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Devoted to the Interests of the Cavalry, to the Professional Improvement of Its Officers and Men, and to the Advancement of the Mounted Service Generally

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The United States Cavalry Association

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Wide World Photo

On Maneuvers
Troop C, 116th Cavalry, Idaho National Guard

The
CAVALRY JOURNAL

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The Calv'ry Gunners

By First Lieut. Leonard H. Nason, *158th M. G. Squadron*
Author of Chevrons, Three Lights from a Match, and Other Stories

THE afternoon was growing rapidly along to twilight and night. It had been a hot day and the night gave prospects of being hotter. A division of the American Expeditionary Forces, vigorous in their youth and filled with an overwhelming desire to close with the enemy, had at last found its wish fulfilled. It had entered into battle and was getting its belly full of fight and its skin full of holes. The enemy was likewise eager. He could see the end of the war in sight and, at every crossroads a sign post assured him that Paris was only eighty kilometers away. Paris and Peace. And anything that got in the way, such as the division in question, had better look to itself.

A rock filled, bumpy, farm road ran from the heights above the Marne back into the country, joining the highway to Condé en Brie, and later the main road to Paris. A party of horsemen appeared at the far end of this road, and riding at a rapid trot, clattered up the slight slope. They were out of sight of enemy here, due to the thick woods, but machine gun fire was clearly audible, and an occasional shrapnel cracked overhead. The horsemen were probably members of some staff, up looking around to see how the line was holding. They skirted the edge of a grove and suddenly one of them drew rein. He was a French officer, a high ranker from the stars on his sleeve. He beckoned to him an American officer, evidently an interpreter, for this one, having listened attentively, rode into the grove while the horsemen waited for him outside. There were horses in that grove, some thirty of them, the limbers of a battery of field artillery that was just a little way off, doing what it could to increase the German casualty list.

"Who's in command here?" demanded the officer who had ridden into the grove. Silence. The horses stamped and their harnesses rattled. The sun slanted through the treetops, and gave promise of an early twilight. The officer rose in his stirrups and looked about. There were no men with the horses. "Who's in command?" repeated the officer. He added words forbidden by the regulations to be addressed to man or beast. "Who tied these horses to trees?" There was no answer. The officer listened. Considerable racket came up to his ears from the valley below. A lively ring-around-the-

rocey was going on there, and the officer had seen some of it through his field glasses. The night was going to be dark, and he was far from home.

"It's against the regulations to tie horses to trees," he shouted. "Untie them immediately! They eat the bark and the French authorities don't like it! You hear me?" Silence gave assent, or so the officer considered. He rejoined the staff, and they all clattered away.

When the staff had disappeared and the sound of their hoofs was no longer audible, a bush moved to one side and a man appeared.

"'S all right," called this man, "come out. They gone away."

More than a dozen men appeared, from behind trees, out of holes, from under bushes. These men were all old. They were bronzed by years of exposure to the Border sun, their legs were bowed from long wrapping about a horse's belly, with a sabre under one and a gun boot under the other. They did not wear the burlap uniform of the new army, but each one had breeches with balloon-like peg, made from the cloth of the 1907 model overcoat, and with the seams stitched with yellow silk. They wore laced leggins faced with leather. It was astonishing to see these men in such surroundings. They were cavalrymen of the breed that was trained by the old type of cavalry officer, that had his training by the moustached Christers of the old plains cavalry, men that washed with saddle soap and that anointed their loins with neats-foot oil, that slept in their spurs three hundred and sixty days in the year, that had no home but a foot-locker, no love but for their "hawss" and no fear save only of the Old Man.

The eldest, most bowlegged of these men that had appeared out of the forest like the dwarfs to Rip van Winkle, unrolled a blanket with a sweep of his hand and with the other brought out a pack of cards from his breast pocket.

"It's my deal," said he. "This'll be seven-toed Pete, an' the one-eyed Jacks is wild."

"That shavey ain't liable to come curvin' back here, is he?" asked one of the others, squatting down and taking a peek at the first card dealt him.

"Naw," said the dealer. "He come in an' done his duty an' gone. If I'd known what he was upset about I'd a stayed. I thought he was after us to dig a trench or somethin'."

"We done right to migrate," observed another. "He'd a had us untie them jar-heads an' stand here holdin' 'em until night or tomorrow morning or whenever. Who's bettin'?"

The game continued in peace. Once in awhile one of the men would listen a second to the fighting below them, but no one made any remark. There were no other men in the grove save these cavalrymen. What were they doing with a regiment of artillery? Ah, it was not a regiment of artillery, but one of cavalry, but they were armed with 75's instead of sabres.

A long time ago, at the beginning of the war, it had been judged wise to

change two regiments of cavalry to field artillery.* The regiment to which these men belonged had been changed. Officers, non-coms, and stable orderlies were, by the signing of an order, changed from one branch of the service to the other, to their intense disgust. These men that were grouped about the blanket were the non-commissioned officers of a troop. They had turned in their sabres and rifles, they had learned to signal "caissons right about," they had drilled with wagon bodies when they had no guns, they had learned to say such words as "parallax" and "barometric co-efficient" without breaking their jaws, they had strained their eyes through the peep-holes of panoramic sights, could repeat, parrot-like, that at the command "prepare for action," number one let down the apron and that number four handed out tow or waste to the gunners. This took months of head-aching effort. Then the regiment came to France and all that they had learned must be unlearned again. The gun was no longer a "three inch," but a "seventy-five." They did not have a panoramic sight, but a little thing with a white cross on it, over which one peeked at a stick. The caisson did not have an apron that let down, but it tipped up bodily. The first day's explanations, given in broken English by a French non-com who employed and required to be repeated such words as "gisement," "ligne de reparage," "pointe de cheminement," and "obus percutant," was enough for the non-commissioned officers. They went forth, headed by one Joe Gunnison, ranking sergeant, and filled themselves with strange liquors. They then fought to their hearts content with the members of the Military Police, came back to camp and rolled the offending guns right through a portable barracks, and went to bed. When they awoke they were privates. That they might still have a horse to fork, a saddle to use as a pillow, and a horse blanket to keep them warm, they were made drivers. So they found themselves in the grove watching the limbers, while new fresh-faced Johns, of a year's service, commanded the gun crews and fought the battery on the slope below them.

The battery, under the aforesaid Johns, was doing well. There came suddenly one of those changes that, when they occur at sea, are marked by a sudden darkening of the sky, a freshening of the wind, and drumming, and the arriving of spray on the vessel's deck. Look out for stormy weather. In battle a change is marked by a sudden outbreak of prolonged firing, men can distinguish individual reports of rifles, they hear yelling, and bullets begin to find lodgements in the immediate vicinity. The battery began to experience this. The infantry in front of them had been ordered to retire, at the approach of night, to a line of resistance marked by an aqueduct. This aqueduct was long and the direction of the retirement not specified. One battalion went one way and another, another. German contact patrols suddenly appeared in an orchard a hundred yards or so from the guns. The guns were in abbatage, that is, their wheels were locked on the brakes, and their trail spades were

*Actually seven regiments of cavalry were converted to field artillery and sent to France, but only two saw service at the front. Four unconverted cavalry regiments also went to France, while the remainder fought the war on the Mexican border and in training camps.—*Editor's note.*

jammed deep in the ground against a log of wood. While the gun crews sought madly to get these trails out of the hole, and the guns out of abbatage so that they could be swung for direct fire on this new target, the enemy brought up some light machine guns and a considerable force of infantry. The executive officer was killed, the battery commander was killed, two section chiefs and half the gun crews went down in heaps, and the survivors retired hurriedly. They went directly toward the limbers and the card game was once more suspended.

"What's the army all kettled about?" demanded ex-sergeant Gunnison with disgust. "An' just as I was havin' a little luck. Where yuh goin', Jaspero, hear pay-day blown?"

"The boche took our guns!" panted the men. "The place is lousy with 'em! You better be gettin' outta here!"

"Hook up these limbers!" ordered one of the surviving officers, "and go down and get those guns away."

"Too late!" objected the orientation officer, who was the last away, "they're on the guns now. You can see 'em." He led the other to a space where he could see through the trees a number of grey-clad figures already swarming about the guns, occupied in removing the shoes from the dead gunners.

"The infantry have let 'em through," agreed the first officer. It was getting dark in those woods and the men had upon them the chill that comes with the sight of their first battle-dead, and a contact with a remorseless enemy. "Let's get to hell out of here. Mount up those limbers and let's go! We can't hold 'em off with pistols! If we only had a gun up here we could keep them off the rest until we got some help!"

"They'd chew hell out of anything that went down there now!" said the other officer sadly.

"Could the lootenant use one o' them guns?" asked Joe Gunnison. "If so, we can make out to get one!"

"Don't be crazy! How could you get a gun?"

"Few calv'ry tactics, sir!"

"Well, go to it!"

"Mount up, you hombres!" barked Gunnison. Who we got for calvrymen here? Unhitch them teams! Turn loose them limbers all but one! All got pistols? Man, if we only carried sabres like the frog artillyurry we'd show yuh some scrimmagin'! Calvrymen, follow me! This aint wagon soldierin' no more! Ready with them hawsses? First an' second piece team take the right, limber in the middle, fourth piece to the left! As forigers at five yards! Raise pistol! Let's go! Don't let a spik-boche, I mean son escape!"

They rolled down the slope at a dead run, the teams still coupled, but lead, swing, and wheel running side by side instead of in column, and ridden by old-time "calv'rymen" that r'ared to go. They tore out into the open—only old-timers could have brought those coupled horses through the woods without wrapping them around trees—and swept up to the guns with a crackle of pistol fire. The Germans, taken unaware, and only seeing a sudden wave of horsemen

surge at them in the half light, could not tell that they were only attacked by a dozen men. All they saw were huge horses, rearing and plunging, all they heard was a wild yell and the thunder of hoofs and the crack-crack of pistols.

The German machine guns opened fire from the opposite slope, but a machine gun throws its bullets where it listeth and not always where the gunner intends. The cavalrymen were unscathed. Gunnison and the team from the first piece charged and trampled under foot a squad that was trying to get a light machine gun going, and by the time they had turned about, picked up a man who had had his team blown from under him by a grenade, and emptied their pistols at some figures running up the farther slope, the limber had been hooked onto the only gun that the battery had been able to get out of abbatage, and they were away, raging and cursing at horses that shied from a running man and so ruined the riders' aim. Five minutes later the gun was in action and, served with ammunition from the limbers, was smacking high-explosive into the place where the Germans had last been seen.

"That was nice work, Gunnison," said the orientation officer. "I'll see that Higher Authority hears of it."

"Lootenant," replied ex-sergeant Gunnison, "fer figgerin' an' peekin' through sights an' killin' a man by arithmetic, we aint much account, but what it takes to get guys out of a mess the old calv'ry is all broke out with!"

The Army Horse Show Team

By Captain W. B. Bradford, *9th Cavalry*
Member of the Team

Organization of Team

On the last day of January, 1927, at the direction of the War Department, Captains F. H. Waters and W. B. Bradford were relieved from duty with the Department of Horsemanship at the Cavalry School and, with Captain Waters in charge, began the selection and assembly of horses considered prospects for the international competitions held in November at Madison Square Garden in New York City. With the helpful cooperation of Major E. W. Taulbee, director of the Department of Horsemanship, stables and crew were chosen and set aside for the sole use of the horse show team.

A few days later the following horses were selected and, with the exception of the first four, assembled in the horse show stables: *Nigra, Miss America, Jack Snipe, Dick, Black Boy, Babe Wartham, St. Paul, Joe Aleshire, Dick Waring, Anita, Benny Grimes, Hindustan, Tantalizer, Temptation, Joffre, Mr. Green, Verdict* and *Maudelia*. The first four were horses of greater experience than the remainder and were left in pasture until the number of officers on the team should be somewhat augmented. The remaining fourteen were either absolutely green, of very little show experience, or experienced horses unaccustomed to the Olympia course of jumps, the immediate goal in the training that had been directed.

Conditioning and training began at once and, in general, though only two officers were present to ride, approached the routine outlined in the paragraph relating to training, which appears later.

On March 11, Major Sloan Doak arrived from the Pacific Coast and assumed captaincy of the team. Captain F. L. Carr reported early in April and Major Harry D. Chamberlin at the end of June. In September, just prior to its departure for the east, the team was further augmented by adding to the five cavalrymen already named, two field artillery officers from Fort Sill, Captains Richard A. Gordon and Norman J. McMahon.

Stables and Management

The stable assigned the team had been used several years for quarantine and was in bad repair. It had an interior aisle running down each side, with double open stalls with mangers facing away from aisle-ways. The stalls were clay and the aisle-ways cobblestone.

In the process of remodeling, all mangers were removed and the open stalls on each side of one of the aisle-ways changed to box stalls with feed boxes and water buckets in each. Along the second aisle-way, day stalls were built by placing a bar across the front of each double stall. These were used during the day for grooming and to permit the night stalls to be freshened. The cobblestone aisle-ways were covered with slightly less than two inches of clay and an

equal amount of gravel. They were then wet thoroughly and rolled. The resultant footing was good and lasted well. The interior superstructure of the stable was whitewashed. The exterior of all stalls was painted a battleship gray and the interior woodwork of the stalls given a coat of oil secured from crankcase drainings. The general appearance was neat, light and practical.

Careful attention was given feeding and each horse prescribed for individually. In general, oats and chop were fed four times daily and bran once each week. Hay and water were kept in night stalls at all times. The shoeing, grooming and general trimming up was done by carefully selected men from the 9th Cavalry and the Cavalry Detachment. They worked faithfully and efficiently during the year, and much credit is due them.

Horses

The following horses were in the horse show stable at one time or another during the period of training:

No.	Name	Class	Color	Sex	Height	Age	Breeding	Owner
1	*Nigra*	J	Bl	M	16	18	Irish	U. S.
2	*Miss America*	J	B	M	15-2	10	H B	U. S.
3	*Jack Snipe*	J	Br	G	16-1	18	Coach	U. S.
4	*Dick*	J	B	G	15-2	15	Unk	U. S.
5	*Black Boy*	J	Bl	G	15-3	13	Unk	U. S.
6	*Babe Wart'm*	J-H	B	G	16-2	9	H B	U. S.
7	*St. Paul*	J-H	B	G	16-2	8	H B	U. S.
8	*Joe Aleshire*	J	B	G	16-½	8	Sdl-TB	U. S.
9	*Dick Waring*	J-H	B	G	16-2	9	H B	U. S.
10	*Pop Over*	J-H	B	G	15-2	6	H B	Capt. Carr
11	*Anita*	J-H	B	M	15-2	9	H B	U. S.
12	*Big Joe*	J-H	B	G	16	12	H B	U. S.
13	*Siren*	J	B	M	16-2	6	H B	U. S.
14	*Pluto*	C-H	Bl	G	15-3	[illegible]	H B	Capt. Carr
15	*Rex*	J-H	Gr	G	16	9	H B	Capt. Bradford
16	*Revel*	J	B	G	15-2	10	H B	Maj. Doak
17	*Misty Morn*	C-H	Rn	G	15-3	10	H B	Maj. Doak
18	*Benny Grimes*	C-H	Ch	G	16	7	H B	U. S.
19	*Verdun Belle*	C-H	Ch	M	16	8	T B	Maj. Cullum
20	*Hindustan*	C-H	Ch	G	15-3	6	H B	Col. Lorillard
21	*Michridate*	C-H	Ch	G	16-1	6	T B	Capt. Carr
22	*Tantalizer*	C-H	B	G	16-2	11	T B	Mr. O. W. Lehmann
23	*Temptation*	C-H	Ch	M	16-1	6	H B	Capt. Bradford
24	*Peppermint*	H	Br	G	16-1	9	T B	Capt. Bradford
25	*Proctor*	C-H	B	G	16-1	13	T B	U. S.
26	*Buck*	J	B	G	16	12	Unk	U. S.
27	*Jerry*	C-H	B	G	16	9	T B	Maj. Chamberlin
28	*Brown's Best*	C-H	Br	G	16	9	T B	Maj. Chamberlin
29	*Pathfinder*	C-H	B	G	15-2	7	T B	U. S.
30	*Garry Owen*	H-J-C	Gr	G	17	8	H B	U. S.
31	*Woodrow*	J	B	G	16-1	14	Unk	U. S.

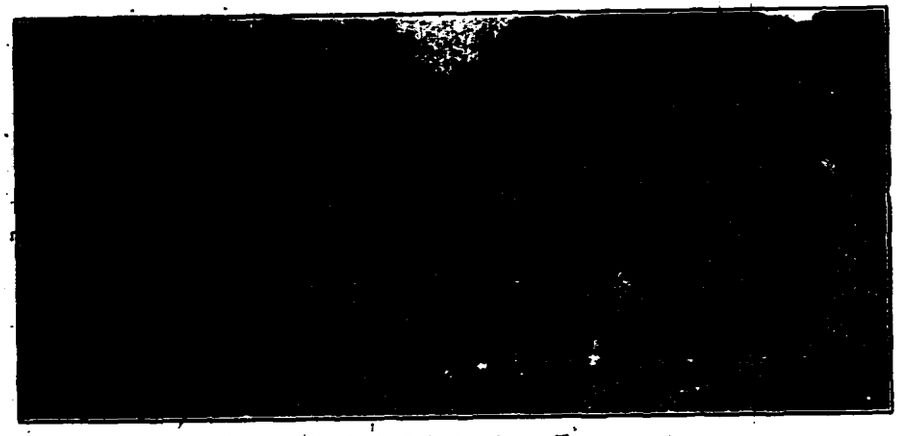
Note: J denotes jumper, C charger, H hunter.

Mr. Green, Verdict, Maudelia and *Joffre*, all of whom were included in the original organization of the stable, were dropped during the month of March.

Training

For a discussion of training, the horses shown in the preceding table may be grouped in several classes.

Nigra, Miss America, Jack Snipe and *Dick* might be called the more experienced jumpers. The first three represented the United States in the International Class in New York in 1926. These horses were turned into pasture, with night stabling, upon return to Fort Riley from the 1926 campaign. They were brought in in March and their conditioning begun. *Black Boy, Babe Wartham, St. Paul, Joe Aleshire, Dick Waring, Pop Over* and *Anita* were less experienced. These were kept in condition and schooled from the beginning over the modified Olympia course, and over individual jumps of this course, for



The United States Army Team

Left to Right: Maj. Chamberlin, Capt. Bradford, Capt. Carr, Maj. Doak, Capt. Waters, Capt. Gordon, Capt. McMahon

control, calmness and experience. *Big Joe, Siren, Pluto, Rex* and *Revel* might be called novice jumpers. They were added to the team after the middle of March, and though none was considered material for use in 1927, their conditioning and schooling over single jumps, and combinations of jumps of the Olympia type, was conducted with the idea of developing them for future use. *Misty Morn, Benny Grimes, Verdun Belle, Hindustan, Mithridate, Tantalizer, Temptation* and *Peppermint* were added to the team during the months of March, April and May. They were all hunter and charger prospects and were schooled for balance and precision, and practiced over appropriate single jumps, for steadiness, boldness and experience. *Proctor* was sent to the team from Fort Leavenworth. He arrived a short time before the departure east. He was in good condition and, being an experienced hunter and charger, very little work was necessary. *Buck* joined the team in September, coming from Fort Sill. *Jerry, Brown's Best* and *Pathfinder* all arrived late and were not sufficiently prepared to accompany the team. *Garry Owen* and *Woodrow* were sent from Fort Bliss

to join. They are both excellent horses, though *Woodrow* seemed to stand the trip poorly and was never in condition to put forth his best while in the ring.

In the general plan of conditioning and training, both enlisted men and officers took part. Exercising at a walk was done largely by enlisted men. Officers completed this conditioning each day and gave such training as seemed proper. The outdoor exercise was mostly at slow gaits, though officers did such galloping as was required by each individual.

The Olympia course of jumps was placed in the hall twice each week. On the first day, horses were schooled over single jumps of this course. On the second day, schooling was over the entire course, and over single jumps as desired. Hunter and charger courses were set up once each week and all prospects schooled over the entire course, or single jumps, as was appropriate.

On days when there was no jumping, special attention was given to the schooling of all horses, after their preliminary exercises by grooms. They were worked on straight lines and curves for control of shoulders, engagement of haunches and changes of gait and pace. In particular instances, horses were longed over jumps, jumped in the Hitchcock pen, and jumped at liberty over the Olympia course of jumps, arranged in an enclosed figure of eight shute, in an outside riding pen. The jumping at liberty in the Olympia chute proved excellent for those horses inclined to rush their jumps, and for greener prospects.

Toward the end of the period of training, all horses showing especial aptitude for jumping were practiced over the Olympia course with all jumps raised from two to four inches above the requirements of the New York show. The final week at Riley, their work was lightened and they arrived at their first show feeling fit and ready to go.

The Cavalry Tryouts

A very few days before the time set for the departure of the team east, Major R. E. McQuillin, 7th Cavalry, arrived with two horses, *Garry Owen* and *Woodrow*. At the same time, First Lieutenant H. I. Hodes, 4th Cavalry, arrived from Fort Meade with *Monte Carlo*, his private mount. These officers and their horses had done well in the tryouts held in July and August. At the same time, Major Doak, the team captain, was limited in the number of officers that he could take and felt that it would have been unwise to change at the last moment from officers who had been under his observation and training for several months to others whom he had had no opportunity to observe. In future years, it is expected and hoped that tryouts for teams will be held many months in advance. All officers who have done well may then be assembled and from this group, the team captain may finally select his team at his leisure, after due consideration and observation of the work of each.

Bryn Mawr

On September 23, the team left Fort Riley and shipped by express to Bryn Mawr, Pennsylvania. Horses and riders were as follows:

Major Doak—*Dick Waring, Misty Morn.*
Major Chamberlin—*Sandy, Big Joe, Garry Owen, Babe Wartham.*

Captain Waters—*Nigra, Proctor, Joe Aleshire, Hindustan.*
Captain Bradford—*Miss America, Benny Grimes, Black Boy.*
Captain Carr—*Pop Over, Jack Snipe, Woodrow.*
Captain McMahon—*Buck, St. Paul.*
Captain Gordon—*Anita, Dick.*

Of the above horses, *Black Boy* was lame and *Woodrow* out of condition throughout the entire trip.

The show was very agreeable and made a pleasant impression on all members of the team. It was held out of doors, and the weather was fine, though rather warm. The main ring is a tan bark preparation, enclosed by rail fence and hedge, with the judges' stand in the center. In connection with this is a very attractive outside hunter course, in which the horse leaves the ring by jumping over the hedge, then a water jump, a bank and rail, a post and rail, wormwood fence, picket fence and final jump back into the ring again. Classes began each morning at 9:00 and lasted until dark in the afternoons. Entries were sufficiently large and the attendance always good. The results at Bryn Mawr, combined with other shows, appear in the table which follows later.

Brockton

From Bryn Mawr the team shipped to Brockton, about twenty miles from Boston. Here again a day show, but this time in connection with the annual State Fair. There are two rings at Brockton, with an acrobatic platform and band stand in between. All is out of doors, and surrounded by a race track for trotting horses. Just across the track from the show ring is the grand stand, seating about sixty thousand people, and always well filled. Within the rings, the ground is good turf. All jumping was done within the enclosure and classes were held in both rings morning and afternoon. The stables at Brockton are most comfortable and commodious, and the horses seemed to enjoy their quarters and surroundings as much as did the officers, who stayed in Boston.

Rye

The next stop was for the Cathedral show, held at the Westchester-Biltmore Country Club at Rye, New York. Rye is one hour by rail from New York City and in a beautiful wooded and rolling country. The show is held out of doors, in a large ring with turf footing and, like Bryn Mawr, has a very attractive outside hunter course about one-half mile long. Here, once again, the team's hunters and jumpers were very fortunate and, at the end of a most agreeable week, horses and equipment were shipped by van to West Point.

West Point

The authorities at the Military Academy were most accommodating and thoughtful. Thanks especially to Colonel Campbell B. Hodges, acting superintendent, and Major H. M. Groninger, head of the Department of Horsemanship, everything was arranged that could possibly have been desired. A set of stables not far from the riding hall, with box stalls especially prepared, was assigned

the team. Men were quartered with the detachment, and officers in Cullum Hall. Every day, for the entire morning, the riding hall was set aside for the use of the team, and the Olympia course of jumps set up whenever required.

With such willing assistance, preparations began at once for the international contests at New York, about three weeks away. Several changes had been necessitated. At Brockton, *Miss America* had been injured. She was not shown at all at Rye and required careful attention to have her sound and ready for

Photo by Harris & Ewing

The Polish Team

Left to Right: Col. Rommel, Minister Ciechanowski, Capt. Antoniewicz, Lieut. Starnawski

New York. *Black Boy* was still lame, and *Woodrow* out of condition. Captain Carr had been injured at Brockton and was still unable to ride.

A slight rearrangement of horses was made, to give each officer a good prospect for the Olympia team class. *Nigra* was given to Major Chamberlin, as *Garry Owen* was sore from jumping, and it was doubtful if he would go. *Jack Snipe* was transferred from Captain Carr, still unable to ride, to Major Doak. *Pop Over* and *Woodrow*, the remainder of Captain Carr's string, were assigned to Captain Bradford. Captain J. T. Cole and his two horses, *Buckaroo* and *Queen's Own*, both of whom had placed in the Olympia tryouts, were added to the team.

As far as possible, all difficulties were ironed out and, on November 4, the

horses were shipped by boat to New York, arriving the following morning, two days before the beginning of the show.

The National Horse Show

This show was held in the new Madison Square Garden building on 49th Street. It is a commodious place, with a seating capacity of about eighteen

Wide World Photo

Procter, the Big Ribbon Winner of the Army Team, Capt. Waters Up
Procter was Undefeated as a Middleweight Hunter in 1927

thousand. At times it is used for prize fights; then a hockey rink; then a circus will be there; and on November 7, it was prepared for America's greatest horse-show. There were from fifteen hundred to two thousand horses entered and all were comfortably stabled in the basement of the building, in temporary stalls erected the day and the night before. Among these entries were horses from Canada, France and Poland. The latter two were the best of the teams from Europe last year, and they, together with the officers from Canada, could be counted on to give our team its severest test. Just how this challenge was met may be seen below.

The American team left the New York show second to Poland in the International team events and quite glad to congratulate these foreign visitors on the excellent character of their jumping. Our team naturally had higher hopes, else it would not have gone, but the disappointment experienced in this class was somewhat alleviated in contemplating the forty-three ribbons that were finally won. Two of these were champions, two reserves, and fourteen blues. Competition was usually international.

Of all the classes in the show, the two of greatest interest from the viewpoint of international competition, were the two team classes over the Olympia course. The first for the Westchester Challenge Cup was of lesser importance and was held on Wednesday night, November 9. In this, Canada, Poland and France each entered two teams. America had three; in addition, there were four civilian teams.

A Polish team was first, with the score of 3. Then three U. S. Army teams, including Captain Cole, with *Queen's Own*, from West Point, with scores of 3½, 4½ and 6, respectively. Fifth place was won by a Canadian team, with the score of 8½. The true import of these scores may be realized when it is rememberd that in 1926 the best score made by any team over the Olympia course was five points. This was done by Poland on the night of the International Military Class.

Friday was the night of the International Military Trophy for teams of three officers over the Olympia course. Madison Square was packed for the event. Many army officers of all nationalities were present and the entire First Class from the cadet corps at West Point. The International Class was preceded by a parade of all teams and a brief ceremony. The ring was then cleared and the battle was on. Teams competed in the order: Poland, France, Canada, and last, America. Results were as shown below:

1.	Poland		
	Fagas	Colonel K. Rommel	1.5
	Redgelt	Captain M. Antoniewicz	0.0
	Jacek	Lieutenant S. Starnawski	0.0
			1.05
2.	United States		
	Dick Waring	Major S. Doak	1.0
	Joe Aleshire	Captain F. H. Waters	2.0
	Miss America	Captain W. B. Bradford	.5
			3.5
3.	Canada		
	Bucephalus	Major R. S. Timmis	4.0
	Golden Gleam	Captain S. C. Bate	.5
	Sergt. Murphy	Captain L. D. Hammond	.5
			5.0
4.	France		
	Pantin	Captain T. A. C. Carbon	4.5
	Laitue	Lieutenant P. A. Clavé	4.5
	Quadrille	Lieutenant G. Briolle	5.0
			14.0

Chicago Riding Club

Upon the conclusion of the New York show, the Army team went by van to West Point for several days and from there to Chicago. The Riding Club, built slightly less than three years ago, is in North Chicago on East Ontario Street, about one block from the lake front. The show is held in the club riding hall, about which boxes are built for the occasion and the entire building draped

in red and white. Great Spanish shawls are most attractively draped over the fronts of the encircling boxes during horseshow week. Horses, men and officers were all most thoughtfully cared for and the team looked back on Chicago wistfully as the train headed for Kansas City and the old Dearborn Street station faded into the distance.

Home

Home again. Horses and men all glad to be back and get the feel of the Riley reservation once more. A few days of digging through records and catalogues and finally a table or two prepared, so that all may know just how faithful these horses of ours have been. *Proctor*, for instance, with twenty-three wins to his credit. Unbeaten throughout the year as a middleweight hunter! *Garry Owen* and *Benny Grimes*, who have proven themselves. And *Dick Waring*, *Joe Aleshire*, *Nigra*, *Miss America* and others! How well they do their bit, if only we give them the chance they deserve. Here they are, with records below, and should a horseman stand up to give a toast, what more fitting than to toast this group of faithful companions who are always ready and willing to answer our call?

Individual Record of Each Horse on Trip

Name	Championship	Reserve	First	Second	Third	Fourth	Fifth	Sixth	Total won	Times shown
Proctor	3	1	20	8	2	4	1	....	39	58
Garry Owen	....	2	12	6	1	1	1	1	24	43
Benny Grimes	....	1	7	7	4	5	....	....	24	33
Miss America	....	....	5	2	3	5	4	1	20	26
St. Paul	....	....	4	7	2	4	....	1	18	35
Pop Over	....	....	7	3	5	2	....	....	17	28
Babe Wartham	....	....	4	6	3	4	....	....	17	31
Misty Morn	....	....	2	6	6	1	....	....	15	21
Dick Waring	....	....	5	2	4	3	....	....	14	21
Anita	....	....	4	2	4	3	....	....	13	23
Joe Aleshire	....	....	1	4	1	3	....	2	11	23
Dick	....	....	4	2	2	2	....	....	10	22
Nigra	....	....	3	3	3	....	....	1	10	24
Sandy	....	....	3	3	1	2	....	1	10	23
Hindustan	....	....	2	3	2	3	....	....	10	20
Jack Snipe	....	....	1	3	3	2	1	....	10	21
Big Joe	....	....	....	2	6	....	....	....	8	15
Woodrow	....	....	1	3	....	....	....	....	4	21
Black Boy	....	....	....	....	1	....	....	....	1	2
Buck	....	....	....	....	....	....	....	....	0	11
Total	3	4	85	72	53	44	7	7	275	501

Note: Though horses have been arranged in column in accordance with the number of ribbons won, this is not an indication of relative standing. So much must be taken into consideration, as for instance, the advantages that hunters and chargers have over jumpers, that such an arrangement would be very difficult.

Note: In this table, where team or pair classes are considered, each horse of the team or pair has been given credit for the place won.

Corps and Division Cavalry

By Lieut. Colonel H. T. Bull and Major G. W. Chipman, *Cavalry (DOL)*.
Instructors, Command and General Staff School

Corps Cavalry

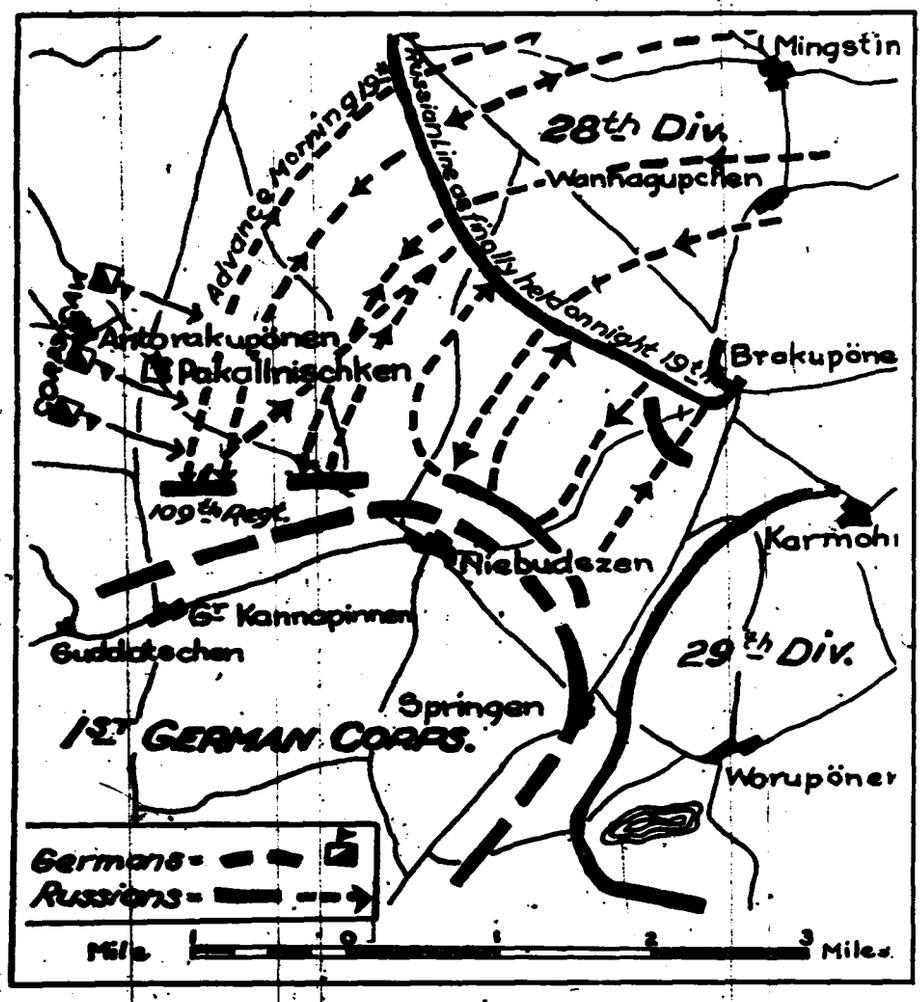
In our army organization we find no cavalry forming a part of the army corps. In operations where a corps is acting alone or is the flank corps of an army, cavalry will be useful and no doubt will be attached. When attached it will seldom be in greater strength than a regiment, reinforced by machine guns. In a situation where a corps is covering the flank of an advance of the main forces, a force of cavalry of the strength of a reinforced brigade might be necessary particularly for reconnaissance or screening, and for maintaining liaison between the corps and the main forces. At times the corps cavalry may be only a squadron, particularly of a corps forming the flank unit of a larger force. If army cavalry is operating close at hand, the duties usually performed by corps cavalry may be taken over by the army cavalry.

When cavalry is attached to a corps, its functions are mainly reconnaissance and security, but at times it may have missions of counterreconnaissance, combat, or pursuit. On the advance of the corps the cavalry, due to its usual numerical weakness, generally, will not operate at a great distance from the corps. It may be attached to the advance guards of the corps, precede them on reconnaissance, cover the flanks, or be used on some important special mission. When army cavalry is covering the concentration or the advance of the army, corps cavalry will maintain liaison with it, reconnoiter between it and the corps, preventing enemy reconnaissance and infiltrations, and assist in furnishing security for the corps. Corps cavalry of the corps on the flank of an army, when army cavalry is not present on that flank, will have the mission of protecting that flank. When army cavalry is absent and the corps cavalry is covering the front, infantry in trucks may be attached. Especially if the cavalry has a mission that may require combat, such as counterreconnaissance, or when charged with securing important terrain features. Light artillery, armored cars and fast tanks may also be attached for such missions.

When corps cavalry, on reconnaissance in advance of the corps, is stopped by hostile resistance, it acts to clear up the situation as to hostile strength and dispositions and redoubles its measures for protection of the corps. If the corps continues to advance the cavalry will secure favorable terrain for the corps security detachments. If the enemy also advances the cavalry seeks to delay his advance in order that the corps may be given time to dispose itself favorably for action. If the cavalry is driven back on the security forces of the corps its role will be to assist the action of the security forces, to continue reconnaissance of the hostile flanks and rear, and to institute protection of the flanks of the corps.

During battle corps cavalry may constitute a mobile fire and maneuver

unit, maintain liaison between divisions of the corps or with neighboring corps, or may operate on an exposed flank. Prior to an extension of a flank it may cover the movement into position of the unit designated to extend the flank. During the advance of an enveloping force into position it may screen that



advance. If operating on the flank of battle it may be given a mission to operate against the hostile flank or rear, or to assist the friendly unit working on that flank. It may be used to delay the advance of hostile forces. Exceptional conditions may require its use to fill a gap in the line or to restore a line by counterattack. Its employment will depend to a considerable extent

upon the strength and activity of the opposing cavalry. If the corps cavalry is weak in strength it may only perform the functions of reconnaissance and security.

During the break-through and exploitation, corps cavalry initially performs important duties of cooperation with the army cavalry by clearing up small hostile resistances in the area of the break-through, securing successive advantageous positions, and furnishing guides for the exploiting army cavalry. It then follows the army cavalry in order to lead and clear the way for the infantry break-through forces, and serves as a liaison link between the army cavalry and the following infantry. In a corps acting alone in the pursuit the cavalry, on account of its mobility, usually would be used in the encircling forces dispatched to cut off hostile retreat.

In case of retirement of the corps the cavalry is generally placed under the orders of the rear guard commander, who usually uses it to maintain contact with the enemy, protect the flanks, and to fight delaying actions. When the rear guard has been able to break off contact with the pursuing forces the cavalry may be given independent missions of a delaying nature.

Historical Example

An interesting and instructive example of the employment of corps cavalry in combat is furnished by the action of the cavalry of the German I Reserve Corps at Gumbinnen on August 19, 1914 (see sketch). During that day the German corps occupied a delaying position near Gumbinnen with one division deployed on the position and one division in reserve. The regiment of corps cavalry was placed under cover on the left flank of the position. The Russian XX Corps, composed of the 28th and 29th Divisions, advanced to attack the German position, enveloping its left. During the Russian advance, the presence of the German cavalry regiment was not discovered. As the attack progressed to the stage where the enveloping forces were about to close with the troops occupying the left flank of the German position, the regiment of corps cavalry delivered a mounted attack into the right flank of the Russian 109th Infantry Regiment of the 28th Division, which unit was making the envelopment. This surprise attack had such success that the whole attack of the Russian XX Corps was stopped and the attacking forces withdrew to the positions occupied by them prior to their attack.

Division Cavalry

Division cavalry consists of any force of cavalry attached to an infantry division. Cavalry operating with an infantry division, like artillery or engineers, is an auxiliary branch. Its operations are so conducted as to assist the infantry. In general, a force the size of a cavalry squadron, with a troop of machine guns attached, will be sufficient to meet most needs. The following cavalry operations indicate the kind of action to be expected from division cavalry.

Prior to the combat of the division, the cavalry may be employed to reconnoiter hostile dispositions and movements and to obtain identifications,

to cover the advance of the division, to delay the movements of hostile forces, to seize and hold a position in advance of the division, to cover the flanks of the division, or to assist in providing security for the division.

During the combat of the division the cavalry may be employed to reconnoiter the enemy's movements and dispositions, to cover the exposed flank or flanks, to delay or contain hostile reinforcements, to operate against the enemy's flanks and rear, to act as a mobile reserve, or to screen the movement of other troops.

After a decision has been reached in the battle, the cavalry may be employed to reconnoiter the enemy's movements and dispositions, to pursue in case the enemy retreats, to cover a withdrawal from action, or to cover a retirement of the division.

Detailed ground reconnaissance is the duty of the division cavalry. The cavalry precedes the division. The main body of the cavalry is preceded by reconnaissance patrols. The division air service promptly communicates the results of its deeper reconnaissance to the division cavalry; it also keeps the division commander informed of the position of the cavalry. As the division approaches the enemy, the division cavalry withdraws, usually to a flank, and continues reconnaissance toward the flank and rear of the enemy. After battle by the division, the division cavalry is usually engaged either in pursuit, or in covering missions. Reconnaissance is conducted in furtherance of these missions.

Some or all of the division cavalry may be attached to the infantry advance guard for reconnaissance. Division cavalry, however, is used for this duty only when its strength is so weak that it cannot sustain itself in advance of the security forces. Where the division cavalry precedes the division, a squad of cavalry for reconnoitering purposes generally is sufficient to be attached to the infantry advance guard.

When the division halts for the night at some distance from the enemy the division cavalry is not attached to the outpost forces but is held under division control. It remains in contact with the enemy and is so located that it can best carry out its most important duties, such as reconnaissance and security of the division. It may be of advantange to attach some part of the cavalry, such as a platoon, to the outpost forces. In this case the disposition of the platoon would be such as to give it some rest and at the same time reinforce the security by the establishment of a few standing patrols at selected points well to the front.

When the division halts for the night in the immediate vicinity of the enemy, the cavalry may be attached to the outpost and operate directly under the orders of the outpost commander. Its most important functions, when attached to the outpost, are reconnaissance, establishing detached posts at points too distant for occupation by the infantry, observing important roads and trails on the flanks of the outpost, and maintaining contact with a distant enemy. When attached to the outpost, the division cavalry, except that part which is needed for the foregoing duties, is usually withdrawn to some point

well in rear of the outpost line of resistance so that it may rest and care for its animals.

As contact is gained by the division with the hostile forces, the division cavalry generally withdraws to the flanks. When the flanks are exposed, some cavalry is placed on each flank for reconnoitering and security purposes, both in the attack and in the defense. In the attack the division commander usually places the bulk of the cavalry on that flank which will best further the main effort of the division. The strength and location of the hostile cavalry will be factors that must be considered. In the furtherance of the main effort of the division, the division commander gives the cavalry squadron an aggressive mission, where practicable. It should not be sacrificed needlessly, as it must be remembered that it will be of great value to the division after combat, either in pursuit or in covering the retirement. In the defense the bulk of the division cavalry is usually placed on the most exposed or vulnerable flank. In addition, when the hostile cavalry is inferior, the cavalry should operate aggressively in the defense, or be maintained as a mobile reserve for counterattacks, or to assist in covering the withdrawal.

Pursuit usually takes the form of direct pressure combined with an encircling maneuver. Division cavalry usually takes part in the encircling maneuver. A small part may be left to conduct reconnaissance for the infantry engaged in direct pressure. The cavalry may be attached to the infantry encircling maneuver or be given an independent mission. Due to the difference in rates of march, it is not desirable to attach the division cavalry to the infantry in the encircling maneuver. However, this may be necessary when the hostile cavalry is of superior strength and its position is such as to interfere with the march of the division cavalry.

When given an independent mission, the cavalry uses its mobility to reach a position in front of the hostile retreating columns and delay their retreat until the infantry in the encircling maneuver can overtake them. The march objective of the division cavalry is some point or area of vital importance to the enemy in his retreat, such as a river across the enemy's line of retreat, defiles through which the enemy must pass, or a strong defensive position in the enemy's rear. Lacking objectives that possess such obvious advantages, the cavalry is directed against the heads of the retreating columns where a series of delaying actions are fought in order that the infantry may overtake and destroy the enemy.

During a retirement involving a withdrawal from action, the division cavalry may be employed to assist in the withdrawal from action, and later, to delay the enemy's pursuit after the withdrawal from action is effected. If the retirement be initiated by the division when not in actual contact with the enemy, the division cavalry will usually operate, initially, between the rear guards and the enemy.

To guard against an encircling maneuver by hostile forces, the cavalry covers the flanks of the division. When the country is open and routes numerous, flank detachments must be sent to a considerable distance on either

side of the line of retreat. In close country, with few roads, checking the enemy's attempts to avoid the rear guard and strike the retiring columns in flank becomes a much simpler problem. The division cavalry is invaluable for blocking and delaying the hostile encircling maneuver.

When the pursuing force consists entirely of infantry, or is very weak in cavalry, the division cavalry at times operates boldly against the hostile flanks; at other times, it conducts a series of delaying actions against the heads of the pursuing columns, thus securing the time necessary for the infantry to break away from the enemy. Under such conditions it may be kept under division control unless by so doing there results a dispersion of effort, in which case it would be attached to the general covering force to secure coordinated action. The more distance the friendly infantry gains from the pursuing forces the more latitude is given to the division cavalry in acting independently against the enemy.

When the pursuing force is strong in cavalry, it is generally necessary for the division cavalry to remain near the axis of movement. Under these conditions it will often be better to attach it to the covering force to secure coordinated action. When the hostile cavalry is used to constitute an encircling maneuver, the division commander will usually keep the division cavalry under his control. In this case the division cavalry will be used to block and delay the advance of the hostile cavalry in order to prevent it from interfering with the retreat of the division.

In all of these operations the air service keeps the cavalry informed of the locations and movements of the hostile forces involved and also keeps the division commander informed of the movements of the cavalry.

Division cavalry should not be frittered away by being held out for messenger service, but should be used as cavalry in furtherance of the mission of the unit to which attached.

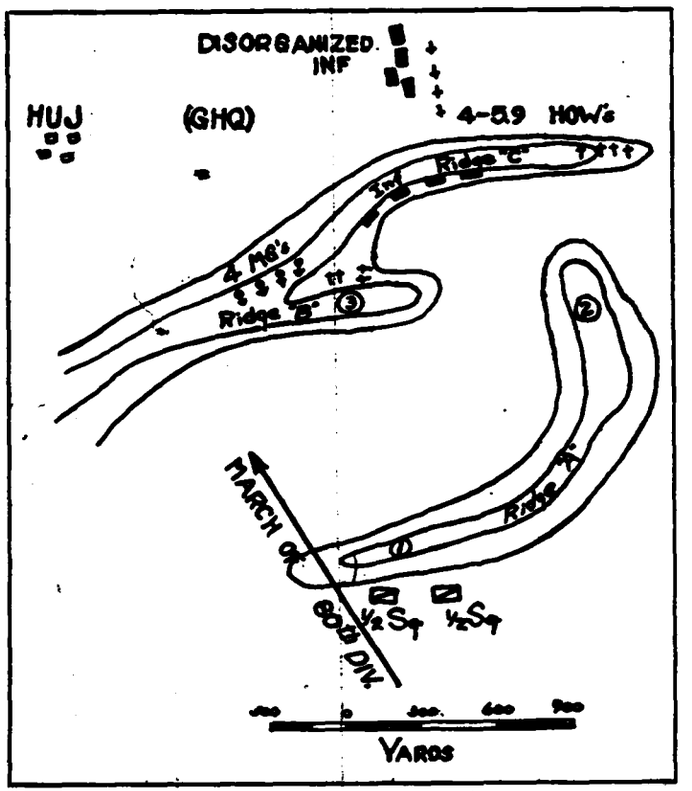
Historical Example

On November 8, 1917, the objective of the British 60th Infantry Division was Huj.

About 2:00 P. M., after pursuing the enemy with great dash, the 60th Division was held up and heavily shelled, with 2,500 yards of open plain to cross in order to reach the enemy's last rear guard position covering Huj. An infantry attack would have been a slow and costly proposition. General Shea, commanding the 60th Division, directed that the cavalry (a force corresponding to about one squadron in our organization) turn the hostile position and silence the guns which were holding up the infantry. The cavalry machine guns had been left behind to find water and had not yet rejoined.

From the southwest end of Ridge "A" (see sketch), position marked (1), the hostile guns could not be seen, but were apparently firing from about 1,200-1,500 yards away, behind a small crest. Ridge "A" appeared to offer a covered approach for a flank attack, and accordingly the cavalry went around in line of troop columns under its shelter to position (2), from where it was seen that a hostile battery was in action at position (3), about 1,000 yards distant, with open ground in between.

The dust raised by this movement had drawn the attention of the enemy, and he swung his guns around to counter the attack. A halt was made at position (2), but the force came immediately under fire from infantry on Ridge "C," about 600 yards away. The leading cavalry unit (a force corresponding to about one troop in our organization) at once charged this position, routing the enemy who retreated, leaving a good many men on the ground wounded by the sword. The remainder of the cavalry went straight for the guns, coming under a hail of shell fire and rifle and machine gun bullets immediately upon topping Ridge "A." The attack was completely successful, sweeping over the guns and reaching the top of the ridge in rear.



A large number of the enemy were killed and the captures amounted to one battery of 5.9 inch howitzers, one Austrian field battery, served by Austrian gunners who fought to the last, one mountain battery, four machine guns which did much damage and about 70 prisoners. The British casualties were very heavy, owing to the unavoidable *lack of any fire support*. The operation was complete in a few minutes, and the 60th Division marched into Huj without further casualties.

New Regimental Organization

By Colonel Aubrey Lippincott, *13th Cavalry*

CAVALRYMEN will be gratified to learn that new tables of peace organization for the cavalry regiment will soon be issued. Perhaps these tables will not entirely satisfy everyone—it is hardly conceivable that they, or any others, would; but it is believed that they will appeal to those who study them with an open mind as a great step forward, for they will accomplish two important things, at least, namely, reduce overhead and increase fire power.

In analyzing these tables, the fact must be borne in mind that it is not possible to obtain the ideal in peace organizations, although this may be done, or very closely approximated, in war tables. The reason is not far to seek. In compiling peace tables there are several governing limitations which determine within very definite bounds just what may be done. The most important of these restrictive factors is the total enlisted strength that the War Department allots to the various arms and services. Furthermore, it is to be remembered that the total strength so allotted to any particular arm is not, in its entirety, available for assignment to combat regiments. Thus, in the cavalry, there must first be deducted from its total authorized strength the numbers necessary for such units as the Cavalry School Detachment, brigade and division headquarters troops, the 9th Cavalry, and the clerical force in the office of the Chief of Cavalry. The numbers allotted to the recruiting pool must also be considered. When all of these have been deducted from the total authorized strength, the remainder, divided by the number of combat regiments that are to be maintained, will give the authorized peace-time strength of these regiments. This strength, it is understood, will be about five hundred and ninety-two men per regiment, the exact number depending upon the authorized recruiting strength at the time.

In working out war tables of organization the problem is quite different, since many of the restrictions which must be observed in framing peace tables do not apply. Units may be designed about as it is considered they should be. However, even here there is one important factor that should not be overlooked, namely, it should be possible to develop the war organizations readily and without confusion from the peace units. The new organization of the cavalry will meet this requirement. It will also give us a peace-time regiment that should prove, even if required to take the field in that form, a superior fighting unit, possessing the necessary mobility and yet capable of delivering a more powerful and more flexible fire than the units organized in accordance with the 1921 tables, as modified. This is no theoretical advantage, for notwithstanding our carefully prepared mobilization plans, we may at any time find ourselves unexpectedly launched in a campaign that was not heralded by an M-Day or anything else of a warning nature. Such a contingency occurred in 1915, when a number of our cavalry regiments were suddenly put in the

field under conditions that, in many aspects, were not so very far from, and might easily have developed into, war. The American Army, through no fault of its own, has never yet entered a war properly organized and prepared, and probably never will, so our peace organization should be as effective as it is practicable to make it.

The high points of the new organization are as follows (as outlined in the new tables of organization, based on full peace strength, an army of 125,000 men, and a regimental strength of 690):

1 Headquarters troop	78 enlisted men
1 Band	28 enlisted men
4 Rifle troops	each of 119 enlisted men
(organized into two squadrons)	
1 Machine gun troop	108 enlisted men

Looking more into details, the following will be noted:

Headquarters Troop.—This unit has been reduced to the minimum strength deemed adequate. The Wire Section has been eliminated and all other sections somewhat skeletonized. Thus the Pioneer and Demolition Section is to have four men only—simply a nucleus of trained specialists; and the Radio and Panel Section is given sufficient personnel to operate two sets only. In this latter connection it is believed that with the great number of young radio amateurs in this country it would not be difficult to expand this section in time of war.

Should a squadron be detached from the regiment, the necessary staff and communication personnel from the Headquarters Troop would accompany it. Similarly, in combat, the squadron commanders would obtain the necessary messengers from this troop.

The Rifle Troop.—This is to consist of a troop headquarters, three (3) rifle platoons of three (3) squads each, and a machine rifle platoon of three (3) squads.

The Squadron.—Two rifle troops will constitute the squadron. The squadron headquarters will consist of a major and captain (adjutant) only.

The Machine Gun Troop.—Lack of practical knowledge or experience with machine guns has led some cavalry officers to look upon these weapons with indifference, or even hostility. The objection usually advanced seems to be based on a hazy misconception as to their mobility. It is believed that when we have had the opportunity to work with machine-gun units these objections will disappear, and then these weapons will be recognized by everyone as equally essential to modern cavalry as they are to modern infantry. Furthermore, we will then learn more about their tactical employment.

The machine gun troop, which is to form a part of the new cavalry regiment, will be a much stronger organization than the present peace-time unit, as the number of machine guns is to be raised from four to eight. This is to be accomplished with a relatively small increase in the enlisted strength of the unit by reducing the number of ammunition pack animals (and corresponding

drivers) in the machine gun troop. Men who perform these duties are easy to train, and the necessary number of ammunition packs could be added without difficulty in time of war.

An important addition to this troop, the need of which is becoming more and more evident, will be a section equipped with a weapon capable of dealing with armored cars and light tanks. The exact type of weapon to be carried has not as yet been determined, but it is understood that development work will soon be started.

Transportation.—The number of cavalry escort wagons has been reduced from twenty-one to fifteen, the spring wagons from twelve to six, and studies are now being made by the Cavalry Board with a view to eliminating much of the impedimenta now being carried. Wagons and wagoners are to become part of the several troops as they were before the service troop was created. The regiment is also to have three one and one-half ton trucks and three light cross-country cars.

The above are the salient points of the proposed peace tables. There will, of course, be changes due to fluctuations in the authorized enlisted strength and to periodical modifications in the allotment of non-commissioned officers and specialists, but these will affect details only. The feature that will strike everyone is the great reduction in overhead. The placing of the wagons and wagoners in the combat troops eliminates the large number of men now required to take care of the needs of the service troop. The eliminating of the wire section from the headquarters troop rids us of a lot of unnecessary and useless "plunder" and adds several men to rifle units. The cutting out of the present over-organized squadron headquarters' detachments effects another material reduction in overhead, so we find a regiment of comparatively small size yet possessing real combat power.

Soon after its arrival at Fort Riley from Fort D. A. Russell, tables for the reorganization of the 13th Cavalry along lines very closely approximating the ones under discussion were received from the office of the Chief of Cavalry, and the regiment is now organized accordingly. All tactical problems and exercises so far held have demonstrated the fact that even the peace organization provides a regiment very strong in fire power, sufficiently flexible to permit the handling of a tactical situation in a variety of ways, and with practically the same mobility as the present units.

Additional Notes on Reorganization

By Colonel Roger S. Fitch, *Cavalry*

THE 13th Cavalry is the first cavalry regiment in the army to try out the new peace-time organization which becomes effective for the Regular Army Cavalry on February 1, 1928. To Colonel Lippincott and the officers and men of the 13th Cavalry are due the thanks of the cavalry branch

for their constructive criticisms, hearty cooperation and unprejudiced try-out of the new organization.

The fire power of the new regiment (at peace-strength) has been increased from the equivalent of two rifles to every three men, to the equivalent of one rifle to every man. The actual figures are based upon the decidedly conservative assumption that the fire power of one machine gun is equivalent to that of fifteen rifles, and the fire power of one machine rifle equivalent to that of three rifles. Nevertheless, even with this very pronounced increase in fire power, the mobility of the regiment has been retained.

The determination of the peace-time number of squadrons in the regiment and the number of troops in the squadron was necessarily largely controlled by the limitations governing the total strength of the cavalry arm, the number of regular cavalry regiments that must be maintained, and the desirability of having troops that are big enough to be real fighting units even at peace strength. An organization permitting of ready transition to war strength is, of course, essential, even though, under the mobilization plans, such transition is not expected to take place on M-Day.

When war breaks it is expected that the regiments will take the field at peace strength only. It is contemplated that at the same time the necessary steps will be taken to begin the organization at home of an additional squadron for each regiment. It is expected that this third squadron will consist of two troops and that its organization will be along the same lines as the peace-time squadron. Its two troops will, however, be much larger, each numbering at least one hundred and sixty men. It is further expected that recruits and remounts sufficient to bring the other two squadrons in each regiment up to a similar strength will also be trained at home, as well as such additional personnel as is necessary to bring the machine gun troops and the headquarters troops up to war strength.

The three-squadron war organization, with its two large troops in each squadron, will result in keeping troop overhead at a minimum, and yet, by the increase in the size of each troop and with a suitable organization, it will enable each troop upon occasion to be divided into two parts tactically, thereby in effect giving us, so far as tactical situations are concerned, our pre-war regiment of three squadrons of four troops each. In addition, the new regiment will, of course, have its machine gun troop, with an increased number of guns, so organized as to be readily split up into appropriate machine gun platoons for attachment to squadrons as needed or, under certain circumstances, for use as a single unit. It is, in fact, thought that in war each squadron may be handled tactically as if it consisted of four troops (of not less than eighty men each), while administratively and so far as supply is concerned, it will consist of but two troops (of at least one hundred and sixty men each). This gives, as stated, practically our pre-war squadron organization, and in campaign this method of tactical handling will, it is believed, be the rule rather than the exception.

A war-strength regiment, organized as indicated, with its three squadrons,

each consisting (for all practical purposes) of four troops, and with its fire power augmented by a considerable number of machine guns, will make a formidable fighting force of practically unimpaired mobility and with far greater fire power than any previous cavalry regimental organization.

The Cavalry Board is now working on the war-strength tables of organization, based on the new peace-strength tables. Upon completion it is intended to try them out at the Cavalry School and in the Cavalry Division.

Pending the distribution by the Adjutant General of approved copies of the new tables of organization (peace), advance photostat copies have been sent by the Chief of Cavalry to all regimental commanders of the Regular Army. These new tables affect, as stated above, the Regular Army only. The organization of the Organized Reserve Cavalry is based upon war-strength tables. Any necessary reorganization of the Organized Reserve Cavalry regiments will undoubtedly be directed by the War Department in due time after the approval and publication of the new war-strength tables now being prepared. The National Guard, of course, has its own tables, based upon the War Department tables. Any changes in its cavalry organizations will presumably be deferred until the completion of the Regular Army war-strength tables and such new National Guard tables as may be prepared by direction of the Chief of Militia Bureau.

THE GOODRICH TROPHY

This Beautiful Bronze Statuette, 1½ by 2¼ Inches, was Sculptured by Mr. R. Phimister Proctor and Presented by Major L. E. Goodrich to the Most Efficient Cavalry Troop of the Year. It was won in 1926 by Troop F, 3rd Cavalry.—

The 2d Cavalry in France

By First Lieutenant Redding F. Perry, *Cavalry*

As the 2d Cavalry was the only cavalry regiment that saw any action as cavalry during the World War, it might be of interest to the service to present a short résumé of this regiment's activities in France.

While the actual combats participated in by this regiment were few, it must be remembered that our participation in the war during the year 1918 was almost exclusively on highly organized and wired fronts and, with the exception of the St. Mihiel advance and possibly the retreat to the Vesle, no opportunities for open fighting presented themselves until the last few days of the war. Then unfortunately our very small force of mounted cavalry had been dissipated on various duties and scattered over most of France, so that it was not available as a unit.

While no great tactical lesson will be drawn from these minor encounters, it may be of interest to know what they were and how they occurred. The various types of duty these troops performed and the innumerable difficulties encountered show that in the immense organization of the A. E. F. they played their part. Being as amazingly scattered throughout France as they were, it is a wonder that they ever functioned as cavalry at all.

Before taking up the movement of the regiment to France, it may be of interest to note that in the first contingent that landed in France with General Pershing from the S. S. Baltic on June 13, 1917, was a detachment of sixty-seven enlisted men. Of these thirty-five were cavalrymen: thirty-one from the 2d Cavalry, one from the 8th Cavalry and two from the 5th Cavalry. While the cavalry took a decided slump in getting overseas later on, they were well represented in the first contingent. Still later, in 1918, twenty men and one officer were detailed from Troops A and C as guard for the Commander-in-chief at Chaumont.

The Voyage to France

In the early spring of 1918, the 2d Cavalry was stationed with the 1st Squadron at Fort Myer, Virginia, and the remainder of the regiment at Fort Ethan Allen, Vermont, under command of the late Major General Dickman. Upon receiving orders for overseas, the regiment, in two groups, embarked late in March from Hoboken. The 1st Squadron landed at Brest, April 7. The 2d Squadron, less Troop E, the 3rd Squadron and the Headquarters, Supply and Machine Gun Troops landed at Pauillac, an outer harbor of Bordeaux, on April 6. No horses were carried, as bottoms were too scarce. Troop E and detachments were left at Fort Ethan Allen and a detachment from Troop D at Fort Myer to bring over the animals. This was never done, as the War Department decided against it, and these elements followed on a later convoy, embarking May 10.

The trip over was an uneventful one for the 1st Squadron, but the other

part of the regiment on the S. S. Martha Washington, when one day off the French coast, had a brush with submarines. Considerable gun fire ensued and it was reported that one submarine was sunk, this being one of the three submarines sunk by the United States Navy during the war.

Several amusing incidents occurred during the excitement of the firing and the call to station. The firing occurred just as the troops were going through the mess line for dinner. One trooper had just filled his mess kit with a generous portion of "slum" and was holding his hat in his other hand. On the explosion of the guns, he cast his hat overboard and, hastily putting the mess kit on his head, appeared at his life boat station, presenting the appearance of a cake well basted with caramel. A sentry near the bow gun was so interested in watching the submarine that he failed to notice that the gun crew had swung the gun to fire at the submarine off the stern. The gun, going off with the muzzle a few feet abreast of him, blasted him down a hatchway where he came to with his overcoat ripped off by the muzzle blast. A few enterprising troopers, evidently indifferent to submarine dangers and keen on the better things of life, raided the galley during the excitement and made away with all the pies that were to be served for dinner.

The 1st Squadron

The 1st Squadron, upon arriving at Brest, was stationed for a short while at Pontanezen Barracks and then moved to Laneuville near the St. Mihiel salient. Here the squadron remained for two weeks, with routine garrison duties, and then Troops A, B and C moved to La Courtine, where they operated a remount depot. Troop D was detached to Angers, but later returned to the squadron at La Courtine. The entire squadron was busy constructing remount stables, caring for wounded and run-down horses and clearing them to front line divisions.

July 17 Troops A and C were attached to the First Army and stationed at Marcie Farm and La Ferté-Sous-Jouarre. These two troops remained here until July 29, where they were engaged in furnishing small detachments to escort prisoners of war, for reconnaissance patrols and for military police duty. These two troops, continuing on this type of work, were next moved forward at Bazu des Ferres and, following the advance to the Ourcq, were stationed at Fère-en-Tardenois from August 5 to 13. During all this period they were on patrol and military police duty. North of Bazu St. Germain on August 1 they sustained their first casualties, when Captains Shelton and Gay were wounded by shell fire while conducting a patrol.

After the Aisne-Marne offensive, Troops A and C, still under the 1st Army Corps, moved to Liverdun on the east of the St. Mihiel salient. They were on military police duty during the preparation for, and through, the St. Mihiel operation.

After St. Mihiel, Troop A marched to Vraincourt on the Argonne front, where it remained until October 31, being split up into fourteen detachments on various military police duties and guarding ammunition dumps. In November Troop A moved forward and maintained a patrol line to pick up stragglers in the vicinity of Harricourt and Châtel-Chéhéry until the armistice

Troop C marched from St. Mihiel to les Islettes, on the Argonne front where it was on military police duty until October 19, when it moved forward and maintained a straggler line at Charlepaux, Cornay and Buzancy. In November two platoons from Troop C were attached to the 77th and 80th divisions for patrol and reconnaissance duty. The platoon under the command of Lieutenant Thomas was attached to the 319th Infantry of the 80th Division from November 3 to 16. "It rendered valuable service north of Buzancy by carrying out patrol work along the entire divisional front and riding into machine gun and artillery swept areas time and time again and drawing fire in successful effort to aid the advance of the infantry by locating machine gun nests and enemy parties digging in." This patrol of seventeen men suffered two casualties and five horses killed. Lieutenant Thomas and two noncommissioned officers were recommended for the Distinguished Service Cross.

Troops B and D remained on remount duty at La Courtine until August, when they joined other troops of the 2d Cavalry at Gièvres which were constructing and putting into operation a large remount depot there. Troops B and D remained at Gièvres a short while and then moved to Camp Jeanne d'Arc with the provisional squadron which was formed there.

The Regiment (less the 1st Squadron)

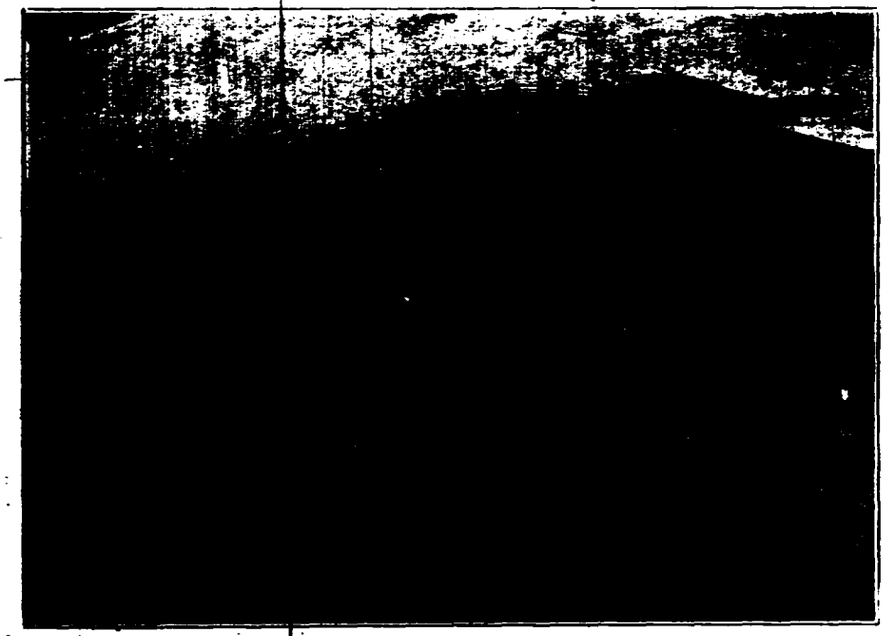
To return to the activities of the other part of the regiment which landed at Pauillac, they were stationed at Camp Genicart and then entrained for Gondrecourt. While en route for Gondrecourt, Troops E, G, H, I, K and L were detached, leaving only the Headquarters, Supply, Machine Gun and M Troops to arrive at Gondrecourt. On April 23 Troop M was sent to the south of France to bring up some horses and on April 24 the Headquarters and the Machine Gun Troops moved to Valdehon, in the Vosges mountains, and began operating a remount station here.

Troops F and G were detached and stationed at Badmenil, in the Baccarat sector, as divisional cavalry of the 42d Division, then in the line. They remained at Badmenil until May 6 and then rejoined the regiment at Gièvres. Troop F later went with the provisional squadron to Camp Jeanne d'Arc. Troop G was stationed at Epinal, operating a remount station under the III, V and VII Army Corps until the armistice. While Troop G was at Epinal, the town was bombed by aeroplanes every few days and the troopers were very active in extinguishing fires and rescuing French civilians from their wrecked homes. After the armistice Troop G was on military police duty over the Argonne battlefield until their return home.

Troops H and I were detached and assigned as divisional cavalry to the 2d Division, then in line in the Toulon-Troyon Sector. They were stationed in the vicinity of Camp Cinq du Freres, near Souilly and remained here until May 9. This divisional cavalry duty with the 2d Division consisted largely of relieving a stevedore outfit, which had been incapacitated by an epidemic

at the rail-head near Souilly. Upon leaving this station Troop H rejoined the regiment at Valdehon and moved back with it to Gièvres. It then became a part of the provisional squadron at Camp Jeanne d'Arc.

Troop I, upon leaving Souilly, went to Selles-sur-Cher, where it was on remount duty and training for mounted combat until July 29. It then entrained for Dommartin-en-Goele but, detraining at Château Thierry, was assigned to the III Army Corps, with which it remained throughout the war. Being assigned to the 10th French Cavalry for patrol work along the front and camping in Les-Près-Fermes, which was nicknamed Death Valley and



Provisional Squadron, Second Cavalry, in Coblentz, Germany, After the Armistice

subjected to heavy shelling, Troop I at once began sending out men with the French patrols. It worked with the French until August 7 when, at Arcis-le-Ponsart, it began independent patrolling along the line held by a brigade of the 3rd Division on the Vesle. It continued on this work until August 16, when it was moved to Coulgones on military police duty. It then moved back to the Marne where it patrolled and did military police work until September 10.

While patrolling on the Vesle front, patrols were sent daily to the front lines along the river and into Fismette to bring back information of the enemy and our own troops, as well as of the condition of the bridges over the Vesle. This was very hazardous work, especially as the abandoned aviation field south

of Fismes, across which the patrols rode at a dead run, was under constant artillery fire. It is said that one trooper, not being satisfied with the extended gallop, jumped off his horse and tried his speed at running on foot. While on this work the troop lost four men wounded and several gassed. On August 9 Lieutenant Rodwell, while crawling out in front of the first line, east of Fismes, was sniped at. Returning to the lines, he borrowed a one-pounder and knocked the sniper out of a tree.

On September 10 Troop I left the Marne and marched to the Argonne, where it was on military police duty (traffic control and enforcing camouflage orders) until the drive commenced September 26. During the offensive this troop was on traffic control and patrol duty. On the first day two troopers captured eighteen Germans in the Bois-de-Forges. The troop next headquartered at Esnes, where it was subjected to long range shelling. On the night of October 7-8 it lost one killed and two wounded (the man killed being a replacement who had joined that afternoon). The casualties were small, considering the intensity of the shelling. One man's shelter tent showed forty-nine holes from shell fragments while the occupant of the tent was unscratched. Troop I moved forward to Cuisy and Bantheville, continuing on military police and patrol duty, under the III Army Corps until the armistice, when it turned over its horses to the provisional squadron and moved back to Dun-sur-Meuse where it drew other horses and began its march into Germany. This troop reached the Rhine at Remagen and was the first, or among the first, American troops to reach the Rhine.

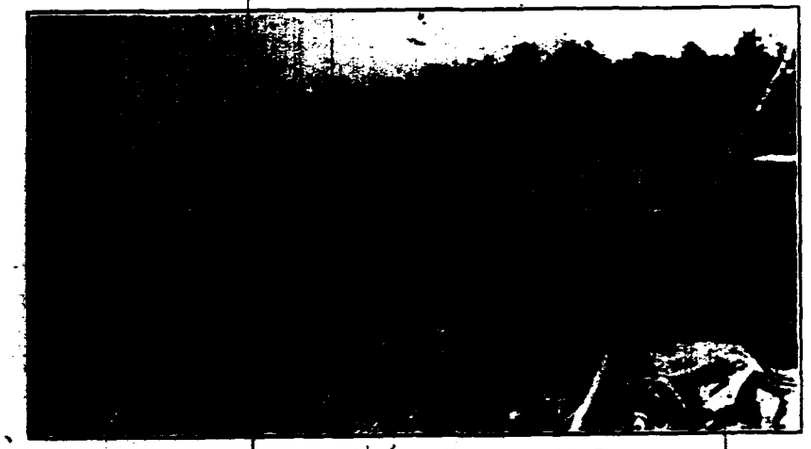
Troops K and L were detached from the regiment April 13 and ordered to Menil-la-Tour as divisional cavalry of the 26th Division. They were attached to the 52d Brigade and stationed at Joy-sous-les-Côtes. As this place was subjected to bombing and long range firing, considerable concern was evidenced by the brigade commander when the troops arrived without helmets or gas masks. They were immediately supplied. The troops remained here and trained, with the expectation of being used in the trenches, until the end of the month when Troop L moved to Selles-sur-Cher and Troop K to La Celle Breure on remount duty. Troop K remained at La Celle Breure operating a remount station, which sent horses to units at the front, until November 1 when it moved to Gièvres. A platoon was detached for a while at Valdehon.

Troop L was moved to Valdehon, Bourges and La Celle Breure and in August was at Gièvres. In November Troops K and L were ordered to join the Second Army, then in front of Metz. Arriving there about November 11, these troops were used to comb the battle areas for stragglers and returned prisoners. They formed a patrol line from Fresnes to Mars-la-Tour. Troop L was later sent back to Commercy to start a school for the care of animals, while Troop K continued on patrol duty until Christmas. After Christmas Troop K moved north to Conflans and, during these bleak winter months, patrolled the country north through the Briey Basin. In the spring Troop L joined Troop K at Commercy, where they remained until April,

when both moved to Royaumeix for guard and patrol duty and from here joined the regiment for the return home.

Troop M, upon its return from Bordeaux, where it had gone to bring up horses in April, rejoined what was left of the regiment on remount duty at Valdehon and later was assigned to the IV Army Corps. It performed remount duty at Neufchâteau and Pagny-sur-Meuse. It then joined the provisional squadron at Camp Jeanne d'Arc and was on military police duty during the St. Mihiel offensive and also evacuating prisoners and wounded horses. It then was stationed at Sanzey in the old Toul sector with the job of evacuating wounded horses from the base hospital at Toul, and of training for mounted combat, until the armistice when it marched into Germany.

When the regiment was sent practically to the four corners of France in



Type of "Cavalry Country" Encountered in France

April, the Headquarters, Supply and Machine Gun Troops operated a remount station at Valdehon. With several troops which rejoined for a short while, it continued on this work until August when, leaving the Machine Gun Troop at Valdehon, it moved to Gièvres. There, with different troops of the regiment, it built and started operating a large remount depot. In this work was included digging a 7,000-foot water line. During the latter part of the Argonne offensive, the Headquarters and Supply Troops were stationed at Rarecourt and Camp Mallery on the Argonne front, but they seemed to have no connection with the troops operating on the Argonne. During these movements, the band remained intact and lost no opportunity to give its services by playing in Red Cross, Y. M. C. A. and Knights of Columbus huts.

Troop E, which had been left in the United States to bring over the horses, landed at Brest May 23 and was immediately pressed into military police duty, on which it remained at Brest and vicinity until November 15.

This work consisted of debarking and guiding troops to rest camps; on this duty Troop E handled over 750,000 men. During the influenza epidemic at Brest, it did not have a man sick. On leaving Brest, Troop E was moved to the old front on military police duty, where it remained until February, when it was used as train guards on leave trains running to Nice and the Riviera, on which duty it remained until its return home.

In the above involved but sketchy description is seen to what extent the majority of the regiment was scattered through France and on what a variety of duties at innumerable places the troops were engaged. Their work varied from front line duty in the heavy fighting at Fismes, through the rather humble stevedoring at Souilly and ditch digging at Gièvres to the pleasant work of riding down to the Riviera. But in all this wandering over France and old jobs, six troops were with combat divisions and corps and performed the dangerous, but not spectacular, work of military police duty and patrolling. Two troops operated for short periods on active fronts and rendered valuable services in patrolling and liaison work.

The St. Mihiel Operation

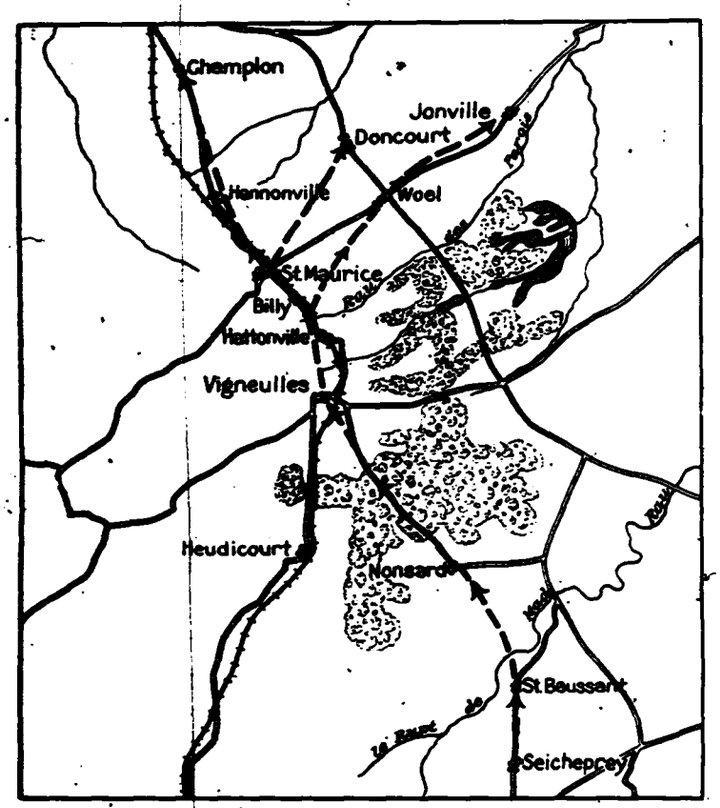
Beside the activities described above, a provisional squadron was formed prior to the St. Mihiel offensive. This squadron consisted of B, D, F, and H Troops, which were taken off construction work at Gièvres and mounted on horses out of veterinary hospitals. These horses were practically all convalescent from gunshot wounds, gas, mange or influenza and, being in bad flesh to say the least, were not in condition for field service. In addition forty of the animals were white. Immediately after drawing these horses on August 22, the squadron left Gièvres and moved by rail to Neufchâteau. On detraining at Neufchâteau, Troops B, F, and H in two days marched to Dommartin. Troop D, having drawn its horses from a veterinary hospital near Neufchâteau, joined the squadron later.

The squadron was stationed in an old cavalry barracks, called Camp Jeanne d'Arc, and here the officers immediately began to whip the green men and mounts into shape for mounted combat. Small combat problems were fired and one automatic rifle was issued to each troop, with an improvised set of fours to man it and to carry 2,500 rounds of ammunition.

This training continued until September 8 (in all about ten days), during which period the squadron was reviewed by General Dickman. An indication of the inadequacy of the training and the poor condition of the mounts was shown in this review, the squadron not being asked to pass in review at a gallop as the horses and some of the recruits were not up to it. This is in no way a reflection on the organization, or the trained personnel, as it is obvious that, with sick and untrained horses and a large percentage of recruits, ten days' training under adverse conditions was all too inadequate. The strength of the squadron at this time was fourteen officers and four hundred and four enlisted men.

On September 9, Troop B was detached and marched to Menil-la-Tour,

where it reported for liaison and courier duty with the 1st, 42d and 89th divisions. The troop performed hazardous duty under shell fire in carrying messages and doing military police duty. On September 13, it moved to St. Benoit, where it was engaged on the front line, and on the 14th moved to Pannes on the same duty. It continued patrolling from here until September 19, when it began its march to the Argonne. At Pannes the troop found a large Ger-



Sketch No. 1

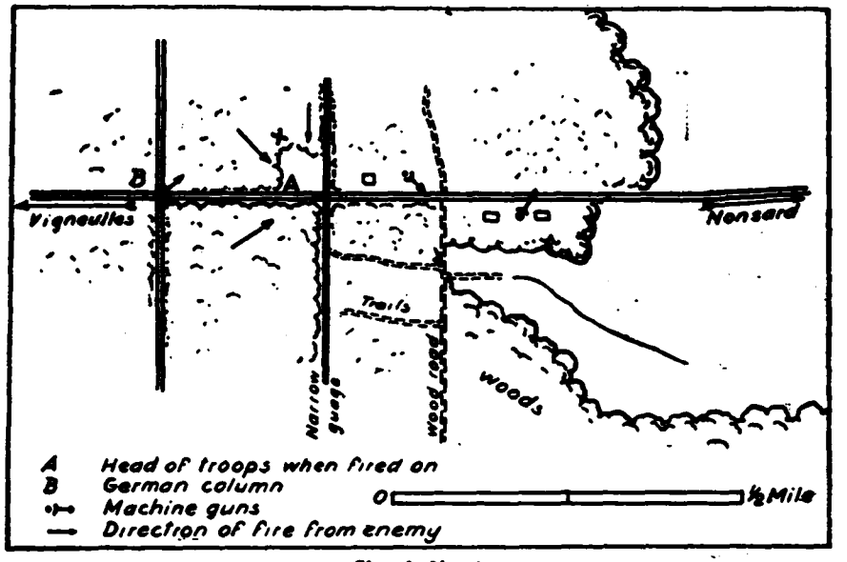
man dump from which they enjoyed many luxuries. An interesting item in this dump, that belied Germany's lack of fats, was quantities of American Ivory Soap.

On the night of September 9-10 Troops D, F and H moved by night marching to Rangeval Forest and, after a long and arduous night march, reached its destination on the night of September 10-11. It again moved on the night of September 11-12 to its designated position west of Mandres and was assigned to the 1st Division.

On the morning of September 12, the infantry attack having progressed so favorably, these troops were ordered up to Seicheprey at 12:00 Noon and at 12:15 P. M. were moved forward to Nonsard, which was five miles behind the original German front lines. (See Sketch No. 1.)

At about 4:00 P. M., orders were received for these three troops to reconnoiter toward Vigneulles and to cut the Heudicourt-Vigneulles railroad. This mission was beyond the ability of these troops, as their only equipment for demolition was a few hand grenades. Had they succeeded in reaching the standard gauge railroad, they would very probably not have been able to destroy it.

The reconnaissance towards Vigneulles was immediately begun and a



Sketch No. 2

patrol sent out towards Heudicourt. The three troops were disposed with Troop F as the advance guard and Troops D and H as the main body. The formation of the advance guard was a point of four men, followed at 75 yards by the advance party of twenty men in two columns of troopers on either side of the road. The remainder of the advance guard were stretched out in groups of eight men at 100 yards distance. Two flank patrols were sent out at 250 yards on the left flank to cover it, but no patrols were sent out on the right as this was specifically ordered against. Upon entering the Bois de Nonsard, heavily wooded, one German was killed by the point. (See Sketch No. 2.)

An unimproved road was encountered leading off to the left and Captain Harmon, reconnoitering down this road, found horses "hitched to wagons of supplies and everything indicating a most hurried departure or the

enemy to still be in the immediate vicinity." Here Captain Harmon captured a mounted German. After reconnoitering this unimproved road, the advance guard commander returned to the main road and found the advance guard halted, as an erroneous order to halt had been passed forward. At this time Troop H, the second troop in column, broke out of the woods to the left and ran onto the main road between the advance party and the support of the troop acting as advance guard. This added more confusion to that already caused by the false order to halt, and the two troop commanders decided to ride about seventy-five yards ahead to a small crest and reconnoiter.

Upon reaching this crest, they saw a military road crossing the main road at right angles. This road was crowded with troops, artillery and wagon trains, pulling out of the salient to the east. It was decided to put down the two automatic rifles at this point, to fire on the column at the crossroads and to attack the head of the column with a pistol attack, deploying the two troops to the right of the main road. The automatic rifles opened fire and inflicted some casualties at the crossroads; the Germans were seen to deploy; and the mounted troops received fire from the front and from both flanks. This fire could not be located on account of the thick brush. The troops were ordered back, with an idea of forming a dismounted line on the unimproved road, and as the troops moved back in good order they were fired on by machine guns from the right flank (unreconnoitered) and then from the left flank by a machine gun, which had evidently laid low in the brush and been undiscovered by the left flank guard. The untrained horses bolted and the two troops streamed back through this machine gun fire. Both German gun crews were put out by mounted fire. This fact is substantiated by numerous statements, and in the advance next morning these guns were seen with their dead gun crews. The troops lost one killed, one prisoner, three wounded, two horses killed and five wounded. Ten prisoners were captured and six machine gunners killed.

Private Valondry of Troop D had his mare shot. The mare going down on her knees threw Valondry, whose foot was caught in the stirrup. The mare, recovering, dragged him for quite a distance, until she finally went down. Valondry then disengaged himself and, drawing his rifle and firing over his horse's body, inflicted casualties on a machine gun crew. For this action Private Valondry was recommended for the Distinguished Service Cross.

The troops were rallied at the edge of the woods, and at this time a sergeant of Troop F reported in with nine prisoners he had captured near Heudicourt and reported the town full of German troops. As it was almost dusk at this time, the three troops fell back to Nonsard for the night.

At 5:00 A. M., September 13, the troops were on the march towards Vigneulles. After passing through Vigneulles, which had been captured by troops of the 26th Division and later entered by troops of the 1st Division, Troops D and H, on September 13, were sent on a mission of scouting the country west and south of Vigneulles for stragglers from the retreating Germans. This work was done, although few prisoners were taken. Many evidences of most recent occupation by Germans were found, such as fires still burning and forage in the mangers. In one woods fifty machine guns were collected by Troop H. A junction was made at Heudicourt with French cavalry, which was advancing from the north.

Troop F was given the mission to proceed north along the main line of the Metz railroad, to gain contact with the enemy, to ascertain his new line of resistance and to gain contact with the French, who were expected to come through from the west of the salient.

Troop F moved out and, advancing rapidly in open formation, passed through Hattonville. This town was in flames and deserted, except for two Germans in a barn, who fired on the point. One squad turned out of column and, dismounting, surrounded the barn and killed one German and captured the other. The next town, Billy-sous-Côtes, was on fire, and here a battery of field artillery was captured in the act of limbering up; twenty prisoners were taken. The troop then pressed on to St. Maurice. A number of Germans were in the town when the troop charged through and established outposts on the exits of the town. Twenty-five prisoners were captured here and valuable information obtained as to the German withdrawal. Operating from St. Maurice, patrols were sent out toward Champlon, Doncourt and Jonville.

The patrol on Champlon, under Lt. Dockler, gained contact with the French (incidentally the 2d French Cavalry) at Hannonville. The patrol on Doncourt established the fact of resistance there by drawing gun fire from the town. It reported wire in front of the town and killed one and captured another German, who fired on them from a shell hole. The patrol on Jonville was fired on from Woel and, capturing five prisoners, remained out until they were reinforced by fifty men, when Woel was attacked dismounted. It proved to be held by only five stragglers in a church, and these were captured. A patrol was then sent towards Jonville. It brought back the report that it was fired upon and that through field glasses wire was seen being put up in front of Jonville.

The German resistance was definitely established and contact was made with the French; messages were sent back to this effect. The troop at 7:00 P. M. marched back to Vigneulles, and in passing through the town were refreshed by the doughboys, who gave each trooper a sack of German bread and three bottles of beer, gleaned from the German stores captured there.

Troops D, F and H camped in a field near Vigneulles, and on September 15 began their march back to Menil-la-Tour, where the squadron rested for two days.

For this work, the squadron received a letter of commendation from the corps commander and was cited in divisional orders. In Lieutenant Colonel Hazzard's report on this operation, dated September 17, it is of interest to note that recommendation is made that each troop be equipped with six automatic rifles and six led horses for ammunition; that fifty men in each troop be equipped with hand grenades, and that a demolition pack be improvised for each troop; also the observation that cavalry cannot be maintained at combat

efficiency if used between times as military police and prison guards: and the observation (amounting almost to a complaint) that several couriers had their mounts taken forcibly away from them by line and staff officers, leaving the troopers without a mount or with an unserviceable one.

The Meuse-Argonne Operation

September 17 Troops D, F and H (Troop B joining en route) began by night marches to move to les Islettes, on the Argonne front. Upon arriving there they were assigned by the V Army Corps to the 35th Division. On September 23 they were ordered to Rarencourt-en-Argonne. Here the troops remained until the morning of September 26, when, at 2:00 A. M., they moved forward to the position assigned near Aubreville. The mission assigned the cavalry was to follow the 70th Brigade of the 35th Division at one kilometer and to be prepared to move forward on missions of reconnaissance and exploitation upon orders of the division commander. The strength of the squadron was fourteen officers and three hundred and two men.

The squadron reached Aubreville at 5:00 A. M., immediately came under shell fire and had two casualties from shrapnel. The enemy was firing on naval guns placed in Aubreville and, as the squadron advanced across the front of these guns, they received the benefit of the blast from one of their salvos: surely, an incongruity of modern war for the Navy to almost blow down the cavalry. The squadron experienced difficulty crossing the trench system, but advanced to Hill 290, where they remained until 4:30 P. M., when they moved forward to Cheppy. (See Sketch No. 3.)

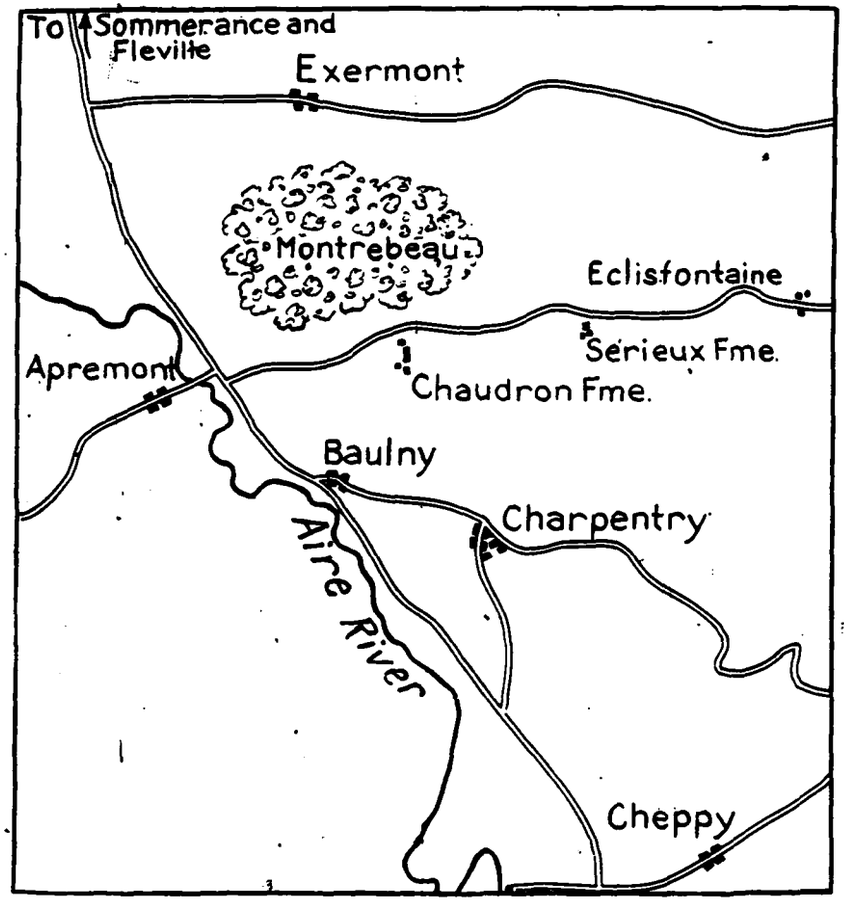
On the afternoon of September 27, patrols of one officer and eight enlisted men were sent to the front to determine the exact location of front lines and the disposition of units. This patrolling continued until the night of September 28-29. Information was gained by riding as far forward as possible and then dismounting and going the rest of the way to the front lines on foot. On the right flank a patrol of Troop B located an enemy battery and machine guns, which were finally silenced as a result of the information gained.

The advance was ordered continued, September 29. Troop B was given the mission of patrolling the right flank and maintaining liaison with the 91st Division. Troop F was to patrol the left flank and keep liaison with the 28th Division. Troop H was to cover the center of the line, maintain liaison and send back messages of the progress. Troop D was kept at Charpentry as reserve.

Troop F moved out into the Aire valley and, being spotted by hostile artillery, took cover under the steep slopes of the Aire river. As no movement of as large a body as a troop was possible under such observation, small patrols were sent out and one, reaching the outskirts of Apremont, sent back information that the 28th Division was attacking this town. An attempt was made to reconnoiter the left of the attacking line, but as it only drew artillery fire on the infantry reserves, the patrol fell back. Later the troop returned

to Baulny, having sustained casualties of three wounded and one gassed and having captured three prisoners near Apremont.

Troop H sent out patrols to the center of the line and sent back valuable



Sketch No. 3

information as to the location of troops from Montrebeau woods, where the fighting was heaviest.

Troop B's patrols covered the front from Sérieux Farm to Montrebeau woods. It remained out when the line was withdrawn to Baulny ridge and sent back information as to the location of the line.

During the fighting on September 30, the troops, realizing the futility of sending out a whole troop to reconnoiter in the face of such heavy fire, sent out small patrols from each of the four troops, maintained liaison with the

flank divisions and maintained contact and courier service with the front line. Lieutenant Burbank's patrol on the left flank kept liaison with the 28th Division. Near Apremont, the lieutenant and four men were wounded. Captain Taylor took patrols to the center of the line, sent back valuable information and was engaged in the fighting here. Patrols of Troop B maintained liaison on the right with the 91st Division, in addition to sending back information.

Troop D was detached on September 30 and performed military police duty with the V Army Corps. It was on this duty until November 4, when it was attached to the 89th Division to furnish mounted messengers.

In the action of September 27 to 30, the squadron had operated over terrain that was very rugged and badly shot up and through an elaborate trench system under hostile observation and fire on practically all its patrols. Many messengers were sent back and much valuable information. Patrols were at Apremont, Chaudron Farm, Montrebeau woods, Sérieux Farm and Eclisfontaine. Casualties were between twenty and twenty-five.

Upon the 1st Division relieving the 35th Division, the squadron (less Troop D) was attached to the 1st Division and used as liaison agents within the division. In the advance of the 1st Division on Sommerance and Fleville, patrols were sent out. A patrol from Troop B went to the edge of Sommerance, when it drew fire and performed courier duty along Sommerance ridge under heavy shell fire. One man of this patrol was captured, but later escaped to the infantry lines and gave information as to the enemy dispositions. A patrol from Troop H, under Captain Lambert, was subjected to heavy fire east of Sommerance and lost two men and twenty-one horses. A patrol from Troop F went to Fleville, where, coming under long range machine gun fire, it dismounted, reconnoitered to Sommerance, located the position of three machine guns and gave this information to the infantry.

On the night of October 16-17, the squadron (less Troop D) was withdrawn from the front and moved back to Rarencourt. The mounted effectives at this time were one hundred and fifty, due largely to the evacuation of sick and wounded animals. While with the 1st Division casualties were two wounded and fifteen gassed. The troops then marched back to Camp Mallery.

This concluded the joint action of the squadron and, as the conditions were not favorable to cavalry action nor were remounts available, the squadron was disbanded. Troop B went to St. Menehould on military police duty, Troop H to Fleury and Troop F to Avocourt, both on traffic control and picking up stragglers.

A detachment of one officer and fifteen men of Troop F were attached to the 1st Division in their final drive on Sedan, and its patrols operated south of Sedan.

After the armistice, the various troops of the 2d Cavalry were scattered throughout France and Germany on various duties. On the march into Germany, the following troops acted as advance cavalry: Troop A with the 2d Division, Troop B with the 5th Marines, Troop C with the 32d Division, Troop D with the 84th Brigade during part of its advance into Luxemburg, Troop I with the 2d Division and Troop M with the 3d Division in the final part of its march into Germany.

Summary

To briefly summarize the above, the 2d Cavalry arrived in France one year to the day after the declaration of war and was immediately scattered over France. From Brest to Valdehon, Epinal and Baccarat in the extreme east and from Fère-en-Tardenois in the north to Bordeaux in the south, with Gièvres in the center, there is a quadrilateral covering a large portion of France, in which the 2d Cavalry was stationed. Attached to divisions in sectors, actively participating in the Aisne-Marne, St. Mihiel and Meuse-Argonne operations, troops of the regiment were with the 1st, 2d, 3d, 26th, 35th, 42d, 77th, 80th and 89th divisions and were attached to practically every corps. While the time actually in combat was very small, troops were on the front and under fire for considerable periods. The work performed was largely military police and patrol duty while on the front, while in the S. O. S. it was largely remount work. In a war in which cavalry had few opportunities to operate, it is with pride that this regiment, badly scattered and under not any too favorable conditions, with young officers and a large percentage of recruits, performed their missions in a most creditable manner.

THE LATE BRIGADIER GENERAL WINFIELD SCOTT EDGERLY

General Edgerly's whole Service, prior to becoming a General Officer, was in the Cavalry. He served in the Indian Campaigns and was with the Seventh Cavalry at the Battle of the Little Big Horn

The Chain of Command

By Colonel George Williams, *Cavalry*
Recently Commanding the Second U. S. Cavalry

PROBABLY the most remarkable fact about exercising command is that while most officers know it in theory, a good many fail to put the theory into practice properly. One reason for this is that peace-time organizations are so small that field officers have not much opportunity to actually command units suitable to their rank. Having spent many years of their service as troop commanders, they now use their spare time to interfere with the prerogatives of their own troop commanders. The latter, having small organizations, take over the duties of their lieutenants, sergeants and corporals. The young lieutenant, noting the manner in which his captain exercises command, continues the system when he is promoted, and so the vicious circle goes on.

Moreover, some field officers and many inspectors always seem to be favorably impressed with any officer who is active, even if his activity consists in taking over all the work himself, instead of seeing that most of it is properly done by the junior officers or non-commissioned officers.

Then war comes. Organizations are filled with untrained officers and non-commissioned officers. The fatal practice continues during the training period. When the organization gets into action, every officer from the colonel to the corporal finds that his own job is all he can attend to, and the result is chaos.

Lucky is the officer who at that late date puts into practice the chain of command, for he is saved, but at a tremendous cost both to his organization and to himself. He who does not see the light goes down in disgrace and is soon replaced. How can this sad result be avoided?

Even in the days of close-order fighting it was realized that direct control by one man could not be exercised over a group larger than from seven to eleven men. This resulted in the basic organization of the corporal and his squad. The corporal controls the men of his squad in barracks, at drill, on the march, in camp, and finally in battle. The only way to teach him to do this is to place responsibility squarely upon his shoulders from the moment he receives his stripes.

He should be held responsible for the personal cleanliness of the men of his squad, the condition of their arms, equipment and clothing, and for their training. If any member of his squad is found wanting in any particular, the corporal, not the private, should be held responsible. It will then be found, after the corporal has been called to task once or twice because some private in his squad has failed in some duty, that the corporal himself will correct the shortcomings of the private.

If the corporal reports to his platoon sergeant or lieutenant beforehand that a private does not know how to perform certain duties and that he has tried without success to instruct him, then the sergeant or lieutenant should

correct the matter, reporting to the captain, if necessary. The captain takes such action as circumstances may dictate.

This method of command will reduce court-martials and desertions, give the corporals confidence in themselves, and cause the men of the squad to look upon the corporals as their natural leaders in garrison and in battle.

One way to teach the corporal his responsibility in the care of government property is to have him list, under the name of each member of his squad, the arms, equipment and clothing which each man is "short" or which is unserviceable, the latter being marked with the letter "U." When property is issued, the corporal consolidates the articles needed to properly equip and clothe his squad, turns in the list with the unserviceable articles to his platoon sergeant, who, in turn, under the supervision of the platoon commander, consolidates the platoon lists and draws the required property from the troop supply sergeant. The platoon sergeant then issues the articles needed to each squad leader, who in turn issues them to the men of his squad. If any articles are not available for issue, the platoon commander decides on the distribution and determines which, if any, unserviceable articles can be retained in use.

The same squad list should contain the names of the squad in the order in which the corporal orders them to command, in case he has to leave the squad for any reason. While this is under the supervision of the platoon sergeant and the platoon commander, they should not change the order fixed by the corporal unless there is a very strong reason for doing so.

The list should be carried in a notebook, or on a card or a piece of paper, in the upper left-hand pocket of the coat or shirt. When the corporal leaves the squad for any reason, he turns the list over to the second in command, placing after his own name the letters "S. H." if sick in hospital, "S. Q." if sick in quarters, "F" if on furlough, etc. If the corporal is killed or wounded, it is the duty of the second in command to procure the list and place after the corporal's name the letter "K" if killed, and "W" if wounded, and carry on as corporal. However, if the second in command fails to procure the list, some other member of the squad should do so, and carry on. This will often bring to light a private who is worthy of promotion for his initiative.

In field exercises, officers and non-commissioned officers should require certain men to fall out, simulating those killed, wounded or missing. The corporal at once places the proper letter, "K," "W" or "M" after the man's name. This is of great assistance in checking up strength after combat. The corporal turns in a list of the absentees of his squad to the platoon sergeant, who consolidates it with the other squad lists, under the supervision of the platoon commander, who forwards the consolidated list to the troop commander, and so on.

Now consider a regiment, and follow the same system down. The colonel, assisted by his staff, inspects all activities of his regiment and assures himself that his policies relating to training, cleanliness and all other matters are being properly carried out. If he finds anything being done particularly well, he says so at the time, complimenting the officer, non-commissioned officer or

private responsible. If he finds anything wrong, he makes a note of it, without letting the party concerned see him do it. He then notifies the squadron, or separate troop commander, who in turn notifies the troop commander, and so on down through the chain of command until the responsible party is found, when the proper action is taken. Any intermediate commander also takes the necessary action on the way down. This method insures that each man believes that his immediate senior is observant. Each man will then naturally look up to his immediate commander as a leader. Under no circumstances should a major say to his captain, "the old man (meaning the colonel) found such and such things wrong in your troop today." If he does, it tends to indicate one or all of the four following things:

1. The major's standards are not as high as the colonel's.
2. The major's powers of observation are not as great as the colonel's.
3. The major is afraid to correct his captain, and so places the responsibility on the colonel.
4. The major does not agree with the colonel's policies, and wishes his juniors to know it.

The colonel is responsible for the general efficiency of his entire regiment, but he delegates the actual duties to his juniors. Thus, while in no way relieved of his responsibility, he assures himself that his policies are being carried out by being constantly on the drill ground and at field exercises, and by frequent inspections of barracks, kitchens, stables and other activities. As an instructor, he holds himself directly responsible for the proper instruction of his majors and his staff. The majors are responsible for their entire squadrons, but their direct control is through their captains, whom they instruct, and whose activities they constantly supervise and inspect. The captain instructs his platoon commanders and his mess, supply and stable sergeants, and holds them responsible for the proper carrying out of their functions.

Except in the instruction of commissioned personnel, the captain is assisted by his first sergeant. The lieutenant instructs the corporals and platoon sergeants, the sergeants assisting in the instruction of the corporals. The corporal instructs the men of his squad. The mess sergeant and the stable sergeant organize and instruct their enlisted assistants.

Certain objections to the above-described system may be visualized and met as follows:

1. Due to the number of men detailed away from a troop for detached service, special duty, and other reasons, it is impracticable to organize the troop into squads as outlined.

   This condition can be met by organizing the men for duty with the troop and those detailed away from it into separate squads. This will necessitate frequent changing in the personnel of the squads, but as this condition exists to an even greater extent in war, due to battle losses and other causes, the troop is being prepared and trained for war in time of peace.

2. Due to stable police, kitchen police and other special duty within the troop, each squad turns out for drill and field exercises with one or more men absent, resulting in an unbalanced organization.

   This condition can be met by having police of barracks and stables done by squads or half-squads, as is often done in camp. Thus one squad or half-squad will clean stables; another the grounds around barracks; and a third the halls, toilets, baths and porches of barracks, leaving undepleted the squads which turn out for duty.

3. In time of war, when many, if not all, of the non-commissioned officers are inexperienced, it is difficult to get the system started.

   As a matter of fact, the sooner responsibility is placed upon a man, the sooner will his value or his inability to command be brought to light. If unfitted, he can quickly be replaced.

4. The method may seem slow, compared with direct control.

   On the contrary, as soon as the system is in operation results come more rapidly, orders are transmitted faster, and confidence in all leaders is greatly increased.

THE LATE MAJOR GENERAL JOSEPH T. DICKMAN

At the Outbreak of the World War, General Dickman, a Life-time Cavalryman, was Commanding the Second Cavalry; at its close, he was Commanding an American Army. The Cavalry Service may well be proud of his illustrious career.

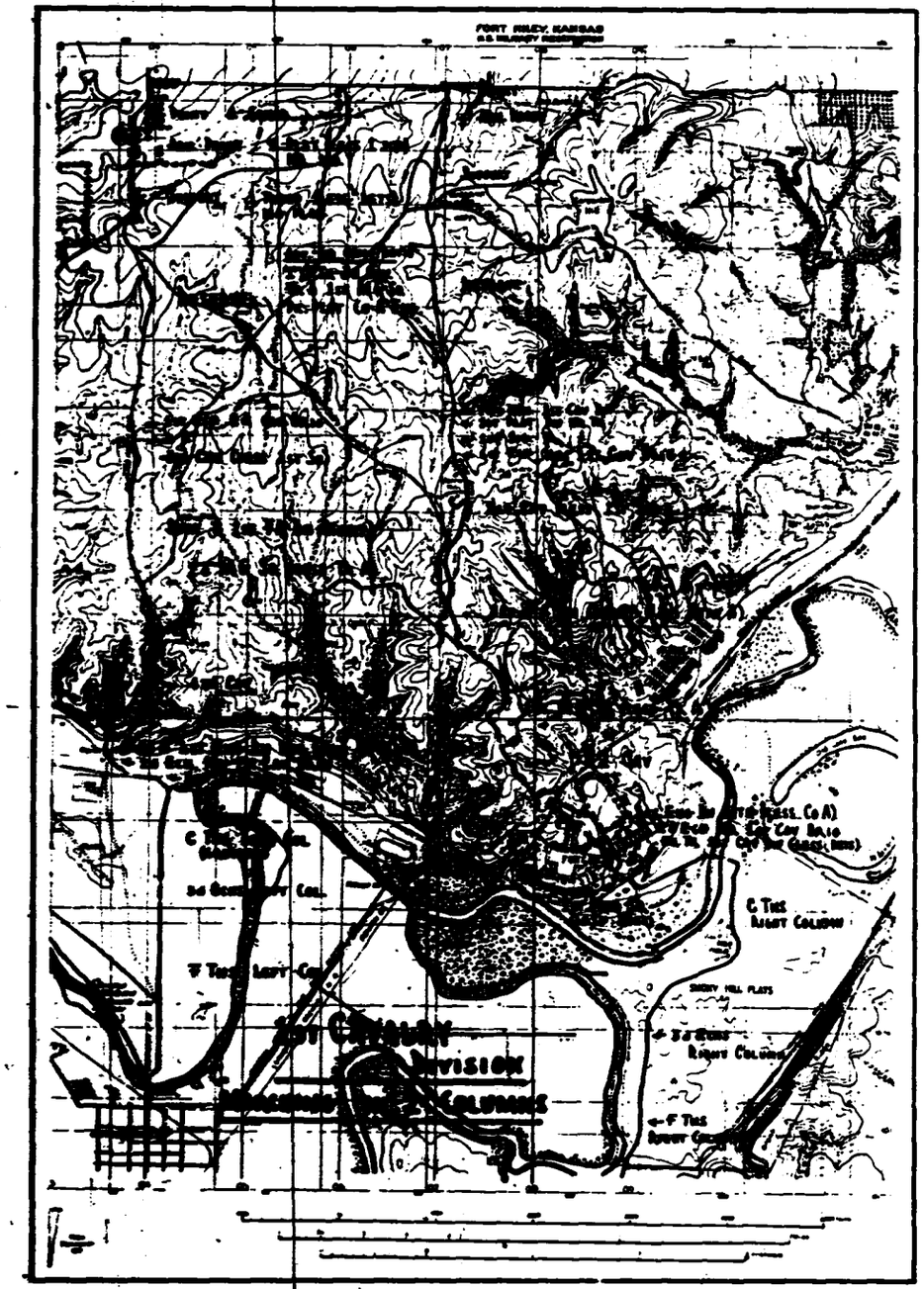


Diagram of a Complete Cavalry Division on Ground Familiar to Many Cavalry Officers

1st Cavalry Division Maneuvers

By Major George Dillman, G. S. C.
A. C. of S., G-3, 1st Cav. Div.

FOLLOWING the 1923 maneuvers of the 1st Cavalry Division, which were held in the vicinity of Marfa, Texas, in the fall of that year, general plans for similar maneuvers were prepared and authority was requested, during succeeding years, for the division to again concentrate in the vicinity of Marfa for maneuvers, but not until 1927 was such authority granted.

As no funds were available for the renting of land on which to hold maneuvers, it was necessary first to determine if sufficient land and water could be secured for maneuver purposes during the latter part of September. It had been an unusually dry year in the vicinity of Marfa, grass and water were scarce and many ranchmen were not charitably disposed; however, due to the energetic cooperation of a few ranchmen, sufficient free land and water had been promised by August 15 for at least limited maneuvers, and on the assumption that this land and water would be available in September, detailed plans were undertaken.

The whole scheme of maneuvers was necessarily based on the location of available water, and it was necessary to make a detailed reconnaissance of the entire maneuver area, not only to fit the problems to the ground and the water, but also to determine what road and bridge work was necessary, to locate places for gates that probably would be needed, in addition to those already available, and to determine water capacities.

On August 24, a detachment of the 8th Engineer Battalion was sent by truck from Fort Bliss to the maneuver area to carry out the necessary work. The detachment repaired roads, bridges and water facilities, constructed additional gates, flagged all gates with white flags and prepared an additional maneuver map to the one used in 1923. The detachment returned to Fort Bliss September 1.

On July 30, a tentative supply and administrative plan was issued to the command and on August 20 general instructions for maneuvers were issued. These instructions included identification marks of opposing forces, neutral troops and umpires, umpire system and control, penalties, general rules for the operation of the observation squadron, reports, etc. On September 1 a terrain guide was issued which laid down rules for the use of ground and water within the maneuver area.

In order to provide orderlies and mounts for observers and visitors during the maneuvers, Troop E, 10th Cavalry, was ordered to accompany the division. This troop left Fort Huachuca, Arizona, August 22 and marched to Fort Bliss, a distance of 314 miles, arriving at the latter place September 6. It was attached to division special troops and accompanied the forward echelon of the division until its return to Fort Bliss, after which it returned to Fort

Huachuca, having marched over 1,000 miles, not counting the distance covered in the maneuver area.

Company C, 25th Infantry, temporarily increased to an enlisted strength of about 100, was transported by truck from Camp Harry J. Jones, Douglas, Arizona, to Fort Bliss. The movement started September 1 and was completed September 3, distance 223 miles. This company took over the post, thus releasing the maximum number of men of the division to attend the maneuvers. Upon the return of the division, the company was transported by truck to its proper station.

The 12th Observation Squadron, consisting of 6 planes, with 3 attack planes and 1 transport plane from Fort Crockett attached, was sent from Fort Sam Houston to Camp Marfa and was attached to the division for the period of the maneuvers.

Due to the location of certain ranches from which troops were excluded or through which passage of troops only was allowed, and also due to the wishes of certain ranchmen as to the use of their land and water, the maneuvers had to be controlled and limited to well-defined areas and to water facilities that could accommodate large bodies of troops.

All problems were prepared for a cavalry division, with an observation squadron attached. Shortly before the march began, information was received that the 1st Platoon, 2d Tank Company, would be moved by road from Fort Sam Houston to Camp Marfa to be attached to the division and that Battery A, 1st Field Artillery, would be provisionally organized as a portée battery, with guns in trucks and tractors on trailers, to be moved by road from Fort Sill to Camp Marfa for the maneuvers. Those organizations arrived at Camp Marfa, September 18.

March to Maneuver Area

The division, less one pack train, with Troop E, 10th Cavalry, attached, marched to the maneuver area between September 10 and 20.

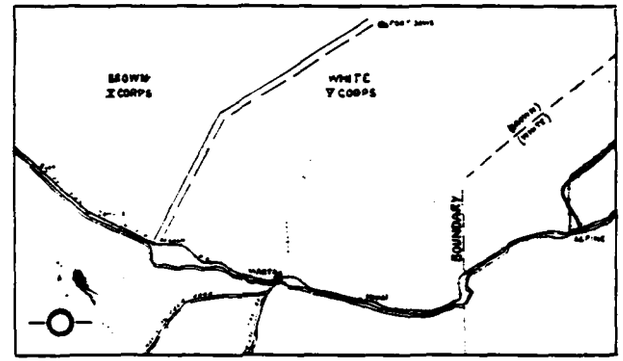
The march was arranged so that the White force for the two-sided maneuvers, consisting of the 1st Cavalry Brigade, reinforced by Battery B, 82d Field Artillery Battalion, Company A, 8th Engineer Battalion, and a detachment, 1st Medical Squadron, was concentrated at Camp Marfa, September 18, and the Brown force, consisting of the 2d Cavalry Brigade, reinforced by the 82d Field Artillery Battalion (less Battery B), Company B, 8th Engineer Battalion, and a detachment, 1st Medical Squadron, was concentrated at Valentine the same day. This arrangement gave brigade commanders an opportunity to have their entire commands together one full day before the maneuvers began.

The forward echelon, division headquarters, which acted as headquarters for the chief umpire and as corps headquarters for both the White and the Brown forces during the two-sided maneuvers, moved into the maneuver area between the opposing forces September 18. Troop E, 10th Cavalry, remained with the forward echelon during the entire maneuvers. The 12th Observation

Squadron, with attached planes, 1st Platoon, 2d Tank Company, and Battery A (portée), 1st Field Artillery, were used as corps troops and were attached to the White force or the Brown force during the two-sided maneuvers as the nature of the problems warranted.

The rear echelon, division headquarters, was motorized, post transportation being utilized, and camped with the forward echelon partly for instruction purposes and also in order to facilitate administration and supply.

The rear echelon, division headquarters, 27th Ordnance Company, bands and detachments not needed on maneuvers remained at Camp Marfa during the entire maneuvers. The 8th Engineer Battalion (less the two companies attached to brigades) and the 1st Medical Squadron (less the detachments



Sketch No. 1—General Map

attached to brigades) remained at Camp Marfa until September 22, then marched to the division camp on Alamito Creek.

General Plan for Maneuvers

On September 18 the following general and special situations were issued, each side receiving only the general situation and its own special situation: (See Sketch No. 1.)

1. *General Situation.* a. The county line which separates Brewster County from Presidio and Jeff Davis Counties is the boundary between a White State (east) and a Brown State (west). The White State has recently declared war against the Brown State.

b. A Red State (south of the Rio Grande) is neutral and it is not expected that it will enter the war as an ally of either belligerent State.

c. The V Corps (White) has invaded Brown territory and is in contact with the X Corps (Brown) along the general line Fort Davis—Aragon, where it has been stopped.

d. Reports of an impending Brown offensive directed toward Marfa—Alpine are in circulation.

2. *Special Situation* (White). The 1st Cavalry Brigade, with one battery, 82nd Field Artillery Battalion (horse), one company, 8th Engineer Battalion (mounted), and detachment, 1st Medical Squadron, attached, has been attached

to the V Corps and on the afternoon of September 18, 1927, has arrived at Marfa, Texas, and has gone into camp in rear of the infantry left flank, where it is awaiting further orders.

3. *Special Situation* (Brown). a. The 2d Cavalry Brigade, with 82d Field Artillery Battalion (horse), (less one battery), one company, 8th Engineer Battalion (mounted), and detachment, 1st Medical Squadron, attached, has been attached to the X Corps and on the afternoon of September 18, 1927, has arrived at Valentine, Texas.

b. On the afternoon of September 18, the Commanding General, 2d Cavalry Brigade, receives orders from the X Corps to proceed with his command on September 19 to Ryan, Texas, and there await further orders.

Umpires were assigned to each cavalry brigade, regiment, and rifle and machine gun squadron, and to the artillery battalion and each battery and to the engineer battalion of both the White and the Brown forces.

A meeting of all umpires was called at 10:00 A. M., September 19, at which the umpire system and control were discussed. Among other points the scheme for nightly camps during the two-sided maneuvers was announced, which was as follows:

Each afternoon, when the situations were furnished brigade commanders for the following day's problem, a copy of the situation and a tracing, showing camp sites and water available to the brigade, was furnished the assistant chief umpire with the brigade, and was given to the brigade commander only after the completion of the problem. In this way, brigade commanders could maneuver their respective brigades, according to the tactical situation, not knowing where they were to go for the night; at the same time assistant chief umpires could control movements so that troops would be in the vicinity of their camp sites at the completion of the problem.

On the afternoon of September 19, umpires joined the units and organizations to which attached.

The maps generally used during the maneuvers were as follows: Progressive Military Map of the United States, Marfa, Alpine and Shafter Sheets; Marfa Maneuver Area, First Cavalry Division, prepared in August, 1923; Texas Alamito Sheet, prepared in August, 1927, and Administrative Map, Marfa Maneuver Area, showing restricted areas. Scale of all three 1/125000. The sketches accompanying this article were prepared from these maps.

Reconnaissance and Counterreconnaissance

On the afternoon of September 19, the following situations were issued: (See sketch No. 2)

WHITE

Reliable information indicates that the Brown X Corps intends to extend its right flank south of the *Southern Pacific Railroad* and assume the offensive in the next few days, with the object of enveloping our left flank. A strong cavalry force, estimated as a reinforced brigade, reached *Ryan* today from the northwest.

The V Corps will assume the defensive pending the arrival of reinforcements.

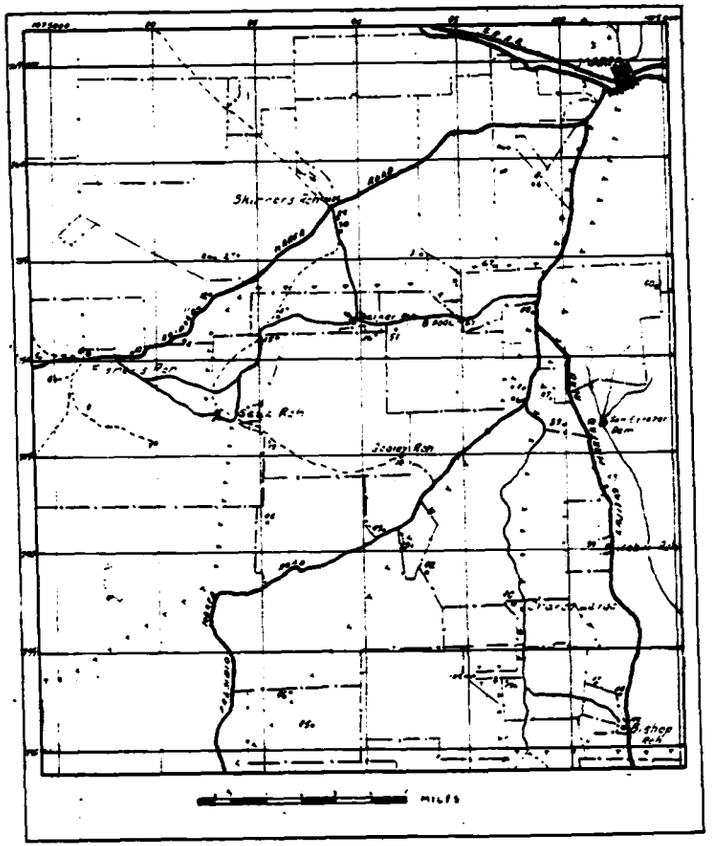
Send a reconnaissance squadron to *Well* 88 (*San Esteban Farm*) today, and, leaving its bivouac at that place at 8:00 A. M., tomorrow (September 20), have it reconnoiter to the *Ruidoso-Marfa Road*, from *Fisher* (12) to *Fisher* (6), both inclusive. If the enemy cavalry be discovered advancing to the southeast, you will move the remainder of your command to 52 (*San Esteban Dam*) to cover the left flank of the V Corps from that vicinity. Contact once gained with the enemy will be maintained. Any attempt of the enemy to move east of

the *Presidio-Marfa Road* (South of *Thaxton Ranch*) will be immediately reported to this headquarters.

The V Corps Air Service will furnish reconnaissance missions over your front at 10:30 A. M., and 1:00 P. M., tomorrow. Radio missions you desire for these flights to Corps C. P. (*Skinner Ranch*) by 5:00 P. M., today.

BROWN

A strong force of enemy cavalry, estimated as a reinforced brigade, is reliably reported to have reached *Marfa* yesterday and is in bivouac at that place.



Sketch No. 2

The X Corps will extend its right flank south of the *Southern Pacific Railroad*, September 21, toward *Skinner Ranch*.

You will march your command at 7:00 A. M., tomorrow (September 20) via the *Ryan-Fisher* (4) *Road*, seize the wells in the vicinity of *Saus Ranch* and cover the right flank of the Corps. You will prevent enemy reconnaissance west of the high ground along the general line: Southwest corner *Thaxton Ranch*—*Well* 94.

The X Corps Air Service will furnish reconnaissance missions over your front at 11:00 A. M., and 1:30 P. M., tomorrow. Send missions desired by you for these flights to Corps C. P. (*Skinner Ranch*) by 5:00 P. M., today.

It was intended by the problem for September 20 to illustrate, by the

operations of the White force, the use of a reconnaissance squadron moving forward to gain contact with an approaching enemy. The operations of the Brown force were to illustrate counterreconnaissance by the covering detachments of the brigade, i. e., by the advance guard on the march and by the outposts after the command halted.

The White reconnaissance squadron camped at Well 88 as ordered and at 8:00 A. M., sent out two officers' patrols of 8 men each, the squadron zone being divided into two sectors and one patrol assigned to each sector. The approach of the Brown column was discovered by one of the patrols at 9:45 A. M. A message to that effect did not reach the White brigade headquarters at Camp Marfa until 11:58 A. M., due to the fact that radio communication failed after 8:00 A. M., and motorcycle messenger had to be used. Acting on the information received, the White brigade was marched to San Estaban Dam, reaching there at 2:55 P. M. The reconnaissance squadron remained out during the afternoon and reconnoitered the Brown outpost position, in the vicinity of which several minor mounted attacks took place.

The Brown brigade, acting under its orders, started from Ryan at 7:00 A. M., and moved rapidly (about 6 miles per hour) via Fisher Ranch to Sauz. The first message from the advance guard commander on contact with the enemy was received by the brigade commander at 11:20 A. M. The command reached Sauz at 11:50 A. M., established outposts and went into bivouac.

On the afternoon of September 20, Battery A (portée), 1st Field Artillery, was sent from Camp Marfa to San Estaban Dam, where it was attached to the 1st Cavalry Brigade. On the same afternoon the 1st Platoon, 2d Tank Company, was sent to Sauz Ranch, where it was attached to the 2d Cavalry Brigade. Dut to the nature of the roads and bridges, it was impossible for the platoon to join the brigade from the rear; therefore, it was sent as neutral troops on a road between the opposing forces. It moved by truck on the road to within about 6 miles of its destination, where the tanks were detrucked and moved under their own power across country to the brigade bivouac.

During the day the forward echelon, division headquarters, moved from Skinner Ranch to Well 86, where it would be in the vicinity of the following day's operations.

Attack and Defense

On the afternoon of September 20 the following situations were issued:

WHITE

Indications are increasing to the effect that the Brown X Corps intends to extend its right and assume the offensive within the next few days, with the object of enveloping our left flank. The hostile cavalry brigade, now bivouaced in the vicinity of *Sauz Ranch*, has the probable mission of covering the enemy right flank and operating against our left.

The V Corps plan remains unchanged. The 1st Infantry Division (White), having completed its concentration at *Lajitas*, has been ordered to extend our left flank and arrives at *Alamito* the afternoon of September 21. It will resume its march to the north the night of September 21-22, via the *Lajitas-Marfa Road*.

Move your command at 6:30 A. M., tomorrow (September 21) to the high ground just east of the *Presidio-Marfa Road* (2600 yards southeast of *Gooley Ranch*) to cover the *Lajitas-Marfa Road*, during its use by the 1st Infantry Division. In case of attack you will hold this high ground at all costs. Battery A (portée), 1st Field Artillery, is attached to your command and will come under your orders upon arrival in the vicinity of 52 (*San Estaban Dam*) at 3:00 P. M., today.

The V Corps Air Service will furnish reconnaissance missions over your front at 8:00 A. M., and 10:00 A. M., tomorrow. Send missions you desire for these flights to Corps C. P. (*Well* 86) by 7:00 P. M., tonight (September 20).

BROWN

It is reliably reported than an enemy force estimated as an infantry division with tractor artillery, which is marching northwest on the *Lajitas-Marfa Road*, will reach *Alamito* tomorrow afternoon (September 21) enroute to *Marfa*, to extend the enemy left. The cavalry brigade, which was in *Marfa*, moved south today and is reported in bivouac in the vicinity of 52 (*San Estaban Dam*). Our reinforcements reach *Brite* tonight.

You will advance from *Sauz Ranch* at 8:00 A. M., tomorrow, via the *Sauz Ranch* (8)—*Gooley Ranch* (14)—*Well* 91—*Charco Largo* (90) *Road*, attack and defeat any hostile cavalry encountered and be prepared to move to the south against the enemy infantry division approaching *Alamito*. 1st Platoon, 2d Tank Company, is attached to your command and will come under your orders upon arrival at *Sauz Ranch* at 4:00 P. M., today.

Cavalry and Artillery at Sauz Ranch

Three attack planes will be at your disposal for operations tomorrow (September 21). Radio missions direct to the airdrome at *Marfa*. The X Corps Air Service will furnish reconnaissance missions over your front at 8:00 A. M., and 10:00 A. M., tomorrow. Send missions you desire for these flights to Corps C. P. (*Well* 86) by 7:00 P. M. tonight (September 20).

The object of this problem was to illustrate, on the part of the Whites, the taking up of a position in readiness (prepared to defend) and on the part of the Browns to attack. Portée artillery was assigned to the defending force as an experiment to determine its effectiveness for use with cavalry in the defense. Tanks and attack planes were assigned to the attacking force as an experiment to determine their effectiveness for use with cavalry in the attack.

The White brigade moved out at 6:30 A. M., toward the position it was ordered to hold; the brigade commander and staff, preceded by one troop as a screening force, moved to the position at a rate of 6 miles per hour. The remainder of the brigade followed at 5 miles per hour. The brigade commander arrived at the position at 7.43 A. M., made his reconnaissance and had completed written orders for its occupation when the enemy appeared in sight.

Through an error in recognizing the position to be held, the brigade halted and occupied a position about 1½ miles to the northeast of the selected position. It being too late to occupy the position originally selected without fighting for it, the brigade commander directed that the position which had been occupied through error be held. The portée battery had no difficulty in getting into position to support the defense.

The Brown force marched from Sauz Ranch at 7:45 A. M., again moving rapidly. On reaching the vicinity of the Presido-Marfa Road, it came under fire of the White screening troop, which had fallen back to the next ridge to the northeast, but which was still about a mile in advance of the main position then occupied by the main White force. The Brown support squadron continued the advance until it came under heavy fire and was finally ruled out temporarily.

The Brown brigade commander, after a personal reconnaissance, ordered an attack enveloping the enemy left. The main attack was made by a regiment and a squadron; the pivot consisted of one cavalry squadron and a machine gun squadron, supported by the artillery. Due to the position of the tanks in rear of the column, they were unable to get up and take part in the attack. The attack planes were ordered to attack favorable targets at 8:00, 9:00 and 10:00 A. M. and were of material assistance to the attacking force.

At the conclusion of the problem the following messages were sent to:

WHITE

Our reinforcements delayed. 1st Infantry Division directed to halt at *Alamito* and await orders. Withdraw and bivouac in vicinity of *Charco Largo*. Further orders will reach you there. You will maintain contact with enemy cavalry.

BROWN

Enemy cavalry in your front appears to be withdrawing to vicinity of *Charco Largo*. Move your command into bivouac in vicinity of *Well* 91, and await further orders. Maintain contact with enemy cavalry. Any indication of further enemy withdrawal will be promptly reported to this headquarters.

Retirement and Pursuit

On the afternoon of September 21 the following situations were issued: (See Sketch No. 3.)

WHITE

Corps Air Service reports that strong Brown infantry reinforcements arrived in the vicinity of *Brite* last night. Reliable information indicates a Brown attack tomorrow to envelop our left flank. The hostile cavalry, after its attack today, is reported in bivouac in the vicinity of *Well* 91.

The concentration of the remainder of our I Corps in the vicinity of *Lajitas* is delayed. The V Corps will begin its retirement tonight by stages prepared to resume the offensive upon the arrival of reinforcements. First stage, night September 21-22, to the general line: *Fort Davis-Marfa*. The 1st Infantry Division now at *Alamito* retires to *San Jacinto Mountain* to cover the concentration and advance of the I Corps, clearing its present bivouac by 9:00 A. M. tomorrow. It is imperative that the Brown cavalry now in your front not interfere with the retirement of the 1st Infantry Division.

You will withdraw early tomorrow, via *Charco Largo*—136—*Bishop Ranch-Lajitas Road*, to the vicinity of *Alamito*, to cover the reirement of the 1st Infantry Division, holding the Brown cavalry north of *Alamito* until 12:00 noon tomorrow. Your rear covering force will not retire to the south of *Charco Largo* earlier than 8:00 A. M. Battery A. (portée), 1st Field Artillery, remains attached to your command for operations.

Three attack planes will be at your disposal for operations tomorrow. Radio missions direct to the airdrome at *Marfa*. The V Corps Air Service will reconnoiter over your front

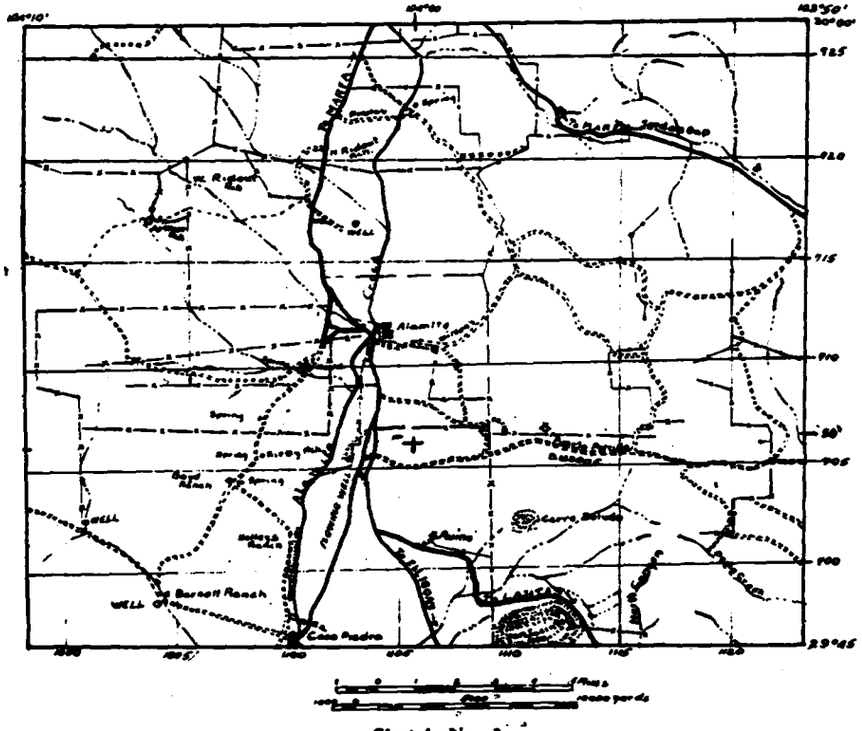
at 8:00 A. M. and 11:00 A. M. tomorrow. Send missions you desire for these flights to Corps C. P. (*Well* 86) by 7:00 P. M. tonight.

BROWN

Corps Air Service reports that the White infantry division, advancing from the southeast, is now going into bivouac at *Alamito*, after a long day's march. The hostile cavalry is reported bivouaced in the vicinity of *Charco Largo*.

The X Corps, reinforced, will attack at daylight tomorrow enveloping the enemy left.

Move your command at 8:00 A. M. tomorrow, via the *Charco Largo*—136—*Bishop Ranch-Lajitas Road* on *Alamito*, driving the enemy cavalry to the southeast and delaying the



Sketch No. 3

The Center of the Upper Edge of this Sketch joins approximately the Lower—Right hand corner of Sketch No. 2 on Page 51

advance of the enemy infantry division to the north. 1st Platoon, 2nd Tank Company, remains attached to your command for operations.

The X Corps Air Service will reconnoiter over your front at 8:45 A. M. and 11:30 A. M. tomorrow. Send missions you desire for these flights to Corps C. P. (*Well* 86) by 7:00 P. M. tonight.

The purpose of this problem was to illustrate the action of a cavalry force falling back through a pass, while protecting its rear from a pursuing cavalry force attempting to cut it off.

The White outpost, consisting of a cavalry squadron and a machine gun

troop, constituted the rear covering force. It was slow in joining the remainder of the rear guard and was attacked, near Charco Largo, about 8:30 A. M. on its left flank and rear by the Brown advance guard. The White rear guard defended successive positions through the pass and, upon approaching the Lajitas-Marfa road, had the support of the portée battery from a position on the road.

The Brown force took up a direct pursuit and numerous mounted attacks took place through the pass. The tanks in trucks, protected by a platoon of mounted engineers, were sent on the main roads north of the pass to operate against the right flank of the White force, but arrived too late to be effective.

At the conclusion of the problem the following messages were sent to:

WHITE

1st Infantry Division bivouacs tonight along *Lajitas Road*, south of *San Jacinto Mountain*. Move your command to bivouac at *Ruins* and well, just northeast of BM 3905, and protect the 1st Infantry Division against enemy cavalry interference from the north.

BROWN

Corps Air Service reports enemy infantry division withdrew from *Alamito* this morning and is now going into bivouac just south of *San Jacinto Mountain*. Cease pursuit and bivouac your command in the vicinity of *Alamito* tonight and there await further orders. Maintain contact with enemy cavalry.

During the day the forward echelon, division headquarters, moved from Well 86 to Alamito, where it remained during the remainder of the maneuvers.

Screening

On the afternoon of September 22 the following situations were issued:

WHITE

The hostile cavalry brigade is reported in bivouac in vicinity of *Alamito*.

The V Corps will hold its present position. The I Corps (less 1st Infantry Division) completes its secret concentration in the vicinity of *Lajitas* (about 30 miles *S.E.* of *San Jacinto Mountain*) tomorrow and will commence its advance on *Alamito* night September 23-24. The 1st Infantry Division has been ordered to move into position along the general line: *San Jacinto Mountain-La Vinita-BM* 4125, to cover the debouchment of the remainder of the I Corps through the *Tascotal-Bandera Pass* (10 miles *S.E.* of *San Jacinto Mountain*). It is important that this movement be kept secret.

Move your command at 7:00 A. M. tomorrow and establish a stationary screen along the general line: *Puerto Portrito Pass*—high ground about 1 mile *N.E.* of *Kelley's Ranch* and deny the enemy cavalry ground reconnaissance south of that line during the movement into position of the 1st Infantry Division tomorrow. Battery A (portée) 1st Field Artillery, remains attached to your command for operations.

The Corps Air Service will furnish reconnaissance missions over your front at 8:00 A. M. and 10:00 A. M. tomorrow. Radio missions you desire for these flights to Corps C. P. (*Alamito*) by 7:00 P. M. tonight.

BROWN

The X Corps Air Service reports the enemy infantry division, which withdrew from *Alamito* today, breaking up into groups and moving generally along the line: *Casa Piedra-San Jacinto Mountain* (2½ miles south of *Cerro Boludo*). The air service also observed great activity in the vicinity of *Lajitas* (about 30 miles *S. E.* of *San Jacinto Mountain*), which appears to be a secret concentration of troops of all arms. The hostile cavalry brigade in your front is reported in bivouac, just north and west of *Cerro Boludo*, with detachments covering its front and probably screening the movement of the infantry division. It is important that the movements and intentions of the enemy infantry force be determined. Move from your bivouac at 8:00 A. M. tomorrow and, by vigorous reconnaissance, determine the movements and dispositions of the enemy infantry division. *Note*: Patrols should not advance south of the line *Casa Piedra-San Jacinto Mountain*.

The Corps Air Service will furnish reconnaissance missions over your front at 8:00 A. M. and 10:00 A. M. tomorrow. Send missions you desire for these flights to Corps C. P. (*Alamito*) by 7:00 P. M. tonight.

The purpose of this problem was to illustrate the use of a stationary cavalry screen to prevent ground reconnaissance of troops in rear and the methods employed by opposing cavalry to penetrate the screen and obtain information.

The imaginary White infantry division was represented on the line: San Jacinto Mountain-Casa Piedra at two points. At those points, mounted posts were established with messages in their possession furnishing information to any Brown troops that reached either of the two posts.

The White brigade moved out at 7:00 A. M. to the line designated for the screen. The two regiments were assigned sectors, each observing on a front of 4 to 5 miles. The line was supported by the machine gun squadron, the portée battery and the horse battery, the latter being prepared to move from one position to another as required by the situation.

The Brown brigade moved from its bivouac at 8:00 A. M., under march orders issued the night before. The plan for piercing the screen was for the advance guard to develop the White position and one cavalry regiment to turn the left flank. After piercing the screen, three cavalry troops, specially detailed, were to get through and secure the desired information.

The advance guard met strong resistance near the Lajitas road. It developed the position and finally attacked, using the platoon of tanks in the attacking line. In the meantime, the regiment making the turning movement encountered White troops that had been concentrated to meet it. Up to the time the problem was concluded, the screen had not been penetrated in force. One patrol passed through the screen by stealth, reached Casa Piedra at 11:30 A. M. and brought back information of the White infantry division, which it received at that point.

After the completion of the problem, both brigades occupied the same bivouacs as the previous night.

Pursuit and Delaying Action

On the afternoon of September 23 the following situations were issued:

WHITE

The attack of the X Corps made no progress today. A hostile force estimated as a cavalry division, less a cavalry brigade, which left *Ryan* this morning, was observed going into bivouac at *Charco Largo* at 2:30 P. M. today. The hostile cavalry brigade in your front is reported in bivouac along east bank of *Alamito Creek*, just south of the *Lajitas Road* crossing.

The movement of our I Corps must be kept secret.

Concentrate your command at *Ruins* and, moving from that point at 8:00 A. M. tomorrow on *Alamito*, attack the enemy cavalry brigade wherever found and drive it north of *Alamito* to facilitate the advance of the I Corps. Battery A (Portée), 1st Field Artillery, and 1st Platoon, 2nd Tank Company, are attached to your command for this operation.

The V Corps Air Service will furnish reconnaissance missions over your front at 8:00 and 9:30 A. M. tomorrow. Radio missions desired by you for these flights to Corps C. P. (*Alamito*) by 7:00 P. M. tonight.

BROWN

The enemy held along the front of the X Corps today. Reports indicate that an enemy advance in force north of *San Jacinto Mountain* is imminent. Enemy infantry in trucks moved up just south of the hostile cavalry brigade bivouac at *Ruins* this afternoon.

The remainder of the 1st Cavalry Division reaches *Alamito* about 10:00 A. M. tomorrow,

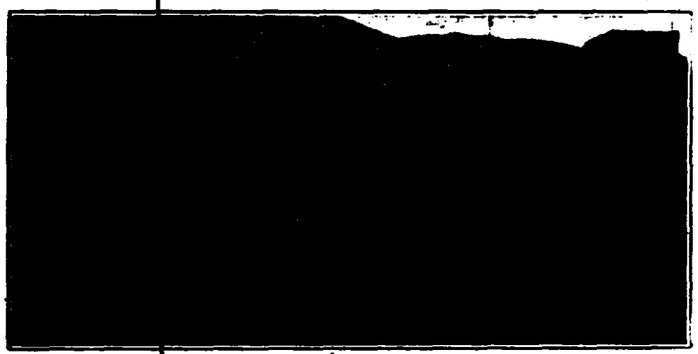
at which time you will come under the orders of the division commander. It is imperative that your command does not become seriously engaged with the enemy prior to the arrival of the remainder of the 1st Cavalry Division.

Move your command at 7:30 A. M. tomorrow on the general line: high ground about 1½ miles northeast of *Kelley's Ranch*—high ground about 1¼ miles north of *Ruins*, gain contact with and delay any advance of the hostile cavalry to the north, holding the enemy south of the ridge about 1 mile south of *Alamito* until 10:00 A. M. tomorrow.

The X Corps Air Service will furnish reconnaissance missions over your front at 7:30 A. M. and 9:30 A. M. tomorrow. Send missions desired by you for these flights to Corps C. P. (*Alamito*) by 7:00 P. M. tonight.

The object of this problem was to illustrate a delaying action and pursuit in open country.

The White brigade advanced from its bivouac at 8:00 A. M. The plan of action was to develop the Brown position in front with the advance guard and



A 7th Cavalry Bivouac on Outpost

to send one regiment from the main body along the Flowing Wells road to the west to attack the Brown right flank.

At 8:30 A. M. the White advance guard was stopped by the Browns in position and the White regiment was started toward its objective.

At 8:42 A. M. the remaining squadron of the main body was sent forward to reinforce the advance guard and the platoon of tanks was also sent forward. About 9:15 A. M., as the White attack had gotten well under way, the Brown force withdrew to its second delaying position about one mile in rear.

The Brown force moved out at 7:35 A. M. toward the position which had been selected for its first delaying position. The position had previously been divided into sectors. One regiment (less one troop) and one machine gun troop was assigned to the defense of each sector and ordered to hold until 9:00 A. M. The artillery supported both sectors. A reserve of two rifle troops, one company of engineers and one machine gun troop had its initial position about one mile in rear of the center. Before the White attack closed the Brown force withdrew to its second position.

After some minutes, the White attacking force again moved toward the second delaying position of the Browns. At 10:15 A. M., when the main White

force had fully deployed for its second attack and the White flanking force was about to launch its attack, the signal to stop the problem was given.

After the completion of the problem, both forces went into the division camp on Alamito Creek. The White force became part of the Brown force and the entire reinforced division operated from that time on as a Brown force, operating against an outlined White enemy.

September 25 being Sunday, the division remained in camp, where preparations were made to continue the problems as a division field exercise. In the morning a critique of the two-sided maneuvers was held, which was attended by all officers of the command. The Chief of Cavalry, the Commanding General, Eighth Corps Area, all umpires, observers and visitors were present.

Division Attack

The exercise for September 26 was based on the following situation:

BROWN

The hostile corps, which concentrated in the vicinity of *Lajitas*, advanced to the northwest last night and is reported in bivouac today in the vicinity of *Alamo Ranch* (20 miles southwest of *San Jacinto Mountain*).

You will advance tomorrow morning, attack the hostile cavalry brigade now in your front and be prepared to operate against the hostile infantry.

Based on the above situation, a written field order was issued for the march to Ruins.

The exercise of this day was to illustrate the mechanism of an attack by a full cavalry division with attached air service, portée artillery and tanks. The hostile White cavalry brigade was outlined by part of the 8th Engineer Battalion.

The division moved from camp as ordered and shortly before 8:00 A. M., its advance guard encountered the White advance guard.

The enemy took position squarely across the route of advance of the Brown advance guard, about 1½ miles north of the line: Kelley's Ranch—Ruins. A message of the contact was sent back promptly. The advance guard, having been stopped by superior numbers, deployed along the next ridge to the north and made a hasty reconnaissance of the enemy's position. In the meantime the division commander and his party galloped up to a ridge some half mile in rear of the one occupied by the advance guard. At that point at 8:25 A. M., a message was received giving the principal dispositions of the enemy. This was confirmed almost at once by a message from a reconnaissance plane and from the artillery observing officer with the advance guard.

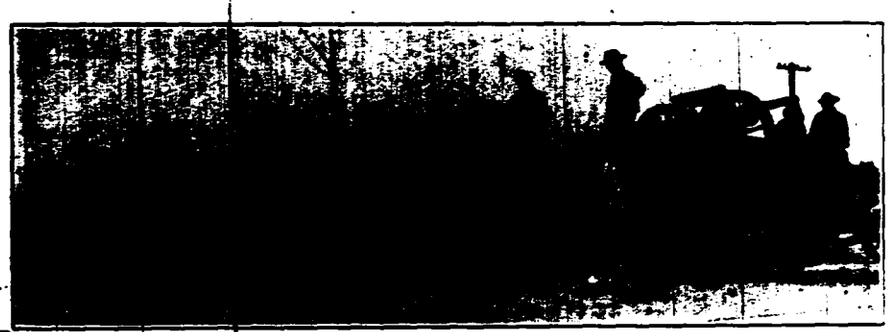
This being sufficient information upon which to develop the division, the division commander issued oral orders to his staff, commanders of the two right columns, artillery commander and liason officer from the left column for the development of the division for attack.

In the meantime the division G-2 had established an observation post on the ridge on which the advance guard was deployed. The division commander moved up to this observation post and made his personal reconnaissance. As the view from that point was particularly good, the division commander directed

that, when the unit commanders reported at his command post, they were to be sent forward to the observation post where he intended to issue his attack orders.

At 9:00 A. M., unit commanders having reported, the division G-2 explained the enemy situation, the division commander announced his decision to attack, enveloping the enemy's right, and an attack order was dictated to the assembled officers.

The situation was so arranged that a rather deliberate attack could be made. The enemy was made stationary, taking up a deployed defense, and the development and deployment of the division were more deliberate than would usually be the case, thus giving the tanks an opportunity to move up to the



Unloading Portee Artillery

assault position of the pivot and to furnish close support to the advancing dismounted line.

The attack was perfectly coordinated, all troops being in place when the rocket signal was fired by the 1st Brigade at 10:20 A. M. The 1st Brigade with the battery attached made its attack using a combination of dismounted and mounted action, the brigade less one regiment attacking dismounted and one regiment attacking mounted.

The rocket signal was fired by the regiment making the mounted attack and here arises the question as to whether this is the best method.

There is no question but that pyrotechnics are the best means of coordinating a cavalry attack and it would seem that the last unit to reach its assault position should be the proper one to fire the signal for the attack, provided, of course, that it could be foreseen which unit would be last to reach its assault position. In the case of the attack described above, the regiment firing the rocket signal launched its mounted attack immediately and the attack was under way before full fire support was received from the dismounted attack of the brigade and from the artillery. If the mounted attack is launched too soon, there is a chance of its being stopped by an enemy which is not under heavy fire. Therefore, it would seem that the mounted attack should be delayed a sufficient time

to insure that the maximum supporting fire is placed upon the enemy before the mounted attack is launched.

Division Defense

The problem for September 27 was based on the following situation:

BROWN

The hostile I Corps reaches the western end of the *Toscatal-Bandera Pass* early tomorrow morning at which time, it is reliably reported, the covering force (1st Infantry Division) will begin its advance to the north.

The 27th Infantry Division, moving by motor truck and marching, will relieve you by noon tomorrow. Seize and hold the high ground along the general line: *Kelley's Ranch-Peurto-Porilla Pass* until relieved by 27th Division.

Based on the above situation, a written field order, for the defense, was issued.

This problem was to illustrate the taking up of a defensive position by a complete cavalry division with the idea of its being taken over by an infantry division. All installations and all means of communication were set up, after which the division commander and staff made an inspection of the position and officers were given an opportunity to get a general idea of the set-up.

End of Maneuvers

The original plan for the last two days was to have the entire division march to Camp Marfa under a tactical situation, making a night bivouac at San Estaban Dam. Camp sites and supplies had been arranged but due to the wishes of the ranch owners on which the proposed camp sites were located, it was not possible to use the camp sites selected, and as there were no others that would accommodate the entire division, the march to Camp Marfa was made under the following situation:

BROWN

The enemy is in general retirement. The hostile V Corps withdrew during the night September 26-27 to the general line: *Nopal-Fort Davis.*

This Corps resumes its attack at daylight tomorrow.

Move your command, less one brigade, tomorrow morning to *Camp Marfa, Texas,* in Corps Reserve, sending one troop of cavalry by motor truck accompanied by Battery A (portée) 1st Field Artillery, and 1st Platoon, 2nd Tank Co., to *Camp Marfa* this afternoon prepared to operate on our left flank. The remaining brigade to follow September 29.

Based on the above situation, a division march order was issued and the division marched to Camp Marfa.

Although there was only one available road and that was very muddy, little difficulty was experienced. The column composed of the cavalry troop in trucks, the platoon of tanks and the portée battery cleared Alamito at 1:30 P. M. and, after traveling over flooded roads, at times using its tractors to pull vehicles out of mud holes, reached Camp Marfa, a distance of about 32 miles, by 7:30 P. M.

On the afternoon of September 29, a critique on the division field exercises was held. In addition to the critique proper, the Commanding General, Eighth Corps Area, and the Chief of Cavalry both addressed the assembled officers and an observer sent from the Chemical Warfare School gave a talk on chemical

warfare in connection with the maneuvers and the possible cases he had observed where chemicals could have been successfully used in connection with the problems.

A review of the division was held October 1 on a large open elevation about 3 miles north of Camp Marfa. The setting was ideal and the troops were at their best. The division commander reviewed the troops and pronounced the review perfect in every detail.

The division then returned to its permanent stations.

Supply

The division exercised general supply control from the time troops left their respective stations until their return thereto, exercising direct supply

Headquarters Troop, 7th Cavalry, Watering at Saur Ranch

control for the Fort Bliss units throughout that period and direct control for all troops during the period the division was concentrated in the maneuver area, all supply agencies of the division being used, augmented by the 49th Motor Transport Company and the 81st Motor Repair Section.

Supply services were established at Marfa, which was the railhead throughout the maneuvers. During the two-sided maneuvers, the two opposing forces were required to select and report daily distributing points and the divisional supply services placed supplies at such points in accordance with stated requirements. Each force was also required to select and report daily collecting stations for men and animals, which were evacuated at the 1st Medical Squadron to Camp Marfa.

During the division field exercises near Alamito the division established distributing points from which brigades and separate units drew their supplies. During this phase the Division Quartermaster Train and the 49th Motor Transport Company were required to transport supplies a distance of about 36 miles from railhead to distributing points. The use of animal drawn trains exclusively under this situation would have been impossible. With the present authorized trains of a cavalry division the radius of action is only eight

miles. To afford the cavalry division maximum mobility it is apparent that some motor cargo vehicles must be available.

Tanks

The employment of the 1st Platoon, 2nd Tank Company, clearly demonstrated the following:

1. That the tanks, in supporting the attacks of the pivot of maneuver, were able to cross the rough open terrain, including dry arroyas, traversed by the cavalry, but at a speed of only about 3 miles per hour.
2. That tanks of the type furnished the division, while effective when able to give direct support to the pivot of maneuver, are too slow to move from their place in the marching column, detruck and move into assault position prior to the launching of the attack. This is especially true when cavalry is operating against cavalry.
3. That tanks, as used in the maneuvers, could not be employed with the maneuvering force.
4. While the type of tank used in the maneuvers has not sufficient speed to be effectively employed with cavalry, it is believed from the results obtained, that a tank with a road speed of 18 miles per hour and able to move across country at a speed of 12 miles per hour on its own traction, will be a valuable adjunct to the cavalry.

Portée Artillery

The use of Battery A (portée), 1st Field Artillery, demonstrated the following:

1. That portée artillery, due to the time required for detrucking and moving into position, has limited use in the cavalry division.
2. That this type of artillery could be used with the pivot of maneuver, but was too slow for attachment with the maneuvering force for direct support in an enveloping attack.
3. That portée artillery could not replace horse artillery in the cavalry division, due to its lack of mobility.
4. That portée artillery, if made more mobile than the unit employed, offers promise of being a valuable asset to the cavalry corps.

Motor Transportation

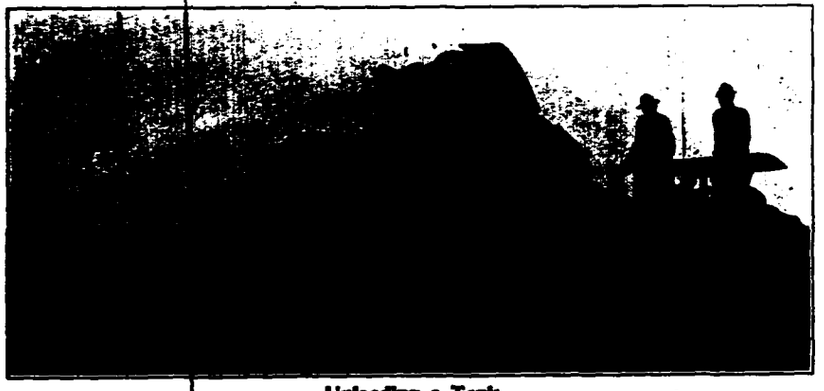
Upon the arrival of the division in the maneuver area, thirteen Class B 3-ton trucks were made available to carry out tests. Some of the trucks were obtained from the Camp Marfa pool and some were sent from Fort Sam Houston.

On September 21, these trucks had been equipped as horse carriers and reported to the 1st Calvary Brigade for experimental transportation of a cavalry troop as a raiding party. The ramps, made of 2" x 12" pine boards, fastened together with three overlapping pieces of 2" x 6", were very unstable, and loading conditions were very bad. The carriers had been improvised hurriedly and side boards spaced from 6" to 12" apart. The tail gates of trucks were used in conjunction with tail boards to close the truck after loading, and ramps were doubled so as to make them the full width of the trucks. Side rails were not used on ramps and no special care was used in loading. After 4 hours and 30 minutes, 38 horses with complete full pack equipment, with the

exception of rifles, were loaded on the trucks and transported a distance of 24 miles after which they were detrucked and ridden 8 miles.

In spite of the poorly constructed carriers, the methods employed in loading and the condition of the roads, it was evident that cavalry could be transported on improvised Class B 3-ton trucks to advantage without impairing their efficiency as cavalry immediately after unloading.

After tests in the 1st Cavalry Brigade, the trucks were turned over to the 2nd Cavalry Brigade, where they were altered and made more safe for the horses and men. Eight trucks were completed with material at hand and turned over to Troop C, 8th Cavalry, for use on the morning of September 27 in the problem of that day. The trucks were well bedded with gravel.



Unloading a Tank

manure and hay, and spotted on a convenient embankment. Loading started before daylight (5:45 A. M.) and trucks cleared the camp at 7:00 A. M. The actual loading was finished in 50 minutes and most of the horses were loaded without any difficulty. They were transported 7 miles and at the termination of the problem returned to camp, where they were watered and fed grain on the trucks and then transported to Camp Marfa. The trucks were pulled out of bad places in the road by other trucks and tractors; worse road conditions could not have been encountered anywhere. The animals, men and equipment were transported about 40 miles and were on the trucks from 5:45 A. M. until 8:00 P. M., over 14 hours. Notwithstanding this, the animals were in good condition when unloaded and could have taken the field for an additional 20 hours that night. The injuries to the horses were due mostly to the construction of the carriers, of a minor nature and preventable. The trucks were assembled at Camp Marfa and 4 carriers were transferred to trucks of the 49th Motor Transport Company for use by troops enroute to Fort Bliss.

During the maneuvers the trucks, in addition to the above, were also tested as field and combat trains.

As a result of the tests conducted, it was concluded:

1. That the transportation of cavalry in trucks (with 6 men and 6 horses with equipment in same truck) is feasible, the size of the command to be transported being limited only by the number of suitably equipped trucks available at the station for that purpose.
2. That movement of mounted men with their mounts and equipment in separate trucks is not as practicable as the method employed above.
3. That the substitution of cargo trucks of the type used in tests (Class B 3-ton) as field and combat trains for animal drawn vehicles is not practicable for cavalry.
4. That the movement of cavalry in trucks appears practicable for distances of 40 miles or more, provided properly equipped trucks are readily available at the station.
5. That under exceptional circumstances it may be practicable to move cavalry in trucks for distances between 20 and 40 miles, if the troops can be loaded without delay and if the physical condition of the animals must be safeguarded for employment at the termination of the truck movement.
6. That the means of converting trucks, as used in the experiments, can be simplified and improved.

Air Corps

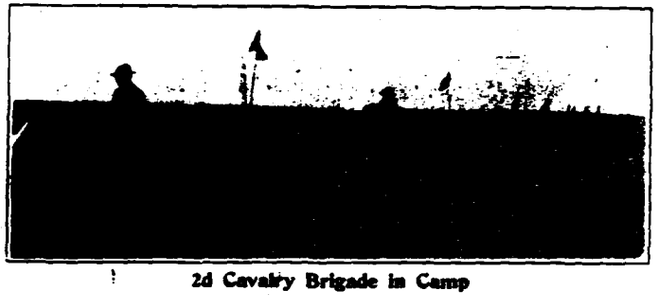
The attached air service functioned in an excellent manner. At times some difficulty was experienced in getting desired reconnaissance missions to the airdrome at Marfa, especially when the division was in the vicinity of Alamito, more than 30 miles away. However, in most cases, reconnaissance planes were able to carry out the desired missions at the times specified.

More difficulty was experienced in the use of attack planes, as in most cases attack missions had to be foreseen and arrangements made so as to have the attack planes flying in the vicinity of their probable objectives at stated times.

General

Needless to say, the experience in the field was of the utmost value to all who took part in the maneuvers. The steady improvement in the efficiency of the division exemplifies the importance of following garrison training by frequent divisional maneuvers.

Many errors were made, but it was observed from day to day that these errors, especially by small units, in most cases were not repeated, showing that valuable lessons were learned and corrective measures promptly taken by the individuals and units concerned.



2d Cavalry Brigade in Camp

Portée Cavalry

Movement by Motor of Troop F, Fifth Cavalry, from Marfa, Texas, to Fort Clark, Texas

By Captain Charles Cramer, *Fifth Cavalry*

It should be of interest to all cavalry officers and also to our brother officers of the other branches of the service to learn that we can move cavalry (horses, men and equipment) by motor transportation as far in a day as infantry can be moved in that time by the same mode of transportation, and still be ready to move out, mounted, in an hour or two after unloading.

I was detailed to return my troop to Fort Clark, a distance of approximately two hundred and eighty-eight miles, in trucks upon the completion of the First Cavalry Division maneuvers.

The troop consisted of two officers, forty-five enlisted men and forty-eight horses, with full field equipment. Twelve Liberty trucks were made available and utilized as follows:

1. One motorcycle for troop commander.
2. Eight trucks for horses (six horses per truck) with equipment of riders and three enlisted men on each (equipment carried on the partially lowered tailgate of truck).
3. One truck for hay.
4. One truck for extra equipment and baggage and for men that did not ride on the trucks with the horses.
5. One truck for rations and baggage.
6. One tanker, used for refueling on road.
7. One truck for spare wheels, etc., for trucks, and oats (not shown in photograph).
8. One G. M. C. truck for officer in charge of trucks (not shown in photograph).

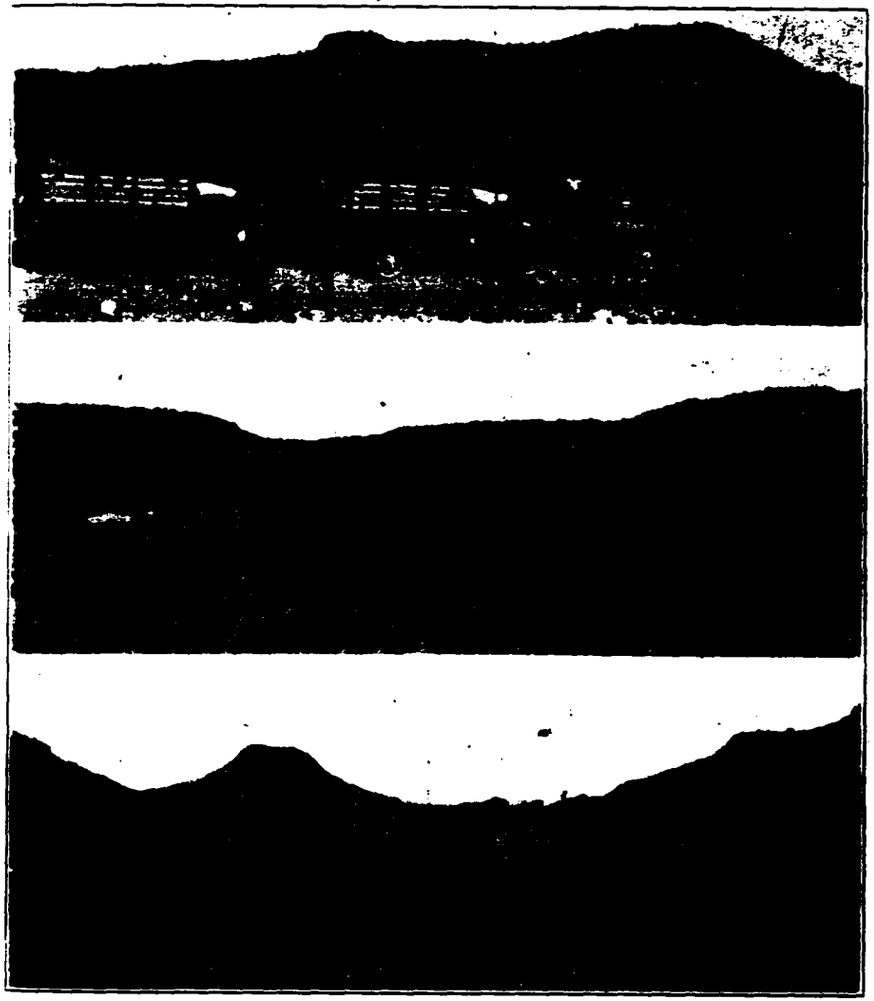
The bed of each truck was fitted with a frame to keep the horses from falling out. These frames were made of 2" x 6" material, and were constructed by the division engineers, under the supervision of Major Mason, Division Veterinarian. They were made high enough so that the average horse could keep his head comfortably out over the side of the truck and still not be able to jump out. The openings in the frame were spaced so that a horse could not get a foot through. Two sets of loading ramps were made of 2" and 2½" material. Side rails were furnished with one set. The ramps were carried on the sides of two trucks, fastened by chains or large iron hooks. The one set of side rails was fastened to the side of a truck with a rope.

The trucks were received about 10:00 A. M., October 2, and the top rails of the frames were rounded by rasping so that sharp edges would not rub or injure the horses' necks or lower jaws. This was better than padding the rail.

Cinders were not obtainable for the floors, so about one and one-half inches of good gravel, with a small amount of sweepings from the picket line, was

put in each truck to make good footing for the horses. This answered the purpose very well.

The troop started loading horses at the end of the troop picket line at 5:30



The Troop Halted on the Road

A. M., October 3, putting six horses in a truck and placing them head and tail, the same as when loading in railroad stock cars. All horses were loaded in one hour and eleven minutes, the first truck being loaded in five minutes and

the last in twenty minutes. The other six took from six to nine minutes each to load. Two sets of ramps were used, loading two trucks at a time. Only one ramp had side rails, which are very essential and make the loading easier and quicker.

The delay in loading the last truck was due to the fact that most of this time was consumed in trying to load an officer's private mount, which we did not wish to risk injuring by forcing him into the truck.

The truck train got under way from Camp Marfa at 6:45 A. M., and arrived at Lozier Canyon at 9:00 P. M., a distance of approximately one hundred and sixty miles. Horses were all unloaded in twenty-two minutes. They were watered, fed hay and, after twenty minutes, were fed grain; all ate very well.

Horses were carefully inspected and nine were found to have abrasions, over half of which were rubbed tails—nothing serious enough to prevent them from being saddled and ridden out.

Perfectly Contented

Condition of roads over the route for the day was excellent, weather fair and cool. The horses rode well, were calm and did not cause one bit of trouble or delay. The only delay was the refueling of trucks about every forty miles, which takes from twenty to thirty minutes.

On October 4, horses were fed grain at 3:30 A. M., and watered at 4:30 A. M. Loading commenced at 4:40 A. M., and was completed at 5:38 A. M. (fifty-eight minutes), loading two trucks at a time.

We moved out from Lozier Canyon at 5:45 A. M., and arrived at Fort Clark at 6:50 P. M., a distance of approximately one hundred and twenty-eight miles. Two of the horse trucks were delayed about one hour on account of broken gas lines and did not arrive in camp until an hour later. One of these trucks carried one set of our ramps, so we could only unload one truck at a time. Horses were unloaded in twenty-five minutes and the same procedure as on the previous day was followed as to water and feed.

The road between Lozier Canyon and the Pecos River was very rough, with many short steep hills, causing the horses to be tossed around considerably and bruising them to some extent. One truck had to be unloaded three times on account of one of the horses getting down. Twenty minutes was lost each time in getting him up and the truck on the way again. After crossing the Pecos River the roads were very good into Fort Clark.

The head of the train reached Devil's River at 2:00 P. M., and halted until the rest of the train caught up and the tanker arrived. Horses were watered from buckets; men had lunch; trucks were refueled and the train was on the way again at 3:30 P. M.

At the time of unloading at Fort Clark, the horses showed signs of what might be called "auto intoxication," by staggering and walking stiff-legged for the first few yards, this being the result of bracing themselves while in the trucks, but it is believed that, after three or four hours' rest, all horses could have been saddled and a twenty-mile march made without any difficulty.

The entire trip was made in thirty-six hours. Of this, eight hours were spent in camp at Lozier Canyon the night of October 3-4, leaving twenty-eight hours actual running time to cover the two hundred and eighty-eight miles, or an average of about ten miles per hour, including stops for refueling and other purposes.

The next morning, October 5, all horses were carefully inspected by the veterinarian and the troop commander and the following noted:

13—rubbed tails.
5—bruised knees.
5—skinned and rubbed buttocks (these were all large horses).
4—skinned hips.
2—bruised sides.
1—skinned hocks.

The veterinarian, Captain Rogers, concurred with me that all horses that were fit for duty when leaving Marfa, Texas, were at this time ready to take the field. A number of horses had bruises from stepping on each other or from kicks, which were not any more than would have occurred if they had been shipped by rail. The large additional number of abrasions noted on the second day, over the number on the first day, was due to the rough roads between Lozier Canyon and the Pecos River. The other officer, Second Lieutenant Charles H. Valentine, and all the enlisted men were very much interested and all worked hard to make the trip a success. Also Captain Shelby Newman, the officer in charge of the trucks, and his drivers worked hard and late each day and all deserve much credit in making this experiment a success.

The following recommendations were made in submitting the report on this trip:

1. That all ramps be made stronger and of lighter material, and that all ramps have side rails or, if side rails are not available, then the ramp must be the same width as the truck.
2. The frame work on the truck must be made more substantial, especially the front and rear ends, to keep the sides from spreading, as a great deal of trouble was experienced in keeping the rear end from spreading; all had to be roped.
3. Provisions must be made so that the end horses, front and rear, will not have their sides bruised or skinned from rubbing. This can probably be best taken care of by using a blanket and surcingle on the end horses.

The Cavalry–Air Corps Team

By Major H. H. Arnold, *Air Corps*
Commanding the 16th Observation Squadron at the Cavalry School

FOR years prior to the time when aircraft became a practical arm of the service, military leaders had thought of, and searched for, some other means than those available for securing information—something with which they could deliver a blow to the forces of their opponent, located in areas beyond their most advanced lines. They wanted something in addition to their cavalry, infantry and artillery. All manner of devices were tried out in the search. Observation posts were elevated as much as possible on trees and high hills and tall wooden towers were constructed, but the want was not satisfied.

The balloon had scarcely made its appearance before the French were trying it out in battle. This lighter-than-air craft was used more or less successfully in the battle of Fleurus in 1794. Apparently the results obtained from its use justified further trials, for these large gas bags were sent up in many of the later battles of the same period.

Napoleon evidently thought that the balloon was not the last word in military aircraft, for he granted permission to one of his officers for the construction of a mechanically driven airship, as his Grand Army approached Moscow in 1812. He was seeking something by which he might penetrate the fog of uncertainty which always surrounds a battlefield. This airship was not a success and so the world's greatest general never learned what advantages might be derived from aircraft during battle.

In our own military history aerial reconnaissance was first attempted in the Civil War, when General McClellan used a balloon during his Peninsular Campaign. He must have found it worth while, for he sent that balloon up during practically every battle from Yorktown to Gaines' Mills. General Fitz John Porter evidently thought that he could secure results by using the balloon that he could get in no other way, for he personally made over a hundred ascensions during the battle of Yorktown. On one occasion the balloon broke loose and General Porter was carried over the enemies' lines, but fortunately the wind shifted and brought him back to the rear of his own lines where the balloon landed. From the meager reports available, it appears that information of great value was secured by the passengers of this balloon during its various trips.

Aircraft developed so rapidly under the stimulus of the World War that the armistice was signed before the full worth of aerial vehicles was realized. The necessity for an Air Service-Artillery team was fully realized before that war started. The advantages of an Infantry-Air Service team were just beginning to be realized when the war ended. The Cavalry-Air Service team was never fully developed. So little was known concerning the scope of activities of aircraft at the beginning of the war that the co-operation between aircraft and other arms came as a result of necessity. Thus the air service

was working almost continuously with the artillery and infantry, but the opportunities for a Cavalry-Air Service team became fewer and fewer as the war progressed. In only one theatre of war was the cavalry given a real insight into the many varied activities of the air service: that was during General Allenby's Palestine campaign.

With the elimination of all controversial ideas and theories, it is apparent that a close relationship must exist between the cavalry and the air corps. Each must understand the powers and limitations of the other, for both will be pushed to the limit of their powers at the outbreak of war. This mutual understanding must be consummated in time of peace, for it is too late to acquire it after war has been declared. Each has its own missions to perform and neither can entirely eliminate the other from the picture, but their field of activities greatly overlap.

Large cavalry commands find their horses greatly fatigued after a period

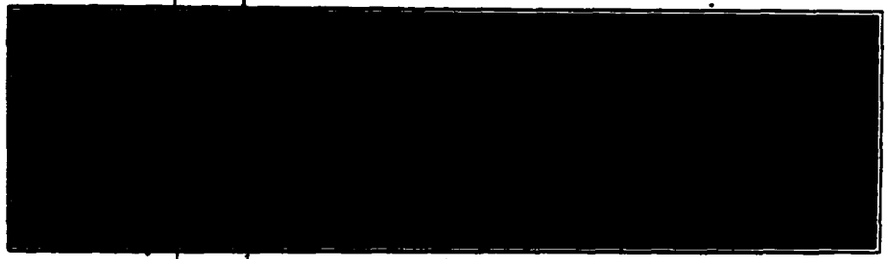
Smoke Screen Laid from the Air Through Which Mounted Cavalry can Attack the Hill on the Left with Small Losses

of two weeks or a month, during which daily marches of thirty or more miles have been made. Cavalry scouting parties can cover the immediate front of an advancing army to a limited extent only. Beyond that they can not secure information. The limit may be imposed by distance or the presence of the enemy in large bodies. The area which the cavalry does cover will be searched most thoroughly, but there is a limit to the endurance of both horses and men: accordingly the necessity for an auxiliary service.

With aircraft an entirely different condition exists. Thirty miles is less than a half hour's flight. Heavily occupied areas which stop the advance of ground troops can be flown over or around. The distance, which an airplane can go beyond our front lines, is limited only by the amount of gasoline that the plane can carry or by the aerial resistance encountered. Well-trained pilots and observers can secure details concerning the movement of troops on the ground which are almost unbelievable. Cameras make pictures of objects which escape the human eye or which, if obtained, may be forgotten during a long patrol on the ground or in the air.

Aircraft can be the cavalry's best friend or its most dangerous enemy. A successful attack upon the bunched led horses of a cavalry command will transform a mounted force into sorry looking foot soldiers in a remarkably short space of time. The effect upon the general plan of operations of such an occurrence needs no further discussion. Then again an aerial attack down the column of a marching cavalry force will disperse that column so that it will take hours for reassembling. Horses must be exceptionally well trained to remain in the vicinity after a few bombs have exploded nearby.

The Cavalry-Air Corps team must function and function well to prevent such occurrences as those outlined in the preceding paragraph. During the peace-time training periods, the horses must be trained to hear, but not heed, the peculiar whine and the terrific roar of the diving plane. The troopers must be trained to see at a distance and recognize the planes as friendly or hostile.



This Formation Presents a Profitable Target from the Air

Air scouts must be able to quickly discover low flying attack planes and instantaneously give warning of their approach.

Unit commanders must know the proper formations to assume to minimize the probabilities of their units being observed by the planes. They must also know the formations which will make the targets presented so dispersed that the planes will not attack. If the attack is made, certain formations will insure fewer casualties than others. Certain things, whether they be in the open or under cover, attract the eyes of the aviators and must be eliminated as far as possible. At times there are conditions existing on the ground which make it impossible for aviators to see mounted men, even though they be out in the open.

Troops can be made to realize these conditions only by the air corps and cavalry working hand in hand during their training. No unit commander can definitely assume that a certain type of foliage will completely conceal his command until he has tried it out against the overhead eyes. How many cavalry unit commanders know whether it is the shine from the polished brass on the horse equipment, or the smooth saddle seat, which betrays the presence of the mounted men to the aviators several miles away?

Cavalry to perform its proper function and be of value, must not be unduly delayed en route to its objective. How can it keep moving if airplanes make intermittent attacks against all the concentrated units in the column?

However, there are formations which will permit the cavalry to continue its march in spite of the planes and these formations will permit the different subdivision commanders to retain absolute control of their units. These formations can be assumed very rapidly and provide a very poor target for the attacking airplanes.

The average air corps officer knows little or nothing of cavalry formations, tactics or organization. These officers unfortunately have very little opportunity of securing such information. In order to give maximum service to the cavalry, it is most important that the officers of an air corps organization, working with the cavalry, understand something of what the cavalry does and how it does it. This holds equally true for the observation pilots, who are part of the Cavalry-Air Corps team, and for the attack personnel, who will be called upon to delay or annihilate enemy cavalry.

The first mission of the Cavalry-Air Corps team is to work together in time of peace and determine and prove certain fundamentals, which are essential

This Formation Presents an Unprofitable Target from the Air

to successful operations in time of war. These fundamentals can not be learned without actual contact between the two arms. They are not all learned at once nor do they come by intuition. Some of them are developments from experiments which at first glance appear to be entirely unrelated. Intimate contact, close association, mutual understanding are essential to the proper working of the team and they can not be obtained in two or three days.

The cavalry and air corps have been working together at Fort Riley for several years. The value of close association was demonstrated during field exercises recently held by the Second Cavalry. The 16th Observation Squadron was operating three entirely different types of planes during the exercises. All of the DH and the Douglas 02C airplanes were enemy aircraft. The Douglas 02 was friendly. There is very little difference between these planes; and between the 02 and the 02C the casual observer finds it rather hard to distinguish one from the other, when they are in the air. However, during these exercises the troopers almost instantaneously took cover upon the approach of a hostile plane. Yet when an 02 came into sight, the panels were displayed and lines marked even before the Very pistols were fired. The enlisted men learned the slight difference between the types of planes by studying the profiles. The Cavalry-Air Corps team had been developed as a result of long hard work and the results obtained amply repaid the efforts expended.

There are four separate and distinct types of planes, which may come into contact with cavalry commands: pursuit, observation, attack and bombard-

ment. However, the two types which will probably be most closely associated with the cavalry are observation and attack. Accordingly, every cavalryman should know intimately the performances of these two types and also something of the others.

The necessity for an observation squadron being part of a cavalry division has been recognized and provided for in the latest tables of organization. Observation aviation is used, as its name implies, for reconnaissance, liasion, contact and photography. It can, if used to its fullest capacity, be of utmost value to a cavalry command.

Observation planes are normally two seater biplanes. They have a speed of from 125 to 135 miles an hour, but their cruising speed is close to 100 or

Latest Type Douglas O-2C Army Observation Plane

110 miles an hour. These planes can stay in the air for periods of five to seven hours. They carry a synchronized gun, which shoots through the propeller straight to the front, and two flexible guns, which are fired from the rear cockpit. Normally observation planes operate from altitudes between 2,000 and 5,000 feet. However, they can climb to altitudes of from 10,000 to 15,000 feet with a full load. Photographs are usually taken from the higher altitude.

Some of the missions required of these planes are: close reconnaissance of fortified areas, location and disposition of forces in strongly held positions, distant missions beyond the enemy lines, contact missions with our own troops, photographic flights, and command missions. A cavalry command might require any or all of these missions from its accompanying air service.

On a command mission, a staff officer will normally be sent out to secure some particularly desirable information. The tendency to use staff officers for this purpose will increase rather than decrease. It should not be expected that any officer, on his first flight, will be able to return with an intelligent report. The first two or three flights are far from being pleasant to the average officer. Accordingly, all staff officers, as a part of their peace time

training, should be required to make many extensive flights and to actually secure data of military importance while on the flights. The ten-hour aerial experience course, as laid down by the War Department, provides an excellent means for developing staff officers who can accomplish satisfactory command missions.

Attack aviation is a new development. So far it has not reached a stage where exact principles can be laid down with regard to performance of planes. The method of using attack planes, however, has been definitely decided upon. The planes approach the targets at a very low altitude, deliver a surprise attack with machine guns and bombs and get away as quickly as possible. By flying very low the element of surprise is almost certain to be obtained.

Latest Type Curtis Army Pursuit Plane

when operating against partially trained troops. In the attack the planes fly so low that they barely miss the tree tops, skim along just clearing the ridges and swoop down into the valleys. Their presence is first known to the personnel attacked when the planes thunder into sight from beyond a tree or over a ridge.

Attack planes are a very powerful weapon, as they carry both machine guns and bombs. The number of guns available for shooting to the front vary from two to six. In addition there are two guns mounted in the rear cockpit for firing over the sides of the fusilage. Each plane can carry ten fragmentation bombs, weighing 18 or 25 pounds apiece. These bombs have an effective range on exploding of about 60 feet. They are specially designed for use against troops.

While attack planes will seldom be attached to a cavalry command, they will probably be used quite often against cavalry. Accordingly the armament, method of attack, possible damage inflicted and performance of the planes should be the subjects of continued study by cavalry personnel. In fact, cavalry personnel should know almost as much about attack aviation, for

self-preservation, as they do about observation aviation, for securing information for further operations.

There are many cases when it is possible for attack aviation to be of great assistance to cavalry. For instance, if during an advance the cavalry is held up by a machine gun nest, or other point of resistance, too strong to be overcome, the assignment of attack aviation will undoubtedly be greatly appreciated. Then again, during a withdrawal, if the pursuit becomes too persistent, an attack by airplanes upon the main body of the pursuing force would provide a welcome relief. It might also happen that our cavalry was pursuing a retreating enemy. Imagine the assistance to be obtained from attack aviation throwing the retreating columns into disorder, blocking the roads ahead of the troops with overturned trucks, wagons or guns, blowing up bridges ahead of them, or even causing the retreating forces to deploy and thus slowing up the retreat.

Normally pursuit aviation comes into contact with ground troops very little. The planes ordinarily operate at very high altitudes and can scarcely be seen from the ground. Their missions are to protect the observation, bombardment and attack planes from hostile attacks, drive away enemy planes from attacking our troops and, generally speaking, to clear the air of hostile aircraft. Pursuit planes are single seaters with a high speed of close to 170 miles an hour. They climb rapidly and are very maneuverable. Before and during combat they may dive at their objective until the planes attain a speed of almost 300 miles an hour. The high speed and extreme maneuverability of pursuit planes provide the greatest menace to planes of other types.

Bombing planes may be of some assistance to cavalry, but their operations will be so remote from the ground troops that the effect of their endeavors will probably never be fully appreciated. Bombardment aviation is a weapon of destruction. It is used against targets of great importance where the bombs will cause considerable damage. Ammunition dumps, depots, factories, railroad yards, ships, docks and concentration camps are typical targets for bombardment aviation. These planes carry from two to four thousands pounds of bombs. The bombs vary in size from 300 to 4,000 pounds each, depending upon the target against which used. Bombardment organizations will probably never form a part of, or be attached to, a cavalry command.

From the foregoing it is seen that the Cavalry-Air Corps team will probably be made up of Observation Aviation and such cavalry units as it may serve with.

The Cavalry-Air Corps team is a strong combination and as important as any team in the army. Their work interlocks and intertwines to such an extent that no exact line of demarkation can be drawn separating their fields of reconnaissance. Their functions will overlap from time to time. Accordingly, it is of the utmost importance that they work in harmony and synchronize their efforts. It is essential that they get together in times of peace to secure the maximum efficiency in time of war. The cavalryman understands his horse and the airman understands his mechanical bird, but each must know at least the fundamental principles of how the other uses his steed.

National Guard Training

By Captain Kramer Thomas, *Cavalry*
Instructor, Idaho National Guard Cavalry

THE National Guard system, eminently advantageous economically and socially as a substitute for a large standing army, has certain inherent difficulties which must be accepted as part of the price of its expediency. The successful training of the Guard is accomplished in the degree to which these innate obstacles are overcome.

Outstandingly, the greatest handicap under which the Guard must work is the shortage of training time. One drill of one and one-half hours per week and a two weeks' field training period per year are the allowance of time in which the Guard is expected to make itself ready to fulfill its mission. It requires nothing more to demonstrate the value of each hour, nor to prove that any training method must have as an integral part of its purpose the most drastic economy of time. "Time-efficiency" must be the frame-work of all training plans. This is a problem peculiar to the Guard alone, and its solution must come from the Guard. Outside of a not too analagous experience in training the war army, the regular service has no back-ground from which it can lend assistance or give advice. The problem is further complicated by the large annual turn-over (around 30%) in the enlisted personnel, which in effect acts to further circumscribe training time.

Training results, then, are largely the reflection of the principle of time-efficiency. Since the reorganization following the war this idea has come to be accepted as a truism by the Guard and, under the whip of necessity, some remarkable results have been accomplished, and modifications of training ideas are in process of development which will be of tremendous value.

There are two directions in which the search for the solution of the training problem may lead. The Guard may be restricted to elementary training as a first objective with a view to thoroughly grounding it in basic training, and only advanced to a higher objective when tests have shown the first objective to be reached. This is the present policy of the Militia Bureau, and under present conditions is conservative and sound. Or the training may be carried, less thoroughly as to detail, over a broader (and for the troops a more interesting) field. Each plan has its good and bad points, and each requires a degree of supplemental, post-mobilization training before the organizations are ready for use.

It is my belief that the second method, the plan of covering more varied and more advanced subjects, is conducive to more actual progress than the first, as it facilitates the maintainance of enthusiasm and study; but it is a dangerous system in the hands of an inexpert leader, and is difficult to keep under supervised control. In following the first, or intensive method, the Guard for the present must forego the advantages of the second, but I believe

that the troops are slowly working forward, within the limitations of the Militia Bureau training doctrine, to a point where it will be possible to extend the scope of training so as to derive the obvious benefits to be gained from extensive training. This progress is due to self-taught, imperically acquired methods of training which are, in turn, the results of the study of time economy. The training of the Guard can advance only as it finds new, or better, methods of learning more in a given time.

Many of these newly learned methods of training are still in the experimental stage, others do more harm than good, but a few have emerged from the laboratory of practical test, which are becoming recognized as thoroughly sound. Among these I consider the following as most important:

1. As the selection of officers and noncommissioned officers goes on, more and more care must be given to seeing that the replacements are above average intelligence, still in the habit of study, and sufficiently nimble-witted to be able to reason deductively from a principle to a given case. The Guard must be trained by its officers, and they in turn must be taught in the very limited time they can spare from their private lives, in addition to what time they give to work with the troops. Naturally, the more the leaders can learn in the limited time available for their instruction, the more they can impart to troops. Long strides can be made by the Guard in this direction, not because the officer and noncommissioned officer personnel is not good (it is excellent), but because the peculiarities of Guard service place a premium on the leader who is quick to learn.

2. Tactical instruction should be increasingly applicatory, the exercises being prefaced by a terse explanation of the principle involved, followed immediately by a demonstration. Besides its native merit, this is a method of instruction to which the men are accustomed; it is the way they are taught their work in civil life. Wordy lectures on tactics to men who have come to drill after a day in an office or factory result in nothing but putting the listeners to sleep.

3. Extra training time should be encouraged by every means possible. Saturday afternoons, holidays, and other spare time, can be efficiently utilized for exercises, field meets and the like. These extra hours can be made popular with the men and, after a reasonable degree of proficiency is reached in the regular drills in horsemanship, they go far toward increasing the riding efficiency of the command.

4. Every cavalry unit should have a suitable place to ride, the year through. Fundamental as this fact is, there are many northern troops who are dismounted all winter for want of riding halls. This is a tremendous waste of training time, as an entirely disproportionate number of drills must be put in on dismounted work. Providing riding halls is a state function, but many Guard cavalry organizations are taking the initiative in this matter, raising funds and building their own halls.

I have said that there are also many ideas still in process of development whose aim is to more efficiently utilize training time. These will require more time for testing before they can be pronounced good. I only mention the following by way of illustration:

In training the noncommissioned officers and the junior officers in the more common forms of tactical employment (advance guard, patrolling, etc.) a "normal" formation, action and solution, is taught, the student being made to understand that this normal can be modified to suit the circumstances. This is a great time saver, as it immediately gives the student something tangible to grasp. He is then, at the very beginning of the instruction, ready to go ahead with interesting applicatory exercises. Although this method has had but little testing, I have observed that fewer mistakes are made in the applicatory exercises when taught by this method, either through applying the "normal" where a modification should be used, or in using an erroneous modification, than under the system where the principle alone is taught and perfection comes only from solving a multitude of problems, a method too prodigal of time for efficient use with the junior officers and noncommissioned officers of the Guard.

The Guard has had seven years since the post-war reorganization. During that time it has had to study and analyze its problems and begin their solution. It is significant that so thoroughly decentralized an organization, with so little opportunity for exchange of training ideas, should find most of its units arriving at about the same conclusions as to how the training problems should be met. And it is a very considerable achievement for the Guard to have advanced to its present satisfactory condition.

At present, the Guard cavalry is limited to troop objectives in training. The training of squadron and higher headquarters is being done away from the units. With the Guard over the whole country realizing that the key to success lies in a proper understanding of time-efficiency, it is not unreasonable to suppose that many units will soon be passing tests which will move them on to squadron and regimental objectives, permitting the headquarters and staffs to train directly with their troops. When that state is reached, the Guard cavalry will be ready for service just as soon after mobilization as the remounts it will require to fill its complement of horses are ready for use.

Field Artillery With Cavalry

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Recently Artillery Instructor at the Cavalry School

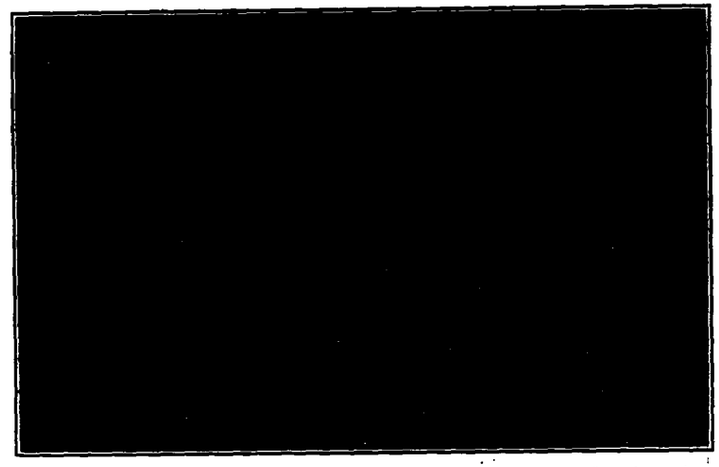
DURING the World War, we gained considerable experience in employing field artillery with infantry, but when it comes to field artillery supporting cavalry, our experiences are very remote. Frequent mention is made of the Infantry-Field Artillery team. But how infrequently do we hear any one speak of the Cavalry-Field Artillery team? And yet, these two branches have always felt a sympathy for each other, a sympathy due, no doubt, to their common comrade, the horse. Few of us realize that our field artillery has had no experience in typical cavalry operations since the Civil War. In our Indian Wars, in which the cavalry rendered such valiant service, no field artillery was engaged. In the Spanish and Philippine Wars, our cavalry unfortunately was separated from its horses and fought on foot. During the Punitive Expedition in Mexico, the field artillery did a lot of marching but I doubt whether it fired a single round with hostile intent. And in the World War, many cavalry units fought as field artillery, and made good field artillery at that.

It is, therefore, not at all surprising to find a general impression existing today, that the employment of field artillery with cavalry is practically the same as that with infantry. Such, however, has not been the experience of the principal belligerents in the World War, nor is this sameness to be inferred from our Field Service Regulations.

If we carefully study our FSR and the important cavalry operations during the World War, we shall find that success can be attained when the important characteristics of cavalry are fully exploited and the employment of the field artillery is adapted thereto. The outstanding characteristic of cavalry, wherein it differs from infantry, is its mobility. The more restricted this mobility, the nearer will cavalry combat approach that of infantry. When cavalry is separated from its horses or transport, it becomes infantry in fact if not in name and adopts the combat methods of the latter. This mobility endows cavalry with the ability to carry out certain combat actions which it would be difficult for infantry to execute. For example, cavalry can move by bounds, quickly transport its fire power to a critical locality, operate at a considerable distance from the main forces and often by surprise, and operate on an extended front with wide intervals between its combat groups.

Now, all of these militate against centralized control of field artillery, so desirable if we want to get concentration and maximum effect of artillery fire. Such centralized control is usually possible when supporting the slower moving combat action of infantry. The field artillery then has sufficient time to reconnoiter its positions, to select good observation points, and to establish its indispensable communications net. All of these facilitate centralized control and, therefore, concentration of fire. On the other hand, the nature of cavalry

combat and the wide front on which cavalry operates make it difficult and frequently impossible to attain this. However, our FSR also accept the principle of decentralized control of field artillery, and clearly indicate the situations where centralized control must go by the board and the principle of decentralized control applied by higher commanders. This should be done when the situation is still obscure and must be cleared up by reconnaissance and security detachments; when visibility of terrain is poor and observation is restricted; when there is not sufficient time for organizing a suitable communications service; when the command is greatly extended; or when the battle breaks up in a series of separate combats.



Part of 82d Field Artillery Battalion (Horse) in 1st Cavalry Division Maneuvers

When we analyze these situations, we find that they all have special application to conditions that will confront field artillery when operating with cavalry. Cavalry is our principal agency for ground reconnaissance and security. Due to its mobility, it operates on a wide front, particularly in a delaying action. Its combat frequently moves so rapidly that there is no time for laying any telephone lines. The air service can not tell us what lies hidden in close or broken terrain. Such terrain must usually be cleared up by the cavalry. When the pursuit of a defeated enemy begins and the action breaks up into a series of separate combats, the first agency a commander thinks of is his cavalry. When we speak of typical cavalry missions, our mind pictures its reconnoitering, covering, delaying and pursuing missions. All of these require a certain amount of decentralization in control of field artillery; in the pursuit our FSR calls for a "wide decentralization." In typical cavalry operations it is, therefore, incorrect to keep the field artillery under

centralized control and resist decentralization.' The art comes in knowing when and how to decentralize.

All of these things show how important it is for all cavalry commanders, certainly down as far as troop commanders, to understand the employment of smaller artillery units. If they do not, we will have the same fiasco that attended the use of the accompanying gun with the infantry during the war. In the next war, any cavalry lieutenant in the service today may roll out of his bunk some morning and find a 75 mm. gun or platoon assigned to his command. Instead of looking on it as an encumbrance, he should be thankful that he has at his disposal a powerful means for carrying out his mission. Unless he understands how to use it, he may find that he has a white elephant on his hands. He should know enough about field artillery to understand its characteristics, fire power and mobility; appreciate its limitations and the difficulties that confront the field artilleryman; assign it appropriate missions; take advantage of its support to exploit his own mobility; cooperate with his field artillery to insure a successful outcome of combat; and be able to disable any captured artillery that cannot be dragged off.

The forward displacement of artillery in a cavalry column is usually very easy because cavalry can march on both sides of the road, leaving the middle of the road free for wheeled and motor transport. If this is not done habitually in a cavalry command, then orders must be issued permitting the artillery to pass on one side. On a march averaging 25 miles a day, horse artillery can keep up with cavalry, day in and out, when the rate of march does not exceed 4½ miles an hour. For a single day's march, it can maintain a rate of 5 to 5½ miles an hour; for short distances up to 7 miles an hour. A forced march of 50 to 60 miles has been frequently made by batteries. Such a march is made, not by increasing the rate of march, but by increasing the duration of the march. Portée artillery can maintain a rate of 8 to 10 miles an hour on good roads and cover a distance of 100 miles in a day's march.

All cavalry commanders must remember that timely arrival of artillery does not necessarily mean prompt opening of accurate fire. The former depends upon the mobility of the horse or motor transport, which we know. The latter depends upon the mental alertness, not of one but of several men, which factor we do not know. Very often delay in opening fire is due not so much to a suspected mental inertia of the artillery commander as it is to lack of foresight of cavalry and infantry commanders. The latter often forget all about their artillery, or fail to give proper and timely instructions so that their supporting artillery commander can look one or two jumps ahead.

The preparation of fire does not take much time, because every good field artilleryman can apply short cuts appropriate to the situation so that his battery will be able to open fire as soon as it is in position. But a proper understanding of the mission, the reconnaissance for position, the transmission of orders, and the establishment of communication, all these take time and foresight. Avoidable delays affecting these preliminary measures are usually the cause of delay in opening effective fire. Before a cavalry commander complains of the failure of his artillery to give him a timely and effective support, he should quiz himself on the following points:

1. Have I kept my artillery commander constantly informed of the situation from start to finish?
2. Have I given him an opportunity to make a reconnaissance and consulted him before formulating my plan of action?
3. Have I kept him informed of my intentions so that he can think one or two steps ahead?
4. Does he know the mission of the command, my plan of action and the scheme of maneuver and location of the supported troops?
5. Have I given him a mission which will make the most effective use of the artillery?

If cavalry commanders will consider these questions, I am sure they will never have any regret for having depended upon their artillery for support. The more effective that support is, the more complete will be the success of the cavalry.

The orders of a cavalry commander to his attached artillery should assign a definite support mission conforming to his scheme of maneuver, indicate the general location from which this mission is to be executed, see that the road is cleared for the artillery to reach its position, say when fire is to be opened, and prescribe the liaison to be established.

All the details of execution should be left to the artillery commander. All the cavalry commander need do after that, is to keep his artillery commander informed of what is happening and what he intends to do, and to see that his artillery has reasonable protection. Let us see how these things would be done by taking up a few situations involving the use of small artillery units with cavalry in different situations.

Reconnaissance

A reconnaissance detachment composed of Troop A, with a machine gun platoon, an armored car section, a 75 mm. gun section, two motorcyclists and a radio set attached, is given a distant reconnaissance mission. Before moving out the captain of Troop A should inform his artillery commander of the mission of the detachment, his plan of action, the march formation of the detachment, the place where he expects to gain contact with the enemy, the degree of readiness in which the artillery should march, and where the commander will march.

The detachment would probably move out in the following march formation:

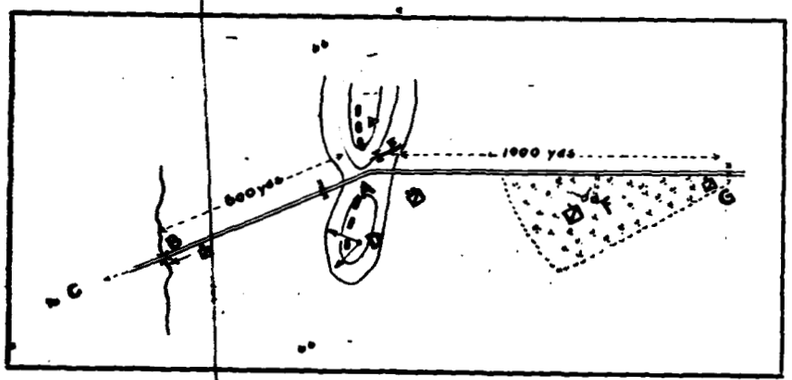
Advance guard: Point: Armored car section with one motorcyclist, preceding the advance guard by bounds to each successive terrain line or to a line of exploration one to three miles distant. *Support:* One platoon of cavalry, with a machine rifle squad attached, preceding the detachment by about one-half mile.

Main body: The rest of the detachment with the 75 mm. gun near the

tail, but followed at several hundred yards by a squad as a rear point; or the 75 mm. gun section may march between the two platoons of the main body.

Since a reconnaissance detachment is more or less isolated, it is apt to receive a surprise attack on its rear at any time. The 75 mm. gun section should, therefore, not be left trailing the column, but should be secured in the column. The march depth of the detachment will vary between 1½ and 3 miles, depending upon the size of the bound made by the advance guard and its armored car point.

Let us assume that about one-half hour before arriving at A (See Sketch No. 1), the first hostile patrols are encountered. The captain decides to halt at A in order to make his periodic radio report to the division and to await the results of reconnaissance by his patrols and armored cars, which have ad-



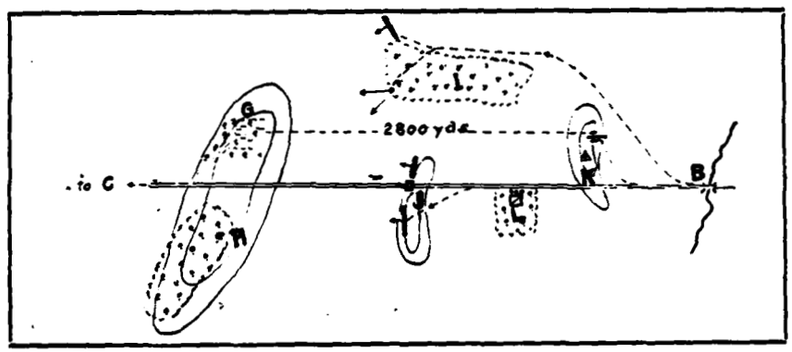
Sketch No. 1

vanced in the direction of C. Being in hostile territory, the detachment would have to provide for its security while resting. The captain's order would probably be as follows:

"We halt here for one hour to await results of our reconnaissance in the direction of C.
"The support will establish a march outpost at A, barricading the road against motor traffic. It will send forward a squad with machine rifles to cover the crossing at B, and patrols to cover our flanks.
"The machine gun platoon, in position on that knoll at D, will cover the barricades and provide anti-aircraft protection.
"The 75 mm. gun section will go into position north of the road near E, prepared to open fire on any hostile column or armored cars advancing from C.
"The rest of the detachment will take cover in the woods at F, where the radio will be set up. One squad will barricade the road at G and protect our rear.
"Led horses in the woods at F.
"I shall be at the house at F."

Here we have an example of the employment of a single gun in a situation that will frequently confront cavalry under present day conditions. With every "flivver" a potential armored car, simply by mounting a piece of boiler plate in front of the hood and a machine gun on the front seat, every cavalry unit must take measures to prevent surprise and to protect itself on

the march and at a halt. The 75 mm. gun is the weapon to use for defense against armored cars and to interdict the advance of any hostile column. It should be emplaced near the road with less than dismounted defilade (allowing the enemy to be seen through the sights) so that it can, with direct laying, bring an enfilade fire to bear on any armored cars or hostile columns before they reach the crossing at B, and continue this fire up to the barricade. It should also be so emplaced that it can be swung around and bring fire to bear on the barricade and road to the rear. The most favorable place for the emplacement of the gun would be at a bend in the road. It should be laid on a straight-away stretch of the road in the direction of the enemy, at a range of about 2,500 yards. All preparations are made to fire a volley of six rounds on a point of the road that must be traversed by the enemy. If



Sketch No. 2

the hostile armored car succeeds in passing through this barrage, the range is shortened by 500 yards or more to the next favorable point where the volley is repeated, and so on. With an enfilade fire down the road, a direct hit should be obtained with six rounds at ranges under 2,000 yards.

After halting at A for one-half hour, the captain received information that his armored cars and patrols received considerable hostile rifle and machine gun fire from the ridge G-H, as they approached C, but were unable to determine the strength of the hostile force (See Sketch No. 2). In order to clear up the situation, the captain decides to advance via B and make a reconnaissance in force. When the head of the advance guard reaches K, he issues the following order:

"We attack the enemy on the ridge G-H, enveloping his left.
"The advance guard will secure the ridge at J, advance astride the road and attack the enemy in front.
"The 2d Platoon, with machine gun platoon attached, will advance under cover to the woods at I and attack in the direction of C, enveloping the enemy's left flank.
"The 75 mm. gun section from position on this hill (K) will protect the development and support the attack. On red rocket fired from I, it will neutralize the farm buildings at G. When this locality is captured, it will move forward to the ridge G-H.
"The rest of the detachment will be in reserve under cover at L. Assembly point at C.
"I shall be with the pivot at J and will advance along the road to C."

Here we have a situation showing a reconnaissance detachment supporting by attack the action of patrols held up by stronger hostile forces as indicated in FSR 189. The captain had three ways open to him for employing his 75 mm. gun:

1. Have the section trail the detachment until actual resistance is encountered and a target is presented on which to fire. The gun would probably not be near a favorable position to fire, or by the time it reached such a position, the target would have disappeared. Neither would the gun be able to give any protection to the column while passing over unfavorable ground.

2. Have the section accompany the detachment by bounds, taking position first at K to cover the advance and deployment, and then change position forward to J to support the attack. This method would be advisable in supporting infantry which moves slower. From K, the gun could cover the advance to the ridge J and the woods at I. As soon as the leading infantry elements reach this line, the section would move forward at a trot and be in position at J to support the attack before the infantry completes its deployment. With a platoon of two guns, the advance could have been covered with one gun in position at K while the other advanced to J to be later joined by the rear gun.

3. Occupy a single position from which the gun can cover the deployment and support the attack. While the position at K is more distant, it offers excellent observation and is within effective range of the objective. We must keep in mind that cavalry can move rapidly and quickly transport its fire power to a critical locality. Therefore, we shall have very little time for a change of position. As long as the position at K offers good observation of the hostile objective and particularly of the critical locality at G, against which the decisive attack is to be launched, a single position is preferable. The first consideration in the selection of any position is good observation. If this is assured, a thousand yards more or less in range does not make much difference at ranges under 4,000 yards. Here again, the gun will take a position with less than dismounted defilade. As soon as the gun is in position, it is laid on the road at the ridge G-H. Fire is opened on the first suitable target that discloses itself, preferably on machine guns. On red rocket, the fire will be switched to the farm yard at G and delivered at a rapid rate. This fire will cease or be lifted to some other point when the attack arrives within 200 yards of the objective.

Advance Guard

Let us now consider the employment of field artillery with a cavalry advance guard. Our FSR lay down three important principles governing the employment of artillery which apply to a cavalry advance guard:

"233. A cavalry advance guard moves by bounds from one terrain line to another."

"231. As soon as the situation indicates the necessity for artillery support, the advance guard artillery marches in a state of increased readiness for action. One echelon of the artillery takes up a position in readiness or in observation, while the other moves forward to an advanced position. The artillery thus successively advances by echelon from position to position."

"446. . . . As far as practicable the commander must insure that troops do not come under hostile fire without artillery protection."

Let us see how these principles should be applied.

An advance guard with a battery attached is advancing against an enemy reported on the previous day. Through his reconnaissance detail with the leading cavalry elements and from the map, the captain of Battery A should determine, as soon as the march is begun, the successive suitable artillery positions along the route of march. Let us assume that each of the successive terrain lines to which the elements of the advance will make their bounds offer good observation of the intervening ground to the next terrain line in front, and that the average distance between these successive terrain lines is about 2,500 yards, which would be the case in ordinary terrain.

Now, this distance is too short to justify a displacement of a battery. As a general rule, if observation permits, a unit as large as a battery should be displaced about half its maximum range. For the 75 mm. gun that would be about 4,500 yards.

By dividing our advance guard battery into two echelons of a platoon each, that leap frog each other as the column advances, we will have each echelon making a bound of 4,000 to 5,000 yards, conforming more or less to the bounds made by the cavalry. In this way we will always have some artillery in position when support is needed. As long as contact with the enemy has not been made or is not imminent, the advance guard artillery would, of course, not be committed to any position but would continue to march in the column at the tail of the reserve.

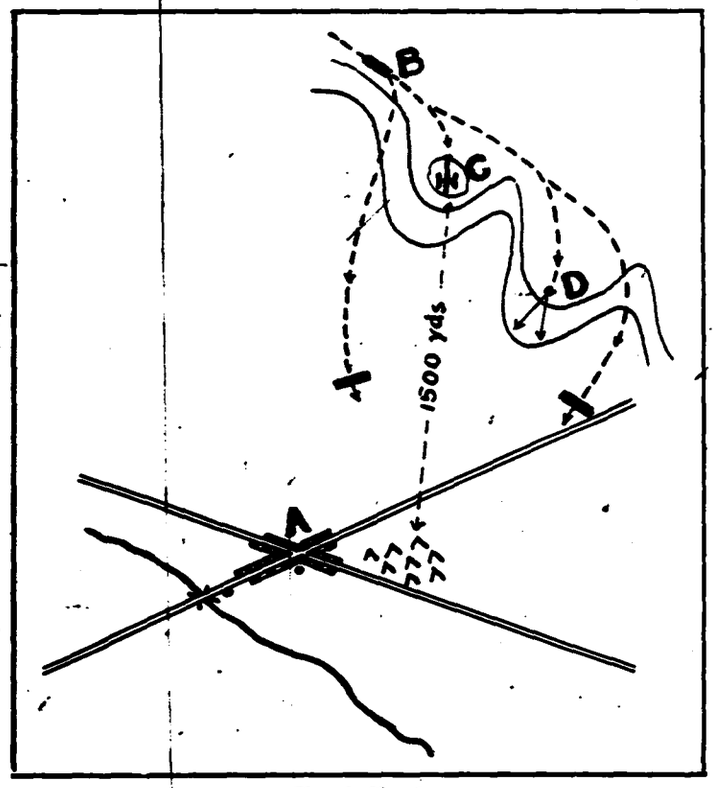
Let us assume that the advance guard commander, marching at the head of the reserve, receives information from his ground or air reconnaissance that a half-hour earlier, a hostile column, preceded at one mile by an advance guard, was observed approaching. The advance guard commander and the captain of Battery A now know that contact is imminent. Within certain limits they can estimate where the enemy will be met.

With the modern mobile means which an advance guard may have, the exact point of meeting cannot be predicted. But the advance guard commander knows that he will encounter the enemy soon and that he must now take steps to put his advance guard in a state of increased readiness for action and take measures that it does not come under hostile fire without artillery protection. What should he do? He should at once order Battery A to clear the march column and advance at an increased gait to the first critical terrain line, one platoon being posted in readiness, while the other platoon continues its advance under the protection of the advance guard support and the first platoon to a position farther to the front. As soon as the second platoon has reached its position, the first platoon advances at a trot to the front. If the advance guard support has not yet encountered the enemy, the first platoon continues its advance to a position still farther forward. These alternate bounds by the advance guard artillery are continued until the progress of the advance guard is stopped. Each echelon in rear covers the advance of the advance guard during its bound to the next terrain line.

Now let us assume that the advance guard support encounters the enemy during this forward movement. One platoon is always in position to give

immediate fire support and the battery can be quickly assembled if necessary. If, however, the advance guard support, thanks to the timely support of the platoon in position, is able to overcome the hostile resistance, the rear platoon, advancing from its last position, will pass on and go to the next favorable position, where it will continue to support the advance guard and be joined shortly by the other platoon advancing from the rear.

The advance guard artillery, when finally in position, should not be used



Sketch No. 3

to fire on small hostile cavalry groups. Its principal initial objectives are the enemy's main columns. The leading hostile elements can usually be taken care of by the fire and maneuver of the rifle and machine gun elements of the advance guard. The important mission of the advance guard artillery is to delay the advance of the hostile main body, to prevent the enemy's artillery from getting into action, and to assist the advance guard in holding or gaining a good terrain line which will protect the development of our main body and give the commander the necessary time to formulate his plan of action.

It may also happen that the enemy has an advantage in terrain or deployment, or that our advance guard, due to its distance in front of the main body must take a defensive attitude to gain time or hold a certain terrain line until the arrival of the main body. In this case the advance guard artillery from its position on the last terrain line in rear will be prepared to support the advance guard in its delaying action.

Surprise Attack

A force consisting of Troop A, with a machine gun platoon and a 75 mm. gun section attached, has been ordered to march at night and make a surprise attack on a hostile reconnaissance detachment which bivouacked at A just before dark (See Sketch No. 3). Reliable information from friendly inhabitants indicates that the enemy's security measures consist of patrols on the principal routes of approach and an interior guard to protect the detachment and its animals against surprise by local inhabitants. At 3:00 A. M., our force, guided by local inhabitants, arrived at a rendezvous at B in the following order of march:

Advance guard: One squad, Troop A: *Main body* (in order of march): Troop A, less one platoon; Machine gun platoon; 75 mm. gun section; One platoon, Troop A, less one squad.

Assembling the platoon, and attached artillery commanders at hill C, the captain of Troop A points out to them the location of the enemy's bivouac, which is barely visible, and orders:

"We attack the enemy in bivouac at A.
"1st Platoon moving west of this hill (C) will attack mounted from the north.
"2d Platoon moving south of hill D will attack mounted from the northeast. The machine gun platoon on hill D and the 75 mm. gun on hill C will support the attack by a surprise fire.
"Remainder of Troop in mounted reserve in swale near B. It will send patrols to cut the telephone wires on both sides of A.
"At 3:30 A. M., the machine gun platoon and the 75 mm. gun will open a rapid fire for five minutes on the hostile bivouac and then cease fire. Under cover of this fire the two assault platoons will advance within close range of the hostile bivouac, which they will rush when the artillery and machine guns cease fire.
"I shall follow with the reserve.
"Artillery and machine guns will remain in present position until the signal, three green rockets, is fired from the vicinity of A.
"It is now 3:05 A. M. Set your watches and move out."

In this situation the poor light of early dawn precludes any direct support by artillery and machine guns during the attack. Any support given by these units must be in the nature of a preparation fire which should cease as soon as our cavalry arrives within assaulting distance. A long preparation is out of the question because a material destruction is not contemplated. A short preparation, not exceeding five minutes, will preserve the element of surprise, and have a powerful psychological effect which will demoralize the enemy and increase his confusion. Without this preparation, the enemy would no doubt be surprised, but he could quickly recover therefrom and, under determined leadership, could put up a strong resistance in which neither artillery nor machine guns could intervene without endangering friend and foe alike. Therefore, if these auxiliary weapons are not used as above indicated, they had better be left behind.

In the five minutes prescribed for the artillery preparation, the 75 mm. gun should be able to fire about 40 rounds at the hostile bivouac. The fire will be a zone fire, sweeping, so as to cover an area about 150 yards wide by 200 yards deep with high explosive shell, short fuse. This fire will be supplemented by the volume of machine gun fire coming from a direction more or less oblique. In view of the central location of these fire units, the two assault platoons can approach within very close distance of the objective. As soon as the preparation ceases, the cavalry can launch its attack which will probably be over in a few minutes.

Pursuit

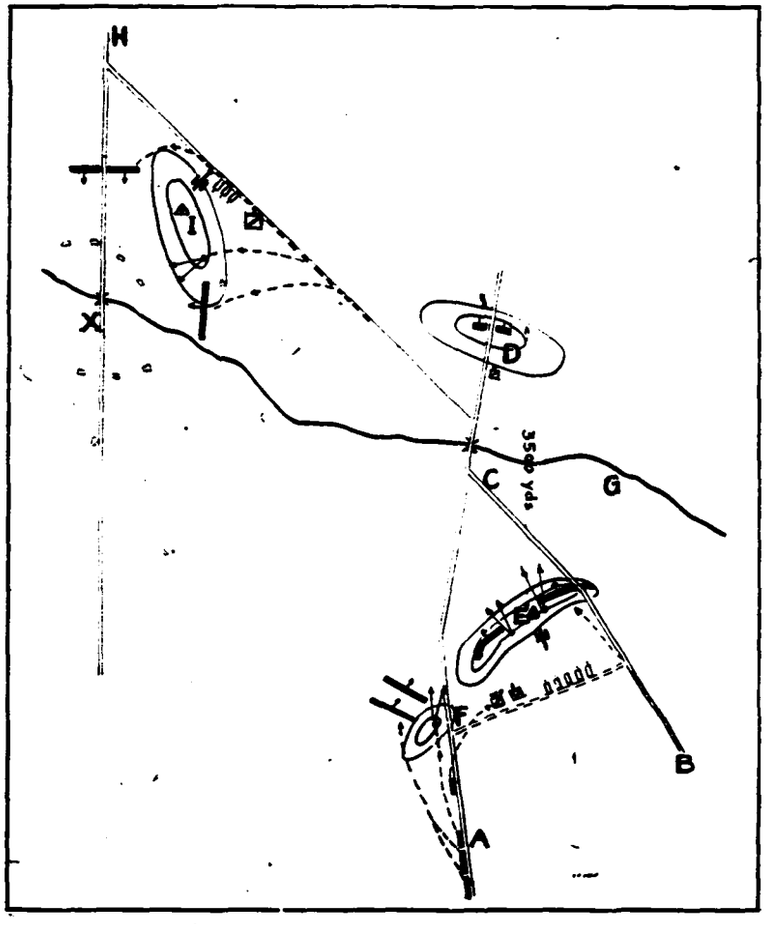
In the pursuit we find a wide decentralization in the control of field artillery, particularly in the artillery attached to the cavalry engaged in the encircling maneuver. The need for rapid maneuver indicates the use of horse or portée artillery. No more artillery should be attached than can be adequately supplied with ammunition. In the case of portée artillery it will, therefore, usually be necessary to send along extra trucks loaded with ammunition. When the distance of the pursuit is not over 10 or 12 miles, portée artillery has little or no advantage over horse artillery, especially when we consider that the enemy will endeavor to block and offer the maximum delay on those roads that are suitable for motor transport. Portée artillery has an advantage in a wide encirclement, directed at a point well to the rear on the enemy's line of retreat, and permitting use of roads that will probably not be blocked to motor transport.

In order to bring out the employment of a small artillery unit in the pursuit, a number of successive situations have been selected, picturing the action of a reinforced cavalry squadron which has the mission of gaining a critical locality by an outflanking maneuver in order to place itself across the enemy's line of retreat. (See FSR 490). It will be noted that the attached artillery adds great fire power to the cavalry and constitutes a most effective means of defeating the enemy's attempts to reorganize his forces for resistance or retreat. In each situation the artillery is used on objectives which cavalry would be unable to engage with its own weapons. The missions assigned to the attached artillery are such as will at the particular moment contribute most effectively to the success of the action as a whole.

The 1st Squadron, with Troop A, 1st Machine Gun Squadron, 1st Platoon, Armored Cars and a platoon of Battery A (75 mm. guns, portée) attached, is advancing in pursuit of a defeated enemy. It has the mission of encircling the enemy's left flank and blocking his retreat at X (See Sketch No. 4). The major had the 1st Squadron move out in two columns, with the 1st Squadron (less two platoons) and the machine gun troop advancing via A, and the motorized elements, composed of Troop A (less one platoon) in trucks, the armored car platoon and the platoon of portée artillery, advancing via B. In this way, he exploited the greater mobility of his motorized detachment, and avoided mixing motorized and mounted units in the same column. By selecting an exterior route for his motorized detachment, he kept it out of

range of hostile artillery interdiction fires and took advantage of a route that would probably be free of hostile delaying detachments.

Upon approaching the crossing at C, the armored car point of the motor-



Sketch No. 4

ized detachment came under hostile artillery fire from the ridge D and encountered a hostile squadron advancing south from the crossing. The captain of Troop A at once decided to take position on the ridge E to delay the enemy and hold this terrain line until the arrival of the mounted column which he estimates is still about 8 miles away. He, therefore, orders:

"We take position on this ridge (E) to delay the enemy until the arrival of the 1st Squadron.

"The 75 mm. platoon will detruck and go into position near E, opening fire at once on the hostile cavalry column advancing from C.

"Troop A will detruck under cover of this ridge. The first platoon in position astride the road will delay the enemy's advance along the road C-B. The 2d platoon in position on the west slope of this ridge (E) will cover our left flank and delay the enemy's advance along the road C-A.

"The armored car platoon will be in reserve on the road in rear of our left flank and protect the trucks. It will place its reserve machine guns in action in rear of the rifle platoons, opening fire as soon as in position to delay the enemy's advance.

"Trucks will assemble on the road in rear of this ridge prepared for close defense.

"I shall be at the artillery OP at E."

In a delaying action, the artillery is pushed well forward so that it is near a good observation point and can open long range interdiction fire at the earliest practicable moment. In this situation, since there is hostile artillery present, it would take a position with at least mounted defilade (permitting a mounted man to barely see the enemy). Its objective would be the hostile main body. The enemy's deployed groups would be taken under fire by the machine gun and rifle units. Since the rest of the squadron will probably arrive within 1½ or 2 hours, the captain deployed all his rifle power in position and held only his armored cars in reserve. The reserve machine guns carried by each armored car were put into position to support the defense.

The advance and deployment of the hostile squadron were considerably delayed by our machine gun and artillery fire. An hour and a half later, the major, in response to a message from the captain of Troop A, arrived at E with his 1st echelon. The situation as known to the major and assembled officers is as follows:

The enemy is launching his attack with his dismounted pivot, estimated at one troop, advancing frontally against the ridge E. The hostile maneuvering force, estimated at two troops, is advancing mounted west of the road C-A, apparently to envelop our left flank at F. The 1st Squadron is advancing at a trot with its head at A. The major at once ordered:

"We attack, enveloping the hostile right to secure the crossing at C.

"The 1st Squadron (less Troop A) Captain Troop B, commanding, advancing west of the hill F, will attack mounted, striking the hostile maneuvering force in flank. Direction of attack F-G. Assembly point G.

"The Machine Gun Troop will support the attack of the 1st Squadron from position on hill F.

"Troop A (less one platoon) will hold its present position.

"The artillery will concentrate its fire at once on the hostile maneuvering force advancing west of the road C-A. When the 1st Squadron closes in to charge, it will lift its fire and interdict the crossing at C to block the enemy's withdrawal.

"The armored cars will be prepared for early advance via the road F-C.

"3d Platoon, Troop A, will join the armored car platoon in mounted reserve.

"I shall remain here at E.

"Sq. 3, transmit my orders to Captain Troop B and Captain Machine Gun Troop."

The attack was successful. The enemy's dismounted troops were captured. In the resulting mêlée the hostile maneuvering force was either captured or dispersed. The 1st Squadron, less Troop A, is now assembling at G. The hostile reserve, estimated at a platoon of cavalry, is withdrawing with a large number of led horses, seeking to escape by the bridge at C which is being interdicted by our artillery fire. The major at once ordered:

"We continue the advance via C on H.

"Order of march: 1st Squadron, less Troop A, Machine Gun Troop, Platoon Battery A, Troop A, less 1 platoon.

"The 3d Platoon, Troop A, preceded by the armored car platoon, will advance rapidly via C, capture the hostile reserve and led horses, and push on to ridge D, which it will hold to cover the crossing of the command. After the column has crossed, it will remain at D to secure the crossing at C and protect the column against any attack from the rear.

"As soon as the 3d Platoon, Troop A, has gained ridge D, the armored car platoon will advance on H on reconnaissance. Early information is desired of the enemy's defensive dispositions at the crossing at X and of hostile troop movements to the north.

"The 1st Squadron, less Troop A, and the machine gun troop will advance to C, cross the bridge and assemble in march formation with head of column on the road to H.

"The artillery will protect the crossing. As soon as the machine gun troop is across the bridge, the artillery will entruck and join the march column.

"Troop A, less 1 platoon, after mounting itself from captured horses, will collect the wounded, prisoners and captured material, and send them by truck under suitable escort via B to O. It will then join the tail of the column.

"I will join the column at the bridge.

"Sq. 3, see that the necessary orders are transmitted to those not present."

After sending back a report of the operations of the squadron to his next superior, the major joined the column at C. He then ordered the column to move out with a platoon of Troop B in the advance guard. As the head of the column was approaching hill I, he received a report from a returning armored car:

"A hostile truck column with its head at H has just cleared the bridge at X. Hill I is unoccupied by the enemy. Bridge at X is protected by a security detachment estimated at a battalion of infantry, part of which is south of the bridge."

The major decides to let the hostile truck column go by and to carry out his mission of blocking the enemy's retreat at X. He, therefore, orders as follows:

"We attack the enemy at X, to capture the bridge and block the enemy's route of retreat.

"Troop B advancing north of hill I will attack dismounted astride the road H-X.

"Troop C advancing south of hill I will attack dismounted with its left flank along the stream C-X.

"The machine gun troop, from positions on the south slope of hill I, and the artillery from position on the north slope of hill I, will support the attack. They will open fire without delay on the bridge at X and interdict it to hostile troops.

"The armored car platoon will cover our right at H. Early report is desired of any hostile troops advancing on H from the north.

"Troop A (less one platoon) upon arrival will remain on the road east of hill I in mounted reserve.

"Led horses under cover of hill I.

"I shall be on hill I."

Conclusion

In presenting these situations, the purpose has been to emphasize the importance of having junior officers of cavalry understand the employment of small field artillery units. They need not wait until they become field or general officers before trying a hand at the game. If they begin now to think of the effective support that field artillery can give them in the numerous situations involving the employment of small cavalry units, then they will find no difficulty later on in using larger field artillery units forming a part of higher cavalry commands. The situations outlined in this article and many others of a like nature can be worked out very easily on the terrain in the vicinity of every cavalry post and, I am sure, will lend not only variety to, but also inject more realism and interest in, the tactical instruction of cavalry

Armored Vehicles With Cavalry

By First Lieut. Eugene Ferry Smith, *Infantry (Tanks)*
Member of the Tank Board

"THERE is a responsible body of opinion holding that, in principle, the day of the horse is over and that the duties of the cavalry should be performed, and would be better performed, by aeroplanes and by troops mounted in rapidly moving cross-country vehicles, such as light, fast tanks and armored cars.

"On the other hand it is urged that there are many military situations possible in various parts of the world in which a mechanically transported unit would be at a great disadvantage. At present, an unbridged river presents an impassable obstacle to tanks, and presents but few difficulties to cavalry. There are many rivers in the countries in which our army must be prepared to operate. What, then, is the truth between these two conflicting opinions?"

It is believed that the Secretary of State for War of Great Britain, when he began his speech to the English Parliament with the above in explanation of why they were mechanizing a part of the British Army, states as clearly as is possible the views of the two schools of thought on the matter of the mechanization of the entire army. He proposes a question that is taxing the minds of the general staffs of the armies of many nations.

Strong supporters and advocates of each of these schools of thought can be found in almost any country. However, it is not the aim or intention of the writer to attempt to decide the issue in this article, but rather to set forth in general the possibilities and limitations of the use of tanks and armored cars with cavalry.

It does not require any great thought to realize that, for the bulk of the infantry, the mechanization will be limited primarily to using motor vehicles for transporting large masses of troops from place to place, with accompanying tanks or armored cars used for scouting, flank protection and the brunt of the combat. For holding purposes, the individual soldier will undoubtedly remain supreme and, in terrain unfavorable to the use of motorized vehicles, the functions of the infantry will not materially change.

The cavalry, however, presents a slightly different problem in view of its horses. The transporting of large bodies of cavalry by motor truck would require an enormous number of vehicles to move the animals, so that such a development may safely be passed by for the present, although not without its possibilities in the future, especially for movements of small detachments.

Many who are strong advocates of the motorization and mechanization of armies advance the thought that future wars will be fought entirely by aeroplanes and tanks. But saner thought will indicate that, so long as there remain mountains, valleys, rivers and forests, there will always be natural obstacles for the motor driven vehicles (be they tanks, armored cars, or trucks), and that there will always remain regions where the individual

soldier, mounted on a horse or packing his weapons on his back if necessary, and supported by light artillery, can occupy critical points of which he can deny the passage to the enemy vehicles.

When one talks of complete mechanization, has not one been thinking too much of a battleground with elaborate trench systems and a stabilized front, or of one in which the country has highly developed road and railroad systems, where water and fuel are always available? But what of a war in which, for example, our country is invaded, either from the north or the south, or by a landing on our very shores? Can one then say, with fighting going on in the arid regions of the Mexican border, in the broken mountainous country of the north, or from a base on either the East or the West coast, that there will be no need or use for the individual cavalryman, even if we can provide large masses of tanks and cross-country armored cars? Would not the cost be prohibitive and the physical limitations of maneuver, maintenance and supply of all this equipment be such that it soon would surpass the limits of practicability?

Let us assume then that cavalry will still have its place in any future war of no matter what magnitude. This brings us to the question of whether or not armored cross-country cars and tanks can be operated successfully with cavalry, and if so, how they can be used to the best advantage. To best answer this, it will be well, perhaps, to take each of the various missions of cavalry and see how they are affected by the advent of the mechanized forces.

But before doing this, let us first see what the post war developments and trend of construction of tanks and armored cars have been and then try to vision the future, with its possible developments along the lines indicated of still greater and improved mechanization.

The United States today has no tank available for combat, except the Heavy Tank (Mark VIII) and the Light Tank (7½ tons), both developed during the war. The Mark VIII weighs 40 tons and requires railroad transportation for moves of any considerable distance. Its weight and armament (two 6-pounder cannon and five machine guns) makes it suitable for special attacks against villages or strongly fortified points, but its lack of continued mechanical dependability, its weight and dependency upon railroads for transportation makes it immediately unavailable for use with cavalry, in any but very special situations and missions. We can ignore it so far as this study is concerned.

The light tank has a speed of about 6 miles an hour in high gear, mounts either a 37 mm. gun or a .30 caliber machine gun, weighs 7½ tons when fully equipped and can be readily transported on trucks over good roads. Properly maintained, it is mechanically reasonably dependable. In favorable terrain it can keep up with cavalry, but, due to its construction and the method of track suspension, it is subject to rapid mechanical deterioration and requires considerable maintenance, especially when travelling over rough and broken terrain. It has the further disadvantage of having only one type of weapon in each tank, the 37 mm. gun for use against material, or the .30 caliber

machine gun for use against personnel. Because of the limited vision of the driver and the gunner, it is necessary to make a thorough reconnaissance of the routes to be followed by the tanks when travelling across country, in order to save time and avoid the possibility of ditching the tank. Except for deep water, swamps and exceedingly dense forests, or extraordinarily steep or rocky slopes, the light tank, manned by a reasonably well-trained crew, can follow a cavalry horse across country.

As to armored cross-country cars, we have none, aside from such pilot models or experimental vehicles as may still be in operation, nor do we see any present indication of the early production of a vehicle of this type, although Brigadier General S. D. Rockenbach has been urging for a number of years the development of a suitable cross-country armored vehicle.

Foreign Developments

Now, let us see what the foreign armies have developed since the war along the lines of both tanks and armored cars. England apparently has done more than any other nation along this line and is still experimenting on a fairly large scale to obtain more satisfactory vehicles of each type for its varying needs. To date they have produced, among other vehicles, the Vickers tank, weighing about 10 tons and reputed to have a road speed of 20 to 25 miles an hour and a cross-country average speed of about 15 miles an hour. Carrying a crew of five men and mounting a 3-pounder and six machine guns, first accounts credited this tank with being an unqualified success, but later reports would indicate that its performances, under any but favorable conditions, are not what were hoped for and that it is being materially modified.

To eliminate the necessity of using tracks on roads, experimental tanks have been built which have wheels for road use and tracks for cross-country use, the change from one to the other being accomplished in about one minute, without the necessity of the crew dismounting.

The English have also been experimenting on a comparatively large scale with the "tankette," or very light tank of less than 3 tons. It is armor proofed against armor-piercing bullets, capable of being operated, at least theoretically, by one man, with a road speed of 30 miles an hour and a cross-country speed of 20 miles an hour, and is armed with a machine gun. Many prophesy that this will be the future means of fighting for the infantryman.

The British have had in use for some years two general types of armored cars, the Crossley and the Rolls-Royce, both with an average economical speed of from 25 to 30 miles an hour and a cruising radius of about 125 miles. Both have a crew of four men and weigh approximately 5 tons. The Rolls-Royce mounts one Vickers machine gun and the Crossley two. The latter is considered the more satisfactory of the two cars, but it must be borne in mind that both of these are strictly armored cars, designed for use on fairly good roads and suitable for fast reconnaissance work, but as at present designed they are helpless when forced to take to the countryside.

Czechoslovakia has produced a new light tank similar in general appearance to the French Renault, but with a new development in a set of wheels that permits the tank to be operated on wheels on good roads and on tracks across country. It requires about three minutes for a trained crew to change from wheels to tracks. They must, however, dismount to effect the change, an appreciable disadvantage when one considers that the tank may be under artillery or airplane fire. This tank has a crew of three and mounts either a 37 mm. gun or a machine gun.

Russia has constructed some tanks that largely resemble the French Renault, but mounting a 37 mm. gun and a machine gun in the same ball mount.

France has produced no new light tanks, although experiments are being made with a small 2½-ton tank having a credited road speed of 35 miles an hour.

Other foreign nations have produced tanks, none of which, however, show any startlingly new characteristics.

Germany, which is not allowed tanks under the Treaty of Versailles, has been experimenting with the transportation of all kinds of troops with all their equipment, including horses, guns, dummy tanks and accompanying weapons, by motor trucks, both by day and by night and over varied terrain. As many as six horses have been carried on one truck, the newer ones of which are equipped with heavy balloon tires. In one instance, a battalion of infantry was moved with all its material, including horses, a distance of about 500 miles, making two night halts on the way.

From the above we can readily see that the trend of development is toward:

1. A greater mechanization of armies.
2. A light tank weighing about 7 tons, having a cross-country speed of 15 to 20 miles an hour and a road speed of at least 25 miles an hour, mounting both a 37 mm. gun and a machine gun, and having a crew of two or three men. Such a tank could readily operate with cavalry.
3. A smaller fast tank, or "tankette," weighing about 2 tons, having a cross-country speed of at least 15 miles an hour and a road speed of at least 25 miles an hour, mounting a machine gun, and having a crew of one or two men.
4. An armored car that will be capable of maneuvering off the road, in addition to its present characteristics.
5. Motor transportation for the cavalry and infantry to enable them to move long distances without the fatigue of marching and with a big saving in time.

Let us now return to the question of the possibilities and limitations of the armored vehicle (for the future development will allow the tank to run on the roads and the armored car to move across country so they may both be grouped under this one head) in conjunction with cavalry in its more important missions.

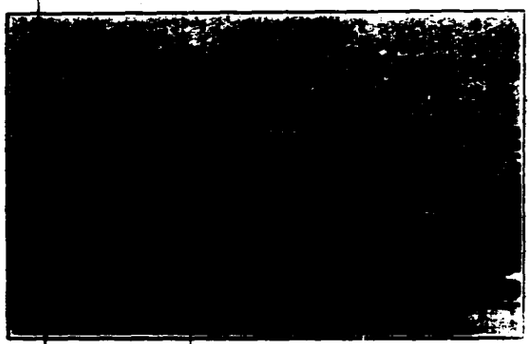
Reconnaissance and Counterreconnaissance

It is here that the armored vehicle can prove quite useful. With a cruising radius of 125 miles or more, it can be sent far ahead of the main body to gain and maintain contact with the enemy, or to deny to it the information

it seeks as to our own forces, by driving off hostile reconnaissance detachments or by means of ambushes.

For detailed reconnaissance and for work at night and in bad weather, the value of armored vehicles diminishes very rapidly, due to the very limited field of vision from the vehicle itself under the best of weather conditions, the fact that it is more or less confined to roads and trails in its more rapid movements, and because its personnel is limited and their observation is necessarily more or less confined to such as can be obtained from the vehicle or from its immediate vicinity.

Perhaps future developments will provide a suitable motor vehicle, in which a limited number of horses can be transported, to accompany such



British Carden-Lloyd Tankette or One Man Tank

armored vehicles and provide a means of more detailed reconnaissance whenever desired.

Security for Other Forces

The extent to which armored vehicles can be used on patrol work, with security detachments, is dependent largely upon the armament of the hostile forces and more particularly on the presence of enemy armored vehicles, anti-tank weapons and artillery.

The use of armored vehicles with advance guards, because of their invulnerability to machine gun and rifle fire, will be a great advantage, not only because they inspire confidence in the troops they are accompanying, but also because of the moral effect upon the hostile forces. Even though not actually moving on the road over which the hostile forces are operating, the mere presence of armored vehicles, which are capable of suddenly cutting off their retreat, will often cause the hostile patrols to become chary about advancing too far from their main body.

For this class of work the armored vehicles move ahead to some important feature of the terrain, waiting there for the remainder of the patrol

to catch up, when they again bound forward, these bounds being about four or five miles each.

Naturally, against a hostile force weak in artillery and in anti-tank weapons and possessing itself but few, if any, armored vehicles, our armored vehicle, in terrain suitable for its use, will be the ideal weapon for patrol duty or for use as a fixed blockhouse. But, with a hostile force armed with anti-tank weapons, armored vehicles and good artillery, our use of the armored vehicle for such purposes becomes more complicated. Instead of being able to advance almost at will, or to remain in a more or less stationary position as in the previous situation, it will have to advance more cautiously and might, in some instances, require reconnaissance by cavalry to guard it against ambushes.

For flank guards, a mixture of cavalry, armored vehicles and artillery make the best combination. Generally resolving itself into taking up a series of successive positions on the flank to be protected and holding them until the main body has passed the danger point, this type of duty presents numerous difficulties.

To secure the desired position and then to get in touch with the enemy, the armored vehicles can be sent out at full speed, while the cavalry and the artillery are brought up later at their own most economical speed to occupy the position and hold it until the withdrawal takes place. This phase of the operation is comparatively simple, but when the order comes for the withdrawal the difficulties rapidly increase for, if the enemy has deployed, it is usually necessary for us to withdraw more or less parallel to his line of attack.

One method is for the armored vehicles to attack vigorously, while the cavalry and the artillery are withdrawing and reforming, and then to suddenly withdraw and take up new positions for the next stand. Another method is to lay ambushes for the enemy (for which type of work the armored vehicles being able to lie hidden from observation are well fitted) and, after firing into the advancing masses of the hostile troops, to effect a rapid withdrawal under cover of the surprise. Concealment is simple; the personnel being inside the vehicle no involuntary movement of theirs will disclose their presence. If the hostile infantry is allowed to advance well up toward the armored vehicles before fire is opened, the hostile artillery will be handicapped in its firing, if not deterred entirely from it, because of the fear of hitting their own troops.

Rear guards will ordinarily be conducted on the same principles and under the same conditions as flank guards, with the exception that in general the pursuing troops will be attacking much more vigorously and the defense will in consequence have to be more determined.

Standing patrol work offers an excellent field for the use of armored vehicles. They can be stationed (in concealment, of course) along the roads or trails, which a hostile patrol of any size must, in general, use, if it is to progress at all rapidly. The crew of the armored vehicle, being in comparative comfort inside the vehicle and protected against any infantry fire, can inflict severe casualties on any hostile patrols and, if equipped with search-

lights, can inflict even greater losses. As soon as one patrol is disposed of, they can rapidly move to another position so as to escape possible artillery retaliation and to be ready for another encounter.

As in battle reconnaissance, the vulnerability of the armored vehicle to artillery and airplane fire and to anti-tank weapons would limit its use very materially for battle security, except on the flanks. Here, in conjunction with cavalry, they can be used to good advantage to repel flanking attacks by the hostile forces, particularly raids or attacks by hostile armored vehicles and cavalry. Their great mobility and their radius of action enable them to keep patrolling along the flanks sufficiently far away to give ample warning to the main body to prepare for an attack from that quarter.

Offensive and Defensive Action in Cooperation with Other Arms in Battle

As now used in the support of infantry in breaking up strong hostile centers of resistance to enable the advance to continue, so also, with the cavalry, the armored vehicle can be used for such purposes.

It is not without the bounds of possibilities that in the future many actions in suitable terrain will be fought largely by masses of armored vehicles and that after the decision has been reached cavalry will be brought up in trucks to mop up and hold the ground gained and to assist in the pursuit.

Delaying Hostile Forces or Holding Terrain of Tactical Importance Until the Arrival of Other Friendly Forces

Here again the armored vehicle can extend the field of activity of the cavalry.

If the commanding officer of the forces on the march desires to hold some defile or river-crossing thirty, forty or more miles away, through or over which his troops have to pass, he would find a company of armored vehicles the ideal means for seizing and holding the place until other troops could be brought up.

In speaking of holding a place by armored vehicles, one must not get the idea that the entire company of vehicles would go into position and remain on the spot. Rather would sections or platoons be sent out on continued reconnaissance to the front and flanks to get and keep contact with the enemy, while the remaining portion of the company created ambushes in and near the locality to be held, in case the hostile forces should arrive before the main body of friendly troops had arrived.

The supporting cavalry should be brought up at the earliest possible moment, in order to release the armored vehicles for work to which they are better suited and more valuable than that of holding ground.

Liaison

The use of armored vehicles other than signal vehicles (of which we have no satisfactory types at present) for liaison purposes is not properly within their sphere, as they are designed for combat purposes and are too valuable

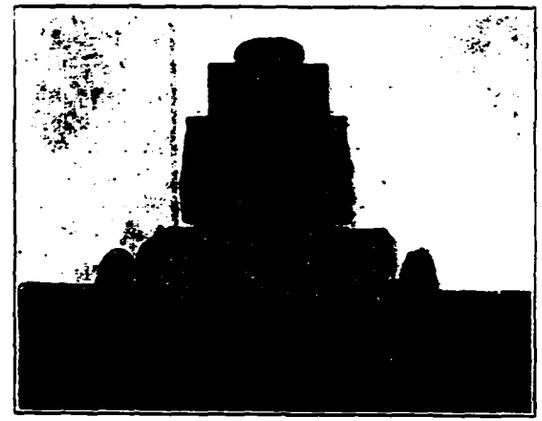
as such to be employed for carrying messages, except under exceptional circumstances.

The perfection of a satisfactory radio telephone, that can be carried in an armored vehicle and is capable of operation over distances up to at least 100 miles, will increase immeasurably the value of the armored vehicle for reconnaissance work and liaison. Then such information as they can obtain will reach the force commander in time to be of real value to him.

Exploitation of a Break-through

Once a break-through has been accomplished and the strong centers of resistance, with their concentrations of machine guns and automatic rifles, have been crushed or driven back, the cavalry again has an opportunity to get into close combat and operate in the rear areas.

To destroy any temporary centers of resistance or isolated machine gun nests, the armored vehicle can be of untold value to the cavalry in such an



New Czechoslovakian Tank with Wheels and Tracks

exploitation. It can be used to push ahead and move rapidly to the rear of the troops on either side of the break-through, causing greater demoralization by reason of its presence. It must not be forgotten, however, that it cannot hold ground thus gained for any length of time and that support must be given it as soon as possible.

Pursuit

Closely akin to the use of armored vehicles in a break-through is their use in pursuit, except that in the latter use one must not forget that they are continually getting closer and closer to the enemy main body and heavier artillery, and are hence more liable to suffer casualties from such sources.

Also, as there is more danger, in such an action, of encountering the enemy anti-tank weapon and his counter-attacking or ambushing armored vehicle, care must be exercised that the pursuing armored vehicle does not

get too far from the main body of troops it is supporting, lest it be annihilated without rendering just returns.

Covering a Withdrawal

This, similar to the movement of a flank guard in the face of a deployed enemy, is a delicate operation and for the armored vehicle presents two methods: first a counter-attack, which will cause the pursuing troops to deploy, while the friendly cavalry is withdrawing and reforming; second, ambushes, which allow the enemy infantry to reach close proximity, followed by a sudden attack and a quick withdrawal, before the enemy artillery and anti-tank weapons can get into action.

Raids

Whether or not the armored vehicle will prove successful on raids is a hard question to answer. It has mobility, a large cruising radius and does not become fatigued as does the horse. But its vulnerability to airplane and artillery fire is a serious handicap to its use for such a purpose, especially during the heaviest part of the operation. At times, such use might be justified, but the loss of one or two machines in a raid will require large gains in results by way of compensation.

Conclusion

This covers the major missions of cavalry and shows the possibilities of the use of tanks and armored cars in conjunction with it.

Lest the supporter of the continuance of cavalry as one of the principal combat arms be too discouraged by the picture painted by the ardent advocate of a completely mechanized army (*sans* horse, *sans* infantry), let me quote the conclusions reached by General Weygand, of the French Army, after a close study of the lessons learned at the army maneuvers in Lorraine, as reported in Associated Press dispatches.

"The idea that cavalry is a thing of the past is a delusion. A cavalry force, if kept perfectly mobile, has immense tactical value. Cavalry divisions, however, need to be supported by a far larger amount of mechanical transport. Machine gun detachments, tanks and field artillery must all follow the light cavalry divisions so as to keep in the closest touch."

Major General Sir Ernest Swinton, K.B.E., C.B., D.S.O., of the British Army, in an article on *Tank Wars of the Future*, appearing in the October, 1927, number of the *Royal Tank Corps Journal*, says, in part:

"The broad lines of what, in my opinion, will happen if mechanization is adopted on a large scale by the leading nations are as follows: In theatres, such as mountainous and forest countries, where cross-country machines cannot function, the present methods of warfare will remain unchanged. Where operations are being carried on in flat, open country, where cross-country machines can function, the actual fighting will be done by machines of a tank nature. And until all such machines of one side are knocked out, or otherwise disposed of, there will be no chance of the employment within the scope of their activity of cavalry, of infantry, of any but long range artillery, or of machine guns out in the open."

Time alone will answer the question.

Protection From Enemy Aircraft

By Major E. M. Whiting, *2d Cavalry*

In September, 1927, the 2d Squadron, 2d Cavalry, executed a march, a combat employing combined action against a represented mounted enemy, and went into bivouac in the open, all in the presence of a flight of three hostile attack planes: the whole operation being observed by the commander of the air squadron stationed at The Cavalry School. The action of the cavalry throughout was governed by the tentative changes and additions to existing training regulations prepared after many experiments and tests by a special board convened at The Cavalry School. It should be stated at the beginning that the fundamental idea of these tentative regulations is to train cavalry to execute ground missions, while at the same time protecting itself from observation and attack by hostile aircraft.

The doctrine of fire and movement applies to defensive measures against hostile aircraft as well as against ground troops but, until exhaustive experiments have determined whether or not small arms in the hands of individuals are effective against low-flying aircraft and, if effective, which weapons used in which manner are the most effective and a definite ratio established between machine guns fired from suitable mounts and a certain number of rifles in the hands of individuals, it will be necessary for the cavalry to depend principally upon movement to avoid losses from air attack.

In the situation, the cavalry squadron was required to make a march of about twelve miles to the scene of its expected encounter with an enemy squadron. Although no encounter with enemy ground troops was expected during the march to the battlefield, the march was conducted as though ground troops might be encountered, with an advance guard and patrols covering the front. Normally, the advance guard of a squadron is a platoon, with its quota of machine rifles attached but, in this case, as attack by attack aviation was expected, the advance guard consisted of two rifle platoons and two machine rifle squads, in order to enable the advance guard commander to post machine riflemen and riflemen in advantageous positions to cover the passing of defiles or other locations favorable to air attack. When the tail of the column cleared the defile or other dangerous point, these detachments mounted and reported to the commander at the head of the main body, who retained them there or sent them forward to the advance guard commander for further use as he saw fit. Familiarity with the route to be traveled or careful study of the map will indicate to the advance guard commander how many and what sort of defiles may be expected.

At first glance, it might appear that the horses of these detachments would be overworked in passing several times at an increased gait from the rear to the front of the column, but the fact is that during the time the column is passing the defiles, these horses are resting, free from the weight of their loads. As the machine rifle is too heavy for effective use as a shoulder weapon

against a fast-moving airplane, the machine riflemen are instructed to make use of fence posts, saplings or any other objects that serve as rests while firing. The riflemen turned their horses over to horseholders and took posts near the road, if practicable not closer than sixty yards to the machine riflemen, in order to avoid the effect of a bomb that might be dropped on the machine riflemen. It is important that a group covering the passage of a defile take position as near the road as possible in order to place fire as long as possible on the planes, for they always attack a column along its length. Another duty assigned to the riflemen re-enforcing the advance guard is to make openings in the fences along the road at frequent intervals to facilitate the rapid departure from the road by elements of the main body nearest the openings in case of attack by aircraft. Approaching defiles, platoons trotted out in succession and passed the defiles at the trot with about seventy-five yards distance between platoons, except in the case of long steep slopes, which were passed at the walk. Long, steep slopes are more dangerous for artillery and wagons than for cavalry.

During the march, the squadron was attacked several times, but the two air scouts of each troop were able to give warning of the attacks never less than a minute and a half before any attack commenced. Much can be done by trained troops in a minute and a half. The trains followed the squadron at about a quarter of a mile, with about seventy-five yards distance between wagons. Marching thus, they do not present a profitable target.

At noon, the squadron took cover in thick woods, with about a hundred yards distance and interval between troops. Here the wagons joined their troops and horses were unsaddled, watered, fed and groomed in perfect safety from air observation.

At 2:00 P. M., by agreement with the air corps, the squadron mounted and moved out into the open, preceded by the advance guard. But for fifteen minutes before moving out, three enemy planes searched the woods, particularly the edges, for signs of troops. None could be seen, but just as the order to fall in was given, the nine recruits of one troop moved across a small clearing in the woods just as a plane flew over and the observer spotted them. This incident impressed all that particular care must be taken to prevent troops from exposing themselves upon arrival in cover and when about to depart. One wagon was unharnessed in the woods and then moved by hand a short distance forward near the edge. It was safe enough there, but when ordered to hitch in, the teamster calmly moved his mules forward to hitch in and the lead mules were just outside of the cover. A watchful sergeant hurried them back before they were seen.

The squadron moved out of the woods at 2:00 P. M., preceded by an advance guard of one platoon and one machine rifle squad. As the march from here on was to be in open unfenced country, there was no necessity for the additional riflemen and machine riflemen. These conditions also made it unnecessary to halt and fire on attacking aircraft and the major instructed the captains to this effect before starting.

The approach to the reported location of the enemy squadron was made in line of troop columns at about two hundred yards interval, the squadron being covered by the advance guard and flanking patrols. Between the squadron and the enemy was a high ridge, with gently sloping sides. The advance guard galloped forward and seized the ridge, dispersing their led horses by squad with about seventy-five yards distance and interval between squads to avoid bombing. While the major and the three captains were reconnoitering under cover of the now dismounted advance guard, which had reported the location of the enemy squadron beyond the ridge, the squadron was attacked by three enemy planes. However, the air scouts had given warning, and the planes found the troops already dispersed in flocks, with from ten to twenty yards distance and interval between troopers.

After a quick reconnaissance, two troops were sent to attack the enemy in right flank and rear, while the remaining troop constituted the pivot and the reserve. All of the machine rifles of the remaining troop were placed on the firing line. The remainder of this troop, under its captain, constituted the mounted reserve and remained under cover of the ridge, deployed in line of platoon columns at seventy-five yards interval. As the radius of the personnel bomb is about sixty yards, this dispersion would prevent more than one platoon from being damaged by any one bomb, and yet kept the troop in hand for instant use. As the maneuvering mass had considerable distance to cover before engaging the enemy, the flock formation was retained until within about five hundred yards of the enemy, when the leading platoons formed line of foragers, the support platoons formed line, and all advanced at a rapid gallop to the charge. Having arrived within five hundred yards of the enemy, there is no further danger from air attack, and the commander may form the flocks in any formation desired within a few seconds.

After a pursuit, the troops, less contact patrols, were withdrawn, moving to the rear in line of platoon columns with air scouts alert. The squadron was now assembled behind a ridge. After reconnaissance, a bivouac position was selected at the intersection of two draws about six hundred yards behind the ridge. An outpost line of resistance was designated on the ridge, a rifle platoon and a machine rifle platoon designated as the outpost, and the squadron, less the outpost, was marched toward the bivouac site, moving in line of platoon columns at about two hundred yards interval. The major and the captains galloped ahead and the bivouac site of each troop was assigned. Care was taken to separate the troops by utilizing the folds of the ground, which served to some extent as traverses.

The troops were then marched by their captains to the bivouac sites and unsaddled by squad, the squads being placed sixty yards apart and the saddles placed so as to avoid straight lines. The horses of the outpost were mobile and brought to their troop bivouac by the horseholders, who unsaddled and cared for them. All horses, as soon as unsaddled, were dispersed in groups of four to graze, each four being held by a trooper. The train, which had been held under cover of a hill in rear during the combat and pursuit, was now

brought forward and the forage, stoves and provisions for supper and breakfast were unloaded, and after unloading, the trains were withdrawn to cover in a wooded draw about a thousand yards in rear of the bivouac, where there was water. Here they remained until dusk, when they returned to the bivouacs. The only water available was near the position of the train and but one platoon could be watered at a time. Each troop in turn, still dispersed in fours, moved down to the vicinity of the water, watered by platoon and returned to the vicinity of the bivouac, where the horses grazed until dusk, when they were tied on platoon picket lines, groomed and fed.

At daylight, the squadron was ready to mount. According to the commander of the air squadron, although it had fought a mounted action, pursued a mounted enemy, gone into bivouac, established an outpost, watered, groomed and fed its animals, fed two meals to the men, all without any cover whatsoever from air observation and attack, except for the trains, at no time was any element of the squadron subject to serious loss from air attack. The protective measures were effective because they were continuous and yet they in no way interfered with the accomplishment of the ground mission.

To the casual reader, it may seem that these protective measures were a whole lot of trouble, but actually they were not, and yet the squadron while in bivouac was prepared to carry out any normal mission that might be expected of a squadron in bivouac. Shortly before dark, the squadron was actually attacked in its bivouac, but the aviators reported that no favorable target was presented. All of the officers and most of the men in the squadron saw the demonstration of bombing last May by attack aviation against a troop of sixty-five mounted targets dispersed in a flock with from five to ten yards distance and interval between individual targets—just half the distance and interval now prescribed in tentative training regulations for the flock formation. Those who heard those terrific explosions and saw the havoc wrought by flying fragments are firm believers in anti-aircraft protective measures involving fire and movement—especially movement.

The 7th Cavalry Column Moves Out at Sunrise in 1st Cavalry Division Maneuvers

TOM'S LETTER

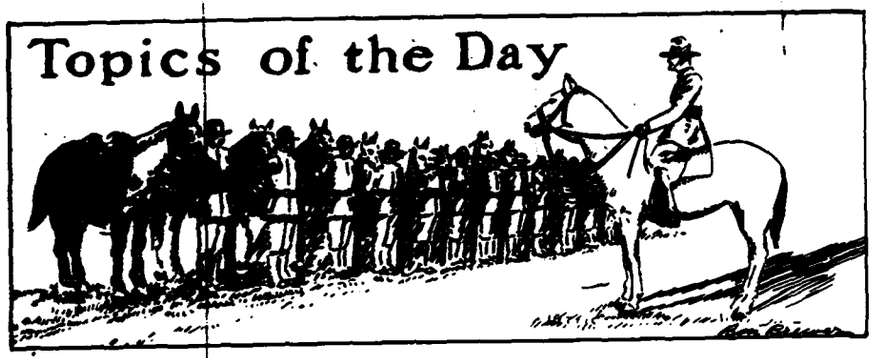
Dear Friend Ed:

I was ast by a prominent rotarian wouldnt I give a talk on cav tactics to the rotarians and I give them a talk Ed which I bet was a good talk because they was all interested and they knew I wouldnt stand for no wise cracks versus the talk I give them. I says well boys 1st the cavalry has got to be as offensive as possible which dont mean that no good cavalry man dont wipe his feet before entering a domicile or chewing at social gatherings but we has got to be embrewed with that spirit. What spirit asts a prominent rotarian interrupting my talk which was give before there own club and well Smarty I says what spirit do you suppose and against that snappy comeback he was speechless. Next I says he has got to be mobil and always remember the early bird catches the worm. Oh apple sauce says another interrupting thats old we know that one. Well I says quick as I wink maybe you been caught once by some early bird eh? I continues bringing out how mobility lets us cross rapidly a fire swept zone and althe it is not necessary to look for a fire swept zone if we was to meet a fire swept zone why you see that would be nuts for us to cross with our mobility. Then I says the real b auty of us is our surprise. You cant never tell which way a cavalry man is going to jump by only looking at the shape of his head. No sir, I says boys it dont never pay to trust a cavalry man on acct of yr not knowing when he may surprise you by the rapidity of his action. Now I will go into combat in which judging from yr appearances none of you know much about except for domestic disturbances. Ed. that went over big and they hand me a good laugh and a big hand. The C. O. we will assume I says is riding with a good ensamble and without no more stiffness in his neck than his rank entitles him to. Behind him the boys is following in column of 4s laughing, smoking and telling jokes when a monnewplane sweeps out of the sky and signals enemy in sight in large numbers. So now we got to approach and develop I says. Well pardon the interruption says another bird but how come you been always absent *from the development phase*? well I says *Big Boy I will take that slide* when I come to it—Rome wasnt billed in 1 day if you know what I mean. Anyway the C. O. turns to me and says Tom come with me on personal reconnaissance on acct of my wanting a good man along. Laugh that off Big Boy, I says in a aside. So when we got to Hill 589 the C. O. throws hisself into a coma and I thinking he has sleeping sickness maybe nudges him (pointing). Ssh. Ssh. He mutters I am estimating the situation and shortly thereafter he brightens and says *in stridn tones we will attack enveloping the hosstile right flank at 2:56 P. M. today* driving him to the northeast and pursue to Mrs. Bucks (12345-67890) Shift! I says unconsciously. Well I continues in my talk I will leave that situation now because it developed that the enemy was only a heard of sheep which was grazing on a opposite hill but anyway if that heard of sheep had of been hosstile Red forces you could see for yrselves whot would have become of them with us enveloping there right flank what with our offensive, our mobility, and our surprising them as we would have surprised them if they had not of been sheep.

That was the end of my address Ed which as I says went big so I will stand to remain yr friend

TOM

Topics of the Day



Extracts from the Annual Report of the Chief of Cavalry, Major General Herbert B. Crosby

THE War Department has given great impetus toward increasing the future efficiency and usefulness of the cavalry by its approval in principle of the following:

That the present Springfield rifle in the cavalry be replaced by the semi-automatic rifle as soon as practicable after a satisfactory type has been developed and tested—present development plans and tests for obtaining a suitable arm to continue.

That an armored car unit be similarly developed, tested and incorporated in the cavalry division—development plans to continue and when type is approved which meets the military requirements, consideration can be given to the unit for the cavalry division.

That a tank unit be incorporated in the cavalry division, and appropriate anti-tank weapons in the cavalry regiment—(necessary personnel to be taken from cavalry allotment). Present plans for development and tests to continue, and when the tank and anti-tank weapons which meet military requirements are adopted, further consideration will be given to the numbers to be prescribed for the cavalry division.

That an observation squadron, Air Corps, be incorporated in the cavalry division—to be made effective when Air Corps can supply suitable equipment and the necessary personnel.

Consideration is also being given by the War Department to the reorganization of the cavalry regiment with a machine-gun troop as an integral part and with a decrease in overhead and an increase of fire power.

When these measures have become effective, we are assured of a cavalry that will be most valuable in any type of warfare and in any theatre of operation.

* * * * *

The manufacture and issue of the Browing Machine Rifle to units of the regular army having been completed, the project of securing enough of these

weapons to equip the regular cavalry at war strength was successfully undertaken. Consequently, there is now in corps area storage a sufficient number, with the corresponding number of pack loads and accessories pertaining to the machine rifle, to completely equip the regular units in case of an emergency. It is now imperative that a sufficient number of Phillips' standard pack saddles be manufactured and placed in storage in order that there will be a means of carrying the above loads in case it becomes necessary to issue this equipment. The plans for this work are now being formulated. Although curtailment of funds has somewhat retarded the manufacture, development, test, or adoption of Phillips' pack saddles, their loads and accessories, the results obtained during the fiscal year are satisfactory.

Many unserviceable animals have been replaced during the year. The grade of remounts thus received has been excellent. The large number of young horses replacing the old ones, many of which were from 17 to 22 years of age, has placed cavalry organizations in a far better condition for field service than they have been for several years. Notwithstanding this fact, there still remains in many organizations a number of old horses unfit for prolonged field service but entirely satisfactory for garrison work.

* * * * *

Tests of equipment, the preparation, revision and coordination of training regulations, and exhaustive studies on various subjects have kept a volume of work continuously before the Cavalry Board. The more important equipment projects investigated during the year were the following: Semi-automatic rifles to replace the present Springfield, gallery rifles (and a consequent saving in ammunition expenditure); gas masks; gas masks for horses; reconnaissance cars; various packs, and studies on anti-aircraft protection. In addition, many miscellaneous questions were referred to the board.

The Cavalry Corps

THE Cavalry organizations, active and inactive, authorized for the regular army, are sufficient in number to permit of their organization into a cavalry corps of three cavalry divisions and a separate brigade of three regiments. This cavalry corps organization is authorized for war only and initially for the regular army only.

The troops forming the organic part of the Cavalry Corps will be:

1. Corp headquarters—about 36 officers, 72 enlisted men.
2. Headquarters troop—about 3 officers, 158 enlisted men.
3. Corps Signal troop—about 6 officers, 150 enlisted men.
4. Headquarters field artillery brigade.
5. Three Cavalry divisions.
6. One Cavalry brigade of 3 regiments.

When circumstances so require, the following troops may be attached to

the Cavalry Corps from troops especially assigned or attached to the army for this purpose:

1. One armored car troop.
2. One observation group, air corps, and such additional aviation as may be needed.
3. One regiment of 105 howitzers (horse-drawn).
4. One regiment of 75 pack howitzers (or two regiments in case the horse-drawn 75s of the cavalry division are increased from a battalion to a regiment per division).
5. One battalion of light tanks.
6. One combat engineer regiment (or such part thereof as may be needed).
7. One ordnance company (light maintenance).
8. One medical regiment (or such part thereof as may be needed).
9. One corps train (normally consisting of a train headquarters, 2 wagon companies, 4 pack trains and 12 motor-truck companies).
10. One remount depot.
11. Anti-aircraft artillery.
12. Tracter-drawn field artillery.
13. Portée artillery.
14. Bridge trains (light and heavy).
15. Additional pack trains.

When the particular situation demands the attachment of cavalry to army corps and infantry divisions, the necessary troops can be drawn from the separate brigade of the Cavalry Corps. Cavalry organizations do not form an organic part of army corps or infantry divisions.

If the available regular army cavalry is utilized for the formation of a cavalry corps, there will be no cavalry divisions for the organic cavalry of the 1st (Regular) Field Army. If it is desired to provide army cavalry for this Army, one cavalry division can be withdrawn from the Cavalry Corps for that purpose and still leave an effective cavalry corps. Or, if the situation demands, the Cavalry Corps can cease to function as a corps and all of its divisions can be assigned to armies.

A Cavalryman the National Pistol Champion

AT Camp Perry, Ohio, this year, First Sergeant Ben H. Harris, Troop A, 1st Machine Gun Squadron, won the National Individual Pistol Championship, with a score of 272 out of a possible 300. Defeating 550 competitors, he gained glory for himself and brought honor to the cavalry service.

Sergeant Harris' accomplishment is the fruit of determination and pluck, plus a vast amount of hard work, for in 1923 he had an uncanny habit of missing the target at 25 yards. Realizing that he was flinching, he set about to overcome this weakness and under the careful supervision of Lieutenant Ireland made rapid progress. Sergeant Harris competed at Camp Bullis that

year but placed second, becoming over-anxious at a critical point in the match. More and more work, and in 1924 he won first place on the Cavalry Team, which sent him to the National Matches at Camp Perry, Ohio. Constant application has brought him distinction.

Sergeant Harris feels that anyone can become a proficient shot, if properly coached and encouraged. Competitions within units, he believes, should be the rule rather than the exception.

On the Organization Day of the 1st Machine Gun Squadron, November 3, General Eltinge, commanding the 1st Cavalry Brigade, presented Sergeant

First Sergeant Ben H. Harris, National Pistol Champion

Harris with a Colt .38 target pistol, officers' model, suitably engraved, a gift from the squadron. Sergeant Harris received the parade, at which commendatory letters from the Chief of Cavalry, and the commanding officers, 1st Cavalry Brigade and 1st Machine Gun Squadron, were read.

Medicine Lodge Pageant

A PAGEANT to celebrate the sixtieth anniversary of the signing of the peace treaty between the United States and the five major Indian tribes of this section was held at Medicine Lodge, Kansas, on October 13, 14, and 15.

Troop F and the regimental band of the 13th Cavalry were directed to participate and, as the cost of rail transportation was prohibitive for such a small city as Medicine Lodge, the trip of three hundred and forty miles was

made by truck. The movement, in seven Class B trucks and one White reconnaissance car was made without difficulty. The superior mobility of the *White* was most useful in selecting the two camp sites en route and permitting a hot meal to be served upon arrival of the Class B's.

Tentage, blank ammunition, and saddle equipment were taken. The authorities of Medicine Lodge secured locally sufficient range horses to mount the command. Despite the untrained horses, the lack of rehearsals, and other unusual conditions (such as the wearing of the old blue uniform and other appurtenances of the old Indian days) the command acquitted itself so well as to receive the official commendation and thanks of the city officials, who stated to the Commandant of the Cavalry School that the deportment and training of the troops created universal favorable sentiment toward the Regular Service.

The pageant depicted the period from before the arrival of Spanish forces, through the taking over of the country by the United States, the trek of the covered wagon trains, the cowboys, etc., down to the present agricultural era. Between four and five hundred Indians from the original five tribes (Choctaws, Cheyennes, Arapahoes, Cherokees, and Crows) were in attendance. One of the most spectacular acts was the relief by the troop of a wagon train of settlers which had been attacked by the Indians.

Reminiscences of the Medicine Lodge Peace Treaties

By General E. S. Godfrey

The 60th anniversary of the signing of these treaties was celebrated at Medicine Lodge, Kansas, on October 13, 14 and 15, 1927.—Editor's note.

I JOINED my troop, Troop G, 7th Cavalry, Captain Albert Barnitz commanding, at Fort Harker, Kansas, having graduated from West Point the previous June. A few days later Troops D, G and H, Major Joel H. Elliott commanding, were detailed as escort to the Indian Peace Commission.

About three hundred army wagons had been assembled on the south bank of the Smoky Hill River at the crossing of the stage road opposite the site of Old Fort Ellsworth; some timbers of buildings were there, evidence of the site. These wagons were loaded with annuities, or gifts, for the Indians and supplies for the Peace Commission. Also there were four Gatling guns hauled by two mules each, with civilian drivers. Against my wishes I was detailed to command them. I receipted for the guns, mules, harness, etc., to Major Henry Inman, depot quartermaster at Fort Harker.

The only Gatling guns I had ever seen were in the ordnance museum at West Point. My first problem was to get men to man the guns. I finally found two men, one a sergeant, who had served in the field artillery during the Civil War. We three worked out the minimum number of men to man the guns and the necessary number of men were then detailed. My second problem, then, was to improvise a drill to work the guns. On the march I drilled my teamsters.

There were no "howitzers" with this expedition. Ambulances and "Dough-

erty wagons" were sent to Ellsworth City (not Ellis) for the commissioners, and these joined us on the first day's march. On arrival at Fort Zara (Great Bend?), near the mouth of Walnut Creek, nearly all the commissioners left the expedition and went to Fort Larned, where the Indian agency was then located. The next day we camped on the Arkansas River, near the mouth of Pawnee Fork. I well remember our astonishment to find that we could cross the great "Arkansaw" dry shod at some places and find it a running stream above and below.

The next day we were joined by the parties who had gone to Fort Larned, the personnel of the Indian agencies, including guides and interpreters and several officers from Forts Larned and Dodge. I recall that our army mess was increased to *thirteen!* At our midday luncheons a case of (12?) canned peaches was opened and there was a drawing of "cuts" for the cans, the successful ones then contributing to the "short cut." Later Major Page and other visiting officers established their own mess.

After crossing the Arkansas River we ascended the sand hills. I rode to the highest hill and there, to my surprise, found the wind had blown out a crater, exposing the top of a tree which, upon examination, I found to be oak. Up to that time we had not seen any buffaloes, but from my high sandhill I could see the rolling prairie to the south and miles and miles of buffalo.

It had occurred to the Indians to drive these herds to that vicinity in anticipation of the assembling for the treaty conference so that their people could prepare their winter supply of dried meat, etc.

That day, while at a halt, an army ambulance drove up to where a group of us were. Lieutenant Tom Wallace called out, "Hello, Satanta!" A bleareyed, drunken Indian, wearing the uniform of a colonel, raised up from his bed, looked out from the rear entrance and, not seeing any of his particular friends present, gave a grunt and settled back on his bed. Then the ambulance drove to where the commissioners were grouped.

During the day several of us, including Major Elliott, engaged in "runs" on the buffalo. That aroused the ire of Satanta and he complained to General Harney, the senior of the commissioners present. General Harney sent for Major Elliott and placed him in arrest, but on arrival in camp released him. That stopped our sport. Satanta's complaint was that we killed more buffalo than we needed for food. A number of times at our camps the command had to be turned out to keep stampeding buffalo, for some reason or no reason, from running into our camp and stampeding our stock. They were particularly troublesome on Rattlesnake Creek.

I will remark here that General Sherman, who was chairman of the Peace Treaty Commission, was at *no time* present at this Medicine Lodge conference.

The day we reached the treaty grounds the escort and supply train was halted a couple of miles from the place while the commission and followers went ahead to meet an escort of warriors from the assembled tribes, the Arapahoes, Apaches, Kiowas and Commanches. The Cheyennes had not yet arrived. The commission was received by a vast array of chiefs and warriors

in panoplies with shouts and shooting of firearms and escorted to a large open space near the left bank of Medicine Lodge Creek above the villages.

The escort and wagon train then advanced and on arrival were placed in camp by General Harney, the troops in line facing upstream, officers' tents on the right, above the camp of the commission. My detachment of Gatling guns was camped behind the right of the line facing toward the creek. The supply train was parked behind the commission camp. The commission had two hospital tents facing, with two flys between for the conferences. Daily conferences were held with the chiefs and sub-chiefs or delegations from the various tribes and bands.

Almost daily visits to these conferences left the impression of monotony in the welcomes by the officials and the replies by tribesmen. No doubt, though, that some of the speeches by the chiefs, with their dignified bearing and gestures and well modulated voices, lost much of their eloquence through the monotonous translation by the interpreters. For many years I had the translation of a speech by Chief Satank, that compared favorably with the speech of the Mingo Chief Logan, with which we were familiar in the old McGuffy readers, and ending with the pathetic phrase: "And who shall mourn for Logan? Not one!"

I recall one amusing incident. Kicking Bird, then a sub-chief of the Kiowas, who later became the famous head chief of the tribe, had made his speech and remained standing, but had his gaze fixed on the high silk hat in front of one of the commissioners. The commissioner, not thinking of the hat but that some trinket had attracted his fancy, asked, "What do you want?" Kicking Bird, without changing his gaze, replied, "I want that hat." The commissioner, thinking he wanted to satisfy his curiosity, handed over the hat. Kicking Bird took it and walked away. Later he appeared in the immediate vicinity of the council tents arrayed in moccasins, breech-clout, and the high hat. He stalked back and forth, telling the tribesmen to look at him; that he was "walking in the white man's ways," and using other set phrases that had been used in the councils. Finally he grew tired of his burlesque, set the hat on the ground and used it as a football until he had battered it out of shape, then stalked away.

These councils continued for more than a fortnight, according to my recollection, and there was considerable anxiety because the Cheyennes had not come in, and what would be the attitude of Charlie Bent.

One day word came that the Cheyennes would arrive the next day, but later word that they would camp about three miles upstream for the night and arrive on the morrow. There was serious anxiety as to the meaning of this delay when so near, and that night the guards were instructed to be particularly on the alert.

Stumbling Bear, a sub-chief of the Apaches, became a constant visitor at our camp and became particularly friendly with Major Elliott; he was sure to be there about supper time and got the "leavings" of the supper. He would give us instructions in the sign language. The morning that the Cheyennes

were to arrive, Stumbling Bear came to our camp, but not in his usual jolly mood. He told us to be on our guard when the Cheyennes came in; then went away. As the Cheyennes approached our camp, we could hear occasional shots and shouts. Stumbling Bear and a few of his tribesmen came walking, rather hurriedly and, without a word to anybody, squatted in close vicinity to Major Elliott's tent. All the troops had instructions what to do in case of demonstration of hostile intent, and stood in front of their tents with everything in readiness to jump to their places fully equipped for dismounted defense.

The nearer the Cheyennes approached, the more demonstrative they became. Shooting, shouting, and blowing of trumpets; of the latter they had two or three. When about two or three hundred yards from our camp they gave several loud shouts and dispersed.

Stumbling Bear and his followers left in high good humor. A year later, November 27, 1868, at the Battle of Washita, Major Elliott was killed. In January, 1869, the Apache tribe came to their agency at Fort Sill. Stumbling Bear came to see me. I noticed that he had his hair cut off, and there were other unmistakable signs of mourning. I asked him if he was in mourning for losses in his band or family. He replied, "No," and gave me to understand that he was in mourning for the loss of his good friend, Major Elliott. I never saw him again.

The conferences were closed soon after the arrival of the Cheyennes, the treaties signed ("touching the pen") and then the wagons were unloaded and gifts of supplies were distributed—food, tobacco, clothing, blankets, pots, kettles, skillets, trinkets, etc.

When we left there, the plain where the commission had camped was strewn with the despised, left-over, shoddy Civil War uniforms, issued by the bale to them.

At Fort Larned, Kansas, these same tribes were assembled in August, 1868 (less than a year after signing the treaties), to receive the annuities promised by the treaties. The *next day* after the issuance of these annuities, as if concerted, warriors of these same tribes attacked the frontier settlements in the Saline, Soloman and Republican valleys, killed men, women and children, outraged and made captive women, burned homes, and stole stock.

The outcries of consternation and indignation, with protests for protection, resulted in the Winter Campaign of 1868 and nine others under General Sheridan, including the attack, capture and destruction of Black Kettle's village of the Cheyennes by the Seventh Cavalry, under the command of General Custer, who later rescued two of the captive white women (Mrs. Morgan and Miss White).

Then these tribes went on their agreed reservations and for some years there *was* peace!

MOUNTED SPORTS

First Cavalry Division Horse Show

By MAJ. STEPHEN M. WALMSLEY

Signal Officer, First Cavalry Division

SIXTH Annual First Cavalry Division Horse Show. I'd like to see the sixteenth and the sixtieth! I feel about the First Cavalry Division Horse Shows the way Frank Tinney said that he felt about women's skirts in one of his monologues of some years ago. He remarked that "He had noticed that women's skirts were getting shorter every year, and that he hoped he would live a few more years, *anyhow!*"

It is not that each successive show held at Fort Bliss is better in every respect than the one which preceded it, for horses and riders come and go, even in as short a period as the three years during which I have observed the shows, but that each year shows an improvement in the general standard and brings forth some new feature in exhibits, ring appointments or organization.

The show this year was favored with perfect weather, and for the first time in the history of these annual events, the entrants performed in a turf ring instead of on yellow gravel. At the close of last year's show it was decided that the exhibition was entitled to a better setting than had been previously available, and work was immediately begun on the improvement of the Howze Stadium, where the shows are held.

The list of animals entered this year, which mounted to a figure approaching five hundred, was materially smaller than that last year, due to the eliminations, which were held in practically all the jumping classes prior to the show. This innovation in the method of handling the Fort Bliss shows added materially to the interest from the spectators' standpoint, as it brought down to a reasonable figure the list of entrants in the jumping events. Classes for novice jumpers and for novice jumpers and riders were included this year for the

first time, and replaced the open enlisted man's jumping class, which last year called forth so many entrants as to be monotonously long.

With the two jumping classes mentioned above, the open jumping and the championship jumping for all winners in jumping classes, ample opportunity was provided for all officers and enlisted men who were capable of good performances. These arrangements also made it possible for ladies to compete in the important jumping events.

Last year the First Cavalry Brigade, whose headquarters is at Fort Clark, Texas, presented a handsome trophy to the division, to be contested for annually by all units within the division. The events scored for this trophy were selected by a division board and included only those which could be properly entered by all division units, care being taken to exclude any classes requiring

Bones, Miss Helen Tillson up

equipment or vehicles not common to all, and also classes requiring animals or heavy equipment, the cost of shipment of which from the outlying stations to Fort Bliss was too large to be warranted. The winning of this cup provides a form of team competition as against individual competition, which adds materially to the interest of the show. The Fifth Cavalry won the trophy this year, with a total of twenty-three points, as against twenty points earned by the Eighth Cavalry, nineteen points by the First Cavalry, and eleven points by the Seventh Cavalry. The show was made up of forty-one classes, which gave an opportunity for showing every type of animal, animal drawn vehicle, and pack equipment used by the division.

In addition to the strictly military events, there were classes for polo ponies, hunters, hacks, both singly and in pairs, and a children's class.

The outstanding horse of the show was a chestnut thoroughbred, *Bones*, owned and ridden by Major J. C. F. Tillson, Jr., Eighth Cavalry. *Bones* took the blue ribbon in the remount cup event and in the open jumping, the red ribbon in the officers' charger class, and the yellow in the classes for novice jumpers, championship jumpers, lightweight hunters, and officers' private mounts. *Bones* is a Texas product, son of *Sir Ballinger*, and was bred and raised near San Angelo, Texas.

The polo pony classes were especially good this year. Capt. B. C. Bridges, V. C., was the most successful exhibitor, taking first place in the group of three ponies' class, showing *Harry*, *Naomi*, and *Lulu*. He also won a red in the heavyweight class, another red in the suitable to become polo ponies class, and a white in the lightweight class. The polo pony classes as a whole formed an interesting study from the standpoint of comparison between Government owned ponies and privately owned ponies. Excluding the classes which were performance solely, such as the bending race and stake race, and classes for stables showing twelve polo ponies in a group, there were one hundred and seven ponies shown in groups of three, lightweight ponies, heavyweight ponies and ponies suitable to become polo mounts. Of these animals, fifty-seven were Government owned and fifty privately owned. In the four classes mentioned above, all the ribbons in the groups of three ponies went to privately owned animals, all the ribbons in the ponies suitable to become polo mounts went to privately owned animals, and first and second ribbons in the lightweight polo mounts did likewise. In the heavyweight class, Government owned ponies made a clean sweep and took third and fourth in the lightweight class.

The jumping classes, although very good, missed *Woodrow* and *Garry Owen*, two sterling performers who have graced the Fort Bliss show for a number of years past. Both of these animals went to Fort Riley last spring for the Olympia tryouts and have gained fame for themselves and the service this fall in eastern shows, especially at the Garden and at the Cathedral show at Rye, New York. Two traditional performers, *Rebel* and *Peanuts*, whose list of winnings is far longer than their pedigrees, failed to successfully compete with their younger rivals this year, and it is evident and not surprising that their winning days are past.

Among the ladies, Mrs. Charlton of Fort Sam Houston; Mrs. Darling from the First Cavalry, and Mrs. Creed from the Fifth Cavalry, were outstanding. Mrs. Charlton's win in the heavyweight hunter class on *Louis XII* was well earned by a beautiful performance. The field against which she competed was large and contained excellent animals and riders. In the jumping, which formed a part of the performance for the class, she was one of the few who negotiated the course at a true hunting pace.

The officers' charger class and the officers' private mounts class were won by Col. Conrad Babcock, riding his big mare *Latonia*. Both these classes included a jumping course and a schooling exhibition, and Col. Babcock showed his mount throughout both classes in a manner extremely befitting the commanding officer of a cavalry regiment.

The dates of the show, November 8, 10 and 12, were less than a month after the return of the entire division from its extensive maneuvers in the Marfa area. As these maneuvers had prohibited any preparation for the show prior to their conclusion, the excellence of the classes were especially noteworthy.

The Army Polo Team in the High Goal Tournaments, 1927

By CAPTAIN C. H. GERHARDT, *Cavalry*

FOR the first time, in 1927, the Army Polo authorities felt that they had the required player and pony personnel to enter in the high goal tournament held at Meadowbrook after the Internationals. These two tournaments consist of the Open, played on the flat, and the Monty Waterbury, played on the handicap basis. The following is the line-up and designation of the various teams entered:

Team	(1)	(2)	(3)	(Back)
Magpie	Morgan Belmont	Watson Webb	Jerry Balding	Devereux Milburn
Eastcott	Mr. Schwartz	Mr. Hopping, Sr.	Mr. Hopping, Jr.	Mr. Trail
Hurricanes	Laddie Sanford	Winston Guest	Capt. Roark	Maj. Harrison
Sands Point	Mr. Harriman	Tommy Hitchcock	Cheever Cowdin	Mr. Stoddard
Ramblers	Sonny Whitney	Capt. Pert	Malcom Stevenson	Bobby Strawbridge
British Army	Capt. George	Capt. Denning	Maj. Atkinson	Lieut. Guiness
U. S. Army	Capt. Wilkinson	Capt. Gerhardt	Capt. Rodes	Capt. Huthsteiner

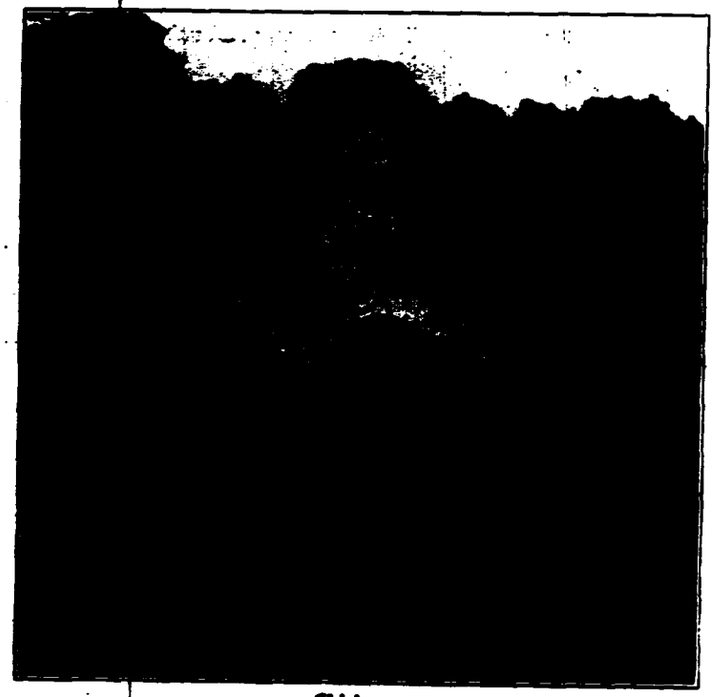
The highest of these teams was rated at 31 goals, our Army Team being the lowest at 21. However, a ruling was passed that no team should give away more than 5 goals in any game, and therefore our Army Team entered at 26 goals.

Due to the efforts of Captain Rodes, extra ponies were secured to augment our strength for these two tournaments, notably, *Tranquil*, loaned by Mr. J. C. Cooley, *Tip Top*, *Last Choice* and *Babe Coeurs* from Fort Riley, and others. The team was outmounted as a whole; however, there were several outstanding ponies for the various positions. Captain Wilkinson had *Peg*, a veteran of the last two military series with Great Britain; Captain Gerhardt had *Tranquil* and *Tip Top*; Captain Rodes had *Chicken*, *Liggett* and *Babe Coeurs*, while Captain Huthsteiner had an even lot of ponies, none of them outstanding.

In the draw for the Open, the Army drew a bye for the first round, and in the second round played the Ramblers, who had Mike Stevenson and Bobby Strawbridge at No. 3 and Back. This, of course, was a very fine defensive combination but, by hard riding and good team play, the Army came through in a driving finish by a score of 6 to 5, scoring two goals in the last period. This put the team in the semi-finals and, when the British Army won its way to the finals, most of the polo enthusiasts were hoping that our team would win its match, thus making the finals for the Open Championship an all-army event. However, things did not turn out this way. With Tommy

Hitchcock at his best, mounted on three of the ponies he had played in the Internationals, the Sands Point team defeated the Army by 10 to 7. Hitchcock scored 7 of these goals and played a beautiful game. Considering the fact that this was a 31 goal team and the Army a 21 goal team, everyone was very well pleased with the showing. Sands Point went on to win the Open Championship by defeating the British Army in the finals.

The Monty Waterbury tournament was played on the handicap basis. For the first game, the Army drew Laddy Sanford's Hurricanes. This Hur-



Chicken

Showing Extreme Development of Hindquarters and Remarkable Handiness

ricanes team was beautifully mounted throughout. It was a high goal team, carrying a handicap of 31. Thus, the Army received a 5 goal advantage to start with. The final score of this game was 11 to 10, in favor of the Hurricanes. Captain Huthsteiner had a bad fall in the 5th period, but played on until the 7th, when he had to be relieved by Captain Tate. Later, we felt that, if a substitution had been made in the 5th period, our team probably would have come by this match a winner. However, it was probably just as well, as the ponies were pretty well played out and several of them would not have been able to go on.

One of the outstanding achievements of the Army this year was the

winning of the Prince Friarstown Cup by the Army Polo mare, *Chicken*. This Cup is presented annually by Mrs. Averill Harriman to the best playing mare in these high goal tournaments, which is also suitable to become a brood mare. *Chicken* won the middle-weight brood mare class in the Annual Pony Show and played so well for Captain Rodes that she was selected for this Cup.

Due to the kindness of the authorities at Fort Hamilton, the Army team shipped down, the last Sunday in September, to play an exhibition polo match on the Fort Hamilton field. A large crowd of about five thousand turned out for this match, and the receipts were donated to the Army polo fund. Several days later, the Government ponies were shipped to Front Royal, Virginia, where they annually winter, and the team broke up for the season of 1927.

Mr. Stoddard, President of the Polo Association, expressed himself as being very much behind the Army's effort to retain the Military Championship next year, when the British Army comes to this country to play, and will do all in his power to further this end. The Army owes a great deal of thanks to the Polo Association, and principally to Mr. Stoddard, Mr. Milburn and Mr. Hitchcock, Sr., not only for their advice and help, but for the use of the Meadowbrook Fields and also the private fields belonging to Mr. Russell Grace, Mr. Harold Talbot, Mr. Phipps, Mr. Fred Post and the Sands Point Club.

Chattanooga-6th Cavalry Horse Show

THE annual Chattanooga-6th Cavalry Horse Show was held at the post November 11 and 12. Following last year's show, the show grounds on McDonald Field in Chickamauga Park were subjected to many changes and improvements. A hedge has been planted around the entire ring and a stone wall built along the west side of the ring to accommodate the additional number of boxes which it was found would be required for future shows.

The show was started at 10:30 A. M., Friday, when the 6th Cavalry polo team, composed of Captains Cheves and Meador and Lieutenants Ireland and Ladue, with Lieutenant Comfort, substitute, lined up against the Infantry School team, composed of Majors Smith and Lyman, Captains McClure, Burris and Forsyth and Lieutenant Guernsey, for the first of a three-game series. The teams were to play the best two out of three games. The first game was played on a wet field, but that fact did not appear to detract from the speed or enthusiasm of either the players or the spectators. During the early part of the game each team played fast even polo which continued until the half, when the 6th Cavalry had gained a slight advantage which was held during the remainder of the game. The final whistle ending the game found the 6th leading by the score of 9 to 7.

At 1:00 P. M., the horse show opened in the show ring and the spectators' attention was drawn from polo to other forms of equine exhibition. The show was fortunate in having Mr. C. C. Harris of Lexington, Kentucky, to judge the three and five-gaited classes. Captain McKinley, Remount Service, Quartermaster Corps, and Captain Renn Lawrence, Cavalry, D. O. L., judged military, jumping and polo classes.

In addition to the local civilian and military entries, we were hosts to a team of officers and ladies from the Infantry School. In addition to the polo games played, the Infantry officers and ladies participated in practically all of the classes in the horse show. The visitors exhibited some excellent horsemanship and received a large share of the prizes and ribbons awarded, winning fifteen ribbons, five each of blue, red and yellow. All of the classes open only to civilians were well filled and afforded many excellent and interesting exhibitions of profound interest to the spectators.

An exhibition ride was given each afternoon by the ladies of the post, Chattanooga and vicinity. One of the most sought after prizes is the Garnett Andrews Challenge Cup, which was won this year by Mrs. Leslie D. Carter, riding *Jazzbo*. This cup is donated by Mr. Garnett Andrews of Chattanooga and is awarded annually to the best lady rider in the regiment. The conditions of the competition include the ability of the rider to demonstrate training of her mount in the ordinary schooling movements and finally to conduct the horse over a course of four jumps. One of the oustanding features of this year's competition was the fact that Mrs. Carter has twice won the cup before and, after not competing last year, came back this year and won over a field of six. Miss Mary Cootes was second and Mrs. R. E. Ireland, third.

In jumping, competition was very close and in several of the classes, jump-offs were necessary to decide the winners of the prizes. *Red* and *Bony* made their usual performances and in the classes entered carried off their share of the ribbons and prizes.

The championships in the three and five-gaited classes were held on Saturday afternoon. These classes were open to all who had won first or second in any three or five-gaited class in the show. Miss Wiseman on *Rex Allen* was awarded the blue in the five-gaited and Lieutenant Comfort on his private mount, *Windy*, received the award in the three-gaited class.

The final polo game was played Sunday afternoon. The field was much improved and a fast game was promised. The final chukker started with the score a tie. With the throw-in, the 6th Cavalry carried the attack with a rush and scored twice, quickly followed by a tally for the Infantry. The spectators were being treated to a real finish and before the final whistle sounded the 6th had again driven the ball between the goal posts for their third point of the chukker. The game ended with the score 10 to 7 favor the 6th, for their second straight victory of the series.

The success of the show was due largely to the many friends of the post in Chattanooga and vicinity, who responded nobly to every request for assistance in putting the show over and making it the success it was.

Troop Horse Show in the Philippines

TROOP G, 26th Cavalry (PS), held its First Annual Horseshow on September 15, 1927. Inasmuch as this was the first troop horseshow that has been held in the 26th Cavalry since the organization of the regiment, it may be of interest to learn what the Filipino cavalryman is capable of.

Prior to 1927, the jumping done by enlisted men, with a few exceptions, had been confined to small, natural obstacles, such as ditches and logs. Consequently, men and horses alike were not prepared to perform creditably without considerable practice.

Immediately after the completion of the target season in June, a jumping chute was constructed in rear of the stables. This chute contained a stone wall, a chicken coop, and a solid post and rail jump, all of which were about three feet high. For a period of about six weeks, fifteen or twenty of the best horses in the troop were put through this chute once each day. In the meantime, permission and support for the show were assured and a date was tentatively set. After the first six weeks all men who desired were allowed to ride their horses through the chute, and for three Sundays preceding the show a regular course of jumps was taken.

There were seven classes, as follows: Privates' jumping, best mount and schooling, non-commissioned officers' jumping, best mount and schooling and open jumping.

In all jumping classes, there were five jumps, four around the outside of the course and one in the center. Each contestant rode twice around the outside and then down the center. The first jump was a brush about three feet three inches high, the second a post and rail three feet high, the third a stone wall with a bar on top three feet ten inches high, the fourth a gate three feet high, and in the center was a triple bar three feet high. The bar was placed on top of the stone wall to make the horses clear the solid part of the jump and to avoid bad falls.

The privates' jumping was won by Private Alejo Sambrano with a perfect score. The winners of second and third places had scores of 99 and 98, respectively. There were ten entries. For the non-commissioned officers' jumping the post and rail, and triple bar jumps were raised three inches. There were five entries. First place was won by Sergeant Proceso Oizon, riding a remount received from the States on the *Meigs* in February. The scores of the three placing entries were 97, 95½, and 92.

There were eight entries in the best privates' mount class, which was won by Private First Class Luciano Saveliana. Non-commissioned officers' best mount, with four entries, was won by Corporal Pablo Hernandez.

There were four entries in both schooling for privates and non-commissioned officers. Private First Class Saveliana was winner of the former and First Sergeant Saturnino Javier of the latter. Private Saveliana's performance is remarkable due to his conformation. He is the shortest man in the troop and in mounting his horse invariably jumps for the stirrup. When in the stirrups his feet do not come below the line of his horse's belly. First Sergeant Javier rode a remount received in February.

For the open jumping, the post and rail jump was raised to three feet six inches, and it was so arranged that there were only two bars very close together at the top. The triple bar was also raised to three feet six inches. Private Sambrano won this class and the Jumping Championship with a score

of 94½. Four entries were tied for third and, as it was late in the morning, the place was awarded by lot. There were six entries and the scores were from 94½ to 92½. Private Sambrano's performance is worthy of note, when it is realized that he rode his horse in four classes and that the horse itself was comparatively old and hitherto unknown.

The results of the show were very gratifying and prove that the Filipino soldier, although not a horseman by nature, is capable of schooling and jumping and, given a fair amount of training, can put up an excellent performance.

Troop G is commanded by Captain W. F. Pride, with First Lieutenant W. S. Conrow as second-in-command.

Hand Polo

THE game of hand polo, as developed by Colonel J. R. Lindsey and Lieutenant J. H. Walker of the 14th Cavalry at Fort Des Moines, Iowa, has opened a new field of riding hall exercise and is meeting with great success and popularity among the troopers of the 14th Cavalry at that station. The game is not only simple to learn, but it is extremely interesting and fast. The game is yet in its infancy. Colonel Lindsey would be pleased to receive suggestions for changes or additions to the rules, which are as follows:

Teams: The game of hand polo is played by two mounted teams consisting of five men each.

Equipment: Snaffle bits, blankets and surcingles, indoor baseball.

The Game: The teams shall line up in the center of the field in column of trooper at right angles to the length of the field. The ball is thrown in by the referee between the two teams to put it in play. The object of each team is to gain and keep control of the ball and to score goals, and to prevent their opponents from gaining control of the ball and scoring. A game is divided into four periods of seven minutes each.

Rules: 1. The goal shall be a board, four feet by four feet square, one being placed at each end of the playing field in the center of the end lines and twelve feet above the level of the playing field. A goal shall be scored when the ball, thrown by a player, strikes the goal board.

2. The ball may be carried only one-fourth the distance of the playing field by any one player. It must then be passed. It may be carried a shorter distance and then passed.

3. An opponent may ride out the player carrying the ball or the player about to receive the ball to prevent the pass or to gain control of the ball.

4. Riding across the head of an opponent's pony or using elbows shall constitute a foul.

5. If the ball be dropped, any player may dismount and regain it and the ball continues in play. The ball may not be passed to a mounted player by a dismounted player; and a player who has dismounted to recover the ball must not carry the ball more than five yards. A dismounted player who has recovered the ball and who is unable to regain his mount in five yards or less, must drop the ball.

6. A ball passed or thrown out of bounds shall be thrown in again by the opponents at the point where it passed out of bounds.

7. After each goal scored, the play shall commence again by the ball being thrown in again in the center of the field.

8. A ball shall not be passed from hand to hand but must be passed by a throw.

9. A field goal shall count two points: and a goal from a free throw shall count one point.

Penalties: A free throw from the quarter line for the side fouled. Players may be located any place on the playing field during a free throw, but shall not interfere with the player making the throw. Fouls and violations of the rules shall be penalized.

Officials: Referee, time keeper and scorer.

While the above rules pertain to the game as played in the riding hall, the game can be developed and made suitable for outdoor play, assuming the same characteristics as polo, using the same horses and equipment and following the game closely in all respects save that the ball is passed and carried instead of being knocked with a mallet.

1st Cavalry Division Polo Tournament

THE winning of the 1st Cavalry Division Polo tournament by both the senior and junior teams of the 7th Cavalry was an accomplishment which reflects great credit on the sporting, fighting and playing ability of Major Terry Allen. Undaunted by the success of the excellent team which represented the 8th Cavalry and Fort Bliss in the inter-circuit tournament and with a handicap of three goals when he lined up against them, Major Allen led the 7th Cavalry to victory by the score of 15 to 8. The pace set in the beginning of the game was a hot one and one team had to break. With the score 5-5 in the 3d period it looked bad for the 7th, when their strong back, Captain C. L. Stafford, was forced to retire from the game as a result of a bad fall. Captain Harry Dodge replaced him and no let-up in the offensive spirit of the team was noticeable. In fact it improved and at the end of the 6th period there was not much doubt as to the outcome of the game. The 1st Cavalry in the finals played a plucky game but their opponents were too strong for them. The 7th won by score of 16-8. The other members of the team were Captain T. E. Voigt and Lieutenant M. McD. Jones.

The junior team defeated the 1st Cavalry by the score of 6-3 and finally won the series by defeating the 82d Field Artillery by the score of 7-4. The team consisted of Lieutenants S. W. Van Metre, J. A. Whelan and Z. W. Moores and Captain H. L. Branson, in that order from front to rear.

Fall Horse Show Record of the 305th Cavalry

THE horse show team of the 305th Cavalry (Pennsylvania), Col. W. I. Forbes commanding, which entered the Wissahichon Horse Show on September 17, 18 and 19, was composed of the regimental executive officer, Captains Brogden and Livingston, Lieutenants Fotterall, Taylor and Town, and First Sergeant Stradley. The 305th entered eight horses in all the military events and had entries in practically all the jumping classes, making a total of sixty-three 305th Cavalry entries at the show. The regiment won all the military

classes, taking first, second, third and fourth places in each class. The following prizes were added to the regimental trophy case as a result of this show: five beautiful trophies, five blue ribbons, nine red, six yellows, and seven white. The excellent riding of First Sergeant Stradley in this show is worthy of mention.

At the Montgomery Hunt Club Show on October 12 the regiment had entries in all the military events. Lieutenant Town on *Liberty Bond* won the cup and blue ribbon in the military jumping over the outside course. Lieutenant Fotterall was second and Lieutenant Mitchell fourth in this event. In the military jumping on the inside course Lieutenant Fotterall was first and Lieutenant Mitchell fourth. In the saddle class Lieutenant Mitchell won the cup and blue ribbon. In the Championship Hunter Class Lieutenant Town took the red ribbon.

The regiment was also well represented at the Whiteland's Horse Show on October 29. In the Hunt Team Class the regimental entry, composed of Major Thompson and Lieutenants Town and Taylor, took second place. In the members' jumping class Lieutenant Fotterall took second place and Lieutenant Taylor third place in a field of twenty-three entries. Lieutenant Fotterall again took second place and also fourth place in the open jumping class in the Memorial Plate Steeplechase. The regiment had entries in all the jumping events and members of the regiment rode in all the flat races and steeplechases.

2d Cavalry Polo Season

THE 2d Cavalry polo team, consisting of Major E. L. Franklin, No. 1, Lieutenant J. W. Wofford, No. 2, Lieutenant Colonel J. K. Herr, No. 3, and Captain J. C. Rogers, No. 4, won the right to represent Fort Riley at the Ponca City Tournament, September 20 to October 7 by defeating Colonel Gordon Johnston's Blue team in two matches; 12-3 and 8-6. Other teams playing at Ponca City were Kansas City, Wichita, Oklahoma University, Fort Reno, Ponca City Reds, Ponca City Blues, Houston and Fort Leavenworth. The 2d Cavalry team won its way to the finals by defeating the Ponca City Reds 14-10, and Fort Leavenworth 13-9. The Fort Leavenworth team was the same that won the Fort Snelling tournament by defeating Onwentsia in the finals. It consisted of Majors Swift and C. C. Smith, Captain Fiske, and Lieutenant Holbrook.

The 2d Cavalry lost the finals to the Ponca City Blues by a score of 8-4. This team consisted of Messrs. Marland, Crawford, Shallenberger and Allen. The 2d Cavalry was obliged to give this team 4 goals by handicap.

Ponca City is developing into quite a polo and riding center, under the guidance of Don Henderson and the liberal aid of Mr. E. W. Marland. The ponies are distinctly high class and the players rate above their present handicaps. The visit of the 2d Cavalry team was made enjoyable, not only by the cordial hospitality of Ponca City hosts, but also in the observance of sound methods by means of which horsemanship and polo are promoted. It seems

that Mr. Marland, the oil king, is far sighted enough to believe that aside from the matter of sport, the dividends in health and efficiency to his officials and employees resulting from the time spent on a horse warrants his strong support of all mounted activities.

The team next took part in the Wichita tournament, with same personnel playing, except that Colonel Herr returned to the regiment. The team went to the finals, but lost to Ponca City by a score of 8-7.

Taken as a whole, the season was successful. Although it was obvious that other teams had better ponies, we made up for the difference as best we could by taking the best of care of the mounts that we had. The care of our ponies counted heavily in the scores made, and we hope to acquire more and better ponies for next season.

The Cavalry School Hunt Club

THE hunting season opened October 23. With the pack improved by considerable new blood and with fifteen couple of this season's puppies to be ready to hunt in the early spring, three or four hunts a week are being scheduled. In addition to Sunday and Wednesday hunts for club members, a hunt for enlisted men is held each Friday, with the several units alternating, and some additional runs are being arranged for the student officers' classes. The first party of the season was held on the Wednesday afternoon before Thanksgiving, when refreshments were served at the Bridge Tea Rooms following the kill. A field of fifty followed the pack twice through Hill Pasture over five fences, through Magazine Canyon and down Cemetery slide to the kill at the concrete bridge. A large number of officers have applied to have their private mounts qualified as hunters under the rules of the National Steeplechase and Hunts Association, of which this club is a member. The pack is working better this year than at any time in the past four years and will compare favorably with any pack in the country.

Presidio of Monterey Polo Team

A POLO team picked to represent the Presidio of Monterey, competed at Vancouver Barracks, Washington, in September in the 9th Corps Area tournament and the Open Championship tournament. It was decided to send a post team representing the 11th Cavalry and the 2d Battalion, 76th Field Artillery. The team not only won the Corps Area championship, but also won the open tournament, being victors in every game it played.

The team consisted of Lieutenant McNair, 76th Field Artillery, at No. 1; Lieutenant Barden, 76th Field Artillery, at No. 2; Lieutenant Read, 11th Cavalry, at No. 3; Major Erwin, 11th Cavalry, at back. Major Erwin and Lieutenant Read played on the 11th Cavalry team which won the Pacific Coast circuit tournament in 1926.

The Presidio team also won places in the horse show, which was held in connection with the polo tournament. Major Erwin won the open jumping match; Lieutenant Read came off first in the polo pony jumping, with Major

Erwin second; and Captain Lambert, who was substituting on the polo team, got first place in the one-quarter mile race. *Rex*, owned by Major Erwin and ridden by Mrs. Clinton, won first place in the walk, trot, and canter ladies' class, and *Brownie*, owned by Major Erwin and ridden by Mrs. Harris, got second place.

Cadet Polo at West Point

By CAPTAIN C. H. GERHARDT, *Cavalry*

CADET polo this year has been put on a somewhat different basis from that of previous years. A decided effort has been made to make this a corps activity, rather than a first-class privilege; and, although we may not do particularly well in the intercollegiates this year, it will make for better polo teams in the future. There are three polo squads being handled at present; the "A" squad of nine players, the "B" squad of nine players, and the "C" squad of promising fourth-classmen. At present the first team consists of Cadet Brown, the polo captain, at No. 1; Cadet Harkins, second class, at No. 2, and Cadet Haskell, third class, at No. 3. So far this team has demonstrated its superiority over all other combinations, and the chief advantage is that only one man will be lost this year. As we go on, more and more underclassmen will be added to the various squads, and no upper classman will be kept unless he has an opportunity to play on the first team. An officers' team, consisting of Lieutenant Jadwin, Captain Cole and Captain Gerhardt, furnishes the Cadet team opposition each week and, although the cadets are outclassed at present, they are improving steadily.

New ponies have been shipped up from Front Royal and will start to work under Lieutenant Jadwin, who has charge of the cadet remount platoon.

General Winans, the new superintendent, is particularly keen on cadet riding activities, and we hope he will be able to do something to further the new polo field.

114th Cavalry Night Ride

OFFICERS of the 114th Cavalry experienced their first regimental night ride on the night of August 22, during the summer encampment at Camp Whitside, Fort Riley.

Responsibility for this experience has been placed vicariously on Colonel W. K. Herndon, on Major Clark P. Chandler, senior instructor, and on Captain John Smith, plans and training officer. Responsibility for the weather, however, has been definitely placed on Captain Smith. It rained. More than that, it stormed. There was lightning and there was wind, and both wind and rain were cold. Aside from that combination, the ride was an excellent one.

The course was approximately 25 miles, and was laid along the boundaries of the reservation. Officers started in pairs, as is the custom, but rode quite often in flocks, for safety and companionship. Home station was Headquarters, Camp Whitside. Station "A" was at the flagstaff on Morris Hill; "B" at Haycamp, "C" at Milford Gate, "D" at Estes Gate, "E" at North Gate, "F" at a designated road bend north of Ogden, and "G" at the bridge over Three Mile Creek on the Golden Belt highway.

With plans for the ride well laid and the weather threatening, Colonel Herndon of the 114th very kindly extended to the officers of the 113th, encamped on Republican Flats, an invitation to join in the ride. Colonel Findley promptly accepted the invitation for his regiment, and ordered participation of all his officers. That may have been what started the storm. At any rate the officers of the 113th rode the same route, starting at their camp, and making Milford Gate their first station clockwise, and Hay Camp the first station counter-clockwise.

There were various incidents and particulars of the ride which, in the name of thoroughness, must be reported. For one, Colonel Herndon, riding with his adjutant, Captain Charles W. Gordon, attempted to beat the system, left the well-defined roads and came to grief in a pen of bulls. Both the Colonel and the bulls were disgusted, but the Colonel waived the point and withdrew. But for lack of pontoon equipment for his mount, and aquatic skill on his own part, Colonel Findley might have been the winner. Several hip-high fords on the route cut the Iowa colonel's time seriously.

The statistical meat of the affair is this: Best time was recorded by Captain George H. Olmsted, adjutant of the 113th and Captain Whitmore of Troop F, who booted their mounts over the route in only a little more than three hours. For the 114th, the winning team was composed of Captain J. S. Turner of the Service Troop, and Lt. Eugene Bush of A Troop, with elapsed time of four hours 15 minutes. Twelve of the sixteen teams of the 114th reported at all stations and qualified as finishing the ride. All mounts were reported at the Colonel's tent at 7 o'clock on the morning of August 23, fit for service. And performed it.

Cavalry School Horse Show Team at Wichita and Kansas City

A HORSE show team from the Advanced Equitation Class, consisting of Captains Morris, Cannon and Carson and Lieutenant Hodes and led by Captain Bauskette, made the Wichita and Kansas City Horse Shows during November. Mrs. Sancomb accompanied the team to both shows, and Mrs. Hyde of Wichita rode with the team at the latter place. The team took eight firsts, eight seconds, ten thirds and eight fourths at the two shows in nineteen classes entered. The most important classes won at Wichita were the $500 stake for jumpers, won by *Monte Carlo*, Lieutenant Hodes up; hunters and jumpers, open, won by *Joffre*, Mrs. Sancomb up; touch and out, won by *Joffre*, Mrs. Sancomb up. At the American Royal Horse Show, Kansas City, the important winnings were: Jumpers, four foot six inches, won by *Monte Carlo*, Lieut. Hodes up; pairs of hunters, won by *George Williams* and *Gedney*, Captains Carson and Morris up; novice hunters, won by *George Williams*, Captain Carson up. *Dynamite*, a Cavalry School horse taken to the American Royal by the 2d Cavalry and ridden by Mrs. Febiger, placed first in four

jumping classes. This is the horse that made such a spectacular fall during the filming of the picture "The Life o' Riley" that that portion of the film was cut out. What may have appeared to be a fatal accident has not affected the ability of this great horse.

Polo at Fort Brown, Texas

THE opening of the 1927-1928 polo season found both the Fort Ringgold and Fort Brown Polo Associations rather low in funds, but with the strong desire for polo. Undismayed, the regimental commander proposed that the Fort Ringgold ponies be led to Fort Brown to reduce expenses, to which the 2d Squadron Commander at Fort Ringgold heartily acceded.

The opening game of the series was played on October 16, Fort Brown winning over Fort Ringgold with a score of 7 to 4 (1 goal by handicap). In the second game of the series, played on October 19, Fort Ringgold scored 3 goals (1 by handicap), Fort Brown running up the winning score of 6. The final game on October 22 resulted in a victory for Fort Ringgold by a score of 6 (1 by handicap) to 5 after an extra period of play.

The large attendance at the games insures support of the Annual Mid-Winter Tournament to be held at Fort Brown, January 4 to 15, to which definite acceptances have already been received from the "Huisaches" and "Freebooters" (teams from the Houston Riding and Polo Club) and from Campwood, Texas. The Mid-Winter Tournament, first established in January, 1927, as an annual affair, gives promise of becoming the principal sporting and social event of the Rio Grande Valley.

Hunting With the 307th Cavalry

THE Deep Run Hunt of Richmond is holding a drag hunt every Saturday afternoon. Jumps are stiff post and rail, varied by an occasional bank or stone wall. The regimental commander, Colonel Earnest, is Chairman of the Hunt Committee, and several other officers of the regiment are members. Any officer of the division who may be in Richmond is cordially invited to hunt. Just let us know at headquarters.

OTHER ACTIVITIES

The 4th Cavalry Presidential Guard

ORDERS were received on May 31, 1927, to establish a model camp at the State Game Lodge, South Dakota State Park, and to furnish the guard for the President of the United States during his summer vacation in the Black Hills.

Work was commenced at once. Some difficulties were encountered, due partly to lack of funds and material but, through the help and cooperation of the War Department, the 7th Corps Area and Fort Meade, these difficulties

were overcome and the camp completed in ample time for the President's arrival.

The camp was located one-half mile from the lodge and about five hundred yards from the main highway, necessitating the building of a corduroy road over a ploughed field. This road was built by utilizing old logs and railroad ties found in the vicinity. Both the road and the camp itself were constructed for the most part by the personnel of the guard.

The camp was ideally located, bordering on a creek, with splendid drainage facilities. Electric light was supplied by a plant made up by members of the guard. The dynamo was loaned by the State Sanitarium at Senator, S. D., and power was supplied by an old automobile motor loaned by a Custer, S. D., garage, put in shape and installed by a member of the guard. The plant functioned perfectly throughout the duration of the camp, supplying light for every tent and electric current for the operation of hospital apparatus. Water for the use of the camp was piped from the State Game Lodge.

The Presidential party arrived on June 15, 1927. Colonel Winship, the President's Aide-de-Camp, and Major Coupal, the President's physician, were most kind in giving every possible assistance and support to the commander of the guard in the way of advice and suggestions.

The personnel of the guard was furnished entirely by the 4th Cavalry and staff detachments from Fort Meade, S. D. The original strength was fifty men, which was subsequently increased. The officers assigned to detail were as follows: Captain Rohland A. Isker, First Lieutenant W. R. Mobley, Second Lieutenant John O. Murtaugh, all 4th Cavalry, and Major Wm. H. Hall, M. C., Camp Surgeon.

The duties required of the guard were various. In addition to furnishing the guard at the State Game Lodge during the President's stay, an express truck was run daily to Rapid City, S. D., a distance of 32 miles; personnel was supplied for a message center at the "Summer White House," and various minor duties were performed, such as escorting guests through the State Park. The 4th Cavalry was also called upon to furnish the Presidential party with twelve good-looking horses—lively, good jumpers, and absolutely safe for anyone to ride.

The Medical Detachment, Major Hall in command, furnished splendid personnel and were frequently called upon to perform numerous duties throughout the Park, including the treatment of sick tourists and persons injured in automobile accidents. The nearest doctor was located 32 miles from the camp.

Supplies for the camp were transported by motor truck from Fort Meade, South Dakota, 62 miles distant. Difficulties were frequently encountered with the old motor equipment. The efficiency of the motor transport personnel supplied by the 7th Corps Area in keeping the transportation in operation in spite of all difficulties is worthy of mention. In several instances bearings, gas lines, and other parts were replaced on the road.

The guard was afforded frequent opportunities for recreation. Permits

were granted to attend dances in nearby camps and towns. Motion pictures, to which the men were invited, were shown in the President's garage. Boxing and baseball games with nearby towns were held at the camp. Invitations were also extended to the officers to attend motion pictures in the President's dining room.

The Presidential party left the Black Hills on September 9, 1927, after which the camp was salvaged by the guard personnel. The performance and behavior of the personnel of the guard was beyond reproach. There were no court martials and the men behaved in a splendid manner. Letters were received from the President of the United States and from the Adjutant General of the Army commending the guard for the service performed.

A March in the Philippines

By Major T. H. Rees, Jr., *26th Cavalry*

The March to Baguio

On April 19, 1927, the 1st Squadron, 26th Cavalry (PS) left its station at Camp Stotsenburg, P. I., on a practice march to Baguio, Mountain Province, and return.

Immediately preceding this march, the squadron had been engaged in rifle and machine rifle practice, so both men and horses were soft. A week had been allowed in which to harden them up, but, as often happens, the Department Inspector chose this week to make his annual inspection, so the march started without any preliminary preparation. Several officers were attached to the squadron for the march at their own request.

Fortunately the first day's march was short—only fifteen miles—and we reached Capas in good shape about 9:30 A. M., April 19th. The next day, instead of halting at Tarlac as planned, we marched on through and camped five miles to the northwest on the unimproved road leading to Camiling.

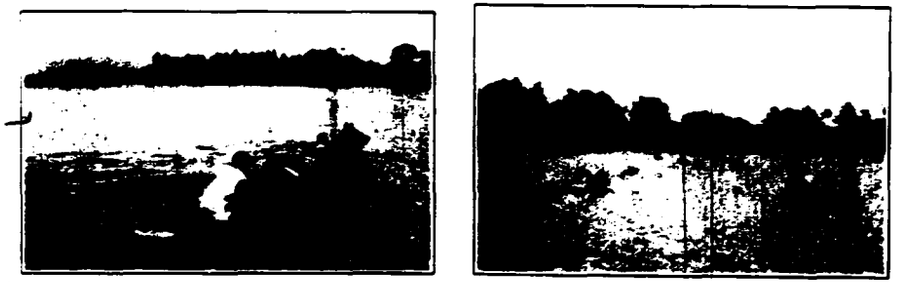
The march on the following day was the hardest of all. The distance covered was only twenty-five miles, but the weather was extremely hot, the road was poor, and there was no shade. We resorted to leading more than usual, and the sun beating down on the empty saddles, made them feel like hot stoves when we mounted up again.

The wagon train, however, had the greatest difficulty. Nearly every bridge along the road had to be repaired before the wagons could be gotten across. The floors of many of the bridges were made of split bamboo matting, and the mules' feet would break through this, so that by the time the last wagon was across, the floor was pretty badly torn up. At one crossing the bridge was too weak to use at all and much time was lost until a ford was located farther downstream. The wagons reached our camp at Mangatarem that night at 9:00 P. M., having been on the road since 5:30 A. M. The mules were nearly exhausted and we had to leave one behind the next day at Salasa. He died a few days later.

Three miles from Lingayen, our destination of the next day, we arrived at the Agno River, which at this point is 200 yards wide and no bottom at fifteen feet. There is no bridge across the river on this road, the only means of crossing being a small cable ferry operated by hand. To have ferried the entire command across would have taken several hours, so it was decided to have the men and animals swim the river and to ferry the wagons across. The saddles and packs were loaded on the ferry to prevent their getting wet, as were also the men's clothes.

We all undressed in the main street of the barrio, much to the amusement of the inhabitants, then rode into the stream bareback. A little difficulty was encountered in getting the leading horses started across, but as soon as this was accomplished, the others followed without much trouble.

Each man was instructed to leave the tie rope knotted around his horse's neck, to tie a knot in the reins, to stay mounted until the horse began to



Swimming the Agno River

swim, then to float off on the downstream side, holding on to the tie rope and guiding the horse by a light pull on one rein or the other. This system worked very well except in a few cases where the men got panicky, due to fear or inexperience, and pulled their horses over backwards in the water. These men were ordered to remove the bridles from their horses and to fasten one end of the tie rope in the D-ring on each side of the halter. With no bit in the horse's mouth, there was less danger of the man pulling his horse over backward.

The best results were obtained by having the men follow each other in column of troopers at about five yards distance. If less distance is taken some horses will overtake others and paw or strike them with their hoofs. If the distance is much greater than five yards, the horses lose sight of those ahead of them and are inclined to turn around and swim for the nearer shore.

Six bancas, or native dug-out canoes, were spaced at intervals across the stream, and held in readiness to go to the assistance of any man who got into trouble. A few men who could not swim were ferried across in bancas. These men led their horses across, the latter swimming behind the bancas, the men holding the tie ropes. There was only one practicable exit from the river, which somewhat increased the difficulty of crossing, making it neces-

sary to steer a very straight course and to make allowances for the current.

Every horse in the squadron, and nearly every man, swam the river. The only accident was a broken thumb in the case of a man who got his hand mashed between a banca and the ferry.

The swimming was done about noon, and the vertical rays of the Philippine sun caused many blistered backs and shoulders.

We camped that night in a cocoanut grove on the beach of Lingayen Gulf, and a wonderful beach it is. Those of us who did not get our fill of swimming at the Agno River enjoyed the surf bathing in the ocean, but it did not improve the condition of our sun-burned backs.

The next two days' marches were made without special incident. The night of the second day out of Lingayen we camped at Klondyke, in the foothills of the Igorot country. A hotel had been built here near the site of some hot sulphur springs. The hotel had recently burned down, but the concrete tanks were still intact and overflowing with the hot sulphur water. All the officers took this opportunity to enjoy the only hot bath of the trip. The water did not have the characteristic rotten egg odor of sulphur water and the heat and medicinal qualities seemed to take all the soreness out of our bodies.

We left Klondyke for Baguio at 1:30 A. M. in order to avoid the day time traffic on the Benguet Road, which at this season of the year is very heavy, as Baguio is the summer resort of the Islands. Most of this stretch of the road is one-track only, with control gates at frequent intervals. The construction of the Benguet road is considered a remarkable feat of engineering and the scenery is beautiful. The road follows in general the valley of the Bued River with high mountains on either side, and it rises approximately five thousand feet in twenty miles.

It was a hard march on both men and animals. We led a great deal of the way, especially for several miles up what is known as the Zig-Zag. Fortunately, the wagons were nearly empty of rations and forage, and what load there was, was divided equally among them all. Also as we gained altitude the air got much cooler, and we arrived at Baguio in good shape about 8:30 A. M., April 25th.

The Stay at Baguio

Baguio is situated high up in the mountains of the sub-province of Benguet, Mountain Province, Luzon, in the southern part of the Igorot country. The mountains are covered with pine forests and the scenery is more like that of the Rocky Mountains than of the Philippine Islands.

Camp John Hay, the army post adjacent to Baguio, is used as a rest camp for American Army personnel in the Islands, and it answers the purpose admirably.

On arriving at Baguio, the squadron moved into a camp which had been previously occupied by an R. O. T. C. organization from Manila. This camp was equipped with pyramidal tents, electric lights, shower baths, Gold Medal cots, hay-filled mattress covers, ice boxes, kitchen ranges—in fact everything to make us comfortable. It was a real treat for the scout soldiers after a week in "pup" tents.

Several of the officers took trips out of Baguio over the trails which radiate from there. The favorite trip is via the Mountain Trail to Camp 88, thence east and north via the Ifugao Trail to Bontoc, and then return to Baguio via the Mountain Trail. The trip is best made on horseback with pack animals, but it may be made on foot, using Igorot cargadores to carry the baggage. These cargadores will carry forty pounds each at the rate of three centavos per kilometer. The round trip is about 250 miles, and it furnishes a wonderful opportunity to study the life and customs of the Ifugao and Bontoc Igorots, two very primitive, non-Christian hill tribes of this region.

Other trips worth taking are to Bokod, a barrio of the Benguet Igorots; to the Mummy Cave, the floor of which is strewn with human skeletons; to Mt. Santo Tomas, elevation 7500 feet; and to Bauang on the China Sea via the Naguilian Trail. Many of us brought back souvenirs of one or more of these trips, including spears, shields, head-axes, gee-strings and skulls. Igorot spearheads took the place of those of regulation pattern on all the troop guidons.

Some of the trails are very narrow. On a trip to Bokod the load of one of the pack horses scraped against the cliff on the up-hill side of the trail and knocked the animal over the cliff. Down he went, turning over and over and end for end until he brought up in some underbrush and scrub trees seventy feet below. We worked our way down to him with difficulty, expecting to find him dead or to have to shoot him. However his only injury was a rather serious cut on his left stifle.

The aparejo was removed, and a zig-zag path was cut in the side of the hill leading back up to the trail. The horse somehow scrambled up this zig-zag, with the assistance of four men heaving on a lash rope which had been tied to the animal's halter.

In some cases, where it was necessary to lead on account of the narrowness of the trail, even the saddle bags on the larger riding horses would scrape against the side of the cliff. From these experiences it was found advisable to use small horses for these trips and to place the loads high on the pack animals.

The Return March

The squadron left Baguio on the return march at 5:00 A. M., May 6th. We made the trip down the Benguet Road in four hours, where it had taken seven hours to go up. The change from the cool air of the mountains to the extreme heat of the Central Luzon Plain caused a good deal of suffering to both men and animals, the thermometer registering above 100 degrees in the shade. May is the hottest month of the Philippine hot season. In addition

to the heat, the lack of water increased the suffering of the animals. On the road there were very few opportunities to water, and at some of the camp sites our water supply consisted of a series of carabao wallows. Another mule died at Guimba from heat exhaustion. He was turned over to the natives who butchered him up in short order with their bolos. Mule meat was the pièce de résistance of a fiesta in the barrio that night.

Fording the Capas River

The march to Tarlac was made without special incident; also without water or shade. The road leads across a perfectly flat open plain, and both men and animals suffered considerably. However, on arriving at camp there was found to be plenty of water in the Tarlac River, and a good bath was indulged in by all, including the horses.

We left Tarlac for Stotsenburg at 1:30 A. M., in order to avoid the heat of the day. Nothing happened until we arrived at the Capas River, just half way home. Here we found that the bridge had been washed out as the result of a typhoon the night before, and we had visions of being held up there indefinitely, as the water was very high. However, two or three men who were good swimmers reconnoitered the stream and finally located a zig-zag ford with the water about breast-high. The squadron crossed here easily, but the wagons had some trouble due to the steep banks, the swift current, and

the depth of the water, which came half-way up the bed of the wagon. It was also rather difficult for them to follow the exact route of the ford and one or two got into deep water, much to the anxiety of the drivers thereof.

We reached Stotsenburg about 9:30 a. m. and after taking care of the horses, a shower bath and a bunk looked pretty good.

Conclusions

The purposes of the march were as follows:

1. To test the ability of cavalry to make a fairly hard march during the hot season in the Philippines.
2. For training in marching, camping, swimming men and animals, reconnaissance, and night marches.
3. To familarize officers and men with the geography of an important section of the island of Luzon.
4. For recreation.

The march undoubtedly accomplished all of the above purposes.

The average daily march on the way to Baguio was twenty miles; on the return trip, nearly twenty-six miles. One horse and two mules died from heat exhaustion. The animals were just about pushed to their limit. If the daily marches had been much longer, or had the march continued for a greater number of days, we would probably have lost a good many more animals.

Night marches have many disadvantages, but they are preferable to day marches during the hot season here in order to avoid the terrible heat of the sun at mid-day. The squadron made only two night marches on this trip. It would have been better had we made four times that many.

Vermont Flood Relief by the 3rd Cavalry

ON November 4, the worst flood in the history of the state of Vermont occurred. Due to a rainfall of from four to eight inches in thirty-six hours on ground already saturated, all streams became greatly swollen, flooding huge areas and carrying away about five hundred bridges throughout the state. The garrison at Fort Ethan Allen, under command of Lieutenant Colonel W. S. Grant, 3d Cavalry, took an important part in the flood relief. At 6:00 A. M. all electricity went off and the roar of the Winooski River could be heard on the post. The papers reported no communication with Montpelier since 10:00 P. M. the night before. As far as communications were concerned, the area around Fort Ethan Allen, between the Browns, Lamoille and Winooski Rivers, was cut off from the outside world. Officers' call was sounded at 7:45 A. M., and every individual and organization was notified to be in readiness for any duty. During the morning seven cavalry details were sent out in private automobiles to make immediate local reconnaissance and to do rescue work. Troop A, Captain W. W. Cox commanding, was ordered to be prepared for immediate field service; Troop B, Captain Harry Foster commanding, was ordered to be ready on three hours' notice.

Details were sent to the city of Winooski to revet the river banks and bridge abutments and to try to save the bridge. This bridge was the main

artery of traffic between Burlington, Winooski and Fort Ethan Allen; it went out at 3:00 P. M. A detail of one officer and fifteen men from Troop C. Captain C. J. Booth commanding, was sent to Winooski on written request of the mayor to augment the local police force.

At noon on the 5th two mounted cavalry patrols from Troop A were sent out, one to the north and one to the south of the Winooski River, with orders to push through and get in touch with the governor at Montpelier and offer assistance. Lieutenant Norman M. Winn, with his patrol, proceeding by roads north of the river, arrived at the town of Bolton at 6:00 P. M., where, on account of distressing conditions, he remained overnight and rendered assistance. Twenty-five persons were reported drowned in that town. The next morning Lieutenant Winn moved to Waterbury, where his patrol was held for relief work, as it was reported that Montpelier needed no army aid. He later continued to Montpelier. Lieutenant Francis S. Gardner, with his patrol, proceeding by roads south of the river (a route reported as impassable), arrived opposite Waterbury twelve hours after leaving the post, having covered forty miles through bogs and over mountains in continous mud and rain. It was impossible at this point to make further progress, mounted, so with Sergeant Duddy and Privates Rough and Williams, Troop A, he proceeded on foot. Without stopping to rest, they pushed on in the mud and rain to Montpelier. After a fifteen-mile tramp in the dark, they found a boatman, who took them across the river, and then continued on cross-country into Montpelier. After twenty-four hours over the worst of roads, cross-country, over washed-out railroad tracks and mountains, they arrived and reported to Adjutant General Johnson at Montpelier. (Captain William Mayer, 7th Field Artillery, had arrived the night before after a long round-about trip in an automobile, plus a gruelling fifteen-mile walk.)

Troop B, Captain Harry Foster commanding, was dispatched at 8:10 P. M., November 5, as part of a larger command under Major R. E. Lee, 7th Field Artillery, comprising an American Red Cross motor convoy from Burlington, and the wagon train, 7th Field Artillery, to Waterbury, where there were twenty-eight reported drowned, and much suffering. The motor convoy, the cavalry troop and the wagon train each had orders to proceed as rapidly as possible, within the limits of their respective rates of march.

The road taken by this expedition via Smugglers Notch is at best a very difficult route, and traffic tended to make it worse. There are about thirty-five to forty-five per cent grades both up and down. The peak of the ridge was covered with several inches of snow; the remainder was heavy with mud. Under these conditions, starting at night, the troop marched about seventy miles (arriving at 1:50 P. M.) in less than eighteen hours. They immediately went on guard and provost duty, and remained until November 21, when they returned to the post. Detachments were sent to Montpelier and to other points in the flood area.

All officers and organizations did strenuous duty of one kind or another in connection with reorganization and rehabilitation after the flood. The character of the service they, in conjunction with other components of the garrison, performed is reflected in the complimentary news items and editorials which have appeared in the public press.

Reserve Training in New England

THE 315th Cavalry, located in Maine, New Hampshire, Eastern Massachusetts and Rhode Island, with headquarters at Providence, R. I., one of the oldest reserve corps cavalry regiments, took its annual active duty training at Fort Ethan Allen, Vt., in August of this year. The majority of the officers of the regiment have taken active duty training each year since 1921 and the organization has been in the field as a regiment three times.

In 1924 it conducted the march of the 3rd Regular Cavalry from Camp Devens, Mass., to Fort Ethan Allen, Vt. In 1925 it organized the C. M. T. C. at Fort Ethan Allen, Vt., received and processed the students and assisted in the training of the cavalry section. In 1926 a provisional squadron of this regiment took its training at Fort Ethan Allen with the 316th Cavalry.

In 1927 forty officers of the regiment, together with a number of enlisted men of the 3rd Cavalry, were organized as a provisional war strength troop including a complete machine rifle platoon. The officers of the regiment rotated positions and all served as squad and platoon leaders and the senior officers as troop commanders in close and extended order drill, together with the practical solution of minor tactical problems. All officers benefited greatly by this training, especially the officers on duty with the machine rifle platoon, as they had the opportunity to work with a full platoon of six guns carried in the Phillips' pack saddle. Great credit is due the 3rd Cavalry, especially the enlisted personnel, for their enthusiastic cooperation and assistance.

The regiment is now beginning its inactive duty training for the winter months, this consisting of one conference per month, together with a weekly class in equitation. The Regimental Headquarters and 1st Squadron takes its training in Providence, R. I., and enjoys the use of the armory and the horses of the 2nd Squadron, 110th Cavalry, National Guard. The 2nd Squadron, located in Boston, Mass., and vicinity, has the use of the armory and horses of the 1st Squadron, 110th Cavalry, National Guard.

5th Cavalry in 1st Cavalry Division Maneuvers

THE 5th Cavalry, Colonel Wallace B. Scales commanding, as part of the 1st Cavalry Brigade, left Fort Clark September 4, en route to Marfa for the concentration of the 1st Cavalry Division maneuvers.

The route, following the Border National Highway, lay over a most uninviting stretch of country, not improved by a prolonged drought. Until the higher altitude in the vicinity of Marathon was reached, the days were extremely hot, the thermometer registering daily well over the one hundred mark. Much of the marching was done at night by starting two or three hours before daylight. With the exception of a camp on Devil's River, water was very limited, and many camps were supplied by tank cars of water shipped

on the railroad. At these camps water for washing was very limited or none was available, which added to the discomfort of marching in extreme heat in an arid country. The two hundred and eighty-five miles were covered in fourteen marches, with one day of rest. The command arrived in Marfa October 18, with the animals in excellent condition.

During the ten days' period of the maneuvers, October 20 to 29, the regi-

Cooling Out in Devil's Run

ment was given opportunities to engage in many varied types of cavalry action. The interest of the men was maintained by keeping them constantly informed of the entire situation, regardless of whether or not such information affected the immediate action of their particular unit. Such maneuvers constitute the highest type of peace training and this period was most instructive to

5th Cavalry in Camp

all concerned. Among the important lessons impressed were the necessity for constant control, and the importance of issuing timely, comprehensive, clear and well-formulated orders. The fact that troops were of such reduced strength forty-five to fifty men, limited somewhat the tactical experience of troop commanders, since squadrons were required to perform some missions which might have been executed by a full-strength troop.

After four days of beneficial rest at Marfa following the maneuver period

the regiment left October 4 for the return march, which was made in twelve marches, with one day of rest, arriving at Fort Clark October 16.

For use on the marches each squadron had purchased a Ford truck, which rendered invaluable service to the troops by placing mess equipment into camp promptly, thus enabling troops to serve regular and satisfactory meals. These were also used to haul forage, wood and rations from the brigade dumps and water for the kitchens. The desirability, if not the necessity, of equipping cavalry regiments with water tank wagons of suitable construction and capacity for use in arid country was quite conclusively demonstrated during these marches and maneuvers.

During this six weeks of field service the conduct individually of the regiment was excellent: one case of absence without leave and no serious breach of discipline occurred.

This march completed something over one thousand miles of marching done by the 5th Cavalry during 1927. The animals returned in first-class condition and with but few sore backs, demonstrating that cavalry can still march long distances and maintain condition.

51st Cavalry Brigade Activities

TROOPS B, G and M, 1st Cavalry, have been re-designated Troops B, A and G, 121st Cavalry, this being the first step in the organization of the 121st Cavalry, which new regiment will give New York a complete cavalry brigade. The present plans are to organize a squadron in Westchester County, New York, where the interest in the horse has been growing of late and where there is excellent cavalry officer and enlisted man material.

The 101st Cavalry, after a rather intensive polo schedule, finished the season by winning the championship of the Second Corps Area.

The 51st Machine Gun Squadron (Squadron A) was the only representative of the brigade in the National Horse Show, but was unfortunately without its now well-known and consistent winner, *Oxford*. However, the Squadron managed to accumulate a number of ribbons and won the polo pony team class. During the show Major Nathaniel H. Egleston and the officers of the Squadron entertained the foreign officers participating in the National Horse Show at a luncheon at the Hotel Biltmore.

Several of the upstate units of the 101st and 121st Cavalry have been represented at the hunts of the Genesee Valley Hounds, which hunt through the Genesee Valley near Rochester.

Innovations in the 10th Cavalry Target Season

THE period July 1 to September 30 was designated the target season at Fort Huachuca. Preliminary instruction began, however, during May and was made continuous until August 6, as some men were backward and it also developed that, after instruction practice began, certain other men had

faults which could only be corrected by additional preliminary work in the afternoons.

On June 20 instruction practice began. In order to accomplish the labor and routine duties on the post, each troop was divided into three groups, the first composed of all men who were considered sure of being able to qualify. The first groups thus consisted of from one-third to one-half of each troop.

Qualification practice began on July 1 and was finished July 9. The time necessary for instruction and qualification firing may seem excessive, but it is explained by the method of alternating half-groups daily. By alternating thus opportunity was given for additional instruction and the correction of individual faults as they developed; also the twenty-two targets available were insufficient to allow all men in the first groups to fire at the same time. The second and third groups were similarly handled.

In order to obtain an orderly arrangement, prevent confusion, and save time, echelons were organized from the firing line back to the cleaning racks. The first echelon consisted of the man firing and his coach (one man per target in both instruction and record firing); the second echelon consisted of the scorers at their bench-tables five yards in rear of the firing line; the third echelon consisted of the telephones five yards farther back; the fourth echelon, another five yards back, was the line of men in the next firing order, seated on mess stools in rear of their targets, with their scorebooks ready, sights set, blackened, and inspected, and with the necessary ammuntion; the fifth echelon consisted of the troop ammunition supplies five yards in rear of the fourth echelon with the man in charge also responsible for sight blackening; the sixth echelon was five yards farther to the rear and consisted of the troop tables, at which sat clerks in charge of consolidating daily firing records, with the sight setting used by each man firing; twenty-five yards farther to the rear were the troop guidons, with the cleaning racks and materials where all men not having other duties were required to stay. Troop officers moved freely among their echelons exercising their duties where most needed.

O'Hare sight micrometers were used freely by all organizations that had them. Some troops had sufficient to use one with each man firing and also at the troop tables, others had only one which was used only at the table.

Arms were inspected along the line of the last echelon by the ordnance officer and his assistant. Any repairs needed that could be done immediately were made at the wagon of the ordnance officer, which was present during all the firing. Another feature was the issue from the wagon of the range supply office of all ammunition used on the range, and at the conclusion of each day's firing the turning in of all unused ammunition, with the immediate termination of accountability and responsibility for that used.

The regimental percentage was 92.87, average score 278.19. Troop C qualified 100 per cent. The Headquarters Troop had the highest average score 291.96.

Tactical Training in the 306th Cavalry

IN view of the fullness in which practically every military subject is covered in the present Army Correspondence Courses a scheme of inactive instruction has been adopted in this regiment, commanded by Colonel John Philip Hill, which is proving extremely interesting. On account of the comparatively few members of the regiment living near enough to attend meetings the subjects covered must be applicable to all grades. For these reasons, instead of attempting to cover a specific subject or conduct a series of conferences on unrelated subjects, a continuing problem has been prepared with view of illustrating the mechanics of cavalry operations with particular attention to the factors of time and space. At each meeting several situations are discussed and solved by placing and moving suitable markers on a large scale colored war game map clearly visible to all. While the force involved is a reinforced brigade of cavalry the situations deal with units varying from a squad up. This affords each member an opportunity to command a unit suitable to his grade and, in addition to illustrating tactics and technique, presents a graphic illustration of the disposition and movements of the command as a whole. Although, in conducting a continuous problem based on the same general situation, tactical principles cannot always be illustrated as well as might be desired, this is offset by the advantage of being able to take up the discussion at one meeting just where it was left off at the last. In addition the officers of the Artillery and Engineer battalions and Services of the 62nd Cavalry Division are invited to these meetings so that they may learn the conditions under which they would be expected to operate in campaign.

1st Division Reunion at Fort Sheridan

THE 1st Squadron, 14th Cavalry, played a leading part in a military exhibition and demonstration given in honor of the 1st Division, A. E. F., at Fort Sheridan, Illinois, on October 22, 1927. Five hundred of the veterans and their families came to the post for the day.

Headed by their war time commander, Major General Charles P. Summerall, Chief of Staff, U. S. A., and Major General William Lassiter, Corps Area Commander, a special train load of veterans arrived at the post about noon. After the usual salutes and courtesies, the guests marched to the post gymnasium through double ranks of troops, at the present. Lunch was served by the ladies of the post, assisted by the Cooks' and Bakers' School. After lunch the visitors went to the post riding hall for the demonstration.

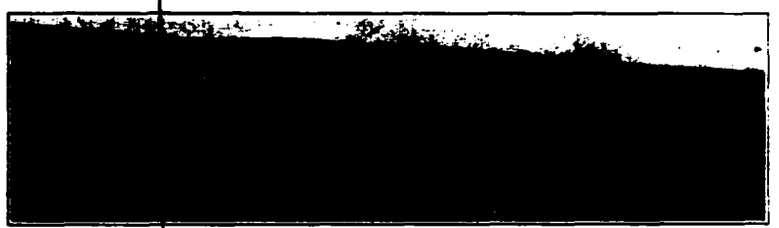
Troop A gave an exhibition of bare back riding and monkey drill. Troop B was next with a demonstration of Cossack riding. Troop C ended the afternoon's performance with a saddle drill of two platoons, ending in the exit through the fire jump. The infantry and artillery units at the post also gave demonstrations.

After the show, the guests were shown about the post and the war time veterans were given an idea of how a peace time soldier lives and "soldiers."

Inactive Machine Gun Training

DURING the winter and spring the training of the 158th Machine Gun Squadron will be conducted with two primary objectives, first to prepare for the coming tour of duty at Fort Ethan Allen, Vermont, next summer, and second to give officers of the squadron opportunity to gain practice in the instruction of others.

The course has been divided into three terms, the first of ten weeks being devoted to mounted work, the next ten weeks to conferences and map problems, and a final term of about five weeks being given over to mounted work out of doors. Meetings are held every Monday at the Commonwealth Armory where horses are made available through the courtesy of the 110th Cavalry,



8th Cavalry Approach March

Massachusetts National Guard. During the middle term, however, work will be carried on at the Army and Navy Club of Boston at 21 Beacon Street. The final term will be held from the Armory.

The 8th Cavalry in the Marfa Maneuvers

IF the ultimate test of the efficiency of a unit is its effectiveness in the field, the members of the 8th Cavalry can certainly take considerable pride in their regiment. The 2d Cavalry Brigade did some very fine marching and some of the best of it was done by the 8th. The distance marched to the maneuver area was about 190 miles. This march was immediately followed by eight days of maneuvers. Men and animals emerged in excellent condition, and arrived back at Fort Bliss better than ever.

On the first day of the maneuver the regiment as advance guard of the brigade, marched 25 miles at 6 miles per hour, established an outpost, and fought several minor engagements, mounted and dismounted, before being recalled to bivouac, without the loss of a single animal. The entire return march to Fort Bliss was made at a rate of over 5 miles per hour, without in any way wearing down either the men or horses. The march was continuous for ten days.

The month of field service seemed to bring out the best in all the men and the willingness and efficiency with which all duties were performed was remarkable. The members of the regiment were unanimous in the belief that

when it returned to Fort Bliss, it was a much better regiment than when it left and was in fit condition to perform credibly any mission under almost any conditions.

1st Squadron, 103d Cavalry, Activities

THIS squadron successfully completed its annual encampment on August 31. Throughout the 52nd Brigade, many drills and exercises were competitive between units and the winners were awarded streamers for their guidons. Troop A won the most highly prized pennant as the best drilled unit at the encampment. Troop B (2d Troop, P. C. C.) won the Machine Rifle Squad Competition, in addition to winning the Brigade Rifle Match and placing two men on the State team to go to Camp Perry.

The squadron continues to carry on in the same spirit with its winter activities. The results of the Bower Long Range Match, won by Corporal Wood of Troop B (2d Troop, P. C. C.) with Corporals Weeks and Williams of the same organization in second and third places, showed nine of the first thirteen as cavalrymen and eight of these from the enlisted personnel of the 1st Squadron.

The troop indoor polo teams are now in training for the tournament held under the auspices of the 103rd Cavalry Polo Association. In addition to this, games with other military organizations and civilian teams will be scheduled.

Activities at Fort Myer

THE Second Squadron, Third Cavalry, at Fort Myer, Va., has been engaged in a varied schedule of activities during the past quarter.

It participated in the military exhibition held at Potomac Park in Washington and entertained a detachment of the Canadian Army which was in Washington for the purpose of presenting to the United States a memorial in honor of the Americans who lost their lives with the Canadian forces in the World War. It acted as escort at the funerals of Major Generals Leonard Wood and Joseph T. Dickman, of Brigadier General Lloyd M. Brett, and the Minister of Guatemala.

Troops of the Squadron have participated in the Army Relief Exhibition at Washington Barracks, in fairs at Marlboro, Md., and at Galox, Pearisburg, Roanoke and Lynchburg, Va. They have acted as escorts to the President on the occasion of the Army Relief Memorial and the unveiling of the Meade Memorial, have given an exhibition for the student officers of the Engineer School, participated in a horse show at the Wardman Park Saddle Club, and have received a visit from the members of the Polish Army Horse Show Team

MILITARY BOOKS

The Two Battles of the Marne. By JOFFRE, VON LUDENDORFF, FOCH and CROWN PRINCE WILHELM. 229 pp. Maps. Cosmopolitan Book Corporation, New York. $2.50.

The material included in this book has already been made public in reports, books, magazine articles and elsewhere. It is here condensed and included in one volume for better comparison of the stories by the leaders on both sides in the two decisive battles of the World War.

The names of the authors would better have been arranged in the sub-title of the book in the order in which their stories appear, which is the proper one chronologically; but the compiler evidently could not resist the thought that Ludendorff's name carries more prestige and, therefore, more selling power than Crown Prince Wilhelm's.

The picture of the controlling decisions involved in the first battle of the Marne could have been more authentically presented by either von Moltke, the German Chief of Staff, or by von Kluck, the commander of the First German Army on the marching flank, than by the German Crown Prince, who commanded the Fifth Army in a much less important position near the German center. In spite of this, the Crown Prince's story is intensely interesting. It places the blame for the loss of the battle squarely on the shoulders of von Moltke, which that commander could hardly have been expected to do. The same assertion on the part of von Kluck, who is frequently blamed for the loss of the battle, would have been open to the suspicion of personal defense.

A more just estimate of the cause of the loss of the battle might be the German system of leaving too much to the initiative of the various Army Commanders. It is a remarkable commentary on the German mind that, having the absolute power to command, they nevertheless voluntarily relinquished even controlled coordination, when its use would have been of the greatest value to them. The allies only achieved unity of command after nearly four years of conflict, while the Germans, possessing it from the first, refrained from exercising it. The inference is inescapable that the German military machine was overstaffed, especially at the top.

Ludendorff's story is a plea for the vindication of his methods and, in spite of his emphatic denial, the suspicion persists that he was more interested in personal prestige than in the success of the German arms. A brilliant strategist and tactician, he lacked the simplicity of method and concentration on the essential, which are attributes of every truly great leader.

The stories of Joffre and Foch are simple, modest and to the point. They grasped the essentials and clung tenaciously to them. By all military estimates, Germany should have won both battles of the Marne, and the fact that they did not is due to the innate qualities of

leadership of two great Frenchmen, Joffre and Foch, whom it was the good fortune of the allies to have in command at the two most critical periods of the war.

This book should be in every library of the World War.

The Santiago Campaign. By the SOCIETY OF SANTIAGO DE CUBA. 433 pp. With maps and illustrations. $2.50.

It is appropriate that this book, the editing of which was one of the last tasks of Major General J. T. Dickman's illustrious career, should appear almost exactly at the time of his death.

The book constitutes a series of monographs on different phases of the short and decisive Santiago Campaign of the Spanish-American War. This method of presentation has the disadvantage of much repetition which would be absent in a single connected narration, but it has the very real advantage of preserving the story in the words of men who actually took part in the fighting.

There is a short description of the campaign as a whole by Brigadier General E. J. McClernand, descriptions of the parts played by many of the individual regiments and services engaged, and a number of personal recollections and diaries.

In spite of the fact that there were twenty-three regular regiments of infantry and dismounted cavalry, as against eight volunteer regiments, in the Fifth Army Corps, which conducted the operations, there are only five chapters devoted to the regulars as against nine to the volunteers. The editor clearly states that this is due entirely to the failure, after repeated efforts, to obtain contributions from regular regiments. None of the five regular cavalry regiments which participated is represented by a contribution. Surely the regular army can only do itself harm by thus hiding its light under a bushel. Furthermore, as the regular regiments were, almost without exception, used on the firing lines in the attacks at El Caney and San Juan Hill, rather than in support and reserve, their lack of contribution causes the greatest dearth of description exactly where the fighting was the thickest—on the firing line.

Other gaps in the book are brought out by General Dickman in the introduction, as follows: "There is, for instance, no separate article on the interesting and epoch-making work of the Gatling guns, nor about the scanty wheel and pack transportation. No champion has come forward to tell the story of the sufferings and service, by sea and land, of the faithful beasts, so long the dependable stand-by for the supply of our troops in the field."

General Dickman calls the Santiago Expedition "a wonderful monument to the fighting qualities of the trained American rifleman, and to the ability and resourcefulness of his leaders in overcoming the serious handicaps imposed by lack of military policy and preparation—deficient organization, especially in the staff, antiquated weapons, unsuitable uniform, paucity of artillery, and inadequate transportation and medical personnel and equipment."

For this reason alone, that is, as a study of our past military errors, the book should be in every complete military library.

Where Cavalry Stands To-day. By LIEUT.-COLONEL H. V. S. CHARRINGTON, M.C., 12th Royal Lancers. 63 pp. Hugh Rees, Ltd., London. $1.25.

The contents of this little book appeared recently as three separate articles (corresponding to the three chapters in their present form) in the *British Cavalry Journal*.

The first article, or chapter, summarizes the history of cavalry prior to the Great, or World, War; the second records briefly the operations of cavalry in the Great War; and the third gives the conclusions of the author as to the future of cavalry.

This future the author deduces from a study of the cavalry lessons of the war, as he sees them, which he sums up in large type as follows: "The outstanding lessons of the Great War are the value of mounted troops acting in small detachments in close cooperation with other arms and their limitations when acting independently in large formations." He adds that "it is to fulfill this role and to cooperate with armoured fighting vehicles that cavalry should now be organized, trained and equipped."

The successful operations of large independent bodies of cavalry in Palestine and other

theaters of war are dismissed as having been carried out against inferior opponents. Cavalry's chief limitations against a well-armed and disciplined enemy are their limited powers of assault and susceptibility to air attack. The author evidently cannot visualize cavalry strong enough in fire power to defeat good foot troops, nor in the eventual fire attack from the ground against airplanes.

The value of the book from an American point of view lies in the emphasis placed upon the undoubted value of small cavalry detachments organically assigned to large infantry units, which we, in an eagerness to evolve efficient large independent cavalry organizations, are perhaps too prone to overlook.

Marching With Sherman, edited by M. A. DeWolfe Howe. 322 pp. Illustrated. Yale University Press. Price $4.00.

This book is a collection of passages from the letters and campaign diaries of Henry Hitchcock, who was a major and assistant adjutant general of volunteers in 1864 and 1865. He acted as a sort of adjutant and private secretary to General Sherman, during the latter's march from Atlanta to the sea and northward through the Carolinas, which culminated in the surrender of General J. E. Johnston's confederate army.

Due to a decided tendency to abbreviations, as is only natural in family letters and in diaries, this book is hard to get into, but once accustomed to this, the reader is interested.

The author, with no previous military experience and having joined the army near the end of the war, could not have been expected to write a military commentary and, indeed, he has not professed to do so. It is doubtful from the text whether he was intrusted with the preparation of General Sherman's most important military papers.

The value of the book lies in the general description of the march, the nature of the country passed over, the people, the discipline and morale of the army and the character of Sherman.

The author is positively vituperative against the Southern leaders and it would seem that this part of the book might better have been omitted, as serving no useful purpose at this late day.

BIOGRAPHY

Genghis Khan. By Harold Lamb. 246 pp. Illustrated. R. M. McBride & Co., New York. $3.50.

This book is the biography of one of the world's greatest, though hitherto little known, cavalry leaders.

Genghis Khan, at the immature age of thirteen years, inherited the leadership of an unimportant tribe of desert nomads, the Mongols, which inhabited a comparatively small area of Eastern Asia at the close of the twelfth century. From this inauspicious beginning, he rose to be the absolute ruler of at least one-half the then known world, his conquests and his dominions being measured in degrees of longitude rather than in miles.

He conquered in succession and brought under his submission the other desert tribes which surrounded him, all of the great civilized country of China, and the numerous Mohammedan races to the west, stopping only at the gates of modern Western Europe. Unlike Alexander and other great rulers, whose empires fell to pieces at their death, Genghis Khan passed his on to his sons and grandsons, who held it intact, and even augmented it, for several generations.

The character of this man was extraordinary. He possessed in astonishing degree the very qualities which we now seek to develop in our present-day military leaders. The only exception to this was his cruelty to conquered peoples, whom he practically exterminated. As the author says, he took from the world what he wanted for his sons and his people. He did this by war, because he knew no other means. What he did not want he destroyed, because he did not know what else to do with it.

He possessed great physical endurance, campaigning actively in the field up to the very

day of his death. His courage was undaunted; he was ever in the thick of battle. His honor was unsullied; his word was his bond. His intelligence was of a high order as shown by his willingness to take advice on administration and other matters from the educated Chinaman, Ye Liu Chutsai, whom he attached to his retinue or staff. Tact was outstanding in his handling of his family, his generals and those of his conquered subjects whom he allowed to live. His initiative and aggressiveness were great; having once decided upon war, he never failed to make the first move and to take advantage of every mistake of his opponents. He was just, as well as hard. In bearing he was every inch the soldier. His military leadership was years ahead of his time.

Even in his greatest campaigns he was greatly outnumbered by his opponents, yet he conquered them all. He never violated the principles of war, as we know them today. His forces were organized into groups of tens, hundreds, thousands and ten thousands, the last corresponding to our divisions. His men were mounted on the best horses, of which each had several in campaign; they were armed with lance, sword and arrows. Their marching and fighting ability was unexcelled. They made as much as seventy miles a day for several days and arrived fresh for battle.

His favorite maneuver was the "standard sweep," or flank attack. On one occasion, when far outnumbered, he awaited attack in a defile, between a mountain and his parked impedimenta, where he defeated the enemy by repeated attacks against the head of their column, while they were unable to take advantage of their numerical superiority in the restricted space. On other occasions, he feigned defeat, retreated and enticed his enemies into ambuscades, or surrounded and defeated them. The mobility and fighting power of his men were his greatest assets. He kept them hardened for campaign by great winter hunts of several months' duration, during which they also obtained their meat.

The career and achievement of this great cavalryman should be familiar to every cavalry officer.

The book is written in an extremely interesting and entertaining style. A glance at the bibliography in the back will show the enormous amount of research undertaken by the author in order to obtain his data.

Andrew Jackson, An Epic in Homespun, by Gerald W. Johnson. 303 pp. Illustrated. Minton, Balch & Company. Price $3.50.

This biography, written in the lighter vein, confounds convention by devoting the first chapter, not to parentage, dates and other unentertaining if necessary data, but to a final judgment of the man. This judgment, as is natural in the case of an author who has selected his own subject, is favorable. The remaining chapters support the judgment.

Andrew Jackson was, perhaps, our first typically American hero, as opposed to the members of what the author calls the Virginia Dynasty, represented by Washington, Jefferson, Madison and Monroe, who were more English than American in their traditions.

As a soldier, Jackson, like Grant, was, although unorthodox, eminently successful which, after all, is the soldier's real standard. His methods were blunt, to the point, decisive and often harsh. He served the country at a time when it might easily have been lost.

As a statesman, Jackson used the same methods. When opposed, he lowered his head and charged like a bull, which is hardly good politics, but which, in his case, was again successful. Yet who can say that his two greatest political victories—defeat of nullification, which was settled later once for all in the Civil War under the name of secession, and destruction of the national bank—did not represent a higher order of statesmanship than the views of his more finished opponents, Calhoun and Clay.

The two great sorrows of his life were the unjust public treatment of his wife, whom he loved, and ill health.

His qualities: roughness, integrity, courage, sentiment, common sense and patriotism, are those which have ever captivated Americans.

An American Soldier and Diplomat. By ELSIE PORTER MENDE, in collaboration with HENRY GREENLEAF PEARSON. 358 pp. Illustrated. Frederick A. Stokes Co., New York. $5.00.

An American Soldier and Diplomat is the life of General Horace Porter by his daughter.

General Porter was graduated from West Point in 1860. He was almost immediately embroiled in the Civil War in which, despite his youth, he gained great distinction, including the Congressional Medal of Honor which he won at Chickamauga. In March, 1865, he was brevetted brigadier general while serving as aide-de-camp on the staff of General Grant.

The book abounds in anecdotes of General Grant, who was not only Horace Porter's idol, but also his friend.

The Civil War closed General Porter's military career, but a life of other activities then opened for him. He was secretary to President Grant; later, he successfully entered the business world in New York. He was chiefly responsible for the erection of Grant's Tomb on Riverside Drive. He was not actively interested in politics, but his fame as an orator, as well as a man of integrity, was such that President McKinley appointed him ambassador to France in 1897.

General Porter's career as a diplomat is particularly interesting in that it shows the rise of the United States from a second-rate country to one of the Great Powers, principally as a result of the Spanish-American War. There are many anecdotes of official life, including the marriage of the Queen of Holland and visits to the Imperial Court of Russia.

Having resigned in 1905, after eight years as ambassador, General Porter turned his attention to the search for the body of John Paul Jones, which was thought to have been obscurely buried in Paris for over one hundred years. At his own expense and after great perseverence, he discovered the body, which was identified beyond the shadow of a doubt. He thus preserved for us the remains of one of our great national heroes.

As a fitting close to his useful and eventful life, General Porter was chosen with Joseph H. Choate to represent the United States at the second Hague Conference in 1907.

The book is written in an interesting manner and contains many letters and speeches, most of which are official.

Napoleon and His Family: The Story of a Corsican Clan. By WALTER GEER. Illustrated. 328 pp. Brentano's, New York. $5.00.

"Napoleon and His Family" is the first of a series of three books by Mr. Geer dealing with the same subject. The present volume carries the history of the family from Corsica to Madrid (1769-1809). The other two are still in preparation.

It is not generally realized what a tremendous factor Napoleon's family was in his life, nor how essentially they contributed to his downfall. Fundamentally a Corsican, with the primitive feeling for the Clan ingrained in him, it was inconceivable to Napoleon that his family should not be sharers of his destiny. He placed them in the highest positions, all in accord with his schemes of Empire, and forgave their slackness, lack of cooperation, intrigues and mistakes. It seems impossible that he should have suffered them, but it never occurred to him to do otherwise.

Mr. Geer is an authority on Napoleon. The book is intensely interesting, and in spite of the many figures that play their parts in it, the author manages to make each one stand out clearly, not only as a distinct personality, but also as a contributor to the decline and fall of the Emperor.

The book is in no sense a military one, but it throws a hitherto little emphasized side light on Napoleon's character and remarkable career.

Francis Joseph, Emperor of Austria, King of Hungary, by EUGENE BAGGER. 555 pp. Illustrated. Putnam's. Price $5.00.

Francis Joseph was the perfect refutation of the saying that, "Genius is the infinite capacity for taking pains." He left nothing to his subordinates, feeling more literally than Louis XIV that "L'Etat, c'est Moi." He kept longer working hours than most men, but detail alone absorbed him, and the larger policies were left to incompetent or unscrupulous ministers. He lived, during his long reign of sixty-eight years, to see most of the monarchial institutions of Europe crumble around him and his own empire dwindle.

Mr. Bagger's book is not only the story of Francis Joseph as a human being and as Emperor, but also a detailed modern history of Central Europe for the hundred years preceding the World War. It shows a tremendous amount of research and an exhausting knowledge of a most confusing subject. In parts the book is intensely dramatic, especially where it concerns the pathetic and ill-fated "Emperor" Maximilian of Mexico.

Francis Joseph had one God—the *status quo*. Change was unthinkable to him and a changing world shoved him and what he stood for into the discard. The long reign of the "last of the Caesars" is a tragic story of treachery and stupidity, culminating in the murder of the Archduke Francis Ferdinand at Sarejevo and the commencement of the World War.

MISCELLANEOUS

Cow Country. By WILL JAMES. 242 pp. Illustrated by the Author. Charles Scribner's Sons, New York. $3.50.

Will James' fourth book, following *Cowboys North and South*, *The Drifting Cowboy* and *Smoky*, is a series of eight episodes, or "pieces," as he calls them, depicting life on the cattle ranges of the West, which he claims still exist with all their old-time flavor of romance, albeit in a more restricted space.

There are two stories about wild horses, not as we know them in the wild horse races in rodeos, but in their habitat. Two of the stories depict an Englishman's attempt to modernize the time-honored methods of the cow outfit. One shows the professional rodeo rider's inadaptability to the serious work of riding the range, another two old timers' yearning for the range and their joy in finding that it still exists, a third the cowboy's longing for a home, and still another his loyalty to his work, his rights and his independence.

Mr. James' language is the ungrammatical, slangy diction of the cow country, honest and outspoken. He is a hopeless sentimentalist, but with a sentiment so clean as to shame many of our present-day sophisticates. He is something of a propagandist too, as shown by his plea for the merciful extermination of the wild horse by hunting, rather than by the bloody methods of the slaughter pen, and for the preservation and appreciation of the range, the horse and the cowboy.

Mr. James' hope, that he has described in his drawings what he couldn't tell in his writings, is fulfilled. His pen and ink sketches, of which the book contains about forty, are easily the best studies of western life since those of Frederick Remington.

Everyone who liked *Smoky* will equally enjoy *Cow Country*.

They Also Serve. By PETER B. KYNE. 344 pp. Cosmopolitan Book Corporation, New York. $2.00.

This is the first story of the World War written from the point of view of the horse.

It details the experiences of *The Professor*, a grade thoroughbred, from his birth on the range through his cow-pony days, the training camps, the sea voyage to France and the actual fighting. His friend *Tip*, the mule, is a faithful example of that astute animal, "without pride of ancestry or hope of posterity."

The Professor's story is intimately bound up with the adventures of his human friends, Captain Sam Burwell, the Red Cross Nurse Mary Varden, his owner Ern Givens, and the old Irish stable sergeant Pat Rogan. Needless to say, all of them experience to the full the adventures and romance of the war.

The horse's favorable reactions to the good care of those who treat him well and his hatred for those who do not is well brought out. The author might well have stressed more strongly the horrible wastage in horse flesh due to the general lack of training in care of animals in our war-time army.

The story is good clean romance and humor. It should be in the library of every troop and battery of the mounted service.

MILITARY MAGAZINES

The Remount. September, 1927.

Each of the five signed articles in this issue of the *Remount* is of interest to cavalrymen and other horsemen.

Major E. Engel, in a discussion called *Distortion in Horses*, makes an earnest plea for training based on absolute freedom of the horse's neck in all work. No matter what the degree of control, whether *balance, collection* or *rassembler*, there must still be absolutely no distortion of any part of the spinal column, which can only lead eventually to atrophy of the muscles of the spinal region. Entire freedom of the forward movement, controlled by bit action on the jaw alone, is insisted upon; a puller, or run-away, is made by *stopping*, not by *going*.

Mr. A. J. O. Culbertson gives an interesting description of the *Preparations and Tests for the International Polo Games*, leading up to the selection of both the American and the British teams. It is regrettable that the date of issue of the *Remount* did not permit the inclusion of a description of the international matches themselves. Mr. Culbertson praises the play of both Captain Huthsteiner and Captain Wilkinson of the Army Team.

Major Henry Leonard describes the *Colorado Springs Horse and Colt Show*, Mr. Newell Bent the *Breeding of Hunters in the Big Horn Valley, Wyoming*, especially on the stud farm of Mr. Ridgeley Nicholas, and Mr. H. H. Reese the *Kellogg Arabian Stud* in California, all of which point to a constant improvement in stock in our natural pasturage in the West.

The Cavalry Journal. (Great Britain.) October, 1927.

This issue of the British Cavalry Journal contains several articles of interest to American cavalry officers.

In *The Administration of a Cavalry Division in War*, Brevet Lieut. Colonel R. Evans, M.C., discusses the supply of the cavalry division as it will function with the new motorized transport recently adopted. He stresses the fact that, though theory is perfect, snags are often struck in practice. This will necessitate actual practice with the new equipment, before it can be counted on to function efficiently, and even then it will have its limitations. It is of interest to note that, with the new equipment, the cavalry division will have 660 motor vehicles, exclusive of motorcycles, in the first and second echelons.

It is regrettable that this issue of the British Journal contains no article on the tactical features of the new British organization, which it is understood were to be tried out in the maneuvers of last summer.

Part III of an article on *The Remount Department* brings out one important difference between their system and ours. The British army apparently does not own its stallions, but assists privately owned studs by horse show prizes, service fees and foal fees. Foals are listed and later bought, if necessary, for the service, very much as in our army.

Part III of *Precept and Precedent*, by Major J. Goddard, describes briefly the successful cavalry pursuits of Napoleon's campaigns of 1805 and 1806, and those of the Allies after Waterloo, of the Egyptian campaign of 1882, and of the Palestine campaign of 1918; as well as the unsuccessful pursuit by Napoleon before Waterloo and several instances in the World War in France where advantage of energetic pursuit was not taken.

An article called *Cavalry Still an Essential Arm* reiterates a statement which by now should be generally accepted. Three good sporting articles are *Horse Racing Through the Ages, Some Men and a Mountain*, being a description of the last nearly successful attempt to scale Mt. Everest, and *Buenos Aires to New York on Horseback*. British interest in our cavalry service is attested by the inclusion of a descriptive article on our Cavalry School by Major F. W. Boye.

Revue de Cavalerie (France) July-August, 1927.

Reviewed by Major W. E. Shipp

This journal continues to be of great interest to all cavalry officers.

In *The Cavalry in Morocco*, by Captain Moslard, he describes some of the actions of the four regiments (one French and three native) in 1925-1926. These regiments, each one of which consisted of four active squadrons and two squadrons of armored cars, were never employed except as squadrons or groups of squadrons. The cavalry maneuvered mounted and dismounted, but fought only dismounted.. From these campaigns, the author draws many conclusions most of which—e. g. the necessity of liaison with other arms—are well known in our service. He is opposed to placing machine guns in the first echelon, to wasting cavalry on unnecessary escort and liaison duty, and to dispersing for combat on large fronts as in European warfare.

A Mission of Reconnaissance by a Cavalry Corps. The Operations of the Abonneau Cavalry Corps in Belgium, August 18-20, 1914, by Major Thierry d'Argenlieu, is a valuable contribution to the history of the war. The author shows the folly of trying to organize a cavalry corps by simply combining two divisions without adding a commander and a proper staff. He recounts the loss of an infantry battalion because it was not realized that it could not retreat as rapidly as cavalry.

Captain Montergon describes the horse show at Nice and an anonymous author the one at Rome. The success of the French team at the latter show receives its just recognition. As a result of the splendid showing of the Anglo-Arabs of the French team, the Italian cavalry has ordered twenty-five French and only ten Irish horses. The reviewer, who was present at this show, admired the French mounts—which are so well known in America, but he thought that the British were better. The latter, however, were not suitably trained for horse-show work, and only one of their riders had a good seat. For most riders, the Italian seat is by far the best to use over obstacles. The seats of the French riders would be difficult for the average horseman to copy.

In *Cavalrymen and Cyclists* Lieut. Colonel G. Besnard gives a full and interesting account of the employment of cyclists in the French Army. At the beginning of the war, they were not only used in dismounted combat—their normal mission—but for everything else as the principles regarding their employment were disregarded. During the period of trench warfare, they were used as an élite infantry, and finally, during the war of maneuver, they were used to intervene rapidly on sensitive points of the front. Cyclist units are at present part of the five light divisions and also of the corps reconnaissance groups. For the former, they serve as an élite infantry. The author believes that cyclist units are valuable only to cavalry and he does not believe that the infantry can be put on bicycles.

In *The Russian Cavalry in the First Days of the War* (I), Captain F. Gazin begins a most important contribution to cavalry history. This part deals with organization, mobilization, war plans and the screening operations during the first months of the war. The material for this series is drawn largely from the newly published memoirs of Colonel Winogradski of the 2d Division of the Guard Cavalry and the report of the Soviet General Staff on the first phases of the war. In spite of the lessons of the war with Japan, Russia expected much of her immense cavalry force—two hundred and thirty-five thousand men divided into one thousand, three hundred and fifty squadrons or *sotnias* from which thirty-three divisions of army cavalry, five independent brigades and two hundred and ninety-four squadrons of corps cavalry were formed. The value of the Russian cavalry was better gauged by the Germans, whose opinion of the Russian soldier was expressed by von Kuhl: "The Russian soldier showed himself to be, as we thought in 1913, vigorous, sober, intrepid but, on the other hand, heavy, rude, and lacking vivacity, intelligence and leadership." Combining these qualities with imperfect leadership, the failure of this great mass of cavalry to accomplish results was foredoomed.

ROSTER OF REGULAR CAVALRY OFFICERS NOT ON DUTY WITH TROOPS

(Figures show probable dates of relief)

OFFICE OF THE CHIEF OF CAVALRY

Major General H. B. Crosby

1928
Lieutenant Colonel B. Palmer
Major K. B. Eastham

1929
Major J. T. McLane

1929
Major J. J. O'Hara

1930
Colonel R. S. Fitch
Lieutenant Colonel W. W. Gordon
Major H. W. Baird
Major K. S. Bradford

1931
Lieutenant Colonel J. G. Pillow
Major R. E. McQuillin

CAVALRY BOARD

1930
Major B. F. Hoge

1931
Lieut. Colonel A. B. Cox

GENERAL STAFF CORPS

1928
Colonel A. Van P. Anderson
Colonel A. G. Lott
Lieut. Colonel C. F. Martin
Lieut. Colonel J. C. Pegram
Lieut. Colonel W. W. Overton
Lieut. Colonel E. M. Offley
Lieut. Colonel D. Van Voorhis
*Lieut. Colonel F. L. Case
Major G. S. Patton, Jr.
Major J. M. Wainwright
Major G. Dillman

1929
Colonel J. M. Morgan
Lieut. Colonel O. Foley
*Major J. C. King
*First Lieut. R. M. Gaw

1930
Colonel H. S. Hawkins
Lieut. Colonel W. J. Scott
Lieut. Colonel G. Grunert
Lieut. Colonel E. K. Sterling
Major V. W. Cooper
Major E. N. Hardy
*Major W. D. Crittenberger

1931
Lieut. Colonel E. A. Buchanan
Lieut. Colonel K. T. Riggs
Major A. B. Conard
Major W. Goodwin, Jr.
Major G. Keyes
Major H. McE. Pendleton
Major A. D. Surles
Major P. L. Thomas
Major A. R. Chaffee

*Duty with G. S. not detailed

STAFF AND FACULTY, ARMY WAR COLLEGE

1928
Lieut. Colonel C. A. Bach

1929
Colonel E. H. Humphrey
Lieut. Colonel H. J. McKenney
Captain R. Williamson

1930
Lieut. Colonel T. Miller
Major G. B. Hunter

STUDENTS, ARMY WAR COLLEGE

1927-1928 Course

Colonel F. Lee
Colonel A. M. Miller
Colonel Geo. Williams

Colonel D. McCaskey
Lieut. Colonel W. V. Morris
Lieut. Colonel T. F. Van Natta
Lieut. Colonel W. H. Cowles

Major W. C. Christy
Major A. W. Holderness
Major R. O. Henry

STAFF AND FACULTY, COMMAND AND GENERAL STAFF SCHOOL

1928
Lieut. Colonel C. Lininger
Major A. E. Wilbourn
Major I. P. Swift

1929
Colonel H. J. Brees
Lieut. Colonel H. T. Bull
Major G. W. Chipman

1930
Lieut. Colonel R. McC. Beck, Jr.
Lieut. Colonel F. Kellar
Major R. M. Campbell
Major J. Millikin
Major J. F. Richmond
Major C. C. Smith
Captain H. L. Earnest

1931
Major J. F. Davis
Major J. M. Tully
Captain N. E. Fiske

STUDENTS, COMMAND AND GENERAL STAFF SCHOOL

1927-1928 Course

Lieut. Colonel S. D. Maize
Major F. K. Chapin
Major J. A. Considine
Major P. Menoher
Major E. L. N. Glass
Major C. DeWitt, Jr.
Major R. W. Strong
Major H. Kobbé
Major H. Herman
Major F. G. Ringland

Captain E. F. Shaifer
Captain H. F. Rathjen
Captain G. M. Peabody, Jr.
Captain C. F. O'Keefe
Captain F. R. Lafferty
Captain R. T. Holt
Captain E. C. Gere
Captain L. G. Forsythe
Captain C. M. Daly
Captain B. H. Coiner
Captain D. H. Blakelock

Captain C. H. Strong
Captain J. L. Philips
Captain J. C. Daly
Captain H. C. Fellows
Captain R. R. Allen
Captain J. W. Geer
Captain M. H. Patton
Captain J. W. McDonald
Captain B. A. Mason
Captain H. C. Tobin

STAFF AND FACULTY, SPECIAL SERVICE SCHOOLS

1928
Lieut. Col. D. R. Rodney (Cavalry School)
Lieut. Colonel C. Enos (Cavalry School)
Major T. K. Brown (Cavalry School)
Captain R. T. Maddocks (Cavalry School)
Captain A. J. Wehr (Signal School)

1929
Colonel R. J. Fleming (Cavalry School)
Major W. M. Grimes (Cavalry School)
Major S. V. Bingham (Cavalry School)
Major H. J. M. Smith (Infantry School)
Capt. L. K. Truscott, Jr., (Cavalry School)

1930
Lieut. Colonel G. Johnston (Cavalry School)
Lieut. Col. A. M. Milton (Cavalry School)
Major E. W. Taulbee (Cavalry School)

1930—Continued
Major F. W. Boye (Cavalry School)
Major D. G. Richart (Cavalry School)
Major E. J. Dwan (Cavalry School)
Captain H. C. Mandell (Cavalry School)
Captain M. V. Turner (Cavalry School)
Captain C. S. Miller (Cavalry School)
Captain C. B. Cox (Engineer School)

1931
Major W. W. West, Jr. (Cavalry School)
Major D. E. Murphy (Cavalry School)
Major E. C. McGuire (Cavalry School)
Major H. M. Estes (C.A.C. School)
Major C. P. Stearns (F.A. School)
Captain C. F. Houghton (Cavalry School)
Captain J. W. Barnett (Cavalry School)
Captain J. G. Monihan (Cavalry School)

STUDENTS, SPECIAL SERVICE SCHOOLS

1927-1928 Course

Advanced Course
Major J. B. Thompson (Cavalry School)
Major F. Herr (Cavalry School)
Major E. G. Elliott (Cavalry School)
Major V. W. B. Wales (Cavalry School)
Major C. L. Clifford (Cavalry School)
Major A. P. Thayer (Cavalry School)
Captain E. F. Dukes (Cavalry School)
Captain H. H. Dunn (Cavalry School)
Captain W. O. Johnson (Cavalry School)
Captain J. A. Kilian (Cavalry School)
Captain H. E. Kloepfer (Cavalry School)
Captain J. T. Minton (Cavalry School)
Captain D. T. Nelson (Cavalry School)
Captain H. M. Shoemaker (Cavalry School)
Captain G. I. Smith (Cavalry School)

Advanced Course—Continued
Captain L. A. Sprinkle (Cavalry School)
Captain J. J. Bohn (Cavalry School)
Captain I. G. Walker, Jr. (Cavalry School)
Captain R. E. Willoughby (Cavalry School)
Captain F. L. Whittaker (Cavalry School)
Captain J. B. Wise, Jr. (Cavalry School)
Captain F. Nelson (Cavalry School)
Captain J. B. Taylor (Infantry School)
Captain T. E. Boudinot (Infantry School)
Captain W. B. Augur (F. A. School)
Captain T. J. Heavey (F. A. School)

Troop Officers' Cr.
Captain F. E. Bertholet (Cavalry School)
Captain M. I. Voorhes (Cavalry School)

Troop Officers' Cr.—Continued

Captain J. C. Macdonald (Cavalry School)
Captain L. F. Lawrence (Cavalry School)
Captain G. Merrill (Cavalry School)
Captain W. V. D. Ochs (Cavalry School)
Captain K. Broaddus (Signal School)
Captain O. Porter (Tank School)
Captain R. C. Blatt (Air Corps School)
Captain W. T. Bals (University of Illinois)
First Lieut. S. P. Walker (Cavalry School)
First Lieut. LeR. Wightman (Cavalry School)
First Lieut. C. H. Espy (Cavalry School)
First Lieut. F. P. Tompkins (Cavalry School)
First Lieut. G. W. Bailey (Cavalry School)
First Lieut. E. F. Thomson (Cavalry School)
First Lieut. C. H. Reed (Cavalry School)
First Lieut. I. P. Swift (Cavalry School)
First Lieut. W. N. Todd, Jr. (Cavalry School)
First Lieut. H. L. Kennison, Jr. (Cavalry School)
First Lieut. G. C. Mudgett (Cavalry School)
First Lieut. W. R. Mears (Cavalry School)
First Lieut. O. R. Stillinger (Cavalry School)
First Lieut. P. B. Sancomb (Cavalry School)
First Lieut. F. W. Koester (Cavalry School)
First Lieut. C. A. Burcham (Cavalry School)

Troop Officers' Cr.—Continued

First Lieut. I. D. White (Cavalry School)
First Lieut. N. F. McCurdey (Cavalry School)
First Lieut. C. A. Thorpe (Cavalry School)
First Lieut. J. I. Gregg (Signal School)
First Lieut. A. W. Johnson (Signal School)
First Lieut. C. O. Burch (Signal School)
First Lieut A. George (Signal School)
Second Lieut. K. O'Shea (Cavalry School)
Second Lieut. D. H. Galloway (Cavalry School)
Second Lieut. W. Burnside (Cavalry School)
Second Lieut. D. DeBardeleben (Cavalry School)

Special Advanced Equit. Cr.

Captain V. M. Cannon
Captain R. E. S. Williamson
Captain P. H. Morris
Captain H. J. Fitzgerald
Captain M. Carson
First Lieut. H. I. Hodes
First Lieut. H. C. Mewshaw
First Lieut. C. W. Feagin
First Lieut. R. B. Bosserman

UNITED STATES MILITARY ACADEMY

1928

Major J. K. Cockrell
Major J. N. Ciperton
Captain J. T. Cole
Captain W. F. Safford
Captain C. R. Johnson, Jr.
Captain R. McD. Graham
First Lieut. W. L. Barriger
First Lieut. J. M. Bethel
First Lieut. J. C. Hamilton
First Lieut. H. F. T. Hoffman
First Lieut. W. W. Jervey

1928—Continued

First Lieut. J. K. Mitchell
First Lieut. E. V. Stansbury
First Lieut. C. E. Morrison
First Lieut. J. K. Baker

1929

Major C. C. Benson
Major G. S. Andrew
Captain H. C. Holdridge
First Lieut. W. J. Crowe
First Lieut. L. L. Judge
First Lieut. L. E. Schick

1930

Major H. N. Groninger
Captain C. H. Gerhardt
First Lieut. W. P. Withers
First Lieut. C. E. Byers
First Lieut. H. H. D. Heiberg

1931

First Lieut. C. C. Jadwin
First Lieut. F. R. Pitts
First Lieut. C. C. Clendenen

ORGANIZED RESERVES

1928

Colonel G. F. Hamilton
Colonel P. A. Murphy
Colonel S. F. Dallam
Colonel G. Vidmer
Colonel P. E. Traub
Colonel T. B. Taylor
Colonel W. L. Luhn
Colonel F. T. Arnold
Lieut. Colonel L. S. Carson
Lieut. Colonel C. A. Dougherty

1928—Continued

Lieut. Colonel R. M. Barton
Lieut. Colonel W. A. Cornell
Lieut. Colonel T. M. Coughlan
Lieut. Colonel W. P. Moffet
Lieut. Colonel T. Smith
Lieut. Colonel J. G. Winter
Lieut. Colonel G. B. Rodney
Lieut. Colonel F. P. Amos
Lieut. Colonel G. E. Lovell
Lieut. Colonel H. L. King
Major W. M. Blunt

1928—Continued

Captain C. W. Richmond
Captain H. E. Eastwood
Captain G. Galwey
Captain J. D. Hood
Captain C. H. Palmer
Captain T. K. Petty
Captain G. Rieman
First Lieut. W. T. Fletcher
First Lieut. M. E. Jones
First. Lieut. F. E. Powers

1929

Colonel A. C. Gillem
Colonel H. B. Myers
Lieut. Colonel G. H. Baird
Lieut. Colonel A. H. Davidson
Lieut. Colonel A. S. Perkins
Lieut. Colonel S. W. Winfree
Major R. E. Cummins
Major J. Kennard
Major R. C. Rodgers
Major J. M. Thompson
Major J. A. Warden
Captain R. Russell
Captain G. J. F. Heron
Captain W. G. Simmons
Captain A. H. Truxes

1929—Continued

Captain G. H. Shea
Captain R. Lawrence
First Lieut. H. A. Boone

1930

Colonel N. F. McClure
Colonel O. W. Bell
Lieut Colonel O. A. McGee
Lieut. Colonel E. Addis
Major J. C. R. Schwenck
Major B. L. Burch
Major R. O. Annin
Major M. Garr
Major P. Gordon
Major J. E. Slack

1930—Continued

Captain B. Putnam
Captain M. Byrne
Captain B. E. Sawyer
Captain R. W. Carter
First Lieut. G. H. Wilson

1931

Colonel G. T. Langhorne
Colonel H. R. Richmond
Colonel O. B. Meyer
Lieut. Colonel D. D. Tompkins
Lieut. Colonel G. T. Bowman
Lieut. Colonel R. W. Walker
Lieut. Colonel F. G. Turner
Major T. G. Peyton
Major R. Blaine

NATIONAL GUARD

1928

Colonel E. A. Sirmyer
Lieut. Colonel B. O. Davis
Lieut. Colonel J. S. Fair
Lieut. Colonel J. T. Sayles
Lieut. Colonel C. B. Amory, Jr.
Captain A. H. Besse
Captain J. K. Colwell
Captain D. R. Dunkle
Captain O. I. Holman
Captain G. A. King
Captain C. W. Latimer
Captain P. E. Taylor
Captain C. H. Unger
Captain K. Thomas
Captain G. D. Wiltshire
Captain C. A. Eastwood
First Lieut. E. F. Cress

1929

Lieut. Colonel J. A. Barry
Lieut. Colonel P. Corbusier
Lieut. Colonel W. R. Taylor
Major C. P. Chandler
Captain G. Cronander
Captain G. H. Millholland
Captain J. W. Weeks

1930

Colonel G. S. Norvell
Colonel H. LaT. Cavenaugh
Lieut. Colonel A. F. Commiskey
Captain G. R. Mead
Captain LeR. Davis
Captain H. N. Christman
Captain W. Kenahan
Captain H. H. Neilson
Captain C. R. McLennan

1931

Lieut. Colonel A. Poillon
Lieut. Colonel G. R. Sommerville
Lieut. Colonel G. B. Comly
Lieut. Colonel F. D. Griffith
Lieut. Colonel W. W. Edwards
Major R. B. Patterson
Major H. H. Broadhurst
Captain R. E. Tallant
Captain F. H. L. Ryder
Captain A. E. Merrill
Captain O. S. Peabody
Captain C. Wharton
Captain H. S. Dodd

RESERVE OFFICER TRAINING CORPS

1928

Lieut. Colonel W. M. Cooley
Lieut. Colonel M. C. Mumma
Lieut. Colonel T. L. Sherburne
Lieut. Colonel C. R. Mayo
Major F. W. Whitney
Captain S. Boon, Jr.
Captain C. E. Dissinger
Captain W. E. Buchly
Captain C. apC. Jones
Captain A. T. Lacey
Captain P. R. Upton
Captain R. C. Woodruff

1928—Continued

Captain D. A. Young
Captain C. J. Dockler
Captain H. H. Baird
First Lieut. D. A. Taylor
First Lieut. H. McP. Woodward

1929

Lieut. Colonel A. B. Dockery
Lieut. Colonel E. R. Harris
Major N. B. Briscoe
Captain L. H. Collins
Captain K. C. Lambert

1929—Continued

Captain R. E. Larson
Captain T. F. Limbocker
Captain C. J. Wilder
First Lieut. E. C. Johnston
First Lieut. P. A. Noel
First Lieut. V. D. Mudge
First Lieut. L. G. Smith
First Lieut. L. B. Rapp

1930

Colonel R. S. Wells
Lieut. Colonel S. D. Smith

1930—Continued
Lieut. Colonel E. A. Keyes
Lieut. Colonel H. C. Tatum
Major H. C. Dagley
Captain H. W. Worcester
Captain O. A. Palmer
Captain R. B. Trimble

1928
First Lieut. A. J. Hart

1929
Lieut. Colonel R. E. Fisher
Major R. E. Carmody
Captain L. A. Pulling
Captain J. H. Washburn
Captain W. R. Hamby

1930—Continued
Captain E. M. Sumner
Captain N. W. Lisle
First Lieut. A. K. Hammond
First Lieut. M. F. Sullivan
Firts Lieut. C. R. Chase

1931
Major A. T. Colley
Major E. L. Hubbard
Major C. L. Stevenson
Captain S. G. Fuller
Captain E. N. Harmon
First Lieut. M. L. Stockton

RECRUITING

1929—Continued
First Lieut. F. E. Rundell
First Lieut. W. C. Scott

1930
Captain B. G. Shoemaker
Captain H. A. Patterson
Captain C. W. Burkett
First Lieut. O. M. Massey

1931
Lieut. Colonel P. J. Hennessey
Lieut. Colonel L. G. Brown
Lieut. Colonel H. E. Mann
Lieut. Colonel C. O. Thomas, Jr.
First Lieut. D. P. Buckland

AIDES-DE-CAMP

1929
First Lieut. E. H. DeSaussure

1930
Captain C. S. Kilburn
Captain F. A. Allen, Jr.
Captain E. A. Regnier
First Lieut. W. A. Holbrook
First Lieut. L. F. Parmley
Second Lieut. W. A. Bugher

1931
First Lieut. R. M. Eichelsdoerfer
First Lieut. P. M. Robinett
First Lieut. D. W. Sawtelle
First Lieut. H. G. Culton
First Lieut. H. M. Alexander
First Lieut. M. McD. Jones

MILITARY ATTACHES

1928
Major R. C. Richardson, Jr.
First Lieut. J. M. Glasgow

1929
Lieut. Colonel C. Burnett

1930
Major H. Thompson

1931
Lieut. Colonel E. Davis
Major W. E. Shipp

STUDENTS FOREIGN SCHOOLS

Major H. A. Flint (*Ecole de Guerre*)
Captain G. B. Guenther (*Saumur*)
Captain J. T. Duke (*Saumur*)

STUDENTS FOREIGN LANGUAGES

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Captain J. W. Carroll (Chinese)

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1928
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Lieut. Colonel R. B. Ellis
Captain J. A. Hettinger

1929
Lieut. Colonel J. A. Benjamin
Lieut. Colonel G. W. Biegler

INSPECTOR GENERAL'S DEPARTMENT

Colonel W. C. Rivers (Tempo. appointment as Maj. Gen., Inspector General)

1928
Colonel C. H. Conrad, Jr.

1929
Colonel W. R. Smedberg
Lieut. Colonel W. A. Austin

1929—Continued
Major J. P. Aleshire
Major W. H. W. Youngs

1930
Colonel C. E. Stodter
Colonel F. LeJ. Parker

1931
Colonel C. A. Romeyn
Lieut. Colonel J. Cocke
Lieut. Colonel B. Lear, Jr.
Major E. P. Pierson

UNITED STATES DISCIPLINARY BARRACKS

1928
Captain T. M. Roemer
Captain T. M. Cockrill
First Lieut. F. W. Drury

1929
Captain J. C. Ward
First Lieut. C. E. Snyder

1930
Major L. S. S. Berry

1931
Captain T. Brady, Jr.

DETAILED WITH OTHER BRANCHES

1928
Colonel A. E. Williams (F.A.)
Lieut. Colonel F. M. Jones (F.A.)
Captain L. E. Ryder (Sig. C.)

1929
First Lieut. E. F. Bullene (C.W.S.)

1930
Colonel J. D. L. Hartman (Sig. C.)
Major T. Barnes, Jr. (C.W.S.)
Captain J. F. R. Scott (J.A.G.D.)
First Lieut. D. C. Kemp (Sig. C.)
First Lieut. E. E. Cox (F.D.)
Second Lieut. G. O. Barcus (A.C.)
Second Lieut. J. L. Loutzenheiser (A.C.)
Second Lieut. H. L. Boyden (A.C.)
Second Lieut. W. H. Hardy (A.C.)
Second Lieut. J. W. Bowman (A.C.)

1930—Continued
Second Lieut. J. G. Pratt (A.C.)
Second Lieut. H. E. Engler (A.C.)

1931
Lieut Colonel W. R. Pope (Sig. C.)
Major C. V. Simpson (Sig. C.)
Major B. Y. Read (A.G.D.)
Captain S. A. Greenwell (A.G.D.)
Captain S. C. Newman (Q.M.C.)
Captain G. A. Moore (C.W.S.)
Captain N. E. Waldron (Q.M.C.)
First Lieut. F. L. Hamilton (Q.M.C.)
First Lieut. W. L. McEnery (A.C.)
Second Lieut. E. G. Johnson (A.C.)
Second Lieut. R. A. Gardner (A.C.)
Second Lieut. J. Smith (A.C.)
Second Lieut. E. P. Mechling (A.C.)
Second Lieut. J. C. Crostwaite (A.C.)

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Colonel M. C. Smith, Panama, C. Z.
Colonel J. J. Hornbrook, Camp Stanley, Tex.
Lieut. Colonel A. E. Phillips, Q.M.C.
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Lieut. Colonel F. W. Glover, C.M.T.C. Affairs, 5th Corps Area
Major H. E. Taylor, 2d Infantry Division, Camp Travis, Tex.
Captain W. Houghton, Service Detch., Fort Myer, Va.
Captain M. S. Daniels, 16th Brigade, Washington, D. C.
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The CAVALRY JOURNAL

Devoted to the Interests of the Cavalry, to the Professional Improvement of Its Officers and Men, and to the Advancement of the Mounted Service Generally

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Major K. G. EASTHAM, Cavalry

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Organized November 9, 1885

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The
CAVALRY JOURNAL

VOL. XXXVII APRIL, 1928 NO. 151

Equine Types

A Compilation from Various Sources

By Major A. A. Cederwald, *Q. M. C. Reserve*

THE different breeds of horses now extant were developed through a process of evolution to meet man's differing and specific requirements for work, for pleasure, or for war. In this development, climate and feed were, of course, important factors. The rigorous climate and scarcity of feed in the Shetland Islands, for instance, were instrumental factors in the production of the diminutive, though extremely hardy, Shetland pony, while the demand for extreme size has been a potent factor in the development of the various draft breeds. Similarly, the demand for extreme speed led to the development of the thoroughbred and the standardbred.

It is a significant fact that although there are about fifteen million horses in the United States, probably less than 1% are pure bred. It is with the pure bred horses of the more important light breeds that this compilation will deal, devoting only a sketchy outline to the less important light breeds and to the various heavy draft breeds.

The light horse is characterized by a lack of massiveness as compared with the draft horse, by greater range, more quality, better action and greater speed. The particular field for the light horse is the hauling of light loads, or work under the saddle at a comparatively rapid gait such as a trot, canter and gallop. Therefore, speed rather than extreme power is desired, and the light horse should possess greater angularity and greater height for his weight than the draft horse, and the weight of the light horse should be due to depth rather than to width of body.

THE LIGHT BREEDS

The Arabian

The Arabian horse, as its name indicates, was developed in Arabia. This is the oldest breed of horses generally recognized at the present time. The Arabs, needing animals that would carry them swiftly and safely over long stretches of sandy soil, developed a breed that could withstand the lack of water and feed to a remarkable degree. The Arabian is an animal of great endurance and weight-carrying ability for his size. This breed has a very docile temperament and with it a courage and an ability to withstand hardship to a high degree, and remarkable endurance.

The upper half of the head of the typical Arabian is large with great

width between the eyes, which are markedly full and bright. The head tapers towards the nose more than in most breeds, ending in a small and fine muzzle. The face line is straight and in many there is a dish below the forehead. The head is set on a high-crested neck giving the head a lofty carriage. One of the striking features of the Arabian is the round and well ribbed barrel. Another striking characteristic is the almost abnormal size of the hock, which

Courtesy The Remount

A Fine Type of Desert-Bred Arabian Stallion

is extremely wide. The form of the Arabian is smooth and symmetrical and heavily muscled throughout. There is a general appearance of strength and sturdiness which gives the impression of great weight carrying capacity for his height, rather than extreme speed. This speed has been developed almost entirely to perform work under the saddle and therefore possesses the general characteristics desired in a riding animal. The walk, canter, and gallops are good, while the trot is only fair.

The colors common in the Arabian are chestnut, bay, brown, and gray

Occasionally a black and sometimes a white one is seen. Duns, roans, and creams are rarely seen. While white marks on the face and legs are common, spotted or piebalds are practically unknown among pure Arabians. The erroneous impression that the piebald was common to this breed evidently gained prominence because spotted circus horses have been called Arabians.

The height is usually between 14 and 15 hands and the weight between 850 and 1,000 pounds, although occasionally an individual exceeding that height and weight is seen.

The pure Arabian is bred in small numbers in various parts of the United States, and there have been a few good sized studs maintained in the New England states and in California, but the total number in this country is small and is probably about 300. The breed is too small to meet the general commercial demand, but the blood has been used to quite an extent in crossbreeding. The Arabian improves any common breed to which bred and also crosses particularly well with the thoroughbred and other light breeds. Many of the continental European countries have used Arabians, particularly in the Government studs, in the production of horses for the cavalry.

The Thoroughbred

The term "thoroughbred" is used correctly only to designate the breed of running race horses developed originally in England. Three Oriental stallions, the *Byerly Turk*, the *Darley Arabian* and *Godolphin Barb*, are credited with having laid the foundation for the thoroughbred. The studbook was established in England about 1790 and consequently the thoroughbred traces back for generations through registered lines of ancestry.

The thoroughbred of today, while resembling in some features those of his Oriental ancestors, is very different in type from the present day Arabian, being larger and more angular and upstanding, and possessing greater speed. The thoroughbred represents the extreme speed type, with extreme refinement throughout, with rather a small head with straight face line, clear cut features, fine throatlatch, good length of neck, long sloping shoulders with great depth of chest, prominent withers running well back, muscular quarters, straight hind legs and rather a small foot. Their action at the walk, trot and canter is rather low with an excellent canter and gallop close to the ground. In temperament the thoroughbred is alert and active in the extreme and if not carefully handled is likely to become erratic, which has caused him to be referred to as "hot headed." When handled carefully by an intelligent caretaker the thoroughbred is quite docile, but is quick to resent abuse.

In height the thoroughbred ranges from 15 to 16 hands and in weight from 950 to 1,200 pounds with occasional specimens both below and above those heights and weights. The most common colors are chestnut, bay, brown, less frequently black, and occasionally a gray.

The thoroughbred is found in small numbers throughout all parts of the United States and is found in largest numbers in the states of Kentucky and Virginia, where the breeding of thoroughbreds is conducted on a large scale.

The number of thoroughbreds in the United States today is probably between 10,000 and 15,000. While the thoroughbred has been bred primarily for racing purposes, this blood has had a big influence in all of our light breeds of horses and in the production of horses for use under the saddle, whether it be for the show ring, cross country riding, polo or for use on the cattle ranches.

Courtesy The Remount

"Spearmint"
A Superb Type of Thoroughbred

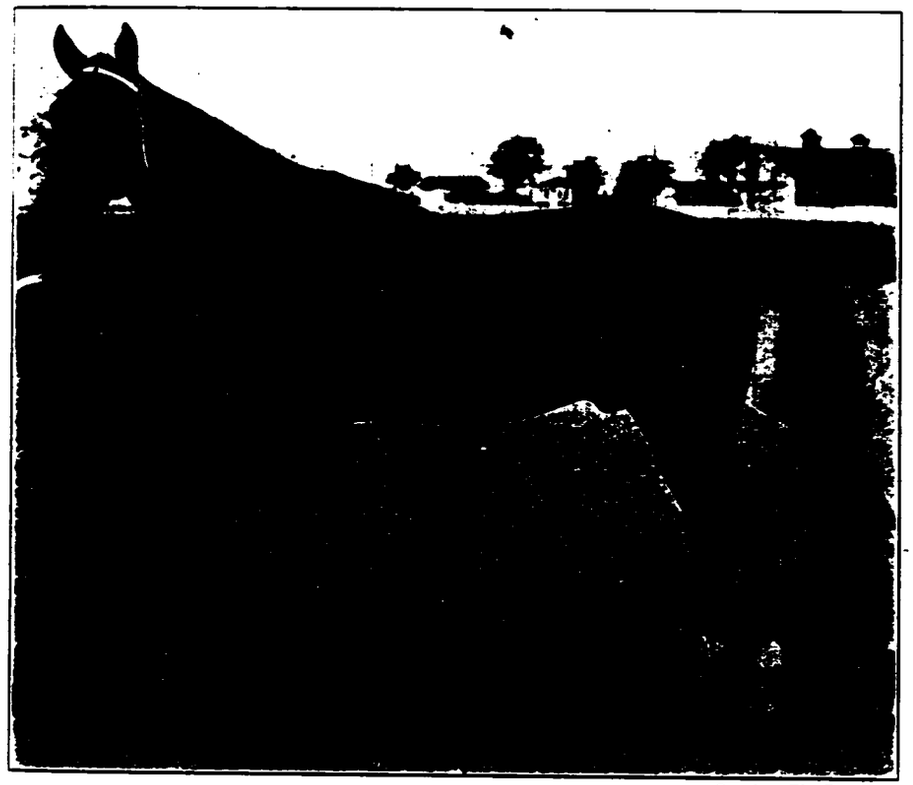
More and more blood is continually being demanded by those purchasing hunters, polo mounts or riding horses for the army or for certain use. Most of our high class hunters, jumpers and polo mounts are rich in thoroughbred blood. In fact, the majority of such horses are at least halfbred. By the term "halfbred" is meant that the animal shall be at least one-half thoroughbred. While we occasionally find a good driving horse among the thoroughbreds, it must be remembered that he has been bred primarily for running races under the saddle and is strictly of the riding type.

The Standardbred

The standardbred is an American breed developed primarily for extreme speed in harness at the trot and pace. The name "standardbred" was used because of the fact that in the formation of this breed the individuals were

selected largely on a standard speed performance and admitted to registry largely on such performance.

Messenger, a thoroughbred stallion imported from England in 1788, was the most notable foundation sire. He was the sire of *Mambrino* who sired *Abdallah*, the sire of *Hambletonian 10*, or *Rysdyk's Hambletonian* (foaled in 1849), who is regarded as the greatest of the progenitors of the standardbred. The greatest son of *Hambletonian 10* was *George Wilkes*, a race horse and a sire of speed. The stallion which has left the greatest number of standard performers is *Peter the Great* (a great grandson of *Hambletonian 10*), having



Courtesy The Remount

A Standardbred Army Remount Stallion

at the end of the year 1923, a total of 573 standard performers, 456 trotters with mile records of 2:30 or better, and 117 pacers with records of 2:25 or better. *Peter the Great* died in 1923 at the age of 28. The ancestry of the trotter and pacer is the same, although some families produce a larger proportion of pacers than others while many individuals show speed at both gaits. Both trotters and pacers are registered in the *American Trotting Register* and

practically every individual registered has both trotters and pacers in the ancestry.

The standardbred, while not showing quite as much quality as the thoroughbred, as a whole possesses more substance. The head of the standardbred is somewhat coarser than that of the thoroughbred; the neck is inclined to be a little heavier; the shoulders straighter; the withers less prominent and the hind legs not quite so straight. In type the standardbred is a harness horse as distinguished from the riding type, which is the type of the thoroughbred.

The standardbred ranges from 15 to 16 hands in height and from 1,000 to 1,200 pounds in weight with occasional individuals above and below these limits. The most common colors are bays, brown, chestnut and black with a few roans and grays.

The standardbred is found in small numbers in practically all parts of the United States but is bred most largely in the middle west and some of the New England and other of the eastern states. The number of standardbreds living today is probably about 15,000.

The standardbred is produced primarily for harness-racing, but the blood of this breed is found to a large extent in our light utility horse used in many of our farming sections and in light delivery wagons. The automobile has, however, displaced to a great extent the use of the light delivery and road horse. The standardbred has also produced a number of our excellent heavy harness horses. Considerable trotting blood is found in many of our cavalry horses and in our light artillery horses. Occasionally good riding horses are found among the standardbreds, but it should be kept in mind that this breed has for years been bred for harness use and not for saddle purposes and consequently is of the harness type. However, the breed crosses well with the thoroughbred, and also with draft blood.

The American Saddle Horse

The American saddle horse as the name indicates is an American breed. The breed is the result of a thoroughbred top cross on a native mare foundation. *Denmark* the great foundation sire of the American saddle horse, was a thoroughbred stallion foaled in Fayette County, Kentucky, in 1839.

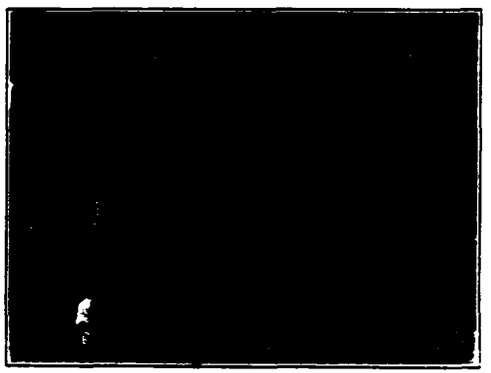
The original American saddle horse was a product of necessity, being used originally at a time when the saddle horse was the most common means of transportation over the rough and unimproved roads. Horses with easy gaits such as the amble and running walk, were found particularly desirable to ride over plantations and on long road journeys. The desire for easy gaits was an important factor in the early development of this breed.

This breed is characterized by being rather upstanding, has a high head carriage, a smoothly turned form, level croup, and high set tail. From an artistic point of view he is perhaps the most beautiful of all horses, being the extreme embodiment of quality and finish. Some have been bred so fine however, as to be markedly deficient in substance.

One of the outstanding features of this breed is the possession of five distinct gaits, namely, the walk, trot, canter, rack and one of the slow gaits, such as the fox trot, the running walk, or the slow pace, the latter often being referred to as the stepping pace. The American saddle breed is without a peer in the production of the five gaited horse, for it is but rare that an individual of any other breed is successfully developed into a five-gaited horse. In addition to the production of the five gaited horse this breed produces a number of the walk, trot and canter horses seen in the show ring. Horses of this breed meet the demand for combination horses, and are shown in harness and under the saddle more naturally than those of any other breed.

The colors common to this breed are bay, brown, chestnut and black and occasionally a gray. They range in height usually between 15 and 16 hands and in weight between 1,000 and 1,200 pounds.

They have quite a wide distribution but are bred in greatest numbers in Kentucky and Missouri. There are probably in the United States approximately 4,000 American saddle horses. Because of their gaits, the pure saddlebred, and any of its grades which have a tendency to "saddle," are not highly desirable as army mounts.



Courtesy The Remount

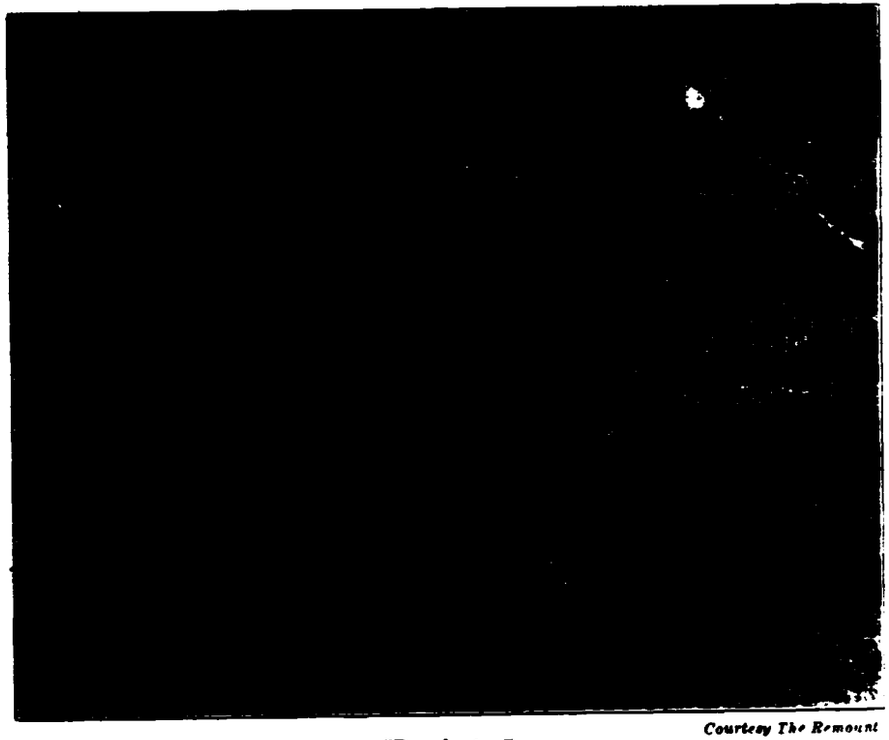
The American Saddle Type

The Morgan

The Morgan is an American breed and derives its name from the stallion *Justin Morgan* foaled about 1793 in Massachusetts. This stallion was afterwards taken to Vermont in which state this bread of horses gained great distinction. The breeding of *Justin Morgan* is not absolutely known but the best evidence indicates that he was sired by the thoroughbred stallion *True Briton*, tracing back to Oriental blood

The Morgan was bred and developed for general work in the New England states. He was noted for his ruggedness, courage, and endurance. He proved to be an excellent road horse and well adapted to general farm work when a small horse was satisfactory. In type he is a harness horse and while a

number has shown extreme speed at the trot Morgans have not as a breed equaled the standardbred in this respect. The Morgan has a higher head carriage than the standardbred or thoroughbred, a more sloping shoulder than the standardbred, but less sloping than the thoroughbred. The Morgan is blockier, wider and heavier for his height than either the standardbred or thoroughbred. The Morgans in height will average about 15 hands and in weight a little over 1,000 pounds. Most of the Morgans will stand between 14.2 and



Courtesy The Remount

"Bennington"

For Many Years Premier Sire at the U. S. Morgan Horse Farm

15.2 in height and weight between 950 and 1,100 pounds. As in all breeds, we find individuals both above and below these heights and weights. The colors common to this breed are bay, brown, chestnut, and black. In temperament the Morgan is alert but docile. He has an alert and active walk and trot and a fair canter.

The Morgan has a wide distribution, but is found in greatest numbers in the northeastern states. There are probably approximately 3,000 Morgans living today. The pure Morgan is not a very desirable riding horse, but

crosses extremely well with the thoroughbred and the Arabian and the result is, ordinarily, an excellent cavalry horse.

The Other Light Breeds

There are other light breeds, such as the flashy and high-stepping hackney, the French and German coach horse, the Cleveland Bay and the several pony breeds. However, their use in the army is inconsequential and a detailed description of their characteristics is, therefore, deemed unnecessary.

The Draft Breeds

The draft horse is characterized by massiveness. The particular field for this type is the hauling of heavy loads at a comparatively slow gait, usually the walk. Therefore, power rather than speed is desired, and in order to possess this power the horse should be, generally, blocky or compact, low set or short legged aond be sufficiently heavy to enable him to throw the necessary weight into the collar to move the heavy load and at the same time maintain a secure footing.

Weight is of prime importance and this weight should be due to a compact, blocky body rather than to extreme height. In fair condition a mature horse of any of the draft breeds should weigh at least 1,600 pounds and the majority of them will be between 15¾ and 17 hands in height.

The principal draft breeds are the Belgian, the Percheron, the Clydesdale, the Shire and the Suffolk. Many of the horses used by our field artillery are grades of these breeds, with the preponderance in numbers in favor of the Percheron and Suffolk grades.

While not strictly apropos to the subject of this compilation, it may not be amiss here to emphasize the fact that in spite of the rapidly increasing employment of motor transportation, the field of economic usefulness of the horse is by no means diminishing. Even in the cities large numbers of horses continue to be used for pleasure and for work, and the studies and investigation of the Horse Association of America have conclusively shown that for short hauls, both light and heavy, the horse is by far the cheapest motive power. On farms, the development of means by which horse power can be multiplied by the use of "multiple hitches" has enabled the operators of large farms to utilize horse power to an advantage hitherto unknown, at a considerable saving over the cost and upkeep of tractors. The breeder of horses, particularly of the better type, thus has no reason to be discouraged, for he is assured of a ready market at good prices for his product.

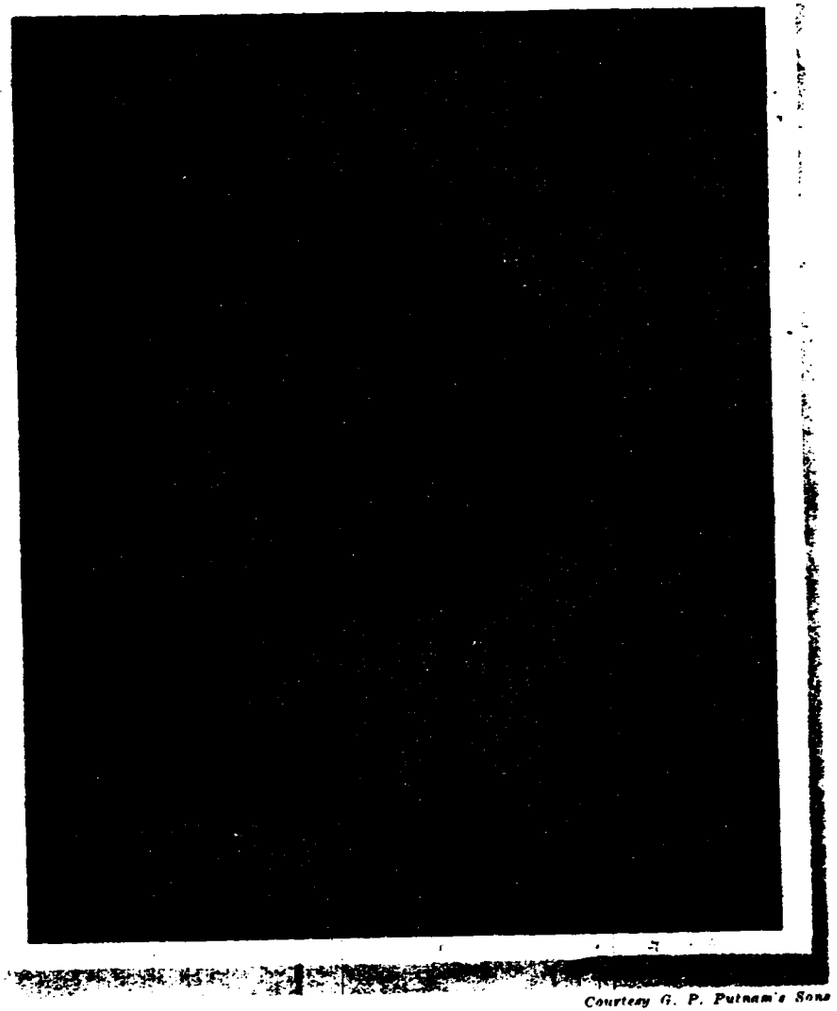
The Tenderfoot

The hurricane deck of a bronc, you know
Is not such a cinch of a place,
When, back poked up high and head pushed down low,
He struggles to fling into space
The thing on his back, which he cannot brook
And seeks to get rid of by hook or crook.

What wonder a new hand was tossed so high
It took him some time to come down,
Convinced that he surely came very nigh
To swapping his cross for a crown.
The horse tried his best to wipe out the man,
But seeing a rope wheeled around and ran.

The tenderfoot? Well, say, he was a brick—
An all-around sport, full of punch!
He got onto every bronco trick,
And soon made a hit with the bunch,
Whose ways he concluded to make his own,
Which brought him the happiest days he'd known.

From Cowboy Stuff, Courtesy G. P. Putnam's Sons



Courtesy G. P. Putnam's Sons

"The Hurricane Deck of a Bronc"
After an Etching by Henry Ziegler in "Cowboy Stuff"

Some Does-Some Doesn't

By Lieut. Colonel J. A. Barry, *Cavalry*
Formerly Director of Horsemanship, The Cavalry School

CAN the experienced horseman pick the best jumping prospect from a few green horses? I think not. Can he, judging by conformation and way of going, select the best jumper from a number of "made" horses, or with certainty, even a good jumper? I doubt it.

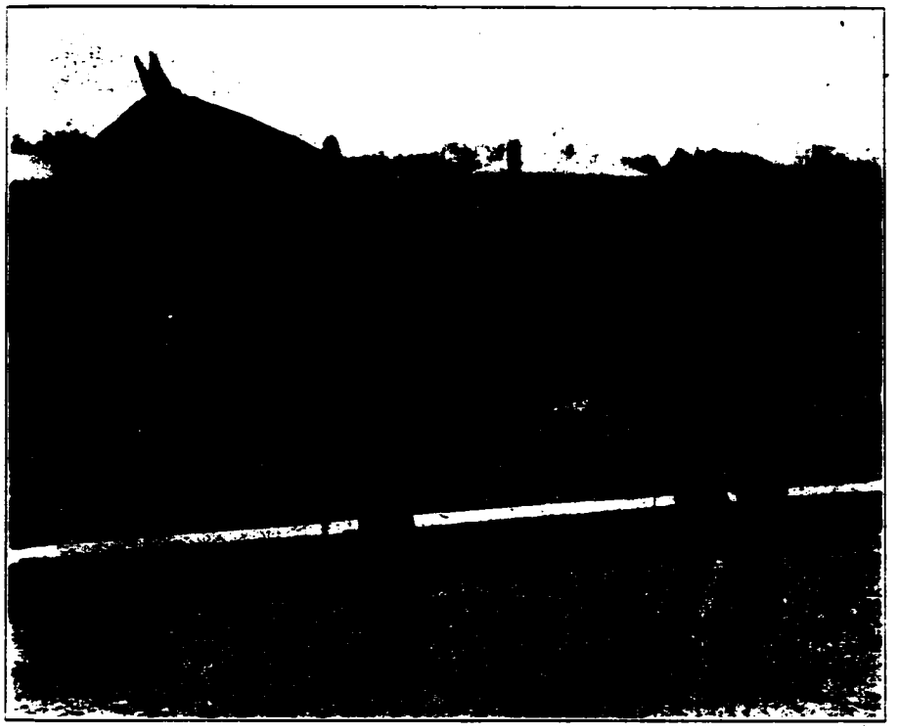
The best jumper is the one which jumps best.

At the recent National Horse Show at Madison Square Garden, the best looking horse, in my opinion, among the hunters and jumpers, was one that was utterly worthless at jumping. He couldn't or wouldn't jump at all, and if he ever becomes even a mediocre performer it will be a great surprise to those who watched him. He had won, at one of the best hunter shows in the country, a class for hunters at walk, trop and gallop, from an excellent field of forty, yet when shown at the Garden in the "suitable" class, his performance over those small jumps was pitiable. It was not on account of lack of schooling—he had had plenty. Imported, at a large figure, from one of England's most noted thoroughbred studs, he is a well-turned, well-muscled, beautiful model of a hunter—a horse that *ought* to be able to jump. Stand him alongside *Bally MacShane* at the same show and ninety-nine out of every hundred people, not knowing the two horses, wouldn't give *Bally* a chance, yet *Bally* is one of the greatest jumpers, by actual test, America has produced. He is a freak, is patently a grade draft horse, and has big dishpan feet; no walk, no trot, no gallop; yet, for the biggest prizes he has beaten for years the best jumpers here, and on one occasion won the King's Cup at Olympia, probably the most coveted prize of the indoor jumping world, and the most hotly contested. The wise and conservative horseman in comparing these two individuals might well say: "I can't pick the better jumper of these two, but of a hundred of each type, you'll find more good jumpers among the hunter type." He would undoubtedly be right, yet the champion might be found among the "*Bally*" type.

A show jumper that consistently wins must have the ability to judge distance very accurately, so as to be "in right" when he reaches the point best suited to him for the take-off. He jumps the same jumps with the same take-offs, and so at successive jumps doesn't have to change his style or vary his effort to clear. A horse with an irregular take-off—close this time and standing off at the next one—has a much more difficult task; he not only must vary his style but to clear the same height or width must vary greatly his effort. It is easy to imagine, but difficult, if not impossible, to express accurately the difference in effort required when the take-off is just right and when it is too close or too far back. The importance of the take-off cannot be exaggerated. Watch the pole-vaulter, the broad or high jumper

See how many times he "refuses" because his take-off is not just right. The take-off with horses is just as important as with athletes. Much practice tends to regularity of take-off, but some horses never acquire it.

The desire to jump cleanly—the fear or dread of touching a jump—is largely a matter of temperament, innate, and I doubt very much if a horse naturally careless and sloven can ever be trained or rapped into a careful and consistently clean performer. The best jumpers I've seen on this side have not been rapped or "barred" excessively, and some of them not at all.



"Miss America"
A Little Short One That Is A Great Jumper—Her Record Proves It

Nearly all breeds of horses furnish some good jumpers, and thus we see them of many different types and conformations. "They jump in all shapes" is a very true saying, to which may be added, "and sometimes the best shapes don't jump."

Let's look at some of the best jumpers of today and the recent past and "see what we can see." Several experienced horsemen with a wide knowledge of jumping horses, have given me individual lists of horses they considered the best jumpers of America (the United States and Canada). From these lists and my own, I've selected the following horses. It is not claimed that every

horse on the list can or could outjump any horse not mentioned, but it is confidently asserted that it would be very difficult, if not impossible, to find during the period covered an equal number that would win over those named. No order of merit is attempted. The horses named can or could all jump a 4-foot 6-inch course nicely and consistently, and when asked would jump 5 feet; in fact, I think all have won over 5 feet. Any jumping horse can do 5 feet in the stable, and many of them, judged on the assertions of their truthful owners, in contrast with the horses' public exhibitions, do it *there only*. I have seen all of the list jump and because I do not want to write of horses unseen by me, some excellent performers have been omitted: for instance, *David Grey*. To avoid, as much as possible, differences of opinion as to type, the horses have been classified as draft, galloper, trotter, or gaited. No argument can now arise as to whether "this" or "that" is a hunter. "Unknown" under breeding means that breeding is not known; "Half-bred" means that the sire was a thoroughbred; "Std" means standard bred trotter.

Horse	Breeding	Type
Silver Crest	Half-bred	Galloper
Bally MacShane	Grade draft	Draft
Sandy	Half-bred	Galloper
Miss America	Half-bred	Galloper
Deceive	T. B.	Galloper
King Nelson	T. B.	Galloper
Cavalier	T. B.	Galloper
Melrose	Std.-T. B.	Galloper-trotter
King Edward	Half-bred	Galloper
Shot	T. B.	Galloper
Bucephalus	Std.	Nondescript
Nigra	Unknown	Trotter-galloper
Rajah	Saddle bred	Gaited
Oxford	Half-bred	Trotter-galloper

Silver Crest, exhibited for a number of years by Miss Becky Lanier, I consider the sanest, safest, smoothest, most sensible, and consistent jumping horse I've ever seen. Wonderfully clever he *could* jump from anywhere, but he tried with all his might *to* jump from exactly the right place. He was bred by Mr. "Freddie" McElhone, of Virginia, who still owns and hunts him. A half-bred horse by *Black Dick*, he was, in his prime, a beautiful model of the half-bred light-weight, either standing or in motion. I have seen no other horse that could jump 5 feet with so little effort. He won, I believe, under Miss Lanier's handling more hunter and jumper ribbons than any other horse in the annals of the American show ring. He has won at one show and in the best of company, the "Touch and Out" stakes, the open jumping, the 5-foot class, the hunter model, the handy hunter, the ladies' hunter, the light-weight and the hunter championship,—truly a remarkable horse, remarkably ridden. It may

be well to note that the method of his rider was to let *Silver Crest* do the jumping. They were strictly a "we" team. He always had complete freedom of his head and a prettier pair over jumps is difficult to imagine.

Bally MacShane, very awkward, "took off" very close. Mr. Bontecou, his owner, always said "when you are sure he can't put in another stride, he always does." Although his breeding is unknown, his feet, "feathers," head and croup ruthlessly mark him with draft blood; his shoulders, withers, and neck just as truly show warm blood. He has a great record—all the more remark-

Photo by W. W. Rouch, London

"Bally MacShane"

able because *Bally* has been a loud and noisy roarer during his entire show career.

Sandy (not the Cavalry School horse of the same name) was shown by Mike Devaney for years in both hunter (middle-weight) and jumping classes. He was unsound (navicular) during his entire career and, finally when he became so unsound that even "we judges" could see it, he appeared as a jumper only. He was a very game horse and a most honest one—jumping in class after class when landing must have been agony. Mike rides his horses collectedly and "lifts" them over. He has been very successful with certain horses. He is the only exponent of that system that I know who has been even partially successful.

King Nelson (Mr. Percy Rockefeller's) and *Cavalier* (Mrs. Thomas

Hitchcock's) are magnificent types of big powerful thoroughfred hunters. *Deceive* and *Shot* were, when in their prime, good thoroughbred light-weight types. *Nigra* is a long powerful mare. *Bucephalus* is short in the neck and except at jumping is cursed with mediocrity most pronounced. *King Edward* was a big half-bred, *Melrose* a little, long horse and a wonderful jumper. *Miss America* is little more than a pony of the half-bred galloping type and of some quality; *Rajah* is a most ordinary crooked-hooked saddle horse that can and does jump. *Oxford* is a big, short horse.

Now let's group them as to size: The big, tall, long ones are *Bally, King Nelson, Cavalier, Nigra.* The "biggest, shortest" ones are *Sandy, King Edward* and *Oxford.* The chunks are *Miss America* and *Bucephalus.* The light-weight types are *Silver Crest, Melrose, Shot,* and *Deceive,* the former two standing over more ground than the latter. *Rajah* is just a plain saddle horse. So we see the list contains big long ones, little short ones, big short and little long ones. Truly, "they jump in all shapes and sizes."

What about the breeding? In this list horses of thoroughbred blood predominate, but we must remember that in America we ride more horses of that blood than any other except possibly the saddle-bred horse. How about the latter breed? In the list there is one, *Rajah.* The only other saddle-bred horse, I know, that might be considered in the class of the horses named, is The Cavalry School's *Joe Aleshire.* He is an excellent prospect, was a member of America's team at the last New York show and with luck should become an excellent performer. He is called saddle-bred, yet has as much thoroughbred blood as saddle-bred, being by a registered saddle horse out of a thoroughbred mare. In America I believe it not unfair to say that the saddle-bred horse, as a breed, has shown his inability to jump. There are too many of this breed under the saddle. The proverbial bushel could not for so long and with such consistency hide its light. Why can't they jump? In my opinion, because first, they have or make little or no use of the neck at any gait (the way it is set on prevents full use), second, they are as a class stiff in the loins, and third, they have no withers and poor shoulders. In selecting a jumper I should prefer any blood, including that of the jackass, to that of the saddle horse. He has many useful and ornamental fields but the jumping field is not, I think, for him.

In this country not a few horses of trotting blood turn out good jumpers. Sir Adam Beck of Canada, who tried out hundreds of horses in developing and maintaining his show stables, was a great believer in trotting blood, and developed many excellent jumpers of the thoroughbred-standard bred cross.

Many hackneys (large and small) and horses of coach-blood are excellent jumpers and so long as the course is inside and little galloping is required, they win a goodly number of prizes.

In résumé, I think we can say that almost all breeds furnish some good jumpers; that the good jumpers sometimes do not look the part; that, on the contrary, a vast majority of good jumpers have good hocks, quarters and loins and fair shoulders; that they can and do use their necks; that in America a great proportion of the best jumpers are horses of the galloping type and therefore with thoroughbred blood predominating; in short, that the "freaks" are just the exceptions which prove the rule.

"If you want to have a good time
Jine the Cavalry."—
If you want to ride a good horse
"Git" a galloper.

After an etching by Marjorie Prescott

Care of the Horse's Feet

By Major Frank G. Churchill, *Q. M. C. Reserve*
Instructor in Horseshoeing, The Cavalry School

MR. JONES, recently commissioned a Second Lieutenant of Cavalry, is assigned to Troop A, 1st Cavalry, and reports to Captain Brown for duty.

Captain Brown proceeds to instruct Lieutenant Jones in the various duties incumbent upon a mounted officer and, among other things, the care necessary to keep the feet of the horse in a serviceable condition. They go to the stables where they inspect the horses pertaining to the troop. Captain Brown first discusses shoeing.

He explains that the serviceability of the horse depends to some extent on the condition of the feet. It is essential, therefore, that one have a good working knowledge of the construction and functions of the various parts of the foot. One should know when the feet are in need of shoeing: what shoes are best suited for the work the animal has to perform: how to properly prepare and balance the feet; how to fit the shoes and secure them to the feet with a minimum amount of interference with the natural functions.

The foot consists of bone, cartilage, tendons, fatty tissue, flesh, horn, blood vessels, and nerves. With the exception of the bones, all parts of the foot are elastic. This accounts for the power of resistance against injury to the foot by concussion when the animal is in motion. The hoof, or the case of horn covering the inner structures of the foot, consists of three parts: viz., the wall, the sole and the frog. These are so constructed as to permit great flexilibity and also to assist the inner structures of the foot in performing their functions: i. e., reduction of concussion and aid to the circulation of blood through the foot.

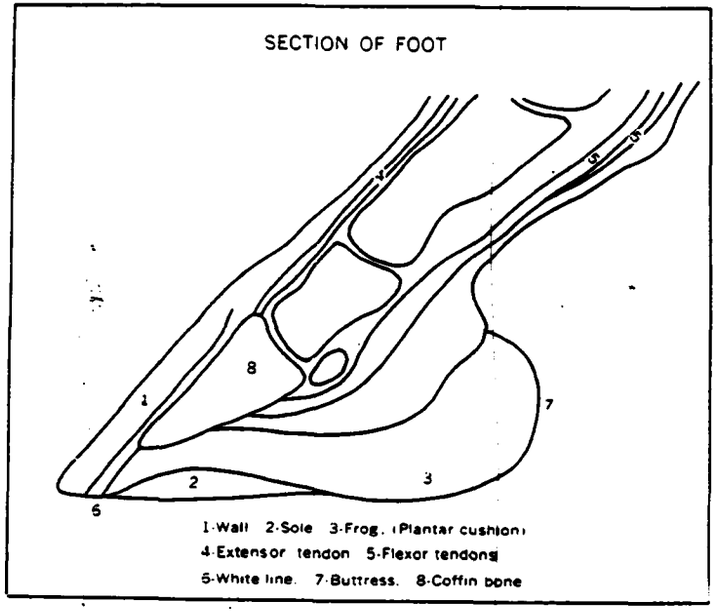
The column of bones in the leg divert from the perpendicular at the fetlock joint and slope downward and forward into the hoof at an angle ranging from 40 to 60 degrees. The joints in the lower part of this column of bones are so constructed that there is very little lateral movement, the articulations being similar to a hinge, moving forward and backward only.

The principal factors involved in resisting the shock to the foot are as follows: the strength of the ligaments supporting the fetlock joint, where the leg bones diverge from the perpendicular; the elasticity of the fatty tissue (frog cushion in the rear part of the foot); the flexibility of the connections between the bone of the foot (coffin bone) and the wall of the hoof; the elasticity of the horn structures; the peculiar construction of the hoof, permitting it to spread when weight is placed upon the foot; and the vast amount of blood in the foot, which helps to alleviate the force of the blow on the foot structures. This power of resistance against injury depends on elasticity of the horn structures, cooperation of the sensitive and non-sensitive structures, and distribution of the

weight of the animal in accordance with the ability of the various parts of the foot to carry the load.

The movement of the joints is controlled by bands of strong fibrous tissue called tendons. On the front part of the leg are the extensor tendons, which straighten and extend the limb. On the back part of the leg are the flexor tendons, which flex, or bend, the limb. Tendons are extended from, and controlled by, large muscles located on the upper part of the leg.

In order to avoid friction and undue strain on the various parts of the foot structure, it is all-important that the foot be kept in balance which means a proper relative position of the foot to the leg. This position should be such



that so much of the weight as is carried on one foot is equally distributed. Balance of the foot controls largely the balance of the gait. A balanced gait means that the movements of the feet and legs are without lost motion or interference: that the feet and legs extend backward and forward in alignment with the body, without lateral swing, with sufficient clearance between the front and hind feet, and with proper elevation to clear the ground. To acquire and maintain balance of the gait, it is essential that the feet be balanced, that the feet and pasterns be in alignment with the body, and that there be no lateral deflection. The feet to be extended in alignment with the body must be in that position at the moment of breaking over and leaving the ground.

The horseshoer, before removing the worn-out shoes from the horse, makes the following examinations to assist him in performing his work in the most

intelligent manner. With the horse placed on a level standing, he views the feet and legs from a position in front of the animal, making the following notes: the conformation of the legs; are the bones of the pastern and foot in prolongation with the upper bones of the leg, or do they deflect outward (toe-out), or deflect inward (toe-in); are the limbs close together (narrow chest); are the corresponding feet the same size (width of quarters and length of toe); are the feet balanced laterally (the length of wall from the hair line to lower border equal on both sides of the foot); are the feet circular, or narrow with pointed toes?

He next notes the following when viewing the animal from the side: are the feet balanced from toe to heel (the length of toe and height of heels in accordance with the conformation of the pastern); are the heels the same height; does the angle of the wall at the front part of the hoof (from the hair line to the lower border) coincide with the slope of the pastern (parallel)?

He further examines the wear of the old shoe as a check on the accuracy of previous examination to determine balance of the foot, and position of the foot at moment of breaking over and leaving the ground. He also notes the general condition of the feet to see what type of shoe is best suited for this particular horse. If there is any malformation of the feet or evidence of irregularities in the gait, the type of shoe and fitting should tend to correct the irregularity.

Lieutenant Jones then asks: "What may be learned from the examinations just made?"

Captain Brown: "A horse that has faulty conformation of the legs, such as toe-in or toe-out, is inclined to irregularities of gait. This irregularity requires that the shoe be outlined in such a way as to induce the foot to be in a straight forward position at the moment of breaking over and leaving the ground. If the horse has a narrow chest, the shoer must avoid the use of heavy shoes and take particular pains in fitting the shoe close and smooth on the inside quarter of the foot to guard against interfering.

"If one foot is longer than its corresponding mate, it would affect the rapidity of the breaking over of the feet (the longer foot breaking slower than the shorter one), which results in irregularities of gait. If the feet are not balanced laterally (the length of wall from the hair line to the lower border being greater on one quarter of the foot than on the other), it will cause the foot to be out of alignment with the body at the moment of breaking over (starting in flight). This results in a lateral swing of the foot and leg while in flight.

"If one foot is larger in circumference (greater width of quarters) than its corresponding mate, the larger foot should be prepared for the shoe first, to insure that the same length of toe and height of heels are maintained on the smaller foot. When fitting shoes to feet of this kind, the shoe should be outlined with greater fullness on the small foot, to more nearly make the circumference of the shoes the same.

"If the feet have pointed toes, the shoes must be outlined with sufficient fullness on the sides of the toe near the point to afford lateral support to the foot at the moment of breaking over and leaving the ground. A horse having pointed toes is most susceptible to being thrown off balance while the foot is in the act of breaking over and starting in flight, which results in irregularities of gait, such as stumbling, forging, and interfering.

"Too great an accumulation of horn interferes with the proper functioning of the foot structures, causes increased labor on the ligaments and tendons, and impairs smoothness of gait. These examinations show the requirements in re-shoeing the horse so that the work may be done in the best possible manner."

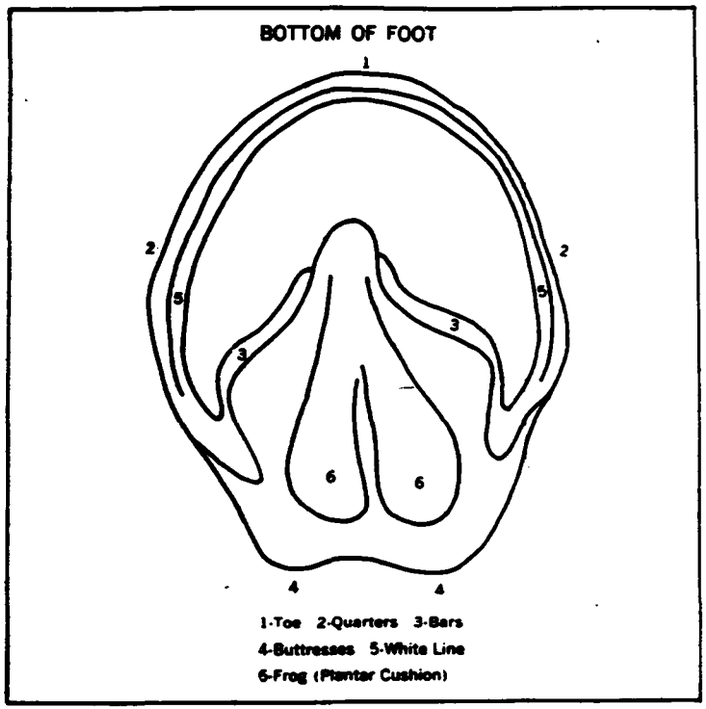
Lieutenant Jones: "What guide has the shoer by which he can determine the amount of surplus horn that may be removed from the hoof at the time of re-shoeing?"

Captain Brown: "The surplus accumulation of horn on the sole and frog loses its elasticity and strength, becoming dry and scaly and easily flaking off, particularly in the unshod hoof. On the foot that is shod, the scales of dead horn are more in evidence, due to the protection afforded by the shoe. When barefoot, friction is greatest on the wall at the toe. The toe is thus kept reduced in length and height and the wall is somewhat higher proportionally at the heel than at the toe. In the shod foot, diminution no longer occurs at the toe because of the protection given by the shoe at this point. Wear does occur, however, from the bend of the quarter to the heel as a result of expansion and contraction of the hoof. The toe thus becomes proportionally longer and higher than the heels, due to the wear at the heels. This results in a recessional condition, which greatly increases the strain on all the supporting structures of the leg and necessitates the periodic removal of the shoe for the purpose of reducing the height and length of the toe. For this reason, a shoe should ordinarily be removed once every four to six weeks.

"The shoer, having removed the old shoe, takes the shoeing knife and pares the dead horn over the white-line (a ring of soft light-colored horn that unites the outer border of the horny sole to the inner lower border of the wall) and outer border of the sole until live horn is reached. This is done to ascertain the amount of horn that may be removed with safety in preparing the foot for the shoe. To retain the elasticity of the live horn of the sole and frog, and to protect the sensitive sole and frog against bruising, a covering of dead horn is essential. Cutting away the bars or opening the heels weakens the foot and may result in contraction of the quarters and heels. Where a great accumulation of dead horn is present on the sole, it is advisable to remove a portion of it, being careful to leave a sufficient amount for protection. Ragged particles of horn on the frog, if allowed to remain, may cause thrush and should be removed when preparing the foot for the shoe and, from time to time, between shoeings. When preparing the foot for the shoe, consider the size of the feet compared with the size and weight of the animal.

"There is a great difference in the thickness of the horny sole, between cup-

shaped and flat feet. The cup-shaped foot, as a rule, grows faster than the flat foot, and the layers of horn, as they dry out, do not fall off; the sole being arched has a tendency to keep them from flaking off. With the flat foot, the horny sole is less arched, and the dead horn, as it dries out, readily flakes off. The horny sole of the flat foot is also naturally thinner than that of the cup-shaped foot. Great care should, therefore, be exercised in preparing the flat foot for the shoe. With some horses having flat feet, especially if the size is out of proportion to the size of the horse (too large), which makes the animal clumsy in his gait, the feet should be taken down as much as conditions permit. With the cup-shaped foot, sometimes the foot is too small in comparison with the



size of the horse and should not be taken down until live horn is reached. By so doing, the foot is made too small to give proper support to the weight of the horse and the ground surface is not sufficiently large to steady the gait. The wall of the flat foot is trimmed to a more oblique angle than in the ordinary upright foot, and it is, therefore, necessary, in the preparation, to remove a part of the outer edge of the wall, in order that the nails may be driven in the outer edge of the white-line where they belong, since the nail holes of the machine-made shoe do not conform to this shape of foot. In general, the foot should be prepared so that it will approximate as nearly as possible a state of nature.

"When horses are in constant use, it is necessary to prevent too rapid wear of the hoof. The modern shoe is the best means to accomplish this result, although any shoe, applied to the foot, interferes somewhat with the natural functions of the foot. Therefore, when conditions permit, it is best to let the feet go unshod. There are certain seasons during the year when the troop does but little drilling, and the nature of the ground over which the horses are used is free from stone. During this season, the horses are shod in front and unshod behind, taking great care to keep the edges of the wall of the hind feet well rounded to prevent breaking. For each size of shoe, machine-made shoes are issued in five different weights, as follows: extra extra light, extra light, light, medium, and heavy.

"For saddle horses, the extra light and light are most suitable. Notice that there is considerable difference between front and hind shoes, the front shoe having a wider web and being much heavier than the hind. The shoer selects a shoe suitable in weight (the weight being governed by the nature of the work the animal performs and his general conformation, or ability to carry weight) and size (the size being governed by the position of the nail holes nearest the heels, which should fall over the bend of the quarters, or widest part of the foot).

"The shoe is then fitted. The outline of the shoe should conform to the foot from the bend of the quarter on one side around the toe to the bend of the quarter on the other side. From this point back to the heels, the shoe should gradually extend laterally beyond the wall to about one-eighth of an inch at the heels. This is in order that the bearing surface of the wall from the quarters back may be allowed to slide outward and inward over the shoe during the expansion and contraction of the foot. The shoe should rest evenly on the lower border of the wall and white line, and just touch the outer edge of the sole. It should also be wide enough at the heels to cover the buttress and extend back even with the bulb of the frog. When the surface of the shoe is wider than the bearing surface of the foot, the inner part of the foot surface of the shoe must be concaved to avoid contact with the horny sole (sole pressure).

"The nail holes in the shoe should be opened to conform, in size and shape, with the shank of the nails that are used in securing the shoe to the foot. In the case of a pointed foot, the shoe should be fitted a little fuller than the wall on either side of the toe to afford lateral support to the foot at the moment of break-over and starting its flight. The outside border of the white-line is the correct place to start the nails when securing the shoe to the foot, and the feet should be prepared, and the shoes fitted, with this aim in view. Nails, thus started, come out evenly on the wall, are low, and at a strong angle. High nailing destroys more horn than is necessary for securing the shoe to the foot, and after a few shoeings the wall is filled with holes, greatly reducing the strength of the hoof. The clinches should be short, strong, and smooth."

Lieutenant Jones: "Why do you have the horses shod with plain shoes?"

Captain Brown: "The plain or plate shoe more nearly approaches the natural state than does the calk shoe. It permits the horny frog to come in con-

tact with the ground, thereby reducing to a large extent the concussion on the foot structures, reduces the weight the animal carries, and permits greater freedom of action (ice covered roads excepted).

"One should be able to inspect shoeing quickly and with some degree of accuracy. In order to accomplish this, one must learn the essential points of correct shoeing and then make the inspection in a systematic manner. To effect a correct inspection, note the following points from the positions enumerated.

"From a position in front of the horse: Are the corresponding feet the same length? Are the feet balanced (broken-in or broken-out)? Are the shoes fitted with sufficient roundness at the toe? Are the nails driven the proper height and secure? Are the clinches strong and smooth?

"From a position at the side of the horse: Are the heels the same height on corresponding feet? Does the angle of the wall coincide with the angle of the pastern?

"From a position in rear of the horse: Are the shoes outlined properly at the quarters and heels? Are the shoes of proper length?

"With the foot raised: Is the shoe the proper size and weight? Are the heels of correct width and properly finished? Are the nail heads properly seated in the shoe? Has enough horn been removed from the hoof, or too much? Is there sole pressure at any point? Does the shoe rest evenly on the bearing surface of the foot?

"It should be remembered that prevention is of more value than cure. Therefore, between shoeing periods, diligent care on the part of the stable sergeant, the trooper, and the horseshoer, together with close observation and supervision on the part of the responsible officers, will eradicate most of the disorders of the feet.

"Stabling deprives the horn structures of much moisture, which they would ordinarily obtain under natural conditions. Moisture in the horn structures is essential to maintain elasticity and thereby resist, to a great degree, concussion on the foot and, at the same time, maintain solidity of the hoof. The front feet show more evidence of stabling than the hind, as the hind feet absorb much moisture from standing in the droppings. Therefore, we find the hoofs of the hind feet soft, pliable, and in a normal condition at all times, whereas the front feet frequently suffer in consequence of not receiving a sufficient supply from exterior sources. The horn fibers of the hoof are nourished by the flow of blood throughout the foot and consist, by weight, of a large percentage of moisture. In many localities there are seasons having but little rainfall, which causes the turf over which the horse is worked to become hard and dry. Under this condition, the moisture supplied by the blood is not sufficient to keep the hoofs in normal condition, and, unless moisture is supplied by the caretaker, the front hoofs will rapidly deteriorate. This perversion causes the hoof to become narrower; the horny frog to waste away; the quarters and heels to contract, causing corns; and the horn structures in general to become inelastic. This increases the concussion on the foot, owing to the loss of the cushion afforded by the horny

frog and its cooperative structures, the plantar cushion (frog), lateral cartilages (large elastic substances extending upward and backward like wings from the coffin bone), and the resiliency of the hoof.

"The feet should be carefully cleaned at the time of grooming to remove any filth that may have accumulated around the horny frog and over the horny sole. At the same time, the foot should be examined for evidence of injury, such as nails lodged in the horny frog or sole, or a stone lodged between the branch of the shoe and the frog. Note the softness of the horny frog; in health it is somewhat of the consistency of rubber. Note the condition of the shoe, its wear and position on the foot, the security of the nailing, and smoothness of the clinches. Examine the inner part of the legs for evidence of interfering. One may be governed by the condition of the horny frog as to the need of moisture in the other horn structures. When the horny frog is hard and dry, the remaining horn structures are likewise in need of moisture. The best method of caring for a condition of this kind is as follows: fill a large can with clay which is free of vegetable matter, and mix with water until the clay is about the consistency of putty. When the horses are put in the stalls for the night, clean and pack the front feet (of such horses as require it) with the moist clay, filling the space between the branches of the shoe over the horny sole and frog. It takes about one minute per horse to pack the front feet. If there are a great many feet to pack and few men to take care of the horses, good results may be obtained by constructing a clay stand in the corral, and leading the animals through this stand just prior to tying them in the stalls. The feet will fill with the moist clay and in most cases it will remain in the feet during the night. Ordinarily the clay will remain in the feet (unless removed by the groom) until all moisture in the clay has been absorbed by the horn structure of the hoof. The clay stand should be located near the water trough, in order to be easily reached with a length of garden hose for sprinkling each day. The stand should be about twelve feet square, if placed next to the building, and twice this size, if built under the picket line. Inclose the stand with an eight-inch shoulder of cement, stone, or wood, and fill with clay to a depth of six inches. Add clay as it diminishes and remove all clay every two weeks, or oftener if the standing becomes foul. One will also find this stand very useful for horses having fever in the feet.

"A record of the shoeing should be kept at the stable by the stable sergeant, and in the shoeing shop by the horseshoer. The advantage of keeping records in both the stable and the shoeing shop is to check against errors that may occur.

"The length of time between shoeing periods should be governed by the rapidity of the growth of horn, wear of the shoe, and general condition of the feet. Shoes should normally remain on the feet from three to seven weeks. A shoe should be removed and the surplus horn cut away, whenever a growth of horn, sufficient to affect adversely the natural functions of the various parts of the foot, has accumulated. The feet of some horses grow much faster than

others and require more frequent changing of the shoes. Climatic conditions, and the care the feet receive, govern largely the rapidity of the growth of horn.

"A troop commander should inspect the feet of all the horses in his troop at least once a week. This inspection may be made in the following manner: The troop commander has the horses lined up for inspection on level ground, with sufficient room for viewing from the front and rear. He has the stable sergeant and the horseshoer, with pad and pencil for making notations, accompany him. Each horse is then viewed, noting the general balance of the feet, the length of the hoofs, the outline of the shoes, the security of the nailing and clinching, evidence of interfering, and the general condition of the feet, making notations of such horses as will require shoeing the following week, and any changes in shoeing when re-shod. It frequently happens that structural changes in the feet have taken place since last slod, requiring a different type of shoe than that used when previously shod. This inspection does not necessitate picking up the feet of each horse, as any outstanding irregularity in the preparation of the feet, fitting the shoes, nailing and clinching, is easily observed with the feet on the ground. Feet that have become abnormal in shape since last inspected should be picked up and examined more closely. By this means, the troop commander is familiar at all times with the condition of the feet and has a check on the work of the horseshoer and stablemen."

Horse Show Judging

By Major Adna R. Chaffee, (*Cavalry*) *G. S. C.*

THE purpose of these notes is not to teach anybody how to judge horses. That can not be done on paper. Long experience and, I think, a certain amount of natural gift in appreciating equine symmetry and motion is necessary before anyone is a good judge of horses. The more one judges or works with horses the more he is satisfied that he knows very little about them. I have found that conceit in horsemanship diminishes in direct proportion to experience. With time one also discards fads and is more willing to listen to opinions of others. That is why three judges for a class are always better than one. Notes such as these may, however, assist some officers in the mechanism of judging should they be called upon to do so.

Duties of Officials

In the first place the duties of a judge are distinct from those of other officials of a horse show. The judge should be careful to keep within his own province. The president, officers, and executive committee are charged with getting up the show, making its regulations, drawing up the program, and conditions of classes, and the business management of the show. The committee of ring stewards, who are usually drawn from the executive committee, see to the management of the show ring, see that classes are called promptly, that jumping courses are set as called for in the conditions of classes, and that the judges are ready to begin the class. To the ring stewards the judges should refer any question of eligibility of a horse to compete in any class under the conditions as written. Frequently questions such as ownership, of whether a certain horse is within the height limit of the class, or as to whether a horse having competed in one kind of class is eligible for another arise during the judging of a class. These are questions to be decided not by the judges but by the ring stewards acting for the executive committee.

If the show has an official veterinarian and there is any question of the soundness of a horse being exhibited, judges should immediately ask the veterinarian to make an official verdict for the show. His decision in this matter is final. I have seen it done, but in my opinion there is nothing quite so bad in the horse show ring as for a judge to put a ribbon on a lame horse.

The duty of the judge is to pass impartial judgment upon the relative merits of the horses exhibited in the ring as they appear to him during the time of exhibition, and with every consideration of the conditions of the class as such conditions are written in the program.

Method of Judging

First of all, each judge should judge a horse as he appears during the exhibition of that particular class. This excludes what he knows of the animal's

previous performances. It excludes what the judge knows the horse can do when he is "right." It excludes the effects of a bad ride as compared with a remembrance of the same horse under a good ride. He must judge the horses as he sees them or feels them at the moment.

Next he should be thoroughly familiar with the conditions of the class. Frequently executive committees or the donors of prizes desire to encourage the breeding, training, or use of a particular kind of horse, a horse for a particular purpose, or the exhibition, care or use of a particular kind of equipment. The judge should carefully study those conditions in advance so that his decision may be as nearly as possible in favor of the best horse under the given conditions. If the conditions of a hunter class are 25% conformation and 75% performance a very different horse may win than would win if these counts were 40% and 60%. Exhibitors study these conditions and often go to great trouble and expense in meeting them as exactly as possible. They have a right to expect that the jury will be well informed as well as just and impartial.

Usually the ring stewards are at the elbow of the judges saying "We are half an hour behind schedule, so if you gentlemen will hurry this class along please, etc." It is unjust to judges and exhibitors in that class. It is an indication of poor work in making up the program. But it is nevertheless done. The judges should take the time necessary to come to a proper decision under the conditions of the class. That doesn't necessarily mean that every horse must be shown through the full gamut of the competition. Take an officers' charger class for instance, where the conditions call, briefly, for conformation 25%, equipment 10%, school movements 40% and jumping 25%. The judges may immediately see an old "skate" so poorly turned out that he is scarcely worth looking at. They they see quickly that he has no walk or trot. He should be lined up with the discards and forgotten in order to save time for thoroughly testing the other horses. Work quickly and move quickly in the ring. Be ready to take the class in hand immediately it enters the ring. Save all the time possible in this way. But judge conscientiously and thoroughly and have a reason which can be stated when asked why you placed the ribbons in the order you did.

Conformation, Type and Gait

Conformation and type enter into the percentages of many classes. Sometimes the award is made entirely on this basis. To judge conformation one must be thoroughly familiar with a particular breed of horses. A thoroughbred is one horse and a hackney another. There is also a difference in points between a Percheron and a Welsh pony.

Type is conformation, and sometimes breed, applied to a particular purpose. That indefinable thing known as "quality" which I think is very essential in an officer's horse, is not so essential in weighing troopers' mounts. A light-weight hunter capable of carrying 150 lbs. to hounds is a different horse from the heavy weight whom the conditions specify must be able to carry 200 lbs. Sometimes the breed itself is an absolute requisite, as in a thoroughbred hunter class.

Gait is perhaps the most important of the performance factors. Trueness and straightness of gait at the walk and trot should be carefully looked into. Gaits should be springy and lively, indicative of strength, suppleness and soundness. In a saddle horse the gait, balance and manners together should indicate an easy and enjoyable ride. Every horse under the saddle should have a good square lively walk. No walk, no horse.

The importance and the characteristics of other gaits vary in different kinds of classes and breeds of horses. The trot of the saddle horse should be not only square and balanced but brilliant in gesture. In the hunter so long as it is square and easy, lowness and length of stride are to be preferred to brilliance. In the polo pony the trot is a negligible gait and need not even be shown. I am not competent to speak of mixed gaits. I know nothing about the rack, fox trot, single foot, pace and running walk.

In all judging, particularly of gait, the horse should be viewed against the background of his usage. A horse to carry a well turned out, beautiful woman for an hour on the bridle paths of Central Park should have the grace and beauty to hold up his end of the picture. A horse to carry the 250 lbs. of a soldier's load on the march day after day should be strong, active, of suitable size, and give the impression of hardihood and ruggedness.

Judging Jumping Classes

In judging jumping classes for performance only, the only thing taken into consideration is clean jumping, that is clearing the obstacle without touching. If the class is an important one or the course is long and complicated there should be a judge at each obstacle and a chief judge whose duty it is to total the scores. Sufficient messengers should be provided so that the score of one horse will be in the hands of the chief judge by the time the next horse enters the ring.

The scale of deductions for faults in jumping is usually laid down in the program. The knockdown of a fence is more important than a tip. A fault in front is twice as bad as a fault behind. A refusal is as serious as a knockdown by the forelegs, and three (it ought to be two) refusals at the same jump eliminate the horse.

In judging hunter classes conformation, type and way of going are taken into account as well as clean jumping. A hunter may be described as a horse who will give "a safe and pleasant ride to hounds." Safe jumping is more than just jumping cleanly. A horse may jump cleanly, but if he rushes his fence with his head in the air, if he "props" one fence and takes off far away from the next, if he "gets in wrong" and hops off of a front foot, if he messes up his landing, a hunter judge will not look at him. A hunter must go an even, steady pace between his fences and that pace must be a good gallop. He must be able to jump from his stride. In Corinthian and hunt team classes the unwritten law is that the horses shall be shown over the entire course at a good hunting pace—a slapping extended gallop. A jumper who has to be collected for his fences is not a hunter; he could never keep up with hounds.

To be a pleasant ride to hounds a horse must have "manners." This

eliminates the puller, bolter and refuser. In classes for ladies' hunters this is very important. None but the very best manners should be rewarded in a ladies' hunter class. A judge should look at a ladies' hunter as a horse to which he would be perfectly willing to trust his wife or sister in the hunting field. I still carry fond rembrances of seeing Mr. Thomas Hitchcock's hunters exhibited in the old Garden. Their manners were always perfect. They showed careful training. His hunters were "trained" not just "broken." Never a one but was fit for a lady to ride.

Judging Polo Pony and Military Classes

In judging polo ponies, I say ride them if possible in addition to judging from the ground. While the thoroughbred pony is desirable on account of the speed of the modern game, still there are many good ponies which are not clean bred, and some with conformations not quite so good but which are tremendous performers in spite of that. Only a polo player can judge a polo pony.

After the judge has watched them under their own riders and has selected the several best in conformation, speed, manners and apparent hardiness, then I know of no better way to place the ribbons in the proper order than to ride them with the question in mind, "Which of these ponies would I rather have for two periods of polo in a good fast game."

The prime requirements in a polo pony are requisite speed, a level head and a good mouth. Ponies that turn on the forehand at speed break their legs and kill their riders in polo games. Pullers should not be allowed on the polo field or in the show ring.

Military horse shows involve many special classes and conditions. In judging officers' chargers in the school movements, great detail and care is required. A judge for this event must be a competent school rider himself. No artificial aids should be permitted. Charger classes involve many counts: conformation and type, equipment, gaits, school movement and balance, particularly with the reins in one hand, manners and jumping. To investigate and weigh all these things requires much more time than the ring committee is usually willing to give. It is well, if possible, to arrange for a preliminary hour.

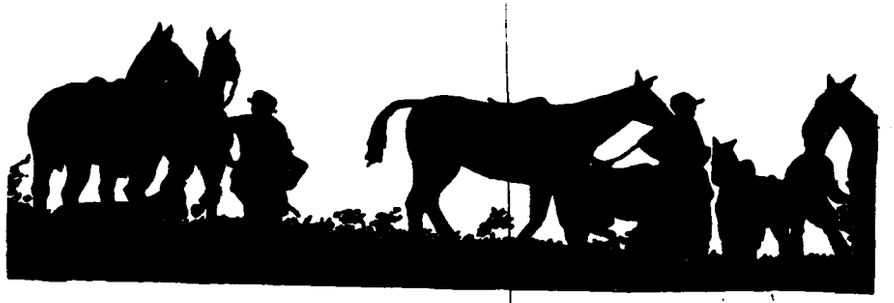
Conclusions

The object of horse shows is to encourage by friendly competition and reward the breeding and owning of horses for particular purposes.

Horse shows serve a very useful purpose in the army, encouraging the proper selection, care, training and maintenance of the horses and equipment entrusted to us. They did more to bring up the standard of horsemastership in the Third Army in Germany than all the inspectors and special instructors rolled together.

The judge for military classes must be a horseman and a practical soldier who knows the conditions under which animals work in the field. He should keep the picture of those conditions in the back of his mind. The mule to pull the old infantry animal-killing water cart would drive a pack master like old Jack Hollingsworth crazy if issued to him for use in a pack train. In judging artillery teams keep in mind a raw, wet day, heavy muddy roads, and a heavy load at the end of the traces. Galloping around the ring is all right to give the crowd a thrill but in judging *"c'est magnifique mais ce n'est pas la guerre!"*

And lastly, in proper classes, reward well cared for and well turned out equipment, especially in military classes. Shining brass and glittering steel, supple or polished leather, immaculate vehicles: these only are a fitting setting for well bred, well conditioned, well turned out animals. Soldiers are proud of well turned out animals and equipment. It is remarkable how a prize winning vehicle will soon be reflected through a whole train.



The Hunter

By Major D. W. McEnery, *M. C.*

Ex-M. F. H., The Cavalry Hunt, Honorary Whip, The Artillery Hunt

ANY horse may be called a hunter that can jump and follow hounds across country whether the horse be the size of a pony or a draft animal. Horses have been ridden to hounds and in the chase since horses have been ridden, yet a hunter as a type has never been developed. In Ireland there is a large pedigreed thoroughbred that approaches the hunter type, but they are rare and not produced in quantity for general use. In Canada the hunter has been studied and his development brought to a high standard. The Canadian hunter brings a large price in this country. England, where the hunter is in greatest demand, has lately devoted a great deal of attention to the breeding of hunters.

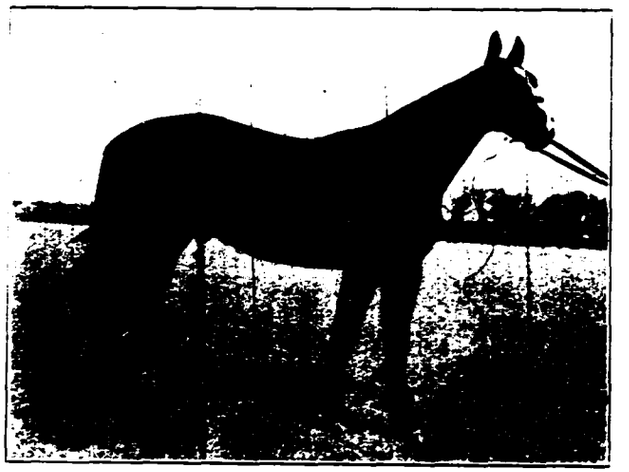
With the production of the hunter in the United States great strides have been made since the World War. There is no doubt that the time will come when a hunter sire and a hunter dam will produce a hunter offspring that we may reasonably expect to develop into a horse that will jump, be of good disposition, and of hunter conformation. Every year we are coming more to thoroughbred blood, and this is due mainly to the Remount Service and the Genesee Valley Half Bred Stud Book. I believe the name "Half Bred" for the stud book a mistake. It seems to cast a slur on the horse entered. Breeders here will have none of it, and will not take the trouble to fill out the application blank and pay the small fee of two dollars. Could it not be called the Hunter Stud Book? I think it would be more successful.

The requirement that the sire be thoroughbred is excellent. In addition the dam should be sired by a thoroughbred. The Remount Service is convinced that the thoroughbred is the coming horse to be used as hunter, polo pony and charger. Every year the brood mares approach nearer the thoroughbred and a greater number each year are registered mares. This is indeed a very important step in the right direction. Many persons who have given the subject much thought are convinced that the thoroughbred is the future hunter. It is just a matter of breeding by selection for a few generations. The majority of thoroughbreds, it is true, that have been raced and raced too young, are not suitable for hunters. The thoroughbred has never been bred for type but for speed alone. He has been inbred for speed to such an extent that the breed is becoming weedy and good only for bursts of speed. The race horse and the greyhound are parallel in their breeding for speed. The old English greyhound pictures show a very powerful large hound as compared to the modern slim roach-backed article with the extreme speed of the present day. The same is true of the race horse. Instead of improving in strength and endurance the average thoroughbred is nervous, bad tempered and of weak constitution. Fortunately this is true only of the average. Those above average are very different, and it

is to the credit of the Remount Service that a great number of these are now scattered over practically all of the United States as stallions.

Breeding

The Breeding Bureau of the Jockey Club, the Remount Service, and the Genesee Valley Breeders' Association are all working hard for the development of the hunter. The best work has been done by the Genesee Valley as this



"Krippalong"

Thoroughbred Gelding—4 Years—by Krippen. Owned by Major I. T. Wyche

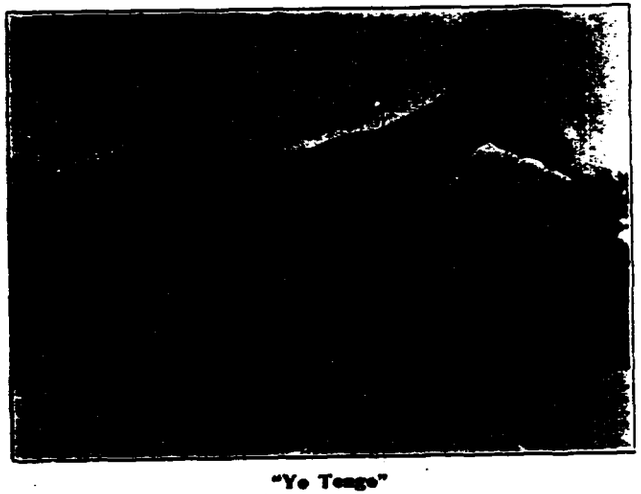
Association, under the valuable guidance of Mrs. Herbert Wadsworth, has almost reached our ideal hunter. Horses have been bred in the Valley for a hundred years, and it has always been a land favorable to the thoroughbred; so, to start with, these mares carried a great deal of thoroughbred blood, though they were called farm or cold-blooded mares. Naturally, now that the third and fourth cross of thoroughbred is being produced, the animals are nearly thoroughbred with just enough cold blood to steady that nervous tendency of the thoroughbred which should be absent in a good hunter.

As every hunter should carry three-fourths thoroughbred blood, it is well to discuss for a moment what the cross should be. Personally I do not think it makes much difference, as each year sees another cross of thoroughbred blood. I am not in favor of the Arab or the American saddle horse. I do not like the draft type. The blood does not mix well with the thoroughbred, and only occasionally do we see a *Bally MacShane*.

The two breeds I do favor are the standard-bred and the hackney or coach horse. For some reason the hackney and coach seem to get jumpers when the

top cross is thoroughbred. Lord Ashton in writing of the points of an Irish jumper, speaks in high favor of the hackney as a jumper, especially if a hackney sire is crossed on a thoroughbred and that offspring bred again to a thoroughbred sire. *Nigra, Moses, Sandy, Jack Snipe* and many more of the big jumpers at Fort Riley are thoroughbred-coach cross. The greatest fault of the hackney when bred to the thoroughbred is that the hackney type prevails over the thoroughbred too many generations for quick breeding purposes. The better cross in my opinion is the square trotting standard-bred, not the pacer. Both the thoroughbred and the standard have been tried for generations for endurance on the track, and there is enough foundation thoroughbred blood in the standard to prevent freak "throwbacks."

But I believe in time the cross in making the hunter will be only of historical interest, just as we now argue over the question as to whether the ancestor of the thoroughbred was a Barb or an Arab. I do think, however, that the Half-Bred Stud Book and the Remount Service should exercise more care in recording the breeding of the dams. With the Remount's four hundred and sixty-one thoroughbred stallions bred to over eleven thousand mares last year,



"Yo Tengo"
Bay Gelding—4 Years—by Yo Puedo Out of a Grade Standardbred Mare. Government Owned

the thoroughbred goes marching on. Naturally the fillies will be bred back to thoroughbreds until the cross blood will be lost in antiquity. But breeding the thoroughbred sire of hunter conformation to the thoroughbred dam of hunter conformation is the best mating of all, especially if one or both have hunted or raced over steeplechase courses. There are thoroughbreds and thoroughbreds, but only a few look like hunters and act like hunters. It should be the objective of the Remount Service to increase this number by breeding by selection and not

by family or in-breeding, which has been the greatest factor in making thoroughbreds the high-tempered horses that some of them are today.

Conformation and Type

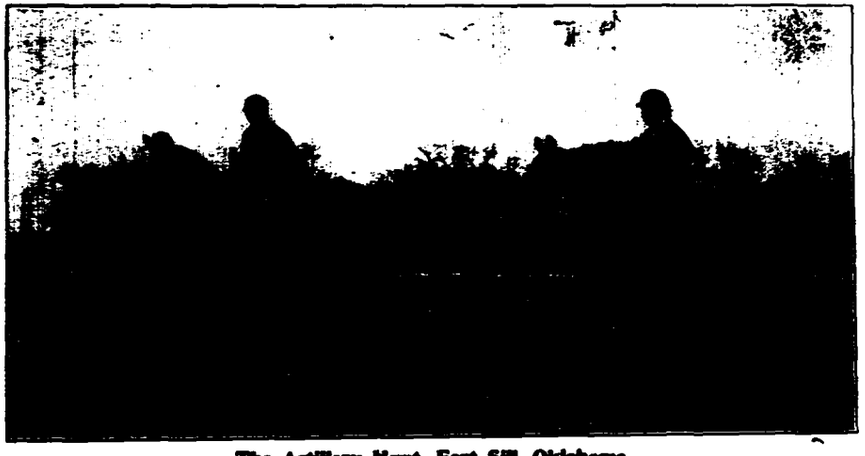
The thoroughbred is the only breed that has the conformation and hunter type without crossing to other blood. If we wish to get hunter conformation we have to cross to thoroughbred blood, and, as a rule, must utilize the thoroughbred as a sire. It is not the purpose of this article to give the conformation of the hunter by points. I will refer anyone who wishes to go into detail to Hayes' *Points of the Horse*. I will presume the hunter to be of good conformation as a horse and emphasize what in my own opinion he should have to make him stand out as a hunter.

To begin with he should have a frame mechanically made to allow him to jump, should he be willing to do so. If he is not willing, his hunting career should stop right there. But Lieut. Colonel Goldschmidt in *Bridle Wise* says that hunting is the only sport a horse enjoys and I believe him. He usually enjoys it as much as the rider. If the horse is of the right conformation and goes well, the rider will know the joy of motion and the thrill of the hunt. If the horse is of faulty conformation, running wild at his jumps, head up in the air, with a choppy quick gallop, the rider generally takes up golf.

The hunter should be in two classes, light and heavy. No horse should be classed as a hunter under 16 hands and 1050 pounds nor over 17 hands and 1350 pounds. The division between light and heavy should be somewhere in these limits, and the middle-weight class should be abolished. There is nothing so confusing as going to a horse show and seeing the same horse come out to win ribbons in all classes. One moment he is a heavy-weight polo pony and by magic he appears in the next class as a light-weight hunter. Having won these two classes he endeavors further to annex the blue in ladies' and gentlemen's saddle classes and the charger class. Speaking of type, I fail to see the difference between the hunter and the charger. The hunter is the charger and I recommend that the word charger be dropped. The same horses are always shown as charger and hunter. The only difference is the requirement of performance in the show ring.

On first glance the hunter should be pleasing to the eye or as Lieut. Colonel John A. Barry, the noted hunter judge says, he should "fill the eye." No matter how long the neck and good the front, if the rear is not there, he is no hunter, and likewise a magnificent pair of hocks will not compensate for poor shoulders and a short heavy neck. Watch the top line, a line running from head to tail at the top of the horse. It's a quick easy way to judge the quality of hunter. The head should be fine, broad between the eyes, and fairly short. The eye should be large, kind, somewhat moist-looking, and fairly prominent with the "look of eagles." The neck need not be very long or very slender, but the shoulder should always be broad and flat to give good rein length. A well-shaped flexible neck is better than a long stiff one. The top line of the neck should be longer than the bottom line. The head should fit on the neck so the

bend will be at the poll. The neck should have the flesh at the top and be firm and prominent as it goes to join the head. The head and neck should have the appearance as if the hunter were looking over a fence. The rear of the hunter is as important if not more so than the front. The croup should be long, powerful and slightly sloping. I do not like the straight or stretched hock found in a great many racehorses. The hock should be clean, but large and heavy looking. The hock, looking behind, should bow neither in nor out, but of the two faults I prefer them a bit close. From the side there should be a bend but not sickle-hocked. There should be a long line from hip to hock, and then a short line straight down. This will give the proper leverage over a jump. The hind leg of a greyhound is built similarly to this. There should be a marked pinched depression in front of the withers. The shoulder should be long and sloping.



The Artillery Hunt, Fort Sill, Oklahoma
Major Wyche M. F. H., Lieutenants Taylor and Potter, Whippers In

The withers must be prominent, but not razor-like. The back should be fairly short, but not so that the horse looks pushed together or roach-backed. The rest of the horse is without argument and we all agree to flat tendons, big barrel, lung and breathing space, big bone, and well let down hocks. No one likes a light leggy hunter. They are usually dangerous over jumps. A hunter with a quiet disposition will perform regardless of conformation, but if he happens to be a puller or fretful, he will take advantage of his peculiar formation to give you the worst ride he possibly can.

Lord Ashton gives five points he considers most essential in the Irish hunter:

1. Good back and shoulders with deep round ribs; head well set on, not fleshy, and with the eye prominent.
2. Sound well shaped feet; legs short, and flat from the knee down; joints large and clean.

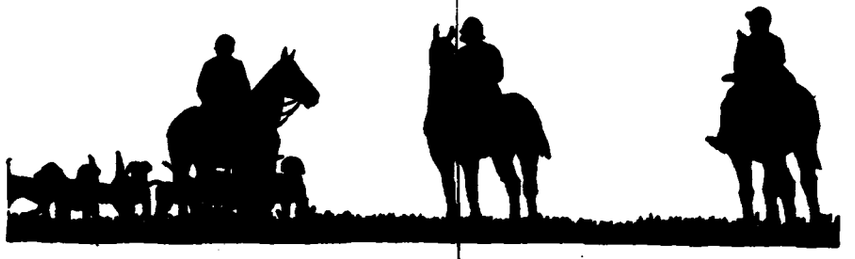
3. Action true, and what is even more important, light.
4. Hind legs set well under the quarter.
5. Tail fine and carried well out from the quarter.

I have mentioned most of the points that are usually disagreed upon except the pastern, and I think that is mostly with the rider. I prefer a moderate sloping pastern—too sloping gives too much motion in the saddle, especially in the walk.

The Test of the Hunter

I believe the test of the hunter should be the work for which he is bred, that is the hunting field and the steeplechase course. The race track is not suitable; the distances are too short and horses are raced too young.

I have been told that almost invariably a thoroughbred is gelded before he becomes a steeplechase horse, and the belief in the hunting field is that the gelding makes the best hunter. This is unfortunate as we should look for our mares in the hunting field and our sires on the steeplechase course. On reading *Thoroughbred Types* we find that there are thirty-six outstanding steeplechase winners in the past twenty-five years, and the great majority were gelded. There are only a few mares and only one mentioned that had given a colt to the track. I advise all horsemen to turn the pages of *Thoroughbred Types* from time to time. The story is told in pictures, the best way of all to tell the story of the horse. To me *Maintenant*, *Short Grass*, and *Stefen the Great* show hunter quality to a marked degree. Among the chasers what a pity that *Conqueror*, *Oracle II*, and *Burgoright* were geldings, all thoroughbreds, of hunter conformation and wonderful jumpers. Among the show horses *King Nelson* stands out, as he is thoroughbred and won laurels and praise both in the show ring and in the hunting field. The book does not state if he is gelded, but no doubt he is. It can be readily seen what a loss these gelded thoroughbreds are to hunter breeding. When we turn the pages to the working hunters we see for the most part a sorry lot, showing what a great field there is for the breeder to fuse type with performance. The thoroughbred, *Dan II*, appears to be the exception. He was imported, raced successfully as a chaser, and kept entire. He has been donated to the Remount Service and is at Front Royal, Virginia. There is one among the polo ponies that, had she been larger, would have been placed among the first in hunter conformation. I am speaking of the thoroughbred mare, *Belle of All*.



Officers' Chargers

By Lieutenant Colonel Gordon Johnston, *Cavalry*

WE HAVE read a great deal about officers' chargers from the ideal point of view, breeding, type, conformation, etc., which might be secured at prices very far beyond the reach of the average officer. It is well to have ideals, but, at the same time, keep in mind a practical and reasonable type of horse which should give satisfactory performance.

Assuming that the National Guard or Reserve Officer finds himself called to active duty and requires a mount, he will be obliged either to select a government horse or to purchase one privately. In the latter case, it is assumed that unlimited means are not at his disposal. Therefore, it is necessary to point out certain reasonable and essential characteristics of such a charger as a guide to the officer making the selection. In general, the description should read about as follows: Mare or gelding, 15-1 to 15-3; Age, 9 to 11; Weight, 1000 to 1200 pounds; Color, bay, brown, or dark chestnut.

It will be noted at once that the age recommended above is higher than is ordinarily considered in case of purchase. However, this is a very important consideration. In the first place, the horse at ten years of age is at full maturity. In the second place, he has established his character and reputation, and, without question, disposition, intelligence, willingness, and honesty are the essential characteristics of a good horse. Proper inquiry in the neighborhood and among people where the horse is known quickly discloses the character which he has established and this should be rated more highly than almost any other qualification. Furthermore, at this age a horse which has done an honest amount of work and is still sound will probably continue sound, and by this is meant serviceable soundness. Such things as splints, wire cuts and other blemishes, which have not interfered with the horse's work for a long time may well be left out of consideration.

Having rated disposition so highly, it is recommended that, in case the reputation of the horse and his past performances cannot be ascertained, a careful study of the animal's head should be made. The disposition above referred to, is generally found in a horse with a large, full eye, a straight front line, a wide, flat forehead, a reasonably fine muzzle, and well-formed, alert ears. Roman nosed horses, those with a bulging forehead, small, round pig-eyes, coarse ears and muzzle, may well be looked upon with suspicion. Of course, the best test of all is to take the horse and use it, keeping it in your own stable several days, if this is practicable.

Next in importance to disposition and character are the feet. These should be solid in color, of the appearance and texture of hard rubber, of a size to correspond with the horse, both pairs shaped exactly alike, outer wall smooth, open heels, and well developed frogs. The importance of good feet cannot be

over-estimated. No matter how good the rest of your horse may be, if any one of the feet go out of business, that is the end of it.

The shape of the back is rated next in importance, particularly if a McClellan type of saddle is to be used. A straight back, with very slight prominence of withers when the horse is in good flesh, is essential. The withers become prominent enough when the horse goes down in flesh. A "roach-back" horse or a "sway-back" horse cannot pack a heavy load on a McClellan saddle without suffering injury. The ribs should be well-sprung, and the lower line of the middle piece fairly straight. Beware of horses with a wasp waist and limited forage capacity.

The action of a horse deserves most serious consideration for it affects ma-

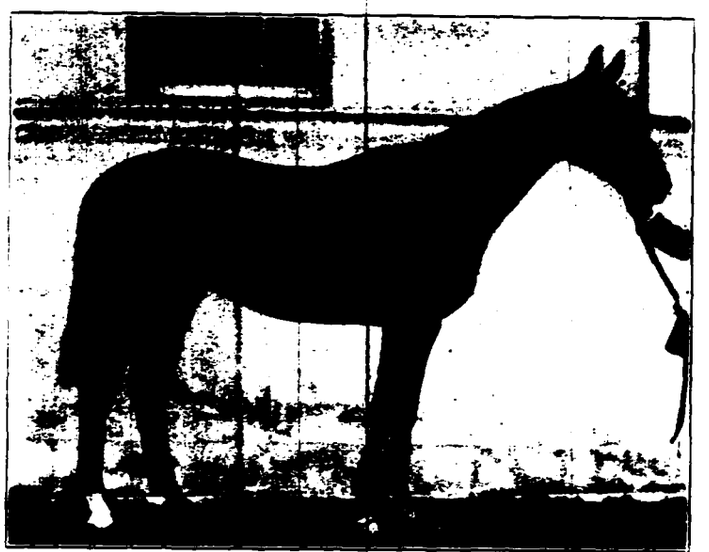


Photo by Haas, New York

"Royal Academy"

A 51st Machine Gun Squadron Animal and a Good Type for the National Guard Officer's Charger

terially the endurance and the ability to carry weight. Viewed from in front, the horse at a trot should move the front legs and feet straight forward, the knees seeming to rise and fall in the same plane without dishing or paddling of the feet. From the rear, the hocks should move straight forward and be thrust well up under the horse. They should give the effect of a piston-like thrust. From the side, each pair of legs should swing evenly, that is, covering the same distance at each stride, and the joints, both front and hind, should flex to about the same extent in the knees and in the hocks. However, the best method of determining good action is by riding the horse. The gaits should be even and comfortable to the rider, for no matter how excellent the horse may be in other

respects, if the rider is worn out and exhausted, his efficiency and effectiveness will be very much decreased. Also, a comfortable ride reflects itself on the disposition of the officer, which, in turn reflects itself on his command.

Horses conforming to the above requirements may be secured or selected with reasonable certainty. However, horses answering to the above requirements may range in quality from one worth about $160.00 to one worth $5,000.00. There are many hunters and polo ponies which fill the above description which could not be purchased for the latter figure from their owners, so it should not be considered that the meager list of essential requirements mentioned above indicates a plug. The trouble is that in the selection of horses, officers frequently have in mind a perfect and ideal type and allow their all-round judgment to be influenced by the fact that a certain individual has one or more of the characteristics of a really fine horse, while very deficient in some one of the above essentials. This leads to the choice of unbalanced horses and rarely results in the selection of the proper type for hard work, for endurance, and for the sure conveyance of the rider on field service.

Probably the most difficult thing to do is to select a good horse out of a corral. It may happen that the officer is under pressure to make his selection promptly, and not have a sufficient time to go over the horses carefully. The following procedure is recommended:

Have all the horses tied to the corral fence and walk around the outside, selecting only those horses with good heads and long necks. Have these segregated and taken to one side. Then, have each horse led before you, one at a time, and look only at the feet. If these are covered with mud, as often happens, insist on their being cleaned. Select and segregate again, choosing only those horses with good feet, refusing to inspect the other points at this time. Send the horses with bad feet back to the herd and then examine the remainder to see if they have good backs. Again select only those with good backs, sending the others entirely away. Have the remaining horses, one at a time, led at a trot straight toward you and straight away, examining the action. The horses should then be moved at a trot so that the action may be observed from the side. At this time select the horses with good action. Your selected group will then be quite small and the remainder may be given closer inspection with a view to selecting the horses with the most quality, bearing in mind that for field service a big middle piece and a quiet disposition are essential. If there is opportunity for further trial, try out, under the saddle, all of the horses that are left and select the one which gives you the most comfortable ride.

The horse is your partner wherever you go.
Faithful and loyal in weal and in woe.
His welfare calls for your constant care,
Fair use—no abuse—and his strength you'll share.

The Cavalry Pack Horse

By Lieut. Colonel Albert E. Phillips, *Cavalry*

Inventor of the Phillips' Pack Saddle

THE Cavalry Pack Horse! What an alluring subject! It brings up visions of pack transportation at cavalry gaits: of strictly fire elements of cavalry armed with modern weapons of war—machine guns of 30, 50 and other calibers; radio, demolition, and other combat packs—visions of a more powerful cavalry.

We are all familiar with the highly mobile cavalry of old, now called the "maneuvering elements" of cavalry. But not all military men and few civilians are even acquainted with the "fire elements" of our cavalry. Likewise, the majority of our officers have seen cargo pack trains moving along at the walk and amble, but few indeed have seen our combat pack units, especially machine gun troops, galloping across country, jumping obstacles,—into action in ten seconds and less, and out of action just as quickly. For those of you who have not seen this work, reflect for a moment on just what this rapid maneuvering and transference of combat power from place to place on the field of battle means and then you will not be one to say that the day of the horse in war is over.

Modern implements of warfare are but accessories to the man and the horse, to be used to the greatest advantage by combining speed and surprise with fire power.

Pack transportation is as old as the military art, but pack transportation successfully conducted at cavalry gaits, as part of a cavalry column, dates from the recent development of suitable pack saddlery. For many years we used mules for all pack saddlery but now have settled on the horse for all cavalry packs.

Selection of Pack Horses

Before discussing the type of horse best suited for cavalry packs let us consider a few requirements and some views on assignment of horses.

The cavalry pack horse is invariably a part of a team, therefore, it should be well mated with the ridden member of the team, as to size, gaits and disposition. Size, as an element of conformation, is important for requisite strength and ease of packing and unpacking; for it is obvious that a tall horse is difficult to pack. Let us state here that the gaits of the ridden member of the team should be approximately the same as those of the pack member and not the other way around. Success in marching and maneuvering a cavalry pack unit is based on the rate and gaits of the animals carrying pack loads. Every cavalry troop now has a considerable number of pack loads.

The pack horses should be selected from among all the horses of the troop. The number of horses required for packs in the rifle troop is small; most of the packs are for the "fire element" of the troop and we are concerned with the welfare of the troop as a whole. For the strictly fire elements or combat pack

troops—the machine gun troops—it is vital to success that suitable horses be assigned to the troop for packs and the remainder in the troop be used for riding. The Artillery selects its draft horses and rides the others.

When we had only two or three packs in the rifle troop, most troop commanders assigned unsuitable riding horses to carry the packs, but these were cargo packs and this method in the assignment of horses to carry combat packs will now defeat its own purpose.

During the recent maneuvers of a large cavalry command, every conceivable type of horse usually found in a large force was used to carry packs and troop commanders stated that they gave preference to the selection of their riding horses. One notable exception though—a pack unit—selected its pack animals and all the animals of this unit, both riding and pack, were in excellent condition.

Type for Pack Purposes

As the cavalry pack horse should be selected from among the standard mounts for cavalry, it is not necessary to dwell on such special breeds as thoroughbreds, Arabs, Morgans, etc. Every horseman knows that many excellent cavalry pack horses may be found among these two latter breeds and a few found among thoroughbreds. The high strong, nervous horse, whatever its breed, is undesirable. The half-bred hunter makes an excellent cavalry pack horse and the breed has many desirable characteristics: one worth noting here is the ability to negotiate jumps. The standard-bred horse is generally more docile than better bred horses and a greater number of the breed is obtainable. Insofar as breed is concerned, therefore, our pack horses should come from the half-bred and the standard-bred animals.

We are particularly concerned here with those features of the horse which are of value for cavalry combat pack transportation as distinguished from heavy cargo pack transportation, at pack train gaits. We are also interested in the special features that the troop officer will seek in the selection of his pack animals. Army Regulation 30-440 gives the general and special specifications for horses and these specifications are, with one exception, excellent as specifications for the purchase of horses. The exception noted is in paragraph 2—(3), in which it is stated—"In draft and pack animals (horses) the neck is shorter and thicker than the riding animals." The short, thick-neck pack animal is strictly a cargo pack train type—a heavy burden carrier—generally a slow mover and a poor jumper. We do not want our pack horses of this type. The cavalry pack horse is not a heavy burden carrier; his loads are principally light combat loads with an authorized weight of 200 pounds over the weight bearing parts, including the saddle. As part of a team the horse is driven at from three to four feet from the rider; his neck therefore, should be similar to that of other cavalry horses.

Desirable Conformation

Neck—"light, moderately long and tapering toward the head: crest firm and longer than the underside." A. R. 30-440 for cavalry horses.

Height—from 15 to 15½ hands, with corresponding weight of from 1000 to 1200 pounds. Horses within these limits of height are easy to pack and unpack, and, if short coupled, usually travel low to the ground and with less back motion than taller horses.

Back—short, straight, strong and well muscled, with emphasis on straight backs.

Chest—large girth; ribs well sprung, long, well separated and sloping backward. By well sprung ribs we do not mean a broad ribbed, draft type of horse.

Barrel—large, gradually increasing in size toward the flanks, strong and full through the waist.

Withers—medium height, not too thin nor too thick, well developed and well muscled.

Shoulders—long, slightly oblique and well muscled.

Loins—broad, straight, short and muscular.

Hindquarters—wide, thick, not too long, well muscled and well directed.

Legs—straight, strong legs with heavy bone, pasterns short and strong and not too oblique.

NOTE: A good unit of measure for the maximum size of ribs and barrel is the Phillips' pack saddle in position on the horse in which the ribs and barrel should not push the sides of the saddle outward.

Gait, Disposition and Training

Gaits are of considerable importance for the well being of the pack horse and for the marching and maneuvering of the troop. The cavalry pack horse should walk, trot and gallop, with free, bold and prompt action. It should have but *little motion to the back at the walk* and should travel low to the ground at the trot. Pacers and single-footers are undesirable.

Some horses have excessive transverse motion or side swaying of the body in rear of the forequarters at the walk, and others have excessive longitudinal—up and down—movement of the saddle position, causing the pack load to rock as though it were packed on a camel. The high trotter wears himself out by the pounding of the load. Posting by a rider will save this latter type.

As success in marching a pack unit is based on the rate and gaits of the pack animals, it is evident that the pack horses must not hang back at either the walk or trot. And conversely, the ridden horses of the unit must not move at a trot or most of the pack animals will gallop. The pack horse should at each gait have its head in line with the head of the ridden member of the team or slightly in advance of it. In this position, the pack horse is driven—not led—and this is one of the reasons why the term "driver" is used in the machine gun drill regulations.

The pack horse should be gentle, have a kind disposition and be free from vicious habits. It normally carries an important combat load and soldiers must work around it and on its sides in unpacking for rapid action and in packing up—and time is too valuable to waste on a horse that bucks, bolts, or is high strung and nervous. Unfortunately, the best type of horse for cavalry packs is the horse that every soldier likes to ride.

We are concerned here only with the training of the pack horse and the

pack team. All horses of the troop should receive basic remount training before selection of horses for packs. From this stage forward, if time permits, the pack horse should be trained as a trooper's mount to include jumping, though this additional individual training, except jumping, is not necessary for the development of horses for packs. The pack horse should stand when being packed and unpacked. From this period on the training should be by teams of "driver and pack," to be followed by training of the squad and platoon as pack units. Training of the "pack team" should be similar to the Artillery, "School of the Driver," to include moving forward, backward, circling, turning and jumping, at the prescribed gaits. Halting from the gallop, to be unpacked and packed, is of particular importance.

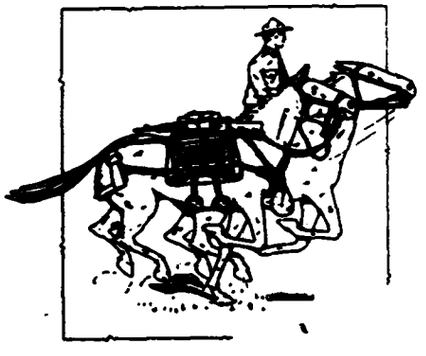
Let it be said here that there is considerable difference between "leading" the pack horse and "driving" it, the difference being particularly noticeable in squad and platoon drills at the faster gaits.

Training of the squad and platoon as pack units should include forward movements, right and left circles, spirals, turns and also right and left about by individual teams.

Unsuitable Types

Types of horses soldiers do not like to ride and which we often find assigned to packs are horses with very broad backs; narrow ribbed horses with high backbone; sway back horses; very tall and very short horses; horses with excessive back motion; high trotters, poorly gaited horses, including single footers and pacers; buckers, bolters, and high strung nervous horses. These are types unsuitable for cavalry packs.

Pack transport, even at the walk, requires experience and skill to maintain it in that high state of efficiency without which continuous operation is impossible, and the first requirement for the successful handling of combat pack transport at cavalry gaits lies in the selection and training of pack horses and pack teams.



Conditioning Horses

By Major Thomas T. McCreery, *O. R. C., Remount Service*

Feeding and Stable Care

CONDITIONING of horses for any purpose consists *primarily* of good feeding and good stable care. By good feeding, I do not mean that all horses should be fed *scientifically*, because scientific feeding always calls for a balanced ration. And a balanced ration is very good in most cases, but not in all cases. Experience in practical feeding will lead one to believe that in most cases a horse requires more protein than a balanced ration calls for.

The Government ration for horses consists of oats, hay, and bran. Oats is the nearest single feed stuff we have to a balanced ration, so the practical feeding will have to be regulated by hay and other roughage. At the present time I am training race horses and have seven kinds of hay in my stables. These are: timothy hay, alfalfa hay, timothy and alfalfa mixed hay, timothy and clover mixed hay, California red oat hay, pea hay, and Japanese bean hay grown in South Carolina.

I have no system of feeding any of these, but feed very little of the timothy hay, and am inclined to feed thin horses more alfalfa, pea hay, and bean hay. These are all very high in protein, while the California red oat hay is high in carbohydrates and fats.

My horses have hay and water in front of them at all times, and I find that none of them will eat more than fifteen to eighteen pounds of hay per day. I feed from six to fourteen pounds of grain per day, depending on the condition of the horse and the amount of work he is getting, and find that most horses will not eat over eight to twelve pounds of grain per day.

I also note that, by keeping water in the stalls at all times, they will not drink more than eight or ten swallows at a time, but I often take a horse's water away while he is eating his grain so that he will not take a mouthful of grain, and then a swallow of water. This allows the horse to swallow the grain without properly masticating it, or thoroughly mixing it with saliva, which is so necessary to good digestion.

I have about one-half pound of bran placed in every feed and fed dry, but I also feed steamed, not boiled, oats about three times a week in which bran is placed.

I have salt in the stalls at all times, and do all I can to make the stalls attractive and comfortable. By this, I mean that the stall should have plenty of bedding in it during the day as well as night, as horses like to lie down during the day, and the more they rest, the more flesh and strength they conserve.

The stall should be dry, *airy* and light, and kept clean at all times. *Ventilation* should be regulated so that no draft blows directly on the horse.

The horse should be well groomed; his feet kept clean. It does not hurt a horse to wash his hoofs, but oil should not be used on them.

Sunlight is a great thing for a horse, but I do not believe that he should stand on an uninteresting picket line all day to get it.

One of the most important things, besides good horse shoeing, is attention to the horse's teeth. They should be floated at least once a year. Wolf teeth should be removed, and the edges of the molars should be kept smooth. By this I do not mean that the table of the teeth should have their rough surfaces polished, but the sharp edges on the sides of the molars should be removed, in order that the horse can grind his food with a natural rotary action.

Most veterinarians object to floating a horse's teeth. If they do not object to it, they will tell you that they have looked at his mouth, and it is all right. To tell the truth about it, it is too much work for them to do it. Since I have been training race horses for the past five years, I have had the teeth of every horse in my charge floated every year.

I can only recommend not to feed and treat all horses alike. If one kind of forage does not get results, try another. If you cannot get another kind of hay, try grass, if it is available; or rolled oats will sometimes help. But always remember that in some respects, a horse is like a human being. He likes things that are good to eat, and likes comfort, and does not like abuse.

In December, 1927, I was in England. Dr. James Crawford (Veterinarian) who is trainer of Sir Victor Sassoon's racing stables, asked me to look at the good two-year-old, *Hot Night*, which he was training for the Derby. The horse was not doing well. He was one of the light-waisted leggy kind and was getting very light work at the time, but would not take on any flesh, although he was eating about eight pounds of grain and about twelve pounds of English hay.

The grain was very good, but the hay, like all English hay, was very poor. I suggested that he change the hay and feed Canadian timothy and clover mixed hay, which he did, and the horse gained one hundred pounds in weight during the next month. He finished second to *Call Boy* in the Derby, and has since been a healthy full-barreled horse.

I have had many such experiences myself, and have gotten very good results from cod liver oil, of which I place two ounces in the feed three times per day.

The amount of work a horse requires always depends on the individual; but as a general outline, I will place them in three divisions: The polo pony, the race horse, and the cavalry horse, whose condition for active service should be like that of a horse prepared for an endurance test.

Polo Ponies

I have talked to Mr. Fred Post about the early conditioning of polo ponies. Mr. Post is a dealer and buys and sells about three hundred ponies per year. These ponies are bought in Texas, Oregon, California, and western Canada, and shipped to Mr. Post in carload lots, at Aiken, South Carolina, and Westbury, New York.

Upon arrival, they are usually sick with strangles, distemper or some form of influenza. He has got the best results by first placing each carload lot in a small corral with a solid board fence to break the wind, and in which they will get the full benefit of the sunlight, without too much draft on them.

He feeds their hay on the ground, in order to keep their heads down when they eat. This is usually a waste of hay, but will prevent a lot of mucous from going back into the lungs or stomach, and they are usually over this sickness after two or three weeks, but it nearly always leaves them thin and weak.

He then puts them under saddle, and has them walked and trotted around for fifteen or twenty minutes per day at first, which is increased to one hour and a half per day before they get any faster work. This they do not get until they are strong and healthy and have gained a fair amount of flesh.

This long, slow work is then discontinued, and their training for polo commences, which is done by knocking a ball around on them, for five minutes a day at first. This time is gradually increased until they are ready to be used for a slow period of polo. If they go well and their wind is cleared up, their polo is gradually increased until they play two fast periods.

My personal experience in training polo ponies, has always been with well-made ponies that were trained for international matches and other important games.

These ponies had no sickness but were nearly always sent to me in what I call stale condition. That is, they were overworked, dried up, and "cooked" by too much long, slow work, mixed in with hard games of practice polo. When in this condition, they have no speed and no stamina.

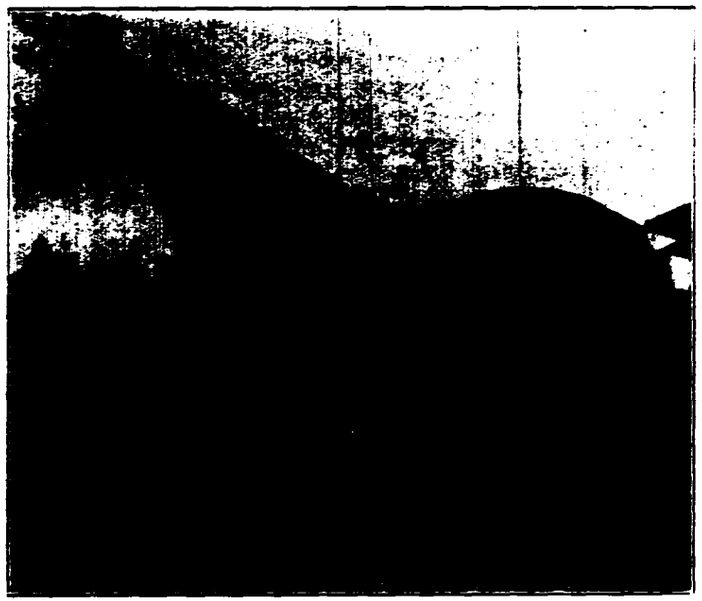
The men who were to play them were good players, and good horsemen, but they were to play against men who were just as good as they were, and better mounted. Where our ponies were mostly drawn from cavalry horses and army remounts, our opponents' ponies were usually the best in the world. So it was up to me to make some changes in the condition of our ponies to compete with them.

I did this by working on one cardinal principle, that is, "flesh makes strength and strength makes speed." But after obtaining all of this, the pony has to be fit, his wind clear, and he must have flesh, strength and muscle, with no fat on his intestine. This was only done by *no* long, slow work, and plenty of sharp, fast work, which was given by knocking a ball around while on them, by short, sharp gallops, and by fast hard periods of polo, and last, but not least, by good feeding and good stable care.

In 1923, when the army team played and won their first army international games, we were using a lot of old army ponies. They were good ones, but mostly unsound and did not have the stamina of young horses. After they had played two hard, fast games, in which many of them played three periods each, Lieutenant Colonel Lewis Brown, who was captain of the team,

asked me about the condition of the ponies, and about the prospects of the best of them playing in the third and last game.

I told him that the best of them were cooked and thoroughly exhausted. He said: "What are you going to do about it?" I replied that I did not know, but I was going to the stables, and go to work on them. My men and myself worked nearly all night in attending to their bad legs and making them comfortable. Some of them would not eat. I gave them strychnine, grass and carrots, shampooed them with alcohol, and kept them warm and quiet. They were not stiff or very sore the next day, and I gave them very little walking



Courtesy The Remount

"Fair Play"
In Breeding Condition, But *Not* in Working Condition

exercise. The second day they were cantered about five minutes each, and the third day they playd the final game, won it, and played the best polo they ever played before or since.

Race Horses

It is very seldom that any two or more race horses, or steeplechasers can be trained alike, and to properly train them one must be with them practically day and night, as there are so many frequent changes in a horse's condition. I often plan on the day or night before to give a horse a certain amount of work and then change it the next morning after looking the horse over.

However, as a general outline, I would advise to have the horse in good healthy, hard condition before attempting to give him any fast work. By this, I mean, that it is advisable to give him slow trotting and cantering exercise

for about six weeks. Assuming that the horse is four years old or over, and is to race at one to two miles, this slow work should consist of about three to four miles per day. If the horse is in good flesh, up to ten miles of this slow work three times per week will not injure him.

After this is done he should be sent one-fourth of a mile at half speed, or in about 30 seconds; two days later one-half mile at the same pace; and two days later, five-eighths of a mile at the same pace. His next work should

Courtesy The Remount

"Man O' War"
In Working Condition

be about three-eighths of a mile at a faster pace, in about 40 seconds; then this work can be gradually increased up to a mile or one mile and one-fourth at the same pace, working the horse every other day.

After this is done, he should be sent at top speed for one-half mile, then sent back to slower work for two or three work days, then sent three-fourths of a mile at top speed, and so on until he works one mile to one and one-fourth miles at top speed. If he is fit to go one and one-fourth miles at top speed and is not distressed after doing it, he is fit to race two miles. By not being

distressed I mean that he should not blow too hard and should get over his high blowing within five to fifteen minutes. He should have no trembling of the flanks, should not be corded on top of the loins, and should eat well and rest well after this work.

Most all horses will eat less when they are in active training, but if one goes altogether off his feed or suddenly eats only half his normal amount, it is a sure sign that you are going too fast, giving him too much, or making his work days too close together. A horse to be in perfect racing condition, should have plenty of flesh on him, should be strong, eating well and feeling well, and all I have written about it is only an outline. No one can train a horse on paper or in an office, but can only properly do so by being with the horse.

Cavalry Horses

As to the condition of the cavalry horse for active duty, he should be in condition to march 25 to 80 miles in a day, and be in condition to go into action at the end of the march. All of this requires ordinary slow work and ordinary good feeding and good stable care, but is hard to do. I have ridden and trained horses for endurance tests, and they have been able to do the work day after day, 60 miles per day with 245 pounds on their backs; but these horses were individually trained to do it. I rode on one march of 84 miles, with the temperature at 90 to 100 degrees, with about 60 horses present. None of these horses were overheated at any time during the march, and both horses and troopers were in condition to go into action at the end of the march, if such had been necessary.

These horses were not individually trained for this march, but were trained and commanded as a troop of cavalry by Major E. G. Cullum of the Remount Service and I think because they were trained as a troop, and not individually trained, that this was better practical conditioning than if they had been trained for an endurance ride.

The horses were well fed and well cared for in every respect, and previous to this march their work had been gradually increased to where they were getting about three hours' work under saddle per day. This work consisted of walking, trotting, cantering and galloping. They were also jumped over a few fences each day. Most of them had swum across a river two or three times, which is excellent work for the wind.

This is about the only work I can recommend for the cavalry horse, and I would think about 75% of his condition is due to stable care and feeding.

In conclusion, I would say that there are hundreds of articles and books written on training and conditioning horses. A great many of them are very good, but the best lessons come from our little successes and many mistakes of practical handling, training, and conditioning.

I once asked Dean Curtis, who was dean of the University of Iowa, who was the best livestock feeder he knew. He named a man whose name I have forgotten, and I then asked him what university the man was a graduate of. He said "None. The man cannot read or write, but he sits on the fence and watches his stock."

Losses of Remounts

By Major C. L. Scott, *Q. M. C.*

Chief of the Remount Service

An analysis of the reasons for condemnation of remounts purchased from July 1, 1924, to and including December 31, 1927, is most interesting as well as valuable. The adoption of the Preston system of branding made such an analysis possible, because a remount is permanently identified for the first time in the history of our army. The remount service can now follow the work of procurement through a horse's entire career—locate, study, analyze and correct, in a large measure, undesirable features of handling as well as of procurement. The mounted units of the army, it is believed, can also obtain much valuable information from this analysis.

From July 1, 1924, to December 31, 1927, 14,886 horses were purchased, of which 1,555 have died or been condemned. This number is 10.4 per cent of all new horses purchased in the past three and a half years, or 2.97 per cent per year. The reasons for these losses are as follows:

Cause	Disposition	Number	Percentage
Poor type	Condemned	132	.008
Outlaws	Condemned	124	.008
Unsound	Condemned	311	.028
Sickness and disease	Died or condemned	698	.048
Accidents	Died or destroyed	286	.019
Condemned	Cause not stated	4	—

It may be noted from the foregoing that sickness and disease caused the greatest losses among horses, and that the losses from poor type and outlaws would appear to be avoidable.

As an example of the value of the permanent identification of horses and what can be done by a study of losses, the following is cited: At the end of the purchasing in the fiscal year 1925 (July 1, 1924, to June 30, 1925), a study of the horse record cards shows a large percentage of poor type and outlaws being secured, and the number and percentage of condemnation for this reason among the 4,600 horses purchased were as follows for this year:

Cause	Number	Percentage
Poor type	85	.018+
Outlaws	64	.014+

These data were conveyed to all remount officers with instructions to be most careful in eliminating the losses due to these two factors. As to what effect this had is shown by the losses under those two headings from July 1, 1925, to December 31, 1927, among the 10,300 remounts purchased:

Cause	Number	Percentage
Losses poor type	46	.0044+
Losses outlaws	60	.0059+

In other words, by following up the horse records for the fiscal year 1925, in the 10,300 horses purchased and issued from July 1, 1925, to December 31, 1927, the remount service was able to reduce the proportion of losses classed as poor type and outlaw horses about 400 per cent and 250 per cent, respectively, as compared with the fiscal year 1925.

The veterinary division of the surgeon general's office is also making a very careful study of the losses from accident, disease and unsoundness, and will unquestionably be able to report a material reduction in those respects as a result of careful study now possible.

In addition to the studies being made by the remount service and the veterinary corps, a careful check and study by officers of mounted units would unquestionably lead to further savings in horse flesh and really assist the remount service and veterinary corps in their work. As suggestions of a constructive nature and in order to assist the remount and veterinary corps in their studies of losses, it is believed that the following comments are pertinent.

Poor Type

A perfect type is rarely, if ever, seen among horses valued at tens of thousands of dollars, so the procurement of a perfect horse for $165 for the army cannot be expected. Remount officers and veterinary officers on purchasing boards, therefore, accept a type that they think will do the work. Whether such horses rate as good, fair or poor, is largely a matter of opinion. We have all seen what we consider a poor type of horse performing brilliantly in the show ring, on the race track, in endurance rides, in polo, on the hunting field and on a march. Poor type, per se, therefore, is no reason for the condemnation of a horse after he has unfortunately been purchased, unless the deficiencies in conformation render the horse useless. Condemnation under this heading and for this reason should not be permitted unless it can be indisputably shown that the horse has been thoroughly tried out and because of its defects in type has proven unsuitable for army work. For example, a narrow-chested splay-footed horse is a poor type. There are some horses with such conformation that perform fine work. The majority, however, lack stamina and interfere badly, and in the latter case are not suitable horses for the army. When condemned, the I. & I. report and the horse record card should state as the cause of condemnation "Interferes—lacks stamina due to narrow chest and splay feet." Also, if a horse has a long back and short rib he may or may not do his work. When he can't do his work the *exact reason* should be given to prove that the horse has at least been given a chance to work and to convey information to purchasing officers for future improvement in buying.

Outlaws

The great majority of high-class horsemen of experience will tell you that they have rarely, if ever, seen a horse that is inherently an outlaw, or a horse that they couldn't handle and get useful work out of. Horses that are bad in this respect are, in the great majority of instances, made bad by

rough handling or neglect. They respond readily and rapidly to intelligent and kindly treatment.

Let us review the handling that army remounts get, and this review will show us that it is surprising that a larger percentage of them are not more difficult to handle. Most horses, in this day of the automobile, are kept on the farm or ranch, where they are raised until they are sold. They seldom go out on the road or to town, and many are not backed until just before they are sold. We will say that a horse raised under these conditions is secured by an army buyer. He is then ridden and winded, malleined, branded and shortly loaded on a stock car, to be unloaded en route, where he is pushed around, prodded about, and arrives in a nervous and excitable state for his first experience at an army remount depot. It is then found that he comes back to normal very rapidly under kind treatment and careful handling. Before he is shipped out he is groomed all over, he will allow his feet to be picked up and he is ridden or driven quietly and is generally tractable. If he could get to troops in this shape he would be satisfactory, but unfortunately, he has to go through another period of rough handling, which sets him back. First, he must be dipped before shipment and, secondly, he has another long ride on stock cars and is again prodded and pushed about. He thinks his kindly treatment at depots is an exception to the rule and he arrives at the troop station in a wrought-up, excitable, suspicious frame of mind, ready to defend himself on the slightest provocation. It can be seen, therefore, that another period of careful handling and gentling is necessary, particularly if the horse is a young, fresh, inexperienced one.

Sometimes we see fresh young horses from the range that received their first grain when they arrived in the army. They get fat and are hard to handle when grain fed, on account of feeling so strong and well. They will kick, strike and put up a vigorous fight against any handling. This resistance, due to feeling good, cannot be called viciousness. If they are deprived of grain for a week or ten days they again become quiet and tractable. If they are then put on work and worked regularly, no difficulty is experienced in their training.

It is frequently stated that the remount depots do not handle and gentle the horses issued, or that the remount depots should have sent them out broken and ready to go to work with troops. When the remount service was established as a part of the quartermaster corps after the World War, it was definitely decided that its functions were to purchase horses and mules, hold them at depots during their sick and quarantine periods to condition, gentle and issue them. The chiefs of the mounted services particularly objected to the adoption of a policy to the effect that these animals were to be retained at depots and *trained* for army work. This is a function which properly pertains to the organizations that receive animals from depots.

No set rule can be laid down for handling all remounts. Kindness, firmness, patience and regular work will usually properly fit any horse or mule

for army work. Condemnations of outlaws should be exceedingly rare, particularly now that great attention is being paid to the purchase of tractable horses and remounts. To say, however, that no horse should be purchased that is not broken, that will not stand to be mounted and ridden without a buck or a fight at time of purchase, will mean the elimination of the very kind of fresh, young, unspoiled horse that the army should obtain as a remount, particularly from the colts sired by Government stallions.

Frequent wholesale condemnation of outlaws means either ignorance on the part of officers charged with the training of horses or an unwillingness to devote the time and attention to their training.

The following data are also of interest:

	Total	Total percent of losses	Per cent condemned as	
Riding-Horses:	Issued	three and a half years	Poor type	Outlaws
To cavalry	6,194	14%	2.0—	1.0
To artillery	2,099	6%	1.9—	.6
Draft Horses:				
To cavalry	0	0	0	0
To artillery	2,717	12%	.9	1.4

The losses in riding horses in the cavalry is much greater than the artillery, and this is to be expected, as the cavalry does harder and faster work than the artillery. The odd part of this analysis is that the cavalry, that is supposed to be able to break and train riding horses, condemns more horses as outlaws than the artillery, and the artillery, which is supposed to be able to break and train draft horses, condemns as outlaws over twice as many draft horses as it does riding horses, even though it is usually easier and safer to break draft horses than riding horses. It is only fair to state herein that one or two stations in the army have made unusual condemnations of outlaws, which run the average up for the mounted services and the army.

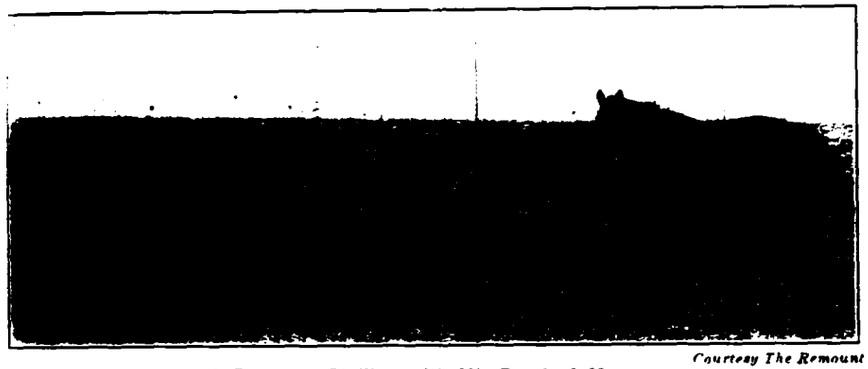
Condemnation

Condemnation of army horses that cannot do their military work is a necessity and an economy. If, however, we are to find out *why* the old ones become unserviceable and *why* a young horse is really unserviceable, a careful study of the causes of unsoundness, etc., is most important.

When a remount is purchased for the army he is carefully examined by a remount officer and a veterinary officer. A lot of time, trouble and money is expended on getting him ready to issue to troops. This is continued by the organization commander in getting him into the ranks. A lot of money has been invested in this horse. Shouldn't there be some careful thought, some careful study given by the organization commander and a veterinary officer to his separation from the service and a careful and accurate record made thereof? If a remount officer must advise with and accept the opinion of a veterinary officer before a horse is purchased for the army, it is only logical that a veterinary officer's advice and opinion is necessary before a horse is separated from the service, if the interests of the Government are to be protected.

There are inspection reports and notations of condemnation of horses

on record cards that would be most amusing were it not for the fact that they show that the reasons for condemnation of horses and mules was being given little or no attention in some instances. For example, a horse purchased by General J. B. Aleshire as a captain in 1903 was condemned in 1925, after twenty-two years' service, as a poor type! One horse in the service for thirteen years was condemned as an outlaw! Many draft horses are condemned after they have been in use for eight or ten years for side bones, when, as a matter of fact, we all know that the great majority of these old horses have side bones and have had them for years without, in any way, interfering with their work. Some young horses are condemned for no



Courtesy The Remount

A Remount Stallion with His Band of Mares

stamina inside of three or four months after purchase, obviously before they have had a chance to be conditioned.

Frequently the cause of condemnation is given as "inspected and condemned" or "unsound," "no good," "crazy." Such indefinite terms give no data of value, show no thought in the preparation of records and at least convey the impression that condemnations are made in a careless way. The assistance of a veterinary officer in preparation of I. & I. reports would insure that the cause of condemnation is *properly* and *specifically* recorded.

The number of condemnations and losses in the remounts purchased since July, 1924, is not excessive; in fact, is less than the estimated losses. The actual losses, as stated herein, was an average of 2.97 per cent for the three and a half years, whereas the estimated losses, based on past experience, would be 4 per cent. This data, therefore, is not submitted with a desire to convey the impression that losses are excessive or that condemnations are being recklessly made everywhere on improperly prepared reports, but to point out the mistakes of the remount service as well as other mistakes and show how further losses can be avoided by careful thought before purchase, before condemnation and by careful study after condemnation of properly

recorded losses on the Preston cards, and on I. & I. reports, as prescribed in Army Regulations.

Before the adoption of the Preston system of identification, purchasing officers received comments on the horses purchased by them only when first shipped to an organization. This was the worst possible time to try to collect information, as the remounts were usually in bad shape from long shipments, tired, half-sick, undeveloped and untrained. As they had received no practical test at the time the reports on them were rendered, such reports were merely a *matter of opinion* and not based on fact. With a permanent system of identification and proper remarks on I. & I. reports and on horse record cards, the remount service and the veterinary corps can make a continuous study of purchases and correct avoidable errors. It is also believed that officers of mounted organizations can greatly profit by following up and analyzing causes for condemnation.

The remount service now follows up carefully all shipments made and all adverse reports received, not with the idea, as some seem to think, of presenting an alibi for its mistake, but with the earnest desire and sole object of the betterment of its work in the future. The impelling reason for presenting to the mounted services the meager data contained in this brief article is a desire for closer cooperation between the remount service, the veterinary corps, and organization commanders, for only through such close cooperation are we able to reach the goal that those of us who are engaged in the procurement of animals for the army are determined to reach, viz., the purchase of the best and most useful horse for the army that can be had for the price we are permitted to pay and the elimination of avoidable mistakes.

Care of Horses in the Field

By Lieutenant Colonel Clarence Lininger, *Cavalry*
Instructor General Service Schools

THE field life of the horse differs greatly from his garrison life. In garrison he is fed regularly with the balanced forage ration that experience as well as theory has shown to be the best and most economical while ways and means are found to vary his food. He gets good water in ample quantities. He knows neither hunger nor thirst except for those mild sensations which tell him that feeding or watering time with its accustomed regularity has come again. He sleeps in a thick bed of straw at night and stands under a roof during inclement weather. In extreme heat he is placed in the shade, and when the nights get cold he is covered. His skin is kept healthy by vigorous grooming.... He gets a couple of hours exercise each day and lives the life on an equine athlete. If we were as careful of ourselves as we are of our horses in garrison it might be possible to raise the retiring age from sixty-four to about seventy!

But suddenly this delightful state of affairs is changed. The regiment takes the field and the horse works hard, often suffering from hunger, thirst, heat, cold, and too frequently from insufficient attention. He probably gets more attention than in garrison but under the changed and difficult conditions in the field more attention is needed.

The first few weeks in the field constitute a difficult and hazardous time but if the horse can be helped along, and nursed through as it were, he may endure many months or years of hard service. It is just at this time in the majority of cases when it is most difficult to give this increased care. In times of war many of the younger officers who are closest to the men and horses may lack experience, and it is certain that most of the men will be inexperienced. The transition from garrison to field life must also be experienced by the men and they may find the adjustment hard to make. The cavalry command is fortunate that enters upon the hardships of field service gradually and in such manner as to accustom men and horses to the altered mode of living before they are called upon to make some supreme effort.

After taking the field, cavalry must overcome the difficulties or minimize the injurious effect of three different conditions—bivouac, march and battlefield. But before taking up those conditions separately there are some general considerations to be discussed.

General Considerations

Mission. The first is one which the cavalry officer cannot control, viz:—the assignment of suitable missions.

On August 5, 1924, Sordet's Cavalry Corps received from French General Headquarters the telephonic message "to determine the limit of advance of the enemy along the eastern frontier of Belgium; delay the enemy's col-

umns; clear out the hostile cavalry from that region."[1] The next ten days witnessed the corps marching and countermarching in an effort to carry out its missions. In the first five days most of the regiments marched about one hundred and fifty-five miles, in an intense heat which proved disastrous to the horses, many of which had to be evacuated or otherwise disposed of. Reconnaissance, covering liaison and combat missions, sometimes one and sometimes more continued until the corps commander was forced to report on August 23rd: "On account of the fatigue of men and horses it seems to me difficult to accomplish the mission assigned me by the instructions of August 22d."[2] On August 29 when the cavalry was asked to cover the right flank of the French Sixth Army and maintain liaison with the British army, the corps commander constituted a provisional division from the strongest elements that remained to him; but by a singular error the provisional division was given an easier task than the remainder of the corps.[3] The French cavalry received glowing tribute from both French and English sources but the question may well be asked whether they would not have performed greater services during the first few months of the war had they been assigned simpler and less demanding missions during the first few days of the war?

The higher command should refrain from assigning several missions to cavalry at the same time but it may not so refrain. In such case what can the cavalry officer do? He is torn between the desire to do everything asked and the knowledge that he probably cannot. A solution of this difficulty would be, first: to ask to have his mission simplified; next: to get from higher headquarters a statement as to the most important of his several missions; lastly: to study the situation and deduce the most important mission; then having obtained a statement or reached a conclusion to devote the bulk of his strength to the most important mission, using only a minimum of his forces on the lesser missions. The cavalry officer has been put in an embarrassing situation but his highest sense of duty will lead him to some solution that will save his command from waste.

Field experience. Another matter over which higher commanders can exercise some control is that of experience in the field. War best teaches cavalry to take care of itself in the field; but, in time of peace, practice marches combined with field exercises and maneuvers can be had,—not a twenty-mile ride that ends about noon in the post but a march of some length and duration. It is gratifying that in some recent changes of station the calvary moved by marching rather than by rail. The 1st Cavalry Division has been fortunate in having maneuvers, but some of the other cavalry units have had no such opportunities.

Replacements. In the summer of 1916 after the Villa pursuit had ended the author made some measurements and collected other data about the horses of a troop of the 13th Cavalry.[4] Everything noted was in confirmation of well known facts and here to only one thing is attention called—the horses that endured best and recovered first were those that had been in the service long enough to be fully trained and developed, yet had not begun to show any signs of age. For the cavalry to get through the first few months of a war, the months which always fall hard on that arm as the experiences in Europe in 1914 and our own in Mexico in 1916 again demonstrated, horses must be replaced before they reach the age when the hardships of field service bring an early break-down. This age is not the same for all and must be judged by the responsible officers. This may make the cavalry cost a few thousand dollars more per year in peace but may save millions in war. On the other hand the cost may not be much greater as the horses to go will probably bring good prices at auction if still useful outside the army.

Trooper and horse. Consider the relations of trooper and horse. The horse is not capable of much affection but he recognizes kindness and fears unkindness. But the rider is capable of affection and the more he feels it and translates it into care for the horse, the greater will be the returns. Some day the trooper's life itself may depend upon the ability of his mount to call up just one more ounce of strength.

The trooper who is fond of his horse will not burden him with useless articles in the saddle bags, will watch his shoeing at every halt, will saddle him properly, will pluck him a handful of grass or get him a taste of good water upon every occasion, and will see that no one, human or equine, steals the forage given him. Day and night the good of the horse will be in the trooper's mind.

On many occasions the man will find it difficult to care for his horse. He himself will be cold, hungry or exhausted and a powerful incentive will be needed to make the necessary effort. Fear of punishment is an incentive but a poor one. A better incentive is love for his horse and a word of praise from his officers who find the animal bearing up under the hardships of campaign.

Men may dislike certain horses just as intensely as they like others. The good troop commander will recognize these facts, will not separate a trooper from a horse he has and wants to keep, and will try to get for every man one upon which he can lavish his affections.

A young and delicate looking horse marched into Mexico with the 13th Cavalry in 1916, carried his rider to Parral, and eleven months later brought him out of Mexico. Other horses grew thin in flesh and some died. The young horse maintained his strength and for this the corporal who rode him deserves the credit. Every attention that was possible in the way of good water, more or better food, protection against the elements, relief from the rider's weight, was given the horse, while somewhere in that barren land the corporal found a set of bandages with which to wrap the horse's legs.

Surprise. It may be a matter of opinion whether the Punitive Expedition caught the army by surprise, especially in the hardships it entailed upon the horses. The men did not suffer. It is true they were often uncomfortable during the cold nights and windy days, and the food frequently consisted wholly or mainly of frijoles and freshly killed beef but there was enough. With the horses it was different. Immediately they were deprived of hay, even

the first night at Palomas which was only nine miles from the base. Then came the reduction in grain ration, the change to corn, to fodder, to wheat, to grazing. The horses seemed to endure marvelously but in time they became thin and weak. The chief reason for the lowered condition was that the troops marched away from supplies but possibly not all the blame can be laid to that score. At the time the belief was universal that everything humanly possible or necessary was being done but sometimes the thought comes that at the very beginning we might have grazed oftener and longer, have taken more from the country, have led more, and have anticipated the long marches. But before the troops realized it they were away from supplies and the horses were beginning to feel the effects of the constant marching, the chilly nights and the short forage. Had there been ample supplies nothing else would have mattered; but lacking them the other hardships fell with greater effect.

So surprise should be avoided. Our supply and transportation agencies should be prepared on a moment's notice to supply the cavalry however fast and wherever it goes, and the cavalry should be on its guard to take precautions with its horses even when precautions seem unnecessary.

Bivouac

More than half the time is spent in camp or bivouac and it is during this period that the ravages made by march and battlefield should be overcome.

Amount of forage. Experience has shown a certain amount of forage necessary to maintain the horse in condition in garrison but the moment troops take the field the supply departments deliver a reduced ration of grain and little or no long forage when forage is most needed. If this policy must be accepted—and no doubt it must in most theaters of operation—then the commanders and supply officers of cavalry should take immediate and vigorous action to exploit the resources of the country in which they are operating. It should be done so promptly and completely that colonels, captains and stable sergeants have no opportunity for worry or complaint as to the amount of forage and the time of delivery.

Quality of forage. Not only do the horses need in the field as much forage as they have been accustomed to but they need a balanced ration. When the ration is deficient in any important element ill effects soon become apparent. The Punitive Expedition started on March 15, 1918. The main reliance for longe forage was on grazing and by that time of the year the grass that grew the preceding summer had been subjected to the elements for months, had dried out, become fibrous and lost its nutriment. It merely went into the horses stomach and had little or no food value. As a reducing agent it had no equal! The lesson then is that quantity is not everything but must be considered in connection with quality. In the field whatever is at hand must be accepted but when any choice exists food values should be considered and if the line officer is at a loss the veterinarian should know.

Forage to which the horse is not accustomed. Cavalry horses as a rule are fed oats and hay. Only occasionally is there some variety, such as barley.

Then when the cavalry takes the field it depends a great deal upon the resources in the theater of operation. In Mexico oats soon became scarce and corn became the staple grain ration. Horses had to eat corn or go hungry. Some went hungry until they discovered that corn was something that could be eaten. Then in time some went hungry because mastication seemed to give them pain. With some horses it was found that they could eat the corn when mixed with chaff or some variety of long forage.

An opinion on the value of corn. Corn was not popular in Mexico either with men or horses. Yet corn has had its defender. The author of "Five Years a Dragoon" (Percival G. Lowe) joined Troop B 1st Dragoons at Fort Leavenworth on Christmas Day 1849 and thereafter had many years experience as dragoon and wagonmaster. He says "Ear corn was the kind of grain always used in garrison. x x x Shelled corn might be musty or some bad corn mixed with it and none but an expert could tell, while any man would know a sound ear of corn; and more than that, horses do not eat ear corn so fast: they like to bite it from the cob—masticate, relish and like it better. Of course on the plains one must use shelled corn, but in garrison, in a corn growing country, there is no forage equal to ear corn and prairie hay. I know that now (1905) there is a great habit of feeding oats to cavalry horses. x x x Barley and wheat are good feed where corn is not raised but where it grows in abundance there is nothing equal to corn; for man, for horses and mules, for cattle, for hogs, for fowls, it is the king of products to make muscle and fat."

We may not subscribe fully to the above opinion as to the merits of corn, but if the cavalry again takes the field in a corn growing country it will find itself feeding a great deal of that grain to its animals. In garrison advantage should be taken of present regulations (Circular 14, War Department, April 11, 1927) to the end that a portion of the ration consist of that grain, especially in the great corn belt of the United States. If the horses become accustomed to small quantities in garrison they will thrive when they get it in great quantities in the field.

Other grains. Wheat is another grain it may be necessary to use occasionally, but it should be fed with chaff or chopped long forage, otherwise the majority of the grains will pass through the horse undigested and be of no more value to him than the dried out grasses mentioned above. Cutting up long forage for mixing with grain is difficult in the field when time is short and only a dull knife or mess knife is available but it may be necessary for satisfactory results.

The horse passes readily from oats to barley but on account of the hardness of the grains the barley should be rolled when possible.

Camp routine. In the field the hours of feeding will often be irregular and as this is a departure from garrison habits it will prove a hardship on the horses. A good rule seems to be to follow the methods of the Indian who ate early, often and much so as to store up within himself as much of a reserve as possible. With horses this rule must be applied with intelligence as too much food can be just as injurious as too little. This irregularity is

unfortunate and the routine of garrison life should be followed as far as practicable. A horse assimilates his food better and there is less waste when he gets it in several small feeds rather than in one or two large ones.

Grain is fed easily and economically in the feed bags but it is difficult to prevent a waste of hay on the picket line. Nets may sometime become popular in the United States army but the general custom is to spread the hay upon the ground. This done, the horses may trample some of it into the earth or mud, or the wind may take its toll. This should be obviated by having enough men on the picket line to watch the hay and save it.

Grazing. Grazing should be resorted to whenever possible. Not only is it beneficial as giving the horse a variety of food but it gives him more of it. It also allows him a little freedom in getting rid of excess spirits on the one hand, when he is fortunate enough to have any, or of muscular stiffness on the other. Even with horses untrained in herding there need be no stampede if the tie rope be fastened around the horse's leg below the knee. The tie rope should be long enough to allow him to move freely at the walk and short enough to prevent him from galloping. In Mexico troops that hobbled their horses in this manner did not have stampedes. A few men can herd the horses of a troop and the others can go about such other duties as are necessary. Grazing can be had both morning and afternoon without exertion on the part of the men and with great benefit to the horses.

Water. Horses exist on water that would be fatal to their riders, yet needless to say they will thrive better on pure than impure water and must have it in sufficient quantities.

Horses have the ability to do with fewer drinks than a man requires. In cold weather they are satisfied with two waterings per day but in hot weather four are not too many and one should be in the evening in order to carry them through the night without thirst.

Watering itself is an important detail in the care of horses and should be supervised by an officer. As a rule horses are watered by groups in a stream, lake or trough. Some horses are impetuous and greedy, plunge their noses in the water, and soon drink their fill. Others are suspicious and timid, are slow to start and drink deliberately. Water is just as important to the latter as to the former. So all horses should be kept at the watering place until all have finished. Some horses are not satisfied with the spot where they reach the water but are very restless. In a stream they move about and if the bottom is soft the water is soon made muddy for all the horses in that vicinity.. Such horses must be held in check by a man on foot on the bank or by other means. Where several squads, platoons or troops water in succession at one place in a stream, the first ones should prevent their horses entering the stream too far or moving about too much and thereby soiling the water for those to follow. When watering from canvas troughs there should be good intervals between troughs—at least ten yards, and preferably fifteen

Watering is done under too many conditions to attempt to give rules to cover

all cases, but water is such an important item in the welfare of the horse that careful consideration must be given to its quality and qauntity and to frequency of watering, not only by the troop officers but by the field officers of the regiment.

Grooming. It rests animals to be groomed and reduces their susceptibility to debilitating influences. Those properly groomed will function upon less forage than those not so groomed. Grooming aids in keeping down the great scourge of mange which in continental Europe rendered more animals unfit than any other disease. Grooming should be thorough and frequent.

Standings. After two rather long marches in Mexico, one of which was partially at night, a squadron camped on a river bank. Soon afterwards many of the horses were observed lying down. Under all conditions of weather that camp site might not have been satisfactory, but that day it could not have been improved upon and when the horses felt the soft sand under their feet they lay down and stretched out. The point in mind is the desirability of good standings. Mud, rocks, vegetation, steep hillsides or anything else that keeps the horses on their feet or prevents their obtaining needed rest, should be avoided. Mud, especially, is injurious and "no foot, no horse" soon shows its truthfulness where horses stand in it; scratches result, followed by epizootic lymphangitis, and the loss is high.

A desire to avoid airplane observation may drive cavalry into woods where standings are not good; and the need for security may keep the regiment or brigade together. But does keeping togther necessarily imply security or does it bring security? If hostile airplanes drive us to concealment will not our airplanes force our enemy into dispersion? Furthermore, when well spread out only a portion and not the entire force can be surprised, so that there is security for the whole, assuming of course the proper use of patrol and other safety measures. The conclusion then is that when not crowded by other troops the cavalry can spread out its bivouacs and feel secure while taking advantage of the best standings and other desirable bivouac facilities in the area.

Medicines. Prevention is better than cure but sometimes medicines are needed to aid in a cure. The experienced stable sergeant, if no one else, will see that a small chest is slipped into the troop wagon. When the nature of the service can be foreseen in time the veterinarian is the best judge of what to take along. There are however a few basic medicines that are wanted under almost all conditions such as iodine for wounds and abrasions; acetanilid for antiseptic purposes; aromatic spirits of ammonia as a stimulant and carminative; cannabis indica for colic; linseed oil as a purgative; white lotion for sprains and inflammation.

The Elements. Extreme heat saps the horse's vitality. Sometimes there is no help but on occasions it can be avoided by placing the horses under trees even if the symmetry of the camp be ruined. When there is no shade the horses are better in the open where the wind can strike them than standing

among bushes or in some other sultry spot. Also, they must have plenty of water.

The cold, even when not extreme, not only prevents the horse from building up fat and sinew but uses up reserve strength in maintaining bodily warmth. Rain, snow and wind have somewhat similar effects in that regard. The effects of cold and chilling winds should be avoided by placing the Bivouacs under trees, in gullies or in other sheltered places. In camps of some duration horse covers should be supplied and used. Is it not a mistaken notion that in order to harden horses to field service they must be made to suffer? It is true that Balck says: "The German cavalry had excellent well trained animals, though a little sensitive against extremes of temperatures."[6] and no doubt the horses suffered somewhat when exposed to the rigors of a winter campaign in East Prussia and Russia. Nevertheless horses will go faster and farther and endure better if they start a camgain in good health and in good condition. Depleted strength from exposure prior to campaign has its effect.

During extreme cold, increased rations heighten the resisting power of men and animals. In the United States Army supply and transportation difficulties have usually made this increase impossible. Just at the time when this increase was needed the cavalry has had to get along on reduced, rather than increased, rations for its horses.

Forage In A Civil War Campaign

Major General James H. Wilson, who commanded the greatest cavalry force of the Civil War, leading it in the spring of 1865 from the Tennessee River to Selma, Alabama, and thence to Macon, Georgia, claimed that he could have continued the march at an average rate of thirty-five miles per day and have joined "Grant and Sheridan in Virginia inside of thirty days." Elsewhere in speaking of an organization for rapid movement to consist of two-thirds cavalry, he refers "to a farming country, fairly well supplied with forage."[7] It was through such country that he would have continued the march to Virginia. In planning for operations our supply departments should give consideration to whether the theater is "fairly well supplied with forage" and if not, means must be taken to supply the cavalry from the rear.

Forage For A Winter Campaign Against Indians

In preparing for a winter campaign in March, 1876, Bourke says: "(General) Crook wanted to have our animals kept in the best condition, at least in a condition somewhat better than that of the Indian ponies. He knew that the amount of grass to be depended upon would be very limited; much of the country would be burned over by the Indians to prepare for the next growth; much would lie under deep snow, and not be accessible to our horses; much would be deadened by wind and storm; so that the most prudent course would be to move out from Fetterman with a wagon-train loaded with grain, which could be fed in small quantities to supplement the pasturage that might be found, and would keep our mules and horses in strength and health."[8]

Two things are noticeable in the above statement, one is that a satisfactory standard to be reached was that the cavalry horses should be in better condition than the Indian ponies, and Bourke also says that "The ponies of the Indians fare poorly during this season (winter). They become very thin and weak." The other point to be noticed was that the grain would be fed in small quantities. General Crook, one of the most skillful of our Indian fighters, made careful preparations for his campaigns. We must remember in this instance that his enemy has only those very "thin and weak" ponies which will probably not be the usual case with our enemies in the future. We cannot therefore be content with "small quantities" of grain; we must have ample grain and hay to keep our horses in the state of health demanded by the missions of cavalry in present day operations.

Cavalry and Artillery in the Field in Texas

Among the many fine traditions that remain to the cavalry from those old days there may be the belief that the horses can live off any country with little or no assistance. The experiences of the Punitive Expedition are enough to disprove this belief.

A winter expedient. In April, 1873, the 7th Cavalry en route from Kentucky to Fort Abraham Lincoln, arrived at Yankton, Dakota Territory, and camped in the vicinity of the town. A terrific blizzard came on and General Custer directed that each man go into town with his horse and seek shelter with the townspeople. The entire regiment was cared for. Without doubt the lives of a great number of horses and men were saved due to the adoption of this simple and justifiable expedient.[9]

Marches

Based upon the idea of marching and fighting—not marching alone—paragraph 304 of our Field Service Regulations prescribes an average rate of march 3½ miles to 6 miles per hour and an average number of miles per

day—12 to 15 miles for unseasoned cavalry and 25 miles when seasoned. Great latitude is thus allowed, so responsibility for avoiding excessive rates rests both upon the officer who assigns mission to cavalry and upon the cavalry officer himself. The latter is more often concerned with rate and conduct of march rather than with its length. Experience rather than rules must guide him.

Rate of march should be planned by the cavalry officer ahead of time from a consideration of the mission, from a study of the road, from a map or other sources, and from a knowledge of the condition of the horses. In a good climate, on a firm but not hard road, with fresh and seasoned horses, the highest rate mentioned above may be had, remembering always to start and end the march more slowly than that. When conditions are adverse it may not be possible to make even the lowest rate.

It is usually possible to prepare a march shedule prior to starting the march. For example, in each hour a total of twenty-five minutes spent at the trot, fifteen at the walk, fifteen leading, and five at the halt will give a rate of about five miles per hour. Each of these periods would be broken up into shorter ones to suit the road and other conditions. Other schedules can be made and followed for other rates or even this rate.

The officer conducting the march must not judge of its effects on the horses as a whole by the condition and action of his own horse. It is probable that his is better than the average troop horse and carries less weight. He should go back along the column to note the effects of the march on the average horses and on the weakest ones. The march, as the battle, is not always and only to the strong.

Night marches. We may rest assured that in our service night marches will be frequent. Anyone who reads our past wars, the Civil War for example, is struck with the amount of marching that was done at night by cavalry forces of all sizes as well as by other arms and large units. All the reasons that then existed for night marching still remain and air reconnaissance has given added reasons.

When the horses are saddled at night the saddling may not be well done. Now daylight lasts until about an hour after sunset, depending upon the time of year and locality, but after sunset the effectiveness of airplane reconnaissance rapidly diminishes until by the time darkness arrives, flares, with their uncertain results, must be used to observe objects on the ground. Cavalry which marches at night for the chief purpose of avoiding observation from the air should wait until darkness to start the march but under most conditions of camp or bivouac it can utilize the twilight to saddle the horses. In this way it will perform that important duty while there is still enough light to adjust the saddles and other equipment carefully and properly.

Men may sleep or slouch on their horses. One way to overcome this is to change the gait occasionally, which can be done on roads but is not so

easy when marching across country. Another way is occasionally to dismount and lead.

While it is difficult to do, officers nevertheless should inspect and watch the riding of the equipment. This inspection will of course be confined largely to the halts.

The equipment. Ill fitting or badly adjusted equipment is a prolific source of injury to horses in the field. The saddle leads all other articles in the amount of harm it may do. Each horse should have a saddle fitted to his back, the captain satisfying himself by personal observation that no horse will suffer from an improper saddle. Not the plump condition of the horse in garrison, but his thinner condition after a week, two weeks, a month of hard marching should be the guide. Sometimes this will take a little imagination. A pommel arch that in garrison almost touches a horse's withers will rest disastrously thereon when the horse is thinned down. Cantle bars that are flat on a fat horse's back may bore into the ribs when the horse is thin.

It is important to place properly the equipment that belongs on the saddle. It should be evenly balanced on the two sides of the horse and if the right pommel carries a certain weight the left pommel should carry an equal weight, and the same with the two sides of the cantle, otherwise the saddle will be pulled awry. Whenever the weight is improperly distributed a saddle sore is apt to result. Rolls carried on the pommel or cantle must be held up by the straps and not allowed to rest on the withers or backbone, otherwise sores may come that will incapacitate the horse for a long time.

A simple expedient for the field when materials are scarce is to put the ordinary oat sack between the folds of blanket over the sound portion of the horse's back and thus relieve the portion becoming sore. De Brack, with his years of field service in Napoleon's light cavalry, for the saddle in use in his period, recommended that "when the blanket has been folded, the surface which chafes the injured parts should be covered with a linen cloth, in order that the wool may not irritate the sore; then the saddle should be raised by half pads which will bear upon the sound surface, without touching the sore, so that the horse may be cured while marching."[10] We may remember that in our own pack trains the duck covered corona and not the woolen blanket is next to the mule's back.

When the horses begin to get thin in the field two blankets may be put under the saddle. This has the effect of saving the horse's back but may fill up the pommel arch and thus transfer the weight of the forward end of the saddle from the horse's back to the top of the withers, very soon producing puffs and sores. So it cannot be prescribed for all horses that two blankets will be worn under the saddle. Each horse must be studied separately.

It has frequently happened in campaign that saddles were kept on the horses for several days. In an account written by a veterinarian of the French cavalry it is stated that on August 29, 1914, "for three days our mounts had not been unsaddled: and what terrible sores were hidden under the heavy equipment." He states further that when billeted in a village that night "in

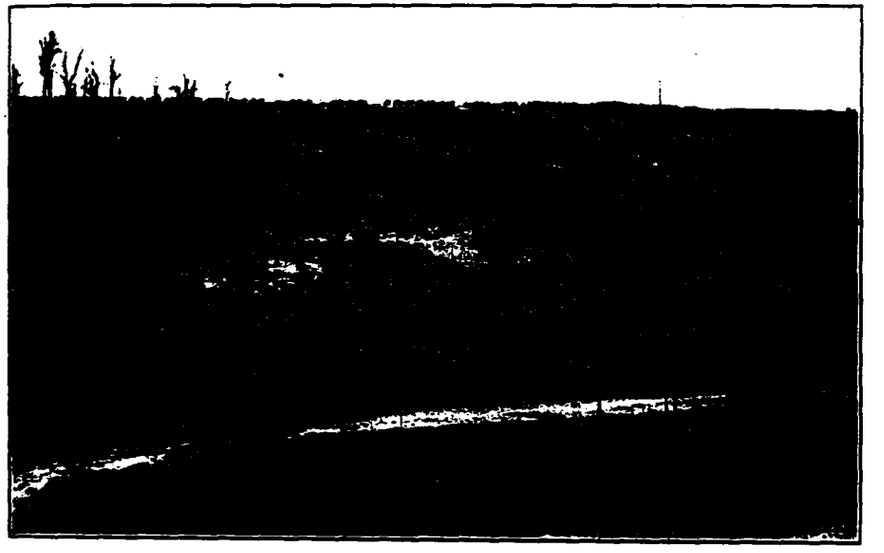
some stables the injuries were so bad that there was a putrid odor."[11] The exigencies of war may demand such a sacrifice but it is most unfortunate since injuries brought on in a few hours or a day may take weeks to heal. The lesson then is to unsaddle at every reasonable opportunity, rest and rub the horses' backs, give the officers and troopers an opportunity to inspect for incipient injuries, treat any injured parts that are found, and give an opportunity for readjustment of equipment. The term "reasonable opportunity" cannot be defined exactly but in general it means at the end of each march or at the end of about twenty-five or thirty miles when the march is to run into some forty or fifty miles. Sometimes the tactical situation may make it appear inexpedient to unsaddle but, when possible, means should be found to do so. Sometimes after communication with higher headquarters the cavalry may find that there is no immediate prospect of its being called upon for duty. Sometimes in the presence of the enemy a liberal use of security detachments may provide rest for the greater part of the command. Sometimes a careful analysis of the mission will show that to unsaddle and rest will produce better results than to do otherwise. Frequently higher commanders are at fault when they fail to let mounted troops know that the command will rest for a certain period or at a certain place, or will be ready for movement or combat without delay. Whenever a mounted unit halts, it should know, if possible, the duration of the halt.

A method that has proven satisfactory in preventing puffs is to keep the saddles on for half an hour or so after reaching camp, loosening the cinches some and removing the rolls and other equipment. This allows a slow return to normal of those portions of the back that have been carrying the weight and lessens the liability to lumps and sores.

Riding. Poor riding is something to expect with hastily formed cavalry but there should be very little in our old regiments, either regular or national guard, or in other regiments that have had ample time to prepare for campaign. The officers and experienced non-commissioned officers must show to the others the correct methods and insist upon their observance. While good riding is partially aptitude, it is more a growth of physical culture; therefore, it will develop slowly and for a long time the best that can be hoped for is a mitigation of the evils of poor riding. When officers or men are found in the regiment without the necessary qualifications to become good riders or otherwise care for the horses entrusted to them they should be transferred to a branch for which they are fitted. This should be done in time of peace and even more in time of war when men are needed for so many tasks and the period for training for any task is short.

Poor riding may come about from causes other than simply not knowing how to ride. In describing the march of General Crook's command from the Little Missouri River to the Black Hills in September 1876 Bourke says: "Although there could not be a lovelier pasturage than that through which we were marching, yet our animals, too, began to play out, because they were carrying exhausted and half starved men who could not sit up in the saddle, and couldn't so frequently dismount on coming to steep, slippery descents where it would have been good policy to 'favor' their steeds."[12] From this is the lesson that when it is possible for the men to keep their strength they can and should exert themselves more than usual. There is a partnership between the trooper and his horse which should prevent one having all the privileges and the other suffering all the hardships.

Leading. Leading should not be confined to steep descents but should be made a part of every march. It takes some hundred and fifty pounds off the horse's back and relieves some of his muscles. As for the man—a short walk is very refreshing to him too, in fact some find it more so than merely sitting by the roadside. Another point in its favor is that the command keeps pushing ahead. There is no lost time.



British Cavalry in France

Gaits. The gaits must be suitable. There is nothing much more fatiguing to a command than to try to conform to the gaits of a commander's horse whose walk or trot is too slow or too fast.

Change of gait is restful to the horses as, in leading, it brings some new muscles into play and relieves other muscles that are becoming fatigued.

Shoeing. Von Posek says: "As a result of the very hard roads in the west, the shoeing was to some extent in a sadly deficient state, the constant marching and daily fighting not permitting timely renewals."[13] The Chief of Staff of Sordet's Cavalry Corps states under date of August 10, 1914, that "The matter of shoeing daily became more critical; the hard roads and the constant marching used up the shoes rapidly and others did not arrive due

to lack of time and supply, and it became necessary to make an urgent request for fifteen thousand." [14]

On soft roads such as found in many theaters in the western hemisphere the shoes would not wear out so rapidly but for the same reason it might be difficult to get new ones up to the cavalry, so the problem is no less important here than in western Europe.

In preparation for taking the field the shoeing in the troop and regiment should be brought up to first class condition so as to avoid difficulties along that line for as many days as possible.

After taking the field each trooper should carry on his horse two carefully fitted shoes and also the necessary nails to put them on. Such shoes can be put on with very simple tools, in fact a hammer is enough when no other tools are available. In an emergency the trooper can tack a shoe on by himself but it is better that the horseshoer do it.

On the march the horses should be watched for evidence of shoes becoming loose. The trooper should do this at halts but in movement the clink of a loose shoe is easily detected by the experienced ear. Loose shoes should be tightened at once without waiting to get into camp.

At the end of the march all feet should be carefully examined by the troopers under the supervision of the officers and noncommissioned officers. Shoes that show signs of too much wear or of becoming loose should then and there be replaced or tightened, for after all it is in camp and not on the march that the shoeing should be done. The advice which de Brack gave his French regiment a hundred years ago is perfectly good in our army today: "The captain should carefully superintend the work at the forge." [15]

Lastly, our supply agencies should make early provision for a supply of horse shoes and get them forward to the cavalry in time.

Battlefield

What can be said about care of horses on the battlefield? We may discuss formations and dispositions to avoid losses from small arms or artillery fire, or from airplane attack, but this is not a paper on tactics—it is concerned with health, strength and condition.

It is for the battlefield that we have worked day and night to save our horses, and now duty may take in an hour or a day all that we have saved to them for many weeks. With minds intent on our mission we should yet find time in thought and deed for food, water and rest for our horses. They may get no food, no water, no rest but if in the excitement of the moment we can recall that it is not man nor weapon but horse that is the distinctive element of cavalry, and that while the horse has strength and speed we are cavalry, and when those have faded away we are not cavalry, we can as surely remember to provide those things which seem so simple and yet mean so much. A little rest, a little food, a little water and a great victory may be seized, a beaten enemy destroyed, a victorious foe halted in his tracks.

Concluding Advice from the Author

To the high command. Do not waste your cavalry on fruitless missions.

To the cavalry. Cherish your horses until the hour has come to spend, then spend freely and in the glory of their accomplishments may come your reward for months of labor.

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1. Historique du Corps de Cavalerie Sordet. Page 23.
2. Historique du Corps de Cavalerie Sordet. Page 69.
3. Historique du Corps de Cavalerie Sordet. Page 87.
4. Cavalry Journal, April, 1917.
5. Five years a Dragoon. Lowe, page 153.
6. Development of Tactics—World War. Balck Page 19.
7. Under the Old Flag. Wilson. Volume II, pages 192 and 295.
8. On the Border with Crock. Bourke. Page 251.
9. Boots and Saddles. Custer. Chapter II.
10. Cavalry Outpost Duties. De Brack. Page 29.
11. Trois Mois au Premier Corps de Cavalerie. Letard. Page 67.
12. Under Crook on the Border. Bourke. Page 367.
13. The German Cavalry in Belgium and France. Page 230.
14. Historique du Corps de Cavalerie. Sordet. Page 35.
15. Cavalry Outpost Duties. De Brack. Page 34.

Equestrian Events IX Olympiad

Plans for U. S. Army Participation

By Major R. E. McQuillin, *Cavalry*

IN the Olympic Games which are to be held in Amsterdam, Holland, this summer, the principal interest of horsemen naturally centers around the equestrian events. These are scheduled to occur on the four days, August 9th to 12th, inclusive.

The program and specifications indicate that the mounted events are to be practically the same as those of 1924, when the games were held at Colombes, near Paris. As then, there are but three equestrian events. These are scheduled in the 1928 program as follows:

1. Equestrian Championship Competition.
   (Individual and in teams.)
   A. Training test, 11 minutes. (1st Phase).
   B. Endurance test. (2d Phase).
   (About 22½ miles as follows:
   4 1/3 miles on roads and paths at about 9 M.P.H.: 2½-mile steeplechase over usual obstacles at about 20 M.P.H.: 9 2/5 miles on roads and paths at about 9 M.P.H.: 5 miles across country over obstacles at about 17 M.P.H.: 1¼ miles on roads and paths to finish at about 11½ M.P.H.)
   C. Jumping in the Stadium. (3d Phase).
2. Training Test.
   (Individual and in teams.)
3. Obstacle Jumping Competition—Prix Des Nations.
   (Individual and in teams.)

Except for training tests all horses must carry 165 pounds.

Individual and team entries must be made by July 19, 1928. Each nation is permitted to enter four riders and four horses in each of the three events, but actual competitors are limited to three riders and three horses per nation in each event.

A significant requirement effective for the first time in the 1928 Olympics is that "roarers will not be permitted to compete." Many of the best jumping horses are "roarers."

From a strictly mounted service point of view, without doubt the Equestrian Championship is the most important event and most worth while to win. It obviously requires an all around well bred horse of endurance, that will school, and, at the same time, one that is a good consistent jumper. The interest throughout the cavalry in this particular event is considered to warrant the following more or less detailed account of its governing specifications.

The Equestrian Championship

Each phase of the Equestrian Championship has been alloted a certain value in points, with 2000 the total points for all phases, as indicated in the following table:

1st Phase—Training Test		300 points
2d Phase—Endurance Test		1400 points
Includes—Cross Country	700 points	
Steeplechase	500 points	
Roads and Paths	200 points	
3rd Phase—Jumping		300 points
Total		2000 points

Training Test

The training test is to be conducted in a riding hall or in an arena arranged as indicated in Figure 1.

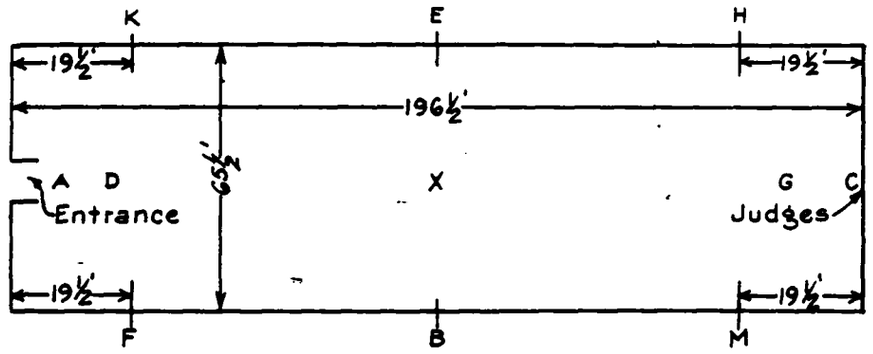


Figure 1 (Diagram of Arena)

The different schooling movements, their sequence and assigned values are specified as follows:

	Value
1. Enter at any gait, halt on center line at G facing judges, salute	3
(A) Work at walk.	
2. Track to right at walk on long reins	4
3. At A, column right down center, horse collected, march straight	6
4. Two track: D to B and B to G	8–8
5. At G halt, horse immobile and straight	4
6. Track to right at collected walk	2
7. At F, half turn (3 yd. radius, horse true)	5
8. At M, half turn (same), track to right	5
(B) Work at trot.	
9. At F, posting trot to M	6
Extend and reduce the trot in 1½ times around the track, as follows:	
10. From M to F, 8 miles per hour (sitting)	6
11. From F to H, extended trot (posting)	12
12. From H to B, slow trot (sitting, horse collected)	12
13. From B to A, 8 miles trot (sitting)	6
14. At A, column right	4
15. Two track: D to E and E to G	12–12

	Value
16. At G, halt, immobile	4–4
17. Move out at walk, track to right	3
18. On gaining the track, trot, (sit or post)	4
(C) Work at gallop (canter).	
19. At B, canter right	5
20. At A, column right down center	2
21. At D, circle to right (3 yd. radius)	5
22. Trot at completion of circle	4
23. At center (X) canter left	4
24. At G, circle left (3 yd. radius) and track to left	5
25. At H, walk	4
26. At E, canter left	7
27. At A, halt, canter left	5–8
28. At B, halt, back four (4) steps, canter left	5–8–8
29. At M, half turn, holding lead	5
30. At B, walk	3
31. At F, canter right	7
32. At K, halt, canter right	5–8
33. At H, halt, back four (4) steps, canter right	5–8–8
34. From M to A, extended gallop	4
35. From A to H, canter	4
36. From H to F, extended gallop	4
37. From F. to H, canter	4
38. At H, half turn, holding lead	5
39. At E, walk	3
40. At K, canter left	6
41. At A, column left down center	2
42. At X, halt, salute, horse immobile, on long reins	4
43. Correctness of position, application of aids, calmness, and control of horse	15
Total value of schooling phase	300 points

NOTE: The time allowed, 11 minutes, begins with the dropping of the hand in the first salute.

Endurance Test

The endurance phase will probably be conducted early on the day following the training phase. The actual course will be shown to contestants the day before the event, when they will be conduced over it for the first time. The specifications issued give the distances and rates of speed required in the different portions of the endurance test identically as shown in the list of events previously quoted herein. It is further stated that both the steeplechase and the cross country will be over obstacles of the type usually encountered. The indications are that the steeplechase obstacles will include brushes, water jumps, ditches and banks of the usual combinations and variety. There will be in the neighborhood of ten jumps. Heights will probably not exceed 3½ feet, nor widths more than 10 feet. The cross country portion will probably include many natural obstacles such as ditches, brooks, hedges, road crossings where fences are combined with ditches, and banks. In Holland there are few natural banks. Practically all ditches are wet and they are usually found in combination with fences or banks. The cross country obstacles will probably be no higher

than those of the steeplechase course, and widths of broad jumps will not exceed 12 feet.

Contestants will take the course singly and at intervals of about three minutes. Points may be gained both in the steeplechase and cross country portions by finishing ahead of time, one half point bonus being given in each course for each five seconds saved. However, a total of no more than 10 points bonus will be awarded in either course.

Jumping In Stadium

This phase will be held on the second day following the endurance test. It is stated that this is not intended to be the usual type of international jumping competition, but merely a test to demonstrate whether or not, on the day after a severe effort, the horses entered still retain the degree of suppleness and energy which enable good hunters and chargers to perform the usual service which might be required of them.

The course includes twelve obstacles, without wings, spaced a fair distance apart, but arranged irregularly, thus requiring numerous turns. The heights of the straight obstacles are not more than 3 feet 10 inches. Open ditches are not more than 7 feet wide and the water jumps have less than 12 feet of water.

As specified the obstacles will include:
- One double obstacle, such as a road.
- Four obstacles, each 3 feet 10 inches high.
- A ditch 6 feet 10 inches wide.
- Six obstacles (open ditch, brook, cross bar on bank, wall, oxer, double bank, etc., as decided by the Organizing Committee).

An average speed of about 14 miles per hour is required.

Penalties:

In the endurance test, over time on any portion of the course is penalized one-half point for each period of 5 seconds or fraction thereof lost. Similarly, in the jumping phase, overtime is penalized one-half point for each period of 2 seconds or fraction thereof lost.

In addition, the following penalties apply on the steeplechase and cross-country:

Third refusal or run-out, either at the same obstacle or during the course of the competition	Disqualification
Fall of rider alone	10 points
Fall of horse and rider	6 points
Second refusal or run-out, either at the same obstacle or during the course of the competition	6 points
First refusal	2 points

The following additional penalties may be incurred in the jumping phase:

Third refusal or run-out, either at the same obstacle or or during the course of jumping competition	Disqualification
Third refusal or balking on track but away from obstacle	Disqualification
Fall of rider alone	10 points
Fall of horse and rider	6 points
Second refusal or run-out, either at same obstacle or during the course of the comptition	6 points

Second refusal or balking on track	6 points
Knock-down with front legs	4 points
Front legs in water or ditch	4 points
First refusal or run-out	2 points
First refusal or balking on track	2 points
Knock-down with hind legs	2 points
Hind legs in water or ditch	2 points
Mistakes in course	2 points

In mixed obstacles such as double bars, ditches in front of or beyond another jump, only the heaviest penalty will be awarded. If a horse bolts off the course he will be disqualified. A horse stopping between two obstacles must make his second attempt from between the obstacles.

Marking

In the Equestrian Championship, the scoring system is rendered somewhat complicated through the use of coefficients whereby the different parts of the competition are relatively weighted. Each part is awarded a mark on a scale of from 0 to 20 (the penalties made being subtracted from 20). This awarded mark is then multiplied by the assigned coefficient to obtain the points earned in that particular part of the test.

The different parts and the corresponding coefficients are as follows:

Maximum Mark	*Event*	*Coefficient*	*Points*
(20)	Schooling	15	300
(20)	Cross Country	35	700
(20)	Steeplechase	25	500
(20)	On roads and paths	10	200
(20)	Jumping in Stadium	15	300
		100	2000

EXAMPLE

Steeplechase	Penalties	
	Fall of horse and rider	6
	One refusal	2
	Total	8

20 — 8 = 12 = Mark awarded.
12 x 25 = 300 = Points awarded for steeplechase.

The points thus calculated for each part are added together to obtain the total points awarded an entry for the entire competition. The highest score (individual or team) wins. The team score consists of the sum of the scores of the three highest horses on the particular team.

The Training Test

As it is improbable that America will enter this event it will be but briefly discussed here. Our lack of entries may be attributed to the fact that past experience has shown that it is futile to put any horse in this class other than one of superb quality that is also highly trained in equitation. At present the indications are that we will have no such horses available this year.

The following are the more important schooling movements required in this test, in addition to those usually specified in a training test:

Two-track at the trot to the right and left successively across the center line, seven times in advancing the length of the arena (during the two-track in each direction exactly three strides are to be made on each side of the center line); the same at a gallop with a change of lead at each change of direction; serpentine with true gallop down the center, with change of lead at each crossing of center line; the same with false gallop; the extended gallop from backing; on successive long sides of the arena four changes of leads at each four strides; six changes at each three strides, eight changes at each two strides and sixteen changes at each stride.

Obstacle Jumping—Prix Des Nations

This event will probably occur on the last day, August 12.

There are 16 obstacles of all types, varying in height from 4 feet 1¼ inches to 4 feet 9 inches, with widths of broad jumps not over 13 feet. The course is irregular and an average speed of about 15 miles per hour is required. Contestants will have no opportunity to see the obstacles or their arrangement prior to the day of the event.

Penalties

The penalties applying are the same as those for the jumping in the Equestrian Championship. Performance only counts.

Marking

In this event there are no coefficients. The score of an entry consists of the total of the penalties adjudged at each obstacle. The lowest score wins, both individual and team. A team score is the sum of the penalties awarded its three lowest horses.

Plans for U. S. Army Participation

In 1925 the Chief of Cavalry conducted studies with a view to determining the best plan for our participation in the mounted events of future Olympiads. Based upon these studies and as a continuation thereof, the Chief of Cavalry and the Training Section of the General Staff made recommendations to the Chief of Staff early in 1926 for the formation of a continuing committee to be known as the War Department Olympic Riding Committee. It was to consist of the Chiefs of Field Artillery, Infantry, Cavalry, The Quartermaster General, a representative of the Remount Service and a representative of the General Staff. The committee was to be charged with the duty of formulating ways and means, and with the organization of army riding teams to compee in future Olympic games.

Accordingly, the committee was designated and it began functioning in the latter part of 1926. The plan adopted for army participation was to have a nucleus for the equestrian team begin training immediately, using all available officers and mounts; to conduct preliminary training both at the Field Artillery

School and at the Cavalry School: then, later, to assemble all army competitors at the Cavalry School for final selection and training under the direction of the Chief of Cavalry.

The committee selected Brigadier General Walter C. Short as team manager of the 1928 team and Major Sloan Doak as team captain. It announced the policy of placing the principal dependence upon Army mounts, public or privately owned, it being deemed inadvisable to make a systematic canvass with a view to securing the loan of civilian-owned horses. However, the team manager was empowered to accept the loan of any horses offered.

It was early announced that no government funds could be expended in connection with army participation in the games. This necessitated that the committee arrange for the procurement of funds to meet the necessary expenses incident to assembling the competitors and mounts, and for the transportation and maintenance of the team on the trip.

As he has done so frequently in the past, Colonel Pierre Lorillard, Jr., again came forward and announced that he would gladly assume the task of raising the needed funds. Here it might well be mentioned that Colonel Lorillard for several years has given his hearty support towards improving the standard of horsemanship in the army and he has also been instrumental, in no small degree, in making it possible for our teams to participate each year in the important eastern shows. Without his support it is doubtful if we could take part in these coming games. He deserves our most sincere appreciation and thanks.

Following the designation of the Chief of Cavalry as War Department representative on the Executive Committee of the American Olympic Committee, Colonel Lorillard was designated by General MacArthur (President of the American Olympic Association) as chairman of the Special Olympic Equestrian Committee, which was asked to assist in developing the 1928 team and in sending it to Europe.

Besides General Short, the team manager, Colonel Lorillard's committee includes Mr. John McE. Bowman, president of the National Horse Show and president of the United Hunts Association; Mr. Alfred B. Maclay, president of the Association of American Horse Shows; Colonel John W. Converse, a prominent horseman of Philadelphia; Mr. R. E. Danielson, editor of *The Sportsman* and a prominent New England horseman; Mr. C. Groverman Ellis, who is connected with all horse activities near Chicago; Mr. O. W. Lehman, who loaned horses to the American team in 1924 and again this year; Mr. John R. Macomber, president of the Easton Horse Show Association; Mr. W. W. Mines, president of the Los Angeles National Horse Show; Major C. L. Scott, Chief of the Remount Service; General W. P. Story, a director of the Los Angeles National Horse Show; Colonel R. H. Williams, president of the American Remount Association, and Mr. S. Bryce Wing, prominently identified with Long Island and Maryland hunts.

Acting for the committee, Colonel Lorillard in February announced through the press that try-outs open to civilian and military competitors for the 1928 American Olympic Equestrian Team would be conducted at Fort Riley, Kansas, during the month of April. This is in keeping with the policy of the committee that the American Equestrian team as such is open to civilians as well as to officers of the Regular Army, National Guard and the Organized Reserves.

Developments

The Cavalry began preparation for its participation in the 1928 games during the early part of 1927, when Major Sloan Doak, Major Harry D. Chamberlin, Captain F. L. Carr, Captain W. B. Bradford and Captain Francis H. Waters were assembled at the Cavalry School and work started under Major Doak in the development and training of available Olympic horse prospects. Similarly, training was also started at the Field Artillery School, under Major C. P. George. The officers with Major George were Captain William H. Colbern, Captain Norman J. McMahon, Captain Richard Gordan and, later, Lieutenant Edwin Y. Argo.

During the fall of 1927 the Army Horse Show Team, consisting of the officers in training at Fort Riley, Captains McMahon and Gordon from Fort Sill, and twenty horses, made the eastern horseshow trip. The team met with outstanding success. (See Captain Bradford's article in the January CAVALRY JOURNAL). The team returned to Fort Riley early in December and, after a short rest, training for the Olympic games was resumed.

It was early realized as essential that a number of good Olympic horse prospects should be obtained in addition to the dozen or fifteen at Fort Riley and Fort Sill, some of which were known to be of doubtful value. In an effort to obtain additional suitable prospects from the service, the Chief of Cavalry, in December last, called upon Cavalry commanders for reports on public and private mounts which were considered suitable prospects and were available for use of the team. Based upon the reports received, the team captain had several of these horses shipped to Fort Riley. In addition, a number of valuable and well-known civilian-owned horses were generously offered by their owners.

At this writing (March 5) the status of preparations, as far as the army is concerned, may be outlined as follows:

AT THE FIELD ARTILLERY SCHOOL

Major George, in charge, his personnel now including only Captains Colbern and McMahon, and Lieutenant Argo, has several good prospects in training. It is planned that in April the best field artillery prospects in both riders and mounts will join the group in training at Fort Riley.

AT FORT RILEY

With General Short present, Majors Doak, Chamberlin and O. I. Holman, Captains A. W. Roffe, Carr, Waters, Bradford and R. C. Winchester, are now working twenty-four prospects, which are about equally divided between "three-day" horses and jumpers. Several additional horses are en route to Riley. The horses now in the stable and their classifications are given here as a matter of interest to those who know them:

Three-Day Event		Prix Des Nations	
Horse	Owner	Horse	Owner
1. *Gedney*	Government	*Jack Snipe*	Government
2. *Aline*	Government	*Dick Waring*	Government
3. *Misty Morn*	Major Doak	*Miss America*	Government
4. **Pathfinder*	Government	*Scapa Flow*	Government
5. **Proctor*	Government	*George Williams*	Government
6. **Verdon Belle*	Capt Carr	*Garcon*	Government
7. **Beau Geste*	Capt Carr	*Barrington*	Capt. Carr
8. **Shorty Kromer*	Government	*Joe Aleshire*	Government
9. *Star Shoot*	Government	*Nigra*	Government
10. **Peter Prime*	General Short	*Sandy*	Government
11. *Babe Wartham*	Government	*Acrobat*	Capt. Pierce, 5th Cav.
		Big Ben	Lieut. Kohler, 5th Cav.
*Thoroughbred.		*Fairfax*	Maj. Underwood, VC.

The following horses are en route to Fort Riley for use of the team:

Horse	Owner
Queen's Own	Government (United States Military Academy)
Lady	Government (3rd Cavalry)
Warrior	Mr. Robbins, Sewickley, Pennsylvania
Colleen	Mr. Victor Mather, Bryn Mawr, Pennsylvania
Gay Fashion	Mr. Ewart Johnston, Virginia

Other horses offered which may be obtained include *Bones*, offered by Mr. J. H. Lapham, San Antonio, Texas; *Bally Macshane*, offered by Captain F. H. Bontecou, Cavalry Reserve, and *Sure Fire*, offered by Mr. O. W. Lehman, of Chicago.

Three of the horses now in training. *Nigra*, *Babe Wartham* and *Joe Aleshire*, were operated on during February by Major Underwood, V.C., for "roaring." They are now being worked lightly, and it is hoped that they have been saved to the team, as with this unsoundness they were prohibited from entry in the games.

Training At Fort Riley

Major Doak states that all horses are being put through a systematic process of conditioning combined with training. The three-day horses are given a two-hour cross-country workout three days a week. This is mostly at a walk and trot up and down gentle slopes. In addition, a period of two hours each day is devoted to schooling, jumping on the longe, or to jumping under saddle, in accordance with the individual requirements.

Jumpers are given a two-hour cross-country workout three days each week to improve condition, and are walked, mounted or led, on the remaining three days. In addition, they are longed over jumps twice each week and also jumped under saddle twice weekly. Included with this is always a period of schooling for the purpose of securing control of the shoulders, engagement of the haunches, regulation of the pace and a high degree of balance for the negotiation of unusual obstacles.

The obstacles employed are all without wings and of a varied nature. Many

are of breadth combined with height. In-and-outs especially are being employed. In one frequently employed, the first two jumps are uprights, 13 feet apart, and the third (21 feet distant) is a double oxer, the spread of which is gradually being increased to meet contemplated conditions. Among the outdoor obstacles being used are banks, ditches, water and combinations of these types. Others included are ditches and water combined with fences, double oxers and triple bars.

The Team

It is probable that final selection of the team will be made by June 1. On about that date it is expected that it will be moved east, with a view to avoiding the intense heat usually encountered in the middle west during June.

It is anticipated that the team will be composed of the manager, the team captain, a veterinarian, from four to six riders and nine enlisted men, including a sergeant and a horseshoer. Not more than sixteen horses will be taken. Two of the riding members will probably be from the Field Artillery.

Transportation To Europe

Passage abroad will be had on the chartered Olympic boat, the "President Roosevelt," which is scheduled to sail from New York about July 10. Arrangements have been made for building the necessary box stalls between decks, and there will be room for an exercise track, as well as a space for all the equipment and sufficient forage for the entire trip.

The boat is scheduled to arrive in Amsterdam July 20. This allows but nineteen days for conditioning after landing. A longer period is desirable. However, this would require an earlier departure from New York, obtainable only through shipment on a regular commercial liner at almost prohibitive cost.

General Short plans to go abroad some time before the team sails, in order that he may complete final arrangements for accommodations and training in Holland before the arrival of the Olympic boat.

The Situation In Holland

The team will be trained and quartered at Hilversum, some twelve miles southeast of Amsterdam. The program provides that schooling and endurance tests will take place at Hilversum and that jumping events will occur in the Olympic Stadium in Amsterdam. It is hoped to effect a change and have all the equestrian events held in Hilversum, otherwise it will be necessary to transport animals by train from Hilversum to the stadium in Amsterdam, and return, on the days of jumping events. The train trip requires two hours or more. The use of a van is out of the question, as there is but one horse van in all Holland

The team has been quite fortunate in having Lieutenant J. M. Glasgow, Cavalry, Assistant Military Attache in Paris, make the preliminary arrangements in Amsterdam and Hilversum for its accommodations in the way of stables, quarters for members and training grounds. Lieutenant Glasgow has also furnished much valuable information covering such matters as temperature range

during August, weather to be expected, the terrain, obstacles common to the country, forage samples, maps and photographs of facilities reserved.

The following nations, in addition to the United States, have signified their intention to compete in the equestrian events: France, Italy, Poland, Spain, Sweden, Holland, Germany, Austria, Switzerland and Japan. England will not enter this year. Of the countries named, Germany is bringing the largest string of horses—fifteen—while Japan is bringing but four.

Participation In Previous Games

In conclusion, it may be of interest to record the composition of teams and the results of American participation in the equestrian events at previous Olympic games:

1912

Stockholm, Sweden

In charge of U. S. Army competitors: Colonel F. S. Foltz, G. S.

Riders	*Horses*
Captain Guy V. Henry (team captain)	*Chiswell*
Lieutenant Ben Lear, Jr.	*Poppy*
Lieutenant John C. Montgomery	*Deceive*
Lieutenant Ephraim F. Graham	*Connie*

Extra horses: *Bacon* and *Fencing Girl*

Military Championship

1. Long-distance ride, 31 miles in 3¼ hours.
2. Cross-country, 3 miles, in 15 minutes.
3. Steeplechase, 2½ miles in 5 minutes 50 seconds.
4. Jumping in stadium.
5. Training test.

(NOTE:—The long-distance and cross-country were combined. After a day of rest, the other events were on successive days.)

The American entries were the officers and first four horses listed above. The total score of the three highest counted as the team score.

Results: Sweden, first; Germany, second; America, third; France, fourth. (Second place lost on conformation of mounts.)

Training Competition (Dressage)

Entries: Captain Henry on *Chiswell*, and Lieutenant Montgomery on *Deceive*.

Results: Captain Henry on Chiswell was placed thirteenth. Sweden won the first three places; Germany, the next three; then Sweden two more.

Jumping Competition (Prix Des Nations)

Entries: Captain Henry on *Connie*, Lieutenant Lear on *Poppy*, Lieutenant Montgomery on *Deceive*. (No fourth horse entered.)

Results: Sweden, first, with 25 faults; France, second, with 32 faults; Germany, third, with 40 faults; America, fourth, with 43 faults.

1920

Antwerp, Belgium

Team Manager: Colonel Walter C. Short, Cavalry
Team Captain: Major Berkley T. Merchant, Cavalry

The Team

Major I. S. Martin, Cavalry
Major John A. Barry, Cavalry
Major W. W. West, Jr., Cavalry
Major John W. Downer, Field Artillery
Major Sloan Doak, Cavalry
Major H. W. Chamberlin, Cavalry
Major V. P. Erwin, Field Artillery
Major K. C. Greenwald, Field Artillery
Captain H. T. Allen, Jr., Cavalry

Military Championship

1. Long-distance ride 50 kilometers in 3½ hours. (Included 5 kilometers across country at 15 M. P. H. over 20 obstacles.)
2. Road ride—20 kilometers in 1 hour.
3. Steeplechase—2½ miles at 20 M. P. H. (This took place 30 minutes after the completion of the road ride.)
4. Jumping in stadium.

(NOTE—A day of rest was allowed after the first and third phases.)

Entries	*Horses*
Major Doak	*Deceive*
Major Barry	*Raven*
Major West	*Black Boy*
Major Chamberlin	*Nigra*

Results: Sweden, first; Italy, second; Belgium, third; United States, fourth; France, fifth. (*Deceive* eliminated in first phase for lameness.)

Training Competition (Dressage)

Entries	*Horses*
Major Barry	*Singlen*
Major Doak	*Chiswell*
Major Chamberlin	*Harebell*

Results: Sweden won 1st, 2nd and 3rd. U. S. entries awarded last three places—14th, 15th and 16th, each with same score of 19.312.

Jumping Competition (Prix Des Nations)

Entries	*Horses*
Major Doak	*Rabbit Red*
Major Chamberlin	*Nigra*
Major Greenwald	*Moses*
Major Irwin	*Jack*

Results: 1st, Sweden; 2d, Belgium; 3d, Italy; 4th, France; 5th, United States.

Individual Jumping

Entries	*Horses*
Major West	*Prince*
Major Downer	*Dick*
Captain Allen	*Don*
Major Irwin	*Joffre*

Results: Italy won 1st and 2d; Sweden, 3d; Norway, 4th; and Belgium, 5th. *Don* tied for 6th place with two foreign horses; *Dick* was 12th and *Prince* 18th. *Joffre* was eliminated.

1924

Colombes, France

The Team

Major J. A. Barry, Cavalry (Captain)	**Captain J. R. Underwood, Veterinary Corps**
Major C. P. George, Field Artillery	**Lieut. F. L. Carr, Cavalry**
Major E. W. Taulbee, Cavalry	**Lieut. F. H. Bontecou, Cavalry-Reserve**
Captain W. T. Bauskett, Jr., Cavalry	**Lieut. P. M. Robinett, Cavalry**
Captain V. L. Padgett, Cavalry	

Military Championship

1. **Training.**
2. **Endurance test—43⅛ miles—roads and paths at about 9 M.P.H.: 2½ miles steeplechase at 20½ M.P.H.: 9 miles roads and paths at 9 M.P.H.: 5 miles cross country over 28 obstacles at 17 M.P.H.: 11¼ miles on roads to finish at 11 M.P.H. Weight: 165 pounds.**
3. **Jumping in stadium.**

(A day of rest allowed between each phase).

Entries	*Horses*
Major Barry	*Miss America*
Major Doak	*Pathfinder*
Captain Padgett	*Brown Boy*
Lieutenant Carr	*Proctor*

Results: **Holland won the championship. The U. S. Team was eliminated from the competition as a team when *Miss America* and *Brown Boy* failed to finish the endurance phase. As individuals, *Pathfinder* won 3d place and *Proctor* 8th.**

Training Competition (Dressage)

No United States entries in this event on account of lack of suitable mounts.

Jumping Competition (Prix Des Nations)

Entries	*Horses*
Major Barry	*Nigra*
Major Doak	*Joffre*
Captain Padgett	*Little Canada*
Lieutenant Bontecou	*Bally MacShane*

Results: **Won by Sweden. Here the U. S. Team was again eliminated due to two horses failing to finish the course. *Little Canada* tired and went out on refusals. *Bally MacShane*, being windy, gave out before completing the course. The track, 1200 yards long, had been covered ankle deep with sand presumably on account of the ground being wet. Both *Nigra* and *Joffre* made creditable performances.**

Some Famous War Horses

By "Ultimus"

REGARDLESS of the fact that over 125 divisions of cavalry participated in the war, little, if anything, has been written concerning the noble work performed by the mounts of many cavalry leaders. It may be that so many "big things" happened during the four years of the struggle that the historian has had crowded from his manuscripts the records of these faithful animals. In time, when the more minute details are covered by authors, the lives of the famous horses will certainly find a place in the histories of their masters.

Going back to our war with Mexico, we find some excellent descriptions of the exploits of such horses as Colonel May's *Black Tom*, General Winfield Scott's *Rolla* and *Washington*, and General Zachary Taylor's *Old Whitey*, which was sent to Washington during President Taylor's administration in response to requests from many of his admirers. *Old Whitey* was never ridden after the Mexican War, and while en route to and from Washington had nearly all of his mane and tail pulled out by individuals in search of souvenirs. Stonewall Jackson's *Sorrel*, of the Civil War, is said to have resembled him much in conformation.

Black Tom was probably the most famous of the War-horses of this period. He was a thoroughbred, bred in Kentucky, and was seventeen hands high. After being placed in retirement on a Maryland farm he died and his hoofs were cut off by the relatives of his owner so that drinking cups could be made of them as a memorial to his accomplishments.

General James Grant Wilson, D.C.L., writing in the January 2, 1897, *Outlook*, says: "The Hon. Francis Lawley, the highest English authority on the subject, gives thirty-four feet as the greatest distance ever broad-jumped by an English horse in a steeplechase or elsewhere. *Black Tom* jumped thirty-five on a wager during the war, and, later, May made another bet that he would, with a flying start of fifty yards, leap *Tom* across a canal thirty-six feet wide. They came thundering along, the jet-black steed nearly seventeen hands high, and May over six feet, sitting like a centaur; *Tom* gave a mighty jump, but fell short, and, of course, man and horse had a very sudden and an exceedingly cold bath, for the attempt was made in mid winter, soon after the close of the war. For a "Charlie O'Malley" leap over a cart loaded with a cord of wood, standing in front of the City Hall, May was fined in a Baltimore court. On another occasion the dashing cavalryman rode *Tom* up the steps of the leading hotel of that city, cavorted around and through several of the principal apartments, and then calmly rode out again."

The same author also relates how Colonel May on his coal-black, powerful gelding, while in command of a squadron of the Second Cavalry at the battle of Resaca de la Palma, May 9, 1846, jumped one of the guns of a Mexican battery and captured the entire battery, together with General La Vega of the

Mexican forces. It may be interesting to note here that an emblem characterizing this feat by the gallant, dashing May now forms a part of the coat of arms of the Second Cavalry.

Civil War Horses

In the Civil War we find some wonderful chargers. Among the most celebrated of these were General Grant's *Cincinnati*, General Sherman's *Sam*, General Sheridan's *Winchester*, and General R. E. Lee's *Traveler*.

Cincinnati was a big bay animal by the famous sire *Lexington*, the leading racer and sire of his age. *Cincinnati* was used throughout the wilderness campaign by General Grant. He had great strength and endurance, and was about seventeen hands high. At one time the General was offered $10,000 for him but refused it. A gentleman in Cincinnati presented him to General Grant. He died on a Maryland farm in September, 1874.

Winchester was foaled at Grand Rapids, Michigan. He was over seventeen hands high, was powerfully built with deep chest and strong shoulders. His clear eyes were separated by a broad forehead, denoting great intelligence. He was never ill and had great endurance. He was presented to General Sheridan by the officers of the Second Michigan Cavalry when the General (then a colonel) was in command of that regiment. This was in the spring of 1862 and *Winchester* was coming three years old. This powerfully built animal had a reputation as a fast walker, and was ridden by General Sheridan through all his other campaigns to the end of the war. He died in 1878. Black in color, and of *Black Hawk* stock, he presents an interesting figure when viewed in the National Museum in Washington. At the time of his death, after being prepared by a taxidermist, he was placed at Governor's Island, New York but recently has been moved to Washington.

Some other great war-horses, detailed descriptions of which must necessarily be left out for lack of space, are Captain Philip Kearney's white *Moscow* written about in both prose and poetry; also his bay *Decatur*, and his brown *Bayard*, shot in action; General Judson Kilpatrick's sorrel *Beppo* which was shot from under him in the battle of Aldie; and Kilpatrick's most famous *Old Spot* of many colors which was captured from a confederate colonel. He was almost as celebrated as *Winchester* and is said to have lived longer than any other General officer's horse of the Civil War. He died in 1887 at the age of forty, and was buried at Deckerstown, New Jersey. General Sherman once referred to this horse as "Kilpatrick's celebrated calico horse."

In this class we also find General Joseph E. Johnson's bay throughbred *Fannie* which was in many battles, but never wounded; and General James Longstreet's *Hero*, a bay, sixteen hands high, and by the famous racer *Red Eye*. General J. E. B. Stuart wore out his good thoroughbred mare *Virginia* during the Gettysburg campaign.

Then there was *Napoleon* the eighteen hands high, bay horse owned by General Winfield Scott, who owned *Rolla* and *Washington* during the Mexican War. *Napoleon* died at the age of thirty and is said to have been the largest and most powerful horse ever ridden by a soldier. Just before General Scott died at West Point in 1867 he sent for his groom and said to him: "Peter, take care of my horse!"

General Wade Hampton had many thoroughbreds, the favorite one of which was *Beauregard*. Spirited, bold and sixteen and a half hands high, he was considered one of the finest horses in the southern armies. *Beauregard* was mortally wounded at Gettysburg and died in front of the hospital there while the wounded General was being carried in.

General Fitzhugh Lee's dapple gray *Nellie Gray* deserves mention. This mare, with white mane and tail, was stylish and active, and was selected by General R. E. Lee for use by President Davis in the contemplated review of the troops of the Army of Northern Virginia. She was killed in the battle of Winchester.

General Nathaniel P. Banks purchased his *Shenandoah* from a gentleman in Virginia. He also owned a horse called *Charlie*, reputed to be the only horse that ever threw General Grant. It is said that this fall put the General on crutches, causing his absence from the battle field and that his absence was one of the contributing causes of the defeat of the northern forces at Chickamauga.

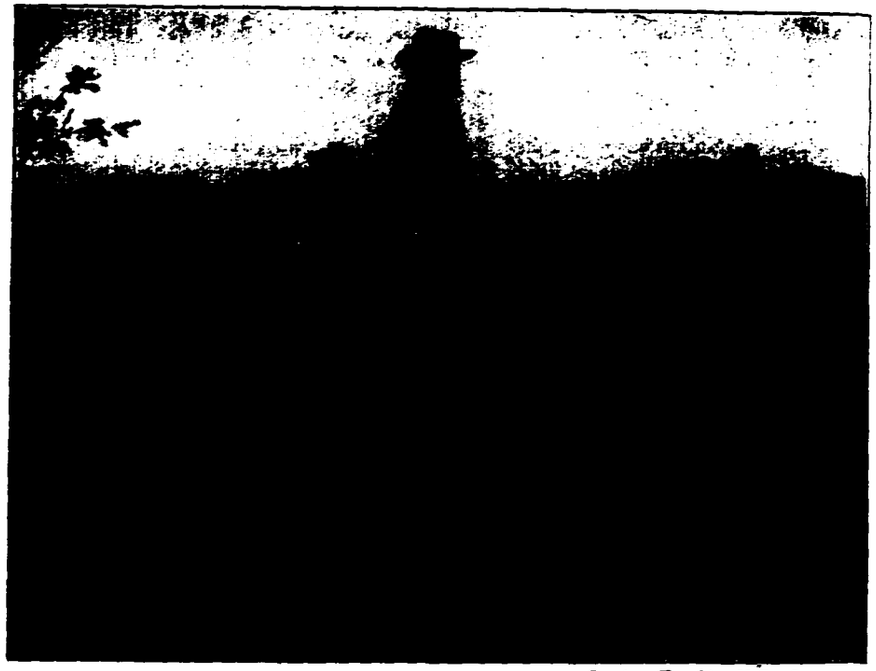
Mention should also be made of General Grant's two other horses (*Cincinnati* is mentioned above). One was *Egypt*, a thoroughbred animal from southern Illinois; and the other was *Jeff Davis*. The latter was captured on the Davis plantation in Mississippi.

And now we come to *Traveler*, the most distinguished of the various warhorses. He was born near the Blue Sulphur Springs, in West Virginia, and was purchased by General Lee from Major Thomas L. Broun, who bought him from Captain James W. Johnston, the son of the gentleman who reared him. General Lee saw him first in West Virginia and afterwards in South Carolina, and was greatly pleased with his appearance. As soon as Major Broun ascertained that fact the horse was offered the General as a gift, but he declined, and Major Broun then sold him. He was four years old in the spring of 1861, and therefore only eight when the war was closed. He was greatly admired for his rapid, springy walk, high spirit, bold carriage, and muscular strength. When a colt he took the first premium at the Greenbriar Fair, under the name of *Jeff Davis*. (General Grant also had a horse called *Jeff Davis*). The General changed his name to *Traveler*. He often rode him in Lexington after the war, and at Lee's funeral *Traveler* followed the hearse. He was appraised by a board in August, 1864, at $4,600 in Confederate currency.

When General Lee went to Washington and Lee University, "the famous grey which had borne him so faithfully amid the flying bolts of battle, now carried him to peaceful pursuits. Unheralded and unattended, having ridden from Powhatan County in four days, his simple entreé was made into the little mountain town of Lexington. As he drew rein in front of the village hotel, an old soldier recognized him, gave him the military salute, placed one hand upon the bridle, the other upon the stirrup, and stood, waiting for him to dismount." This

was the eighteenth day of September, 1865. Every afternoon, rain or shine, the General mounted *Traveler* and had a ride.

It is written by a biographer of Lee that a Mr. Senseney, the village blacksmith at Lexington, who died there in December, 1915, told the author of the volume that General Lee always took *Traveler* to the shop to be shod, never trusting him to the care of a servant while undergoing this ordeal. As the faithful old horse was spirited, the General always stood by his side while he was being shod, talking to him and enjoining patience on the part of the blacksmith.



Courtesy Houghton Mifflin Company

General Lee on "Traveler"

On these occasions the General would say: "Have Patience with *Traveler*; he was made nervous by the bursting of bombs around him during the war."

The old iron grey horse was the privileged character at General Lee's home. He was permitted to remain in the front yard where the grass was greenest and freshest, notwithstnading the flowers and shrubbery.

Traveler was of fine proportions, muscular conformation, deep chest and short back, strong haunches, flat legs, small head, broad forehead, delicate ears, quick eye, small feet, and black mane and tail. He had great "endurance of toil, hunger, thirst, heat, cold, and the dangers and the suffering through which he passed." He was responsive to every wish of his rider.

General Lee had *Traveler* with him in Virginia, the Carolinas, and back to Virginia. He rode him at "the Seven Days' Battle around Richmond, the second Manassas, at Sharpsburg, Fredericksburg, the last day at Chancellorsville, to Pennsylvania, at Gettysburg, and back to the Rappahanock." "From the commencing of the campaign in 1864 at Orange, till its close around Petersburg the saddle was scarcely off his back, as he passed through the fire of the Wilderness, Spottsylvania, Cold Harbor, and across the James River. He was almost a daily requisition in the winter of 1864-65 on the long line of defenses from Chickahominy, north of Richmond and Hatchers Run south of the Appomattox." In the campaign of 1864 he carried General Lee from Petersburg to Appomattox Court House, and during those final days of the war. He was better than half thoroughbred, was an iron gray with black points, strong and active, and sixteen hands high.

The authors who have written of *Traveler* are almost unanimous in the statement that he was of even temper, docile, and calm under fire, and easily managed. However, the writings of General Curtis Lee seem to indicate that, at times he required a strong seat and a steady hand. He says: "*Traveler* injured both of my father's hands at the second battle of Manassas, and General Lee could not thereafter hold the reins in the regulation manner."

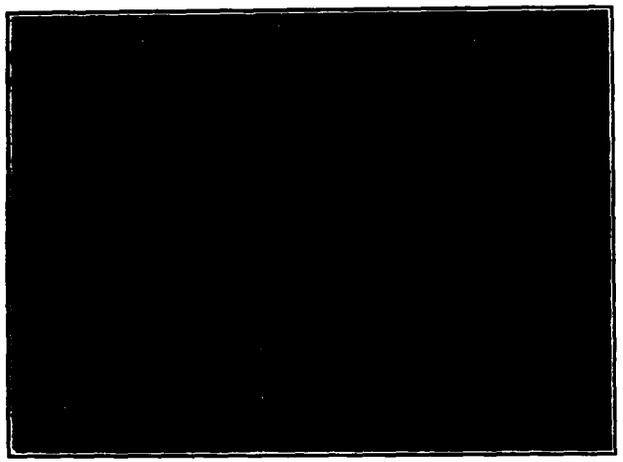
General Lee, in referring to *Traveler's* endurance as compared with his other horses, once said: "Of all his companions in toil, *Richmond*, *Brown Roan*, *Ajax*, and quiet *Lucy Long*, he is the only one that retained his vigor, the first two expired under the enormous burden, and the last two failed." Soon after the death of General Lee, *Traveler*, who had for years lived in a stable adjoining the General's home, stepped on a nail which penetrated his foot and could not be withdrawn. This caused lockjaw to which his death was due. His skeleton is now preserved in the museum at Washington and Lee University.

Horses of General Custer's Commands

It is said that General Custer, an accomplished rider, and gallant, dashing cavalryman had seven horses killed under him in four years. His favorite was *Don Juan*, a thoroughbred stallion; and his next favorite a speedy bay *Jack Rucker*, which he rode at Five Forks. Custer loved horses and dogs. In many of his Indian campaigns he rode his horse *Dandy* which he purchased in Kansas. His sorrel thoroughbred *Vic* was his mount at Little Big Horn, June 25, 1876, when his command was massacred.

Many people think that *Comanche* was Custer's horse. *Comanche* was a troop horse of Troop I, Seventh Cavalry, and since he was the only surviving thing of the attack of "Sitting Bull," the impression has come about that he was the General's mount. Note what General James Grant Wilson, D.C.L., writing for *The Outlook*, January 2, 1897, has to say: "*Comanche*, a powerful gray horse, nearly sixteen hands, the only living thing that escaped the massacre in the Little Big Horn when Custer and his command were annihilated by the Sioux, died at Fort Riley, Kansas, November 9, 1891. He was more than thirty years old, and for nearly two-thirds of that period he was on the retired

list of the United States Army, drawing a pension. *Comanche* was the charger of Captain M. W. Keogh, who was killed by the side of his gallant commander in the "Last Rally." When found, *Comanche* was many miles distant from the battlefield and nearly dead from loss of blood, flowing from seven wounds. Major Reno's command cared for him as if he had been human, and after his recovery he accompanied the survivors of the Seventh Cavalry to various posts, being finally transferred to Fort Riley, Kansas, where he died of old age. *Comanche* was daily saddled and bridled and led out for inspection,



"Comanche"

but he never suffered the indignity of serving in ranks. Captain Keogh, commanding Troop I, was the last man that ever mounted the interesting and historic old war-horse. *Comanche*, living and dead, was much sought after by enterprising showmen; but, to the credit of our Government be it said, unsuccessfully. After his death he was skillfully mounted by the orders of the War Department, and was among the most interesting exhibits at the Chicago Columbian Exposition in 1893. Several thousand Sioux Indians celebrated the twentieth anniversary of the massacre of which *Comanche* was the sole survivor by various fantastic dances and ceremonies incident to their ancient traditions."

The Horse in the Palestine Campaign

By A Student, *The Cavalry School*

IN studying the use and care of horses in this campaign, we are particularly fortunate in having the excellent history of the British Veterinary Services, from which one can obtain very complete records as to diseases, forage, losses, etc. On the other hand, the line officers seem to have confined their writings to the tactical side of the question. As a result, many details of horsemastership, marching, saddling, and innumerable other interesting subjects have scarcely been touched.

The majority of the horses used in Palestine were obtained in Australia, with a very small minority coming from England, Canada, and the United States. These Australian horses, or "Walers," are pictured as light, hardy, compact, iron-legged animals about 15 hands high. They exhibited endurance, hardihood, and powers of recuperation hitherto unknown among cavalry mounts, and the record of their performances has led to the belief that the cavalry in Palestine was mounted on super-horses. Space taken, therefore, to consider the means by which these were produced will not be wasted.

The Australians had for many years past bought thoroughbred stallions, which had failed to show the necessary speed for the English turf, and shipped them to Australia for breeding purposes. This policy had resulted in practically all of the light horses of Australia being very nearly thoroughbred. They were raised under range conditions with, in many sections, but scant forage and water. The survival of the fittest, and other forces of nature, had worked continuously and resulted in a horse much smaller and hardier than the English thoroughbred, from which it was descended. The principal sales market had been in India and the quantities exported there for use as remounts in the Indian Cavalry had encouraged the breeders to produce numbers greatly in excess of the needs of the Commonwealth. Without intending to detract in any way from the wonderful record of the horses used in Palestine, there is another side of the picture which must be shown. This is that there were produced an enormous number of horses unfit for military service and that those actually sent to Palestine were a very carefully chosen minority. The report of the Inspector General of the Australian Army for 1920 states that "* * * during the war considerable difficulty was experienced in obtaining sufficient horses of the right type to meet the demands from overseas, and it was actually estimated that less than 3% of the horses of Australia were up to the standard required for cavalry and artillery. * * * that the greatest difficulty was experienced in keeping up the supply, and that the horses sent were picked from all parts of the Commonwealth, and were selected by highly competent buyers of many years' experience."

After these horses reached Egypt early in 1915, there was a period of over two years in which cavalry was not used extensively. During this period, the horses had an opportunity to become thoroughly acclimated. They were carefully

conditioned and the unfit, undoubtedly, were further weeded out. This long period of preparation, coupled with the original careful selection, resulted in the cavalry entering the 1917 campaign horsed in a manner that will seldom, if ever, fall to the lot of cavalry in the future. This fact should be kept constantly in mind when considering the subsequent brilliant record of these horses.

In the early months of the war, the standard of horsemastership was not high. In the English units, neither officers nor men were experienced in the care of horses in the field. The Colonials were splendid riders, but were unaccustomed to using the same horse day after day over extended periods. The time spent in Egypt and Sinai was not wasted, however, and by 1917, the standard of horsemastership was high throughout the mounted units. This improvement was, in a large measure, the result of frequent inspections, advice, and suggestions given by the administrative officers of the veterinary corps and the attention given thereto by commanding officers of the cavalry units.

Throughout the last three years of the war, the outward condition of the horses was good, but this could not always be taken as a true index to the real condition, for sand had played havoc with the digestive organs of many animals. Strains incurred by draft animals in the deep sand had also seriously affected the heart and lungs of a large per cent. This outward condition was a result of intelligent use of such food and water as was available, of systematic exercise when not on the march, and of the high standard of grooming demanded by the British, but practically unknown to us. Clipping was insisted upon and in some areas was done by Egyptian and Indian labor troops who specialized in this work. Throughout the war, periods of intense activity alternated with periods of comparative rest, and during the latter a chance to recuperate was nearly always found.

The issue type of shoe was found to be too heavy and clumsy for desert work, and lasted for two or three reshoeings. A light, broad, webbed shoe, similar to that used in India and South Africa, gave excellent results, but was never obtained in quantities sufficient for issue to all units. Many injuries to feet were caused by attempting to fit shoes cold and this was not corrected until field forges were issued. It had been the experience of the British that mules could go unshod, even in the roughest parts of India, but in marching over the rough sharp rocks of the Judean hills, protection for their feet was found necessary.

Throughout the entire Palestine Campaign, the daily forage ration was below that of peace time and was, in general, of poor quality. Up to the beginning of the 1917 operations, the maximum daily ration was fixed at 10 lbs. barley and 10 lbs. of tibben (chopped barley straw), or hay, if the latter was obtainable. The food value of this ration was 23% below that of peace time. The following table of equivalents gives a clearer understanding of the value of the various feeds used:

¾ lb. oats = 1 lb. barley = 1¼ lbs. bran = 1¼ lbs. crushed maize.
1¾ lbs. hay = 3½ lbs. tibben = 2 lbs. dries.

The hay that could be obtained was of poor quality and great difficulty was experienced in inducing horses to eat it. During the Gaza operations, a "mobile" ration of 8 lbs. of grain and 4 lbs. of hay was used. This ration was more than 50% below the peace time ration, but some units were compelled to operate for a whole week on it. It must be borne in mind, too, that these rations were the maximum to be issued and that often the actual issue was much less. During the campaign in the fall of 1918, enemy forage of good quality was often captured and did much to maintain the underfed animals of the Desert Mounted Corps. It was found that animals of over 16 hands lost condition rapidly on short rations and an extra 2 lbs. of grain per day was allowed them.

A compressed ration made as follows was tried out:

Tibben	40%
Crushed Barley	35
Crushed Maize	10
Bran	5
Chopped Wheat Straw and Molasses	10
	100%

When baled, this was easy to transport and made a good feed, when composed of materials of suitable quality. It often became heated or musty, however, and so much diarrhea resulted that its use was abandoned.

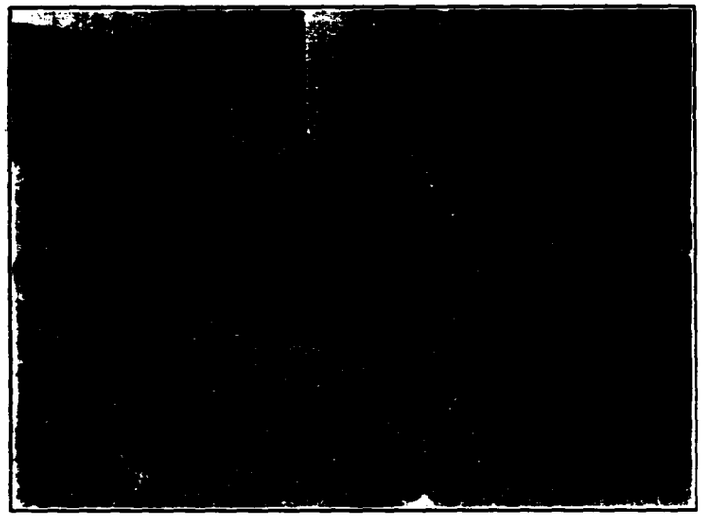
The unit with the best conditioned horses in the force was found to be feeding five times daily. After investigation this was made the standard practice throughout the corps and much improvement was noted. The practice of mixing grain and chop in paulins before filling nose bags was found to result in a very unequal distribution of grain and was abandoned in favor of putting each component directly into nose bags. The condition of some thin horses was traced to extreme nervousness while eating with other horses and these were picketed separately. Constant care was necessary to prevent animals eating sand, and muzzles were used extensively with good results.

Grazing, although poor or nonexistent in most of the area traversed, was resorted to at every opportunity. Lack of bulk feed caused horses to lose condition more rapidly than lack of grain, since the digestive organs did not function efficiently unless distended. This very important point was often neglected by organization commanders who did not believe the extra effort necessary to induce animals to eat bulk of poor quality worth while. When green forage was found near the rest areas, animals were allowed unlimited quantities, often as much as 60 pounds daily, and enormous quantities of sand were eliminated from the intestines.

Because of the arid nature of the country traversed, the question of water supply was a difficult one until the fall of 1918. This had to be carefully considered in planning operations. Those, which could not be completed within 48 hours without reaching water, were better left alone. During the Sinai advance, a pipe line was built across the desert and when beyond its radius of dis-

tribution, troops received water by various means of transportation, including camel trains. Water could sometimes be obtained by digging shallow wells in the sand, but this was often so brackish that its use resulted in the horses rapidly losing condition.

Prior to these operations, it had generally been believed that 60 hours was about the maximum period that a cavalry horse could continue without water and that several days of rest would then be necessary. This was proved to be erroneous, for on several occasions large bodies of cavalry operated continuously for 72 hours without water. One battery marched and fought for nine consecutive days during which only three opportunities were had to water. The intervals between these waterings were 68, 72, and 76 hours. During active



Courtesy The Remount

A "Waler"

An Excellent Type of Trooper's Mount

operations, units which were able to water once daily continued to maintain their animals in fair condition.

During the advance across Sinai, experiments were conducted to ascertain the number of waterings each day that gave best results. It was observed that horses, which were watered twice daily, not only maintained better condition, but by actual measurement drank more than those watered three times during the same period. This idea was so revolutionary, that two waterings daily were adopted as a standard by the mounted troops only after a careful investigation of the conditions under which the tests were made and the results obtained therefrom.

When water could be obtained in very limited quantities, waste was prevented by hand watering. Animals soon learned to drink from very shallow receptacles. Where water had to be obtained from shallow pools, it was found that, if a small ditch was dug so as to drain the pool into a shallow well from which the water could be dipped, the pool was not fouled and the maximum amount of water could be obtained.

Throughout these campaigns, climatic conditions and tactical considerations appear to have made night marches the rule rather than the exception. These were particularly troublesome because of the extremely difficult nature of terrain and the fact that the available maps, though accurate in the main, were lacking in detail. The advance guards of large bodies of troops usually dropped men equipped with flash lights every quarter of a mile. These flashed back intermittent signals and the men were picked up by the main body which in turn dropped others to guide the rear guard. In order to reach their first objectives at Beersheba, the Anzac and Australian Mounted Divisions made night marches of 25 to 35 miles, respectively. During the first Amman raid, the 2nd A. L. H. Brigade made a night march, averaging one mile per hour, in a heavy rain, over extremely difficult country. Under the existing conditions, this was a very remarkable achievement.

The normal scheme of march was to ride 40 minutes, lead 10 minutes, and rest 10 minutes during each hour. The nature of the country was such that the scheme was seldom followed and the variations were too numerous to cite. All gaits were used, but hock deep sand and rough terrain made walking and leading the most common. March formations varied from line of columns in open country (to avoid dust) to a whole brigade in single file where no other formation was possible.

The equipment carried was reduced to a minimum during active operations, overcoats and blankets not being ordinarily used. Three days' rations, mostly in tins, and a very few articles of clothing were packed in cantle pockets. From 19 to 21 pounds of grain were carried in two nose bags, while a third day's grain was carried in limbered wagons, three to each regiment. The saddle, rifle, ammunition, and sword brought the weight of the complete pack up to about 125 pounds. Add to this 150 to 175 pounds for the rider (the Colonials were generally big men) and we have the horse packing 275 to 300 pounds.

Records of innumerable severe marches are available, but limited space permits the presentation of only a few. In January, 1917, the Anzac Division and the 5th A. L. H. Brigade marched 65 miles in 24 hours. The advance guard did 87 miles and the horses were under saddle 20 to 27 hours, respectively. Both were without water for 34 hours. During the final great drive, the 4th Division marched 85 miles, fought two skirmishes, and captured 1,400 prisoners in the first 34 hours, losing only 26 horses. After a short rest to feed and water, one regiment continued in a night march over a difficult mountain trail and captured its objective next morning, having covered 97 miles since beginning its march. The 5th and Australian Divisions made 70 and 68 miles, respectively, during the first 36 hours, fighting as they went. The 5th Division marched 567

miles, fought six actions, and captured 11,000 prisoners in 38 days. Examples of rapid marches by large units are: 11 miles in 70 minutes by the 3rd A. L. H Brigade from Lejjun to Jenin, and 13 miles in 80 minutes by the 3rd and 4th A. L. H. Brigades in the Es Salt raid.

The alternate periods of intense activity and comparative rest caused the use of practically every conceivable type of camp and bivouac. In the semi-permanent camps, some form of shelter was usually attempted for the horses. During offensives, however, this was impossible and it was found that, in such a dry climate, the horses stood the full rays of the sun without ill effects. During the rainy season, every effort was made to get dry standings and, when the horses' feet and legs could be kept out of the mud, they did not suffer. Rope picket lines and tie ropes were soon eaten by the hungry animals, but steel lines and light steel tie chains gave excellent results.

In the semi-permanent camps, manure was best disposed of by placing it in turn on each of four flat piles. It was thus exposed to the direct rays of the sun for three days and dried out sufficiently to prevent the breeding of flies. Exercise tracks, made of manure, were used to prevent dust and protect the feet from wear by sand.

In considering casualties we, as commanders of smaller units, are more interested in the loss to the organization by death or evacuation during some particular operation than in ultimate mortality. An enormous mass of statistics is available on this subject, but lack of space prohibits the careful analysis necessary for clearly understanding them. The following table gives some idea of the losses which we must expect, even with excellent horsemastership and skillful veterinary service:

Period	Approx. duty	Evacuated	Ultimate Loss
Jan.-June 1917	Inactive	38.9%	4.7%
July-Dec. 1917	Active	22.1	8.0
Jan.-June 1918	Inactive	21.7	6.2
July-Dec. 1918	Active	24.9	10.7
1917-1918	Alternate periods	107.6%	29.6%

The above includes neither the enormous number of animals that were treated in the field by veterinary units nor does it include those sent to convalescent depots to recuperate from debility resulting from periods of activity. These convalescent depots were maintained in order to clear the hospitals and provide a place to rehabilitate horses which were run down and did not show improvement after a short period of rest with their organizations. About 85% of the animals admitted to hospitals were ultimately returned to some form of duty, a fact which speaks well for the efficiency of the veterinary service. Generally, the chief causes of loss to organizations were exhaustion, debility, and digestive disorders. These are so interrelated that it is difficult to classify losses resulting from each. The rise in losses from digestive disorders during periods of activity led to a revival of the old saying, "Colic is a disease of work."

The lessons to be derived from a study of these campaigns may be stated as follows:

To achieve maximum results, the commander must know the powers and limitations of cavalry and *must conserve its mobility* by refraining from using it on scattered and indefinite objectives.

Modern conditions will force cavalry to march principally at night.

Large losses in horses must be expected, but can be minimized by good horsemastership.

To be mobile cavalry must be well mounted, and to produce good mounts requires many years' labor and much waste.

Failure of line officers to keep diaries and notes about horses in campaign deprives later generations of much valuable information.

The best condition of animals is obtained from feeding five times and watering twice daily.

Horses can be kept in fair condition for an indefinite period, if watered once daily.

Horses can continue for 72 hours or more without water.

Bulk feed is of utmost importance in maintaining condition.

Cavalry packs are, in general, too heavy and many articles not absolutely essential must be discarded.

Men experienced with horses are becoming very scarce and officers will have to be expert horsemasters to overcome this deficiency.

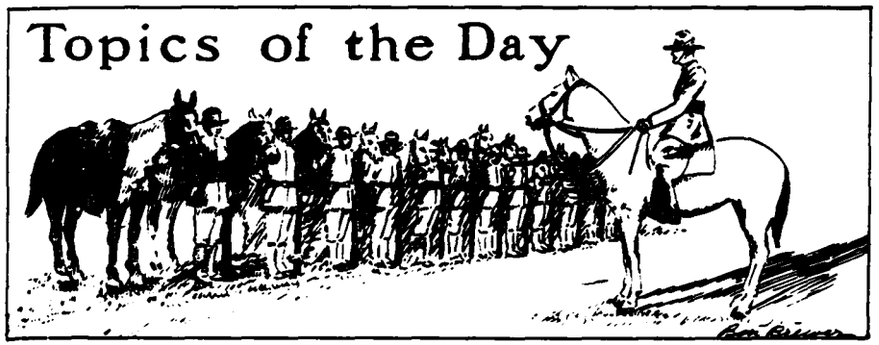
TOM'S LETTER

Dear Ed:

Since having taken the course at Riley I been in considerable demand as a instructor on riding on a horse. I been able to encourage people quite a bit by there just watching me ride, if you know what I mean Ed. Of course there are horses and horses as you know. The Perishon is a tremendous mare of a horse which used to pull the brewery wagons before they become passey—the latter I mean. Then there is the thorobread which is a horse whose papa and mama is known respectably. They keep one at Riley for all visiting dignitaries to get their picture took off of. Then the cold blooded horse is one which they have got to keep blanketed in winter otherwise he will get scarlet fever or kindred diseases. I sprung a surprise on the class the other day—I says Boys whats a thoroughpin? One wise cracker says why sir thats a thoroughpin your riding now. Of course It wasnt Ed because a thoroughpin is our name for one of them big diaper pins to tie a blanket with so you can see how the class laughed at that poor wise cracker. I will say that I got my class pretty well schooled on doing shoulder in and shoulder out, ditto on the haunches and walk and trot on *2* tracks. That probably wont meant much to you Ed since you probably think how can a horse throw his shoulder in and out etc. and why do they have tracks in a riding hall? They don't do neither of them things. First I say Shoulder In, March, HO and then the riders get theirselves all out of shape and seem to be doing something. The horses, and they are really as intelligent as Rin Tin Tin or Black Beauty, look around to see whats biting their riders and then everybody says, how fine. Horse back riding is grand exercise in addition to being a king of the sports and does serve a purpose. For example when Paul Reveres friend hung out the 1 if by land—*2* if by sea lantern how could Paul have roused them New England farmers unless his horse had of trotted loud on the pavement. Could Allenby have reduced El Moogar and won Beer Sheba without them fine desert mounts? Would Hanna Bull have ever got across the Alps on foot? No sir Ed—"vigormous mobilataty" as they say at the Cavalry School which means "we got to hurry when we're strong."

While I havent been selected for the Olimpyc team Im pretty good at jumping. Harry got policed at a jump the other day and he says well what was wrong? Well I says most everything but principally when you fell off you wasnt with yr horse. Then I see when you was hanging around his neck you was whispering in his ear and you know and I know that no horse likes whispering in its ear. Next week I will teach them the eyetalian seat. As somebody said the other day I was one with the horse. I wasnt sure whether they added anything else after the "one" or not. But do come and see me exercise my equestrian tackt whatever that is. As ever yr friend

TOM.



Plans for Polo

By the Army Central Polo Committee

WITH spring approaching plans are being made by the Army Central Polo Committee for an aggressive season. Not only will the army again enter the Open Championship, having benefited from last year's experiences therein, but it will also defend the Junior Championship, won last year for the fifth time in the past six years, and play an active season in preparation for the International Military Tournament, which may be held in the United States in 1929. The Chief of Staff of the Army, Major General Charles P. Summerall, has approved initial plans for the season, and is enthusiastic in his hopes for a successful year. To start the season, a team of seven officers and mounts will assemble at Mitchel Field, Long Island, by May 15.

By virtue of increased handicaps, three of the members of last year's army squad have become ineligible for play in the coming Junior Championship Tournament. This necessitates organizing an almost new Junior team. Accordingly, after careful consideration, the Army Central Polo Committee has selected a list of twelve players as possibilities. Letters have been sent to the commanding officers concerned to ascertain if these officers can be made available. The distance from which it is necessary to bring a player and horse is, of course, a factor when funds are limited. Questionnaires have been sent to each of the twelve officers and final selection of those who are to try out for the team will be made shortly. In the selection of these players, the committee has continued its policy of the past to bring East each year as many young players as practicable. In this way only will it be possible to improve the play of the army as a whole and establish a reserve of players for future years.

This year again the question of mounts is of paramount importance. The further the army goes in high-class polo, the more necessary becomes a permanent string of top-notch mounts. This was never more evident than in the Open Championship play last summer. During the past few years a nucleus

of ten or twelve horses for such a string has been maintained at Front Royal, Virginia. However, this year, in anticipation of a creditable showing in the Open Championship and in preparation for a probable invasion by the British Army team in 1929, more than a mere nucleus becomes imperative. With a view to mounting the team satisfactorily, the committee sought the aid of the Quartermaster General, who immediately cooperated by placing at the team's disposal a number of high-grade prospects at the Remount Depot, Fort Reno, Oklahoma. These remounts are being trained by Major E. G. Cullum, Q.M.C., and Captain C. A. Wilkinson, a member of last year's army team, and substitute forward for the American International Big Four. While it is realized the output of made mounts suitable for Open Championship play may not be considerable this year, it is thought that in future years this depot can be counted on providing approximately twenty top mounts for the team. To further round out the string, the Remount Service turned over to Captain Peter Rodes, last year's team captain, five young horses. These mounts are being trained at Fort Bragg, North Carolina, but how many of them prove to be of high caliber is yet problematical. In addition to the above sources, the committee has hopes of securing for the string outstanding horses from various garrisons and regiments where the game is played. As partial recompense for each horse thus obtained, organizations furnishing horses for the army team will be shipped four remounts in return. It, therefore, can be seen that the success of future army teams depends to no small extent upon organization commanders, the enthusiastic support of whom, so willingly given heretofore, is earnestly sought.

Only polo mounts owned by the respective governments or by officers are eligible to play in the British-American Military Tournament. And only the very best of these are fit for this tournament and National Championship polo. Such mounts require several years' continued training and care in the regiments and garrisons to arrive at the stage when they are suitable for army team polo. In the meantime, the regiment has had the benefit of the play of the mount in regimental and intra-circuit tournaments.

In the continued riding and training of mounts and in their care and conditioning lies the experience and training of mounted officers. This is one of the prime justifications for the maintenance of polo in the army. Polo demands great efforts from horses. They should, therefore, receive the most assiduous care and attention from the officers who train and use them. By this personal care and attention to the details of feeding, grooming, exercise, bitting and stabling, officers learn to be horsemasters as well as horsemen. That constitutes the real training benefit of polo to the army. The committee, therefore, feels that a most equitable arrangement has been made in the alloting to organizations of four top-class prospective polo mounts for each finished mount suitable for the army team furnished by a regiment or service school. This policy was inaugurated last season.

The army team has no reservoir of mounts to draw upon and only through the cooperation of polo-playing organizations in this manner can the army team be mounted or adequate preparations for next year's Military International series be made. Accordingly, it is hoped that the request for assistance in the matter of supplying the best trained mounts for the army team will be met in the above spirit.

The committee expects to take a step forward this coming season in providing the army team with a manager, charged with administrative control of personnel, with supply, with the training of horses, with stable management and with necessary disbursing of funds. Heretofore these details have been left to the team captain and have taken much of his time. It is thought that the team captain should be freed from these executive duties by an officer devoting his entire time and attention to them. As a result, a better conditioned string should be made available for play and the army stables at Mitchel Field should benefit greatly. It is also believed that the team manager should be a player of sufficient skill to fill in when needed in practice games.

During the past year the United States Polo Association has spent $20,000 on the "Army Polo Center" at Mitchel Field. A new field has been built, as well as new saddle rooms, feed rooms, quarters, mess hall and kitchen. Since it is proposed to quarter visiting foreign teams at the Army Polo Center, this installation will always be a center of attraction in eastern polo circles and one of which the army can well be proud.

Indications point to an interesting season for regimental and garrison teams throughout the service. The army is well equipped to make a presentable showing wherever intra-circuit and twelve-goal polo is played, inasmuch as regimental polo in the army fits in with this general class of play more than in any other. In every geographic division into which the country is divided army teams can reasonably be expected to provide strong competition. The winter play of the Fort Bliss team in the tournament at Midwick and the fast polo of the San Antonio Winter Tournaments have given army teams further experience and have demonstrated the constantly increasing caliber of army polo. This year, as in the past, it is hoped that the army will be represented in the Inter-circuit, Twelve-goal and other championships on Long Island.

Major Adna R. Chaffee, General Staff, has been designated by the Secretary of War as chairman of the Army Central Polo Committee, to succeed Lieutenant Colonel Nelson E. Margetts, recently transferred to Chicago, Illinois. Major Rene E. DeR. Hoyle, General Staff, has been named as member of the committee to fill the vacancy created by the new assignment of Major Henry W. Baird, Cavalry.

Correction

NOTE. On page 26 of the January, 1928, CAVALRY JOURNAL, the sub-title to the photograph of the Goodrich Trophy states that the size of the trophy is 1½ by 2¼ *inches*. This should read "1½ by 2¼ *feet*."

POLO TOURNAMENT DATES, 1928

Club	*From*		*To*	
Midwick Country Club	January	27th	February	12th
San Antonio Polo Club, Eighth Corps Area	February	12th		
Flamingo Polo Club	February	1st	February	29th
Santa Barbara Polo Club	February	17th	March	4th
Camden Polo Club	March	3rd	March	24th
Aiken Polo Club	March	5th	March	17th
Del Monte Polo Club	March	9th	March	25th
San Mateo Polo Club	March	30th	April	15th
Sandhill Polo Club (Invitation)	April	7th	April	21st
Bryn Mawr Polo Club	May	12th	May	29th
Boise Polo Club	May	12th	May	29th
Philadelphia Country Club	May	26th	June	9th
Meadow Brook Club	June	9th	June	30th
Rockaway Hunting Club	June	23rd	July	14th
Broadmoor Polo Association	June	30th	July	14th
Point Judith Polo Club	July	14th	August	11th
Suneagles Polo Club	July	21st	July	28th
Rumson Country Club	August	4th	August	18th
Broadmoor Polo Association	August	11th	August	25th
Myopia Hunt Club, Dedham Country & Polo Club	August	11th	August	29th
Miami Valley Hunt & Polo Club	August	25th	September	1st
Onwentsia Club	September	1st	September	15th
Oakbrook Polo Club	September	23rd	September	30th
Open Championship, Junior Championship, Inter-Circuit Championship, Twelve Goal Championship	To be decided later			

A good horse should have three propyrtees of á man, three of a woman, three of a foxe, three of a haare and three of an asse.

Of a man—Bolde, prowde and hardye.
Of a woman—Fayre breasted, fair of hair and easy to move.
Of a foxe—A fair taylle, short ears, with a good trotte.
Of a haare—A grate eye, a dry head and well ronnynge.
Of an asse—A bygge chynn, a flat legge and a good hoof.

Wynkyn de Worde (1496).

The Dublin Horse Show

THE Dublin Horse Show is a great horse fair. Practically every horse in the show is for sale, and breeders and dealers from all over Ireland exhibit them there for that purpose.

There are four big rings and the various classes of hunters, polo ponies and young stock are shown there almost continuously during the first three days. Then in addition, they have a very big enclosure with the jumping course that is not in use except for competitions.

In Ireland, as far as shows are concerned, the line is very definitely drawn between hunters and jumpers. Horses are not required to jump in hunter

Photo by Frank O'Brien, Fermoy

"Knockenan"

Bay Gelding—4 Years—by Sir Roland—Sipango by Islington. Winner of the Samuel Usher Roberts Perpetual Challenge Cup

classes. In most shows it is necessary for an entry to have a certificate from a Master of Hounds that it is a qualified hunter and its ability to jump is taken for granted.

In the jumping classes performance is the sole criterion, and it makes no difference what a horse looks like so long as it can get around the course without faults. As an example, the most brilliant jumping horse that I saw at Dublin last year was a scrawny little animal, about fifteen hands high, that no one would look at a second time, but it was the best jumper, especially over banks, that I have ever seen. An interesting thing about the Dublin jumping course is that it is an outdoor affair, with obstacles such as are met in the hunting field, and the course must be negotiated at a hunting pace.

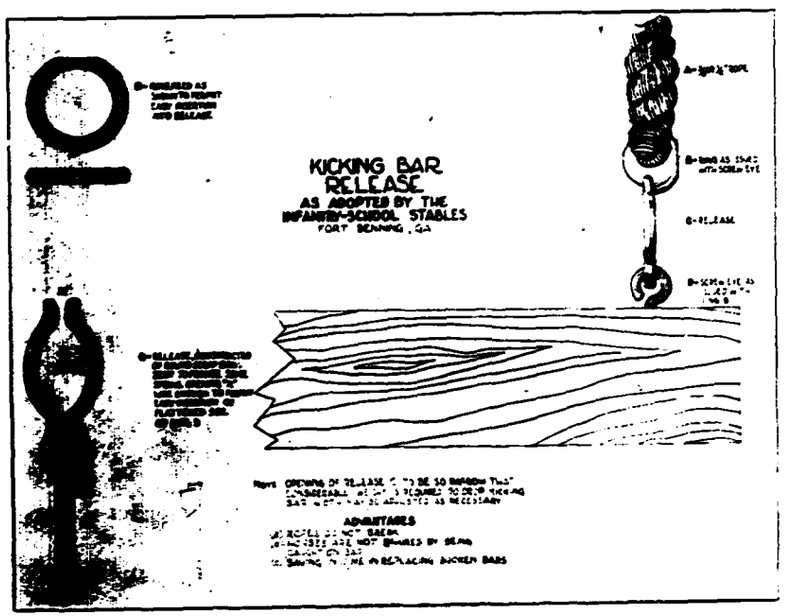
In judging hunters, they pay great attention to basic conformation and gaits. A horse must have a free walk, trot, canter and gallop, and the last two gaits

must be as nearly effortless as possible, with a minimum of flexion of the knees and hocks. Another all important feature is absolutely true action in a vertical plane of both front and hind feet. There must be no intimation of paddling or other fault of action which would cause a horse to knock its legs when it becomes tired. Other things being equal, the way a horse moves at all gaits is the deciding factor in hunter classes.

The Dublin Horse Show holds its own as being pre-eminently the greatest show of its kind in the world today, both from the number of horses actually exhibited and the fact that eighty per cent of the entries are shown at Dublin for the first and last time. This latter feature in itself demonstrates the outstanding character of the show, when compared with other international displays and, while Dublin is old in age, it is annually new by the display of animals sent forward for show and possible sale.

The following comparative figures are interesting:

	1924	1925	1926	1927
Thoroughbred Stallions, Yearlings, and Brood Mares	150	158	123	121
Made Hunters, 5 years old and upwards	460	435	444	393
Young Horses suitable for Hunters	101	126	176	201
Riding Cobs and Ponies	88	82	102	146
Harness Horses	93	115	85	94
	892	916	930	955



Cross Country Racing In Virginia

PROBABLY of more interest to the army than the growth of flat racing is the increasing popularity of the point-to-point races, now held wherever hunting people gather. The result as seen here in Virginia is a great demand for the clean bred hunter or chaser that can go a distance.

In Richmond, for the first time in years, there will be several cross country races put on this spring, in May. The 307th Cavalry is greatly interested, and hopes to have several entries. Any other organization that may find it convenient to ship to Richmond will be notified later of the conditions for the races.

Army to Train Entrants for Olympic Games

THE Secretary of War has designated Major General Herbert B. Crosby the Chief of Cavalry, as the representative of the War Department to serve on the Executive Committee of the American Olympic Association. In connection with the Olympic games to be held in Amsterdam, Holland, in 1928, the War Department has agreed to conform to the request of the Olympic Association to prepare teams for the Modern Pentathlon and Equestrian Events, both of which are military in nature.

The Pentathlon consists of five events, cross-country riding, cross-country running, swimming, pistol shooting and fencing. The Equestrian Events consist of a training test of ten minutes' duration, an endurance test of thirty-six kilometers, and jumping, the latter to be held at the Olympic Stadium. The commanding general of the Second Corps Area will have charge of training for the Pentathlon, which already has been started for a few contestants of known ability. It is expected that additional Army candidates will materialize as a result of local tests, and it is hoped that some may be found in the Navy, Marine Corps and at the colleges.

The riding team will receive its final training at Fort Riley, Kansas. Preliminary training of officers and mounts is now under way at the Field Artillery School, Fort Sill, Oklahoma, and at the Cavalry School, Fort Riley, Kansas, where there are now assembled some officers and mounts of Olympic possibilities. It is the present intention to send to Fort Riley early this spring, after try-out, a few more of the best riders and mounts for final training and selection of the team.

Army Horses Now Permitted to be Returned to the U. S.

NEW regulations which have just been issued by the War Department, upon the recommendation of Major General Fred W. Sladen, Commanding the Philippine Department, will permit horses of the Army, including officers' private mounts, to be returned to the United States upon the certificate of an officer of the Veterinary Corps of the Army that the animals have not been exposed to such diseases as glanders and surra during the

preceding sixty days. In addition, they must show negative reaction to the mallein test for glanders and blood examinations for surra. Upon arrival in the United States, the horses will be subjected to a twenty-one day quarantine and the tests for glanders will be repeated.

From the time of our occupation of the Philippine Islands to the present time, the shipment of horses from the Islands to the United States has been forbidden by the regulations of the Department of Agriculture as a precaution against the introduction of diseases which exist in the Philippine Islands such as glanders, surra, farcy, and epizootic lymphangitis.

This regulation worked a hardship, particularly on officers who owned horses and who were ordered to the Philippines for duty. They either were forced to leave their horses in the United States and thus be deprived of their use during the period of their tour of duty or, if they elected to take their horses with them, they were forced to dispose of them, upon completion of their tour of foreign service, regardless of sentiment and financial loss.

Riding Hall Floor of Sand and Shavings

1. Remove all the old footing and level clay floor of hall.
2. Haul in shavings and dump evenly in piles across one end of hall from one long side to the other.
3. Spread these piles of shavings evenly across hall at least 10 inches deep, so as to cover a section of hall.
4. After spreading shavings sprinkle well with hose or water cart.
5. Continue with next section of hall in same manner as the first.
6. After having spread shavings evenly over the entire hall, be sure that they are well sprinkled but not too wet. If they are not well sprinkled a loose footing will result; if they are too wet, a boggy footing will result.
7. Having spread and sprinkled shavings put on one and one-half to two inches of coarse sand. The sand is spread evenly with shovel in the same manner as the shavings, or else spread directly from the carts or wagons hauling it.

Note: All spreading of sand and shavings must be done in sections from one long side to the other in order to insure uniformity in depth of footing. A floor with a ten-inch depth of loose shavings is fairly good, but a depth of 12 inches of loose shavings is better, as the wetting and the sand on top of shavings will pack them down to a depth of 8 or 9 inches.

The Long Island Polo Center

By CAPTAIN C. H. GERHARDT, *Cavalry*

LAST summer the Army polo center at Mitchel Field, Long Island, was put in really first class shape, due to the efforts of Mr. L. A. Stoddard, President of the Polo Association. This plant was taken over by the Polo Association for repair and upkeep. Naturally, the buildings and the land still belong to the Government. A total of about $20,000 was spent on the repair of the stables and new buildings and a first class field are now under construction on the location of the old field. This new construction consists of a complete renovation of the "hangar" stables, quarters for the grooms, mess, veterinary hospital, hay sheds and the road, as well as the enlargement and extension of the polo field.

Meadowbrook, as everybody knows, is the polo center of the world. The most important fields in this vicinity are as follows: International Field at the Meadowbrook Club, the Cochran Field, and three other splendid playing fields. These are open only to members of the Meadowbrook Club, their guests and members of the Army Polo Team. Due to the kindness of the club members, the Army has always been allowed to play at this club without any expense. About two miles away from the Meadowbrook Club on the far side of Westbury you find the Heckscher Field and Phipps' plant of two fields. Farther on in Roselyn, Harold Talbot has a plant of stables and two fields; following this same direction to Port Washington you come to the Sand Point Club, which took over the splendid playing fields belonging to the late Julius Fleischman. Mr. Russell Grace has two splendid fields just across the road from his lovely residence in Old Westbury. Mr. Fred Post, the well-known polo pony dealer has a large plant in East Williston. He has several schooling grounds and one small ground where he plays his young ponies. He handles a tremendous number of ponies each year through his buyers in Canada, Texas and Oklahoma. These buyers pick up likely prospects, school them a while, and send on the good ones to Mr. Post for further schooling and sale. Mr. Post's reputation is of the highest, and anyone getting a pony from him can always be sure of satisfaction.

Selection of Students for the Command and General Staff School

THE recent decision of the War Department to commence a two-year course of instruction at the Command and General Staff School at Fort Leavenworth, Kansas, in September, 1928, for 120 students, and at the same time to continue the present course of one year for the school year 1928-1929 for 80 students, has made necessary a change in the existing policies governing the selection of students for that school.

The policy now in effect prescribes availability for attendance at the schools by all officers of combatant branches, less than fifty years of age, with satisfactory records of service and who possess certain fundamental information regarding the tactics and technique of the special arms and the solution of tactical problems. The student officers in general are selected from field officers and the senior one thousand captains, although chiefs of branches are authorized to recommend ten per cent of their quotas from among the other captains.

These policies will be modified so that officers detailed to attend the final one-year course of instruction shall be selected, as far as practicable, from field officers, who, by reason of age, might not have an opportunity to attend the two-year course.

For the one-year course, seventy-five students will be alloted to the

combatant branches and five students to the non-combatant branches. The students alloted to the combatant branches will be apportioned as follows: Infantry, 30; Cavalry, 11; Field Artillery, 12; Coast Artillery, 10; Engineers, 5; Air Corps, 5; Signal Corps, 2; the Adjutant General's Department, Quartermaster Corps, Medical Corps, Ordnance Department and Chemical Warfare Service will furnish one student each for this course.

Of the 120 students for the two-year course, 100 will be alloted to the combatant branches, 10 to the non-combatant branches and 10 will be selected by the Secretary of War. Of those selected from the combatant branches, 41 will be from the Infantry, 13 from the Cavalry, 16 from the Field Artillery, 15 from the Coast Artillery, 7 from the Engineer Corps, 6 from the Air Corps and 2 from the Signal Corps. One student will be alloted to each of the non-combatant branches except the Medical and Quartermaster Corps, which will be given 2 and 3 students, respectively.

Drills At Fort Myer

THE Third Cavalry (less 1st Squadron) has been engaged on special work during the past three months in rehearsal for and the presentation of the winter exhibition rides. These rides are given every Friday afternoon during January, February and March.

Each troop has developed one or two specialties for exhibition purposes. A Friday exhibition usually consists of a squadron ride, all members carrying a lance with pennant, an officers' school ride, a rough ride, monkey drill, tandem ride, officers' or non-commissioned officers' jumping, and an artillery drill.

During the past months the following have specially witnessed these rides and been accorded honors: Secretary of War Dwight F. Davis, Major General Charles P. Summerall, Chief of Staff, Major General William D. Connor, Commandant Army War College, Major General Herbert Crosby, Chief of Cavalry, Major General Lutz Wahl, The Adjutant General, Major General W. C. Rivers, The Inspector General, and Brigadier General H. O. Williams, Commanding 16th Infantry Brigade.

For regular duty the garrison has carried on the usual winter school, equitation work and duties in connection with escorts in Washington and honors rendered at Arlington National Cemetery.

On February 22, 1928, the command participated in a large parade at the Washington Birthday Celebration held at Alexandria, Virginia. The parade was reviewed by President Coolidge, Governor Byrd of Virginia and a number of prominent citizens.

Pistol and Saber Practice Combined

IN order to stimulate actual war conditions by teaching the cavalry trooper to draw a saber and continue the fight after he empties his pistol, changes in the present mounted pistol and saber courses have been made for all regular army cavalry units, effective January 1, 1928, combining the separate qualification courses previously employed into one course. While this new feature should prove a great time saver over the old method of conducting pistol and saber practice separately, it is also conducive to good horsemanship, and serves the purpose of making the requirements for qualification in the mounted pistol course more closely on a par with the requirements for qualification in the dismounted pistol course. The change involves no increase in ammunition and no additional expense to the Government.

In the proposed course the trooper first gallops along a pistol track, firing seven shots at standing silhouette targets on the right. Continuing to gallop, he reloads the pistol with seven shots and fires at seven other targets arranged in various positions on his left. The pistol, empty, is returned to the holster, the saber is drawn, and the trooper gallops to the saber course. Here he attacks each of the ten individual dummies, which are variously arranged to the right and left along the 300-yard loop track. Some dummies are placed at the height of a mounted man, others at the height of a man standing, and some are on the ground. Three of the saber targets are suspended over ditches or hurdles, which must be jumped while the dummy is being attacked by the trooper. Minimum time limit is allowed for the combined course, which requires that the trooper maintain the gallop throughout.

The combined pistol and saber qualification course has as its object the establishment of a standard by which officers and men in the cavalry may be uniformly judged as to their proficiency, mounted, with these arms.

The new requirements for qualification with the pistol are given in the following table:

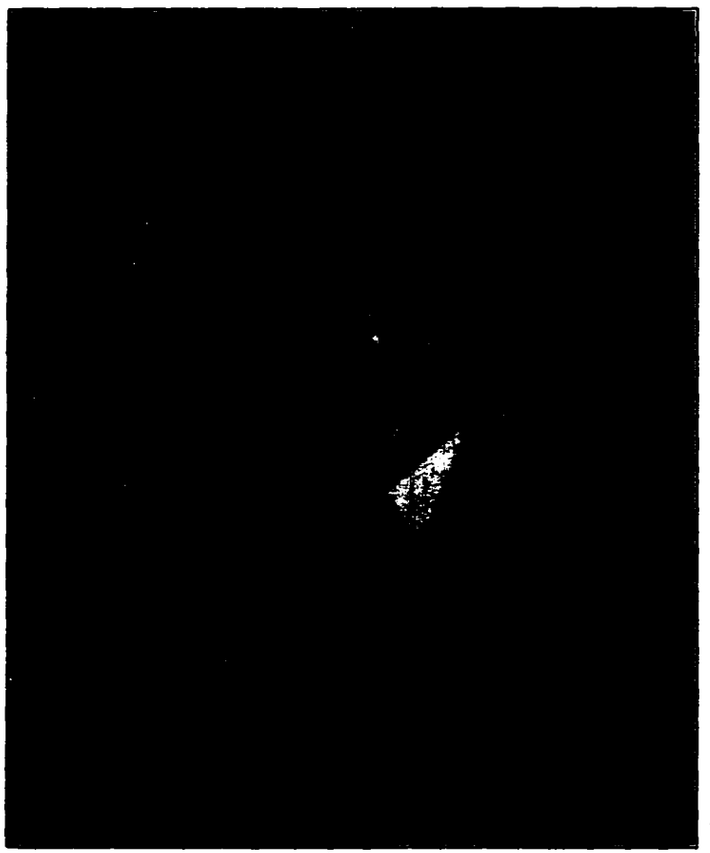
Grade	Percentages
Pistol expert, mounted	at least 82 per cent (23 hits out of a possible 28)
Pistol sharpshooter, mounted	at least 71 per cent (20 hits out of a possible 28)
Pistol marksman, mounted	at least 57 per cent (16 hits out of a possible 28)
Unqualified, mounted	less than 57 per cent

The new requirements for qualification with the saber are as follows:

Grade	Percentages
Expert swordsman	at least 90 per cent
Excellent swordsman	at least 85 per cent
Swordsman	at least 75 per cent
Unqualified	less than 75 per cent

The Retiring Secretary-Treasurer-Editor

MAJOR KARL S. BRADFORD, Cavalry, who has been Secretary and Treasurer of the Cavalry Association and Editor of the CAVALRY JOURNAL since August, 1927, and connected with the work of the Association for about a year prior to being elected editor, has been relieved from duty in Washington and is now on his way to Camp Stotsenburg, Philippine Islands, to join the 26th Cavalry, having sailing from New York on March 7.



Major Karl S. Bradford

His natural editorial ability manifested itself in the splendid issues produced by him. His business management of the affairs of the Association were of the same high standard as his editorial work. Should the present issue please its readers, the credit is due to Major Bradford's efforts prior to his departure.

At the last annual meeting of the Association a vote of thanks was extended to him for the efficient manner in which he had conducted the affairs of the Association.

The Maryland Hunt Cup

IF there is one race in the United States, which may be justly called the American Grand National, it is the Maryland Hunt Cup Point-to-point, which has been run yearly in the Worthington Valley near Baltimore for the past thirty-four years.

The race is open only to members of recognized hunts and is, therefore, confined to gentlemen riders. The chance to win is the greatest inducement offered, as the winner receives only a simple silver trophy and a leg on the Gold Challenge Cup, which must be won three times to procure permanent possession. Mrs. Raymond Belmont is the only owner to have gained two legs on the cup to date.

Courtesy The Remount

"Billy Barton"

The weights carried are 165 pounds, with a 5-pound allowance for five-year-olds and a 15-pound allowance for four-year-olds.

The course is a measured four miles over turf, with twenty-two stiff post and rail fences, varying from three feet ten inches to four feet ten inches in height, only two of the obstacles being under four feet. Each post is solidly embedded in the ground and the rails are very stiff, being broken only when several horses hit simultaneously and often not then. No jump is taken more than once and there are no wings.

The record for the race is held by *Billy Barton*, which in 1926 made the time of 9 minutes, 9 3/5 seconds, including one fall during the race. That year only three horses out of thirty-two starters finished without a fall, and all, needless to say, were the best cross-country horses in America.

The winner last year was *Bon Master*, owned by Mr. C. L. A. Heiser and ridden by Mr. Frank A. Bonsal. The race was run in a drizzling overnight rain, which made the going very soft and increased the difficulty of the obstacles by at least six inches. The date of the race, having been once set, is never postponed on account of weather.

The spectators, among whom are always included the most prominent horsemen in America, are accommodated on the hillsides on the north and south of the natural basin in which the course is laid. The finish and every jump are clearly visible from these natural grandstands.

Any horse-lover who can arrange to see this race, should not fail to do so, as it is one of the very greatest sporting events in America.

Army Uses Forty Thousand Animals in Its Ranks

THOUGH experiments in mechanization are being conducted by the army, the horse remains a very important factor in military organization. Figures furnished by the remount service of the quartermaster corps indicate that there were approximately 40,000 animals in use during the past fiscal year at the various posts, camps and stations of the regular army throughout the United States and its insular possessions. This means that there was one animal to every three and three-tenths men. In the Civil War the proportion existed of one animal to every three and three-fourths men.

The horse ranks of the regular army at the close of the past fiscal year was made up as follows:

Class	Number	Approximate cost value
Riding horses	17,204	$2,830,918
Draft horses	6,058	1,149,384
Pack horses	509	83,756
Draft mules	11,200	2,317,168
Pack and riding mules	2,805	509,669
Stallions	522	412,380
Brood mares	222	47,552
Colts	381	38,100
Total	38,901	$7,388,927

The total number of horses now in use by the army, 38,901, is of interest when compared to the total number in the horse ranks of the army during the World War—387,421. During the World War, 387,421 horses and 184,166 mules were in use in the army. Of this number there were 123,254 animal casualties.

During the past fiscal year the following purchases of horses were made by the remount service for the army:

For the Regular Army:				
Riding horses	3,217	@ $163.28	—	$525,278.75
Draft horses	1,259	@ 163.48	—	205,819.00
Small horses for Philippines	199	@ 88.62	—	17,635.00
For the R. O. T. C.:				
Riding horses	114	@ 165.70	—	18,890.00
Draft horses	37	@ 159.05	—	5,885.00
For the National Guard:				
Riding horses	188	@ 164.79	—	30,980.00
Draft horses	211	@ 164.82	—	34,778.00

The total issues to troops and stations during the year were:

Riding horses	3,005
Draft horses	1,175
Draft mules	202
Pack mules	70
Total	4,452

MINUTES OF THE ANNUAL MEETING OF THE UNITED STATES CAVALRY ASSOCIATION

Washington, D. C., January 31, 1928.

THE meeting was held at the Army and Navy Club, Washington, D. C., this date, and was called to order at 8:15 P. M., by the President. Forty members were present in person and forty-three represented by proxies, a quorum.

Upon motion it was voted to dispense with the reading of the minutes of the last meeting and to approve them as published in the CAVALRY JOURNAL for April, 1927.

The annual report of the Secretary-Treasurer-Editor was read as follows:

Washington, D. C., January 31, 1928.

To The United States Cavalry Association.

GENTLEMEN:

By vote of the Executive Council, the undersigned relieved Lieutenant Colonel W. V. Morris, Cavalry, as Secretary-Treasurer-Editor of the United States Cavalry Association on August 15, 1927.

There is submitted herewith, as required by the Constitution, the financial statement for the year ending December 31, 1927, and a report of the activities of the U. S. Cavalry Association for the same period.

FINANCIAL STATEMENT OF THE UNITED STATES CAVALRY ASSOCIATION FOR THE YEAR ENDING DECEMBER 31, 1927

Receipts

Advertising	$ 1,603.86
Book Department	3,243.44
Cavalry Journal	3,110.57
Cavalry Luncheon	3.00
Dues	1,532.00
Interest	710.00
Magazine Department	5,253.00
Profit and Loss	10.90
Postage, Stationery and Incidentals	325.00
Rent	360.00
Saddle Department	1,059.07
Telephone	34.04
Cash on Hand, January 1, 1927	1,865.56
Total	$19,110.44

Expenditures

Advertising	$ 95.63
Book Department	2,412.56
Cavalry Journal	6,311.62
Dues	12.00
Magazine Department	4,190.20
Petty Cash	55.07
Postage, Stationery and Incidentals	944.39
Rent	1,080.00
Saddle Department	766.93
Salaries	2,369.35
Telephone	109.90
Trophies	393.25
Cash on Hand, December 31, 1927	369.54
Total	$19,110.44

Assets

Cash in Bank	$ 369.54
Six Liberty Bonds, Market Value	6,163.12
Accrued Interest	60.20
Three Real Estate Notes	3,000.00
Accrued Interest	83.33
One Mortgage Certificate	1,000.00
Accrued Interest	27.50
Five Southern Railway Bonds, Market Value	4,612.50
Accrued Interest	50.00
Two American Waterworks Bonds, Market Value	1,015.00
Accrued Interest	12.50
Stock on Hand, Books at Estimated Value	1,117.17
Office Equipment and Supplies, Inventory	544.00
Credit at Post Office, Baltimore	35.00
Credit at Post Office, Washington	8.21
Credit with Register of Copyrights	2.00
Salary Advanced to Miss Finke	25.00
Accounts Receivable	2,595.40
Cash in Personal Possession	8.98
Total	$20,729.45

Liabilities

Bills Payable	$ 49.40
Due Customers on Unfilled Orders	295.40
Net Assets	20,384.65
Total	$20,729.45

Washington, D. C., January 19, 1928

We, the undersigned, appointed by the President of the United States Cavalry Association, to audit the accounts of the treasurer of said association, for the year ending December 31, 1927, do hereby certify that we have examined the books of account, vouchers, and the foregoing statement, covering said fiscal year, and that the same are correct and true, to the best of our knowledge and belief.

G. B. COMLY, *Lt. Col., Cavalry.*
J. M. WAINWRIGHT, *Major, G. S.*
WILLIS D. CRITTENBERGER, *Major, Cavalry.*

It will be seen from the above report that the Association is in a healthy financial condition. Practically all bills were paid at the end of the year, exceptions being commissions on advertisements due agents, with whom agreement is in effect to pay the agent when the advertiser pays the Association.

The net assets for the year remain practically unchanged from 1926. It is recommended that part or all of our Liberty Bonds be converted into other safe securities, giving a greater yield to the Association.

In 1927 the Association presented trophies to the value of $393.25, of which $268.25 was for trophies for marksmanship competitions, and $125.00 for trophies for mounted sports. In view of the more general participation in the latter, it is recommended that the percentages be reversed in future years.

Considering the business activities of the Association, the year 1927 shows the following profits: Advertising, $1,621.17; Book Department, $682.60; Interest, $506.46; Magazine Department, $591.86; and Saddle Department, $82.46; from which have been met the following overhead expenses: Postage, stationery and incidentals, $551.52; Rent, $720.00; Salaries,

$2,390.00; and Telephone, $76.06. The profits in advertising and in books were respectively about $200.00 and $150.00 greater than in 1926. The former was made possible by having an additional officer in the office part of the time, and by the use of agents as solicitors for advertising. The latter was made possible by the publication of a number of good military books during the year, and by soliciting Government book orders. The profits in the magazine department and the saddle department were approximately $180.00 and $390.00 less than in 1926. The former was due to a reduction on the part of large clearing agencies in agents' commissions, and the latter to an almost entire absence of business due to the rise in the value of the franc from about three cents to four cents, without a corresponding drop in French prices, which makes the cost of French saddles almost prohibitive to officers. These business activities are absolutely necessary to the existence of the CAVALRY JOURNAL in its present form, as the dues and subscriptions received cover only the actual cost of printing the JOURNAL. Overhead must be taken care of from other sources.

The membership and circulation of the CAVALRY JOURNAL is as follows:

Life and Honorary Members	6
Regular Cavalry Officers	866
National Guard Cavalry Officers	306
Reserve Cavalry Officers	433
Other Active Members (Including General and Retired Officers)	85
Associate Members	105
Subscribers	377
Exchanges, Advertisers and Publicity (free)	91
Total	2,269

This is a net loss of about seventy-five members and subscribers as compared with 1926, distributed as follows: Regular Officers, fifteen; Reserve Cavalry Officers, thirty-eight; others, fifty-nine. National Guard officers show a gain of thirty-nine, although some officers formerly carried as Reserves, may now be carried as National Guard, due to their dual commissions. In percentages, eighty-five per cent of the Regular Cavalry Officers, thirty-seven per cent of the National Guard Cavalry Officers, and eleven per cent of the Reserve Cavalry Officers are members, representing losses of two per cent, three per cent, and three per cent, respectively, from 1926. The membership has not quite kept pace with the increase in the civilian components of the cavalry.

During the year a voluntary continuous membership was offered to Regular Cavalry officers only. More than half have taken advantage of this to date. This form of membership, while increasing our bills receivable and decreasing our cash on hand, will eventually result in an increased membership from the Regular officers, many of whom, especially those on detached service, neglect to renew their membership each year until some time after it has expired.

The standard of articles, illustrations, paper and printing in the CAVALRY JOURNAL was maintained during the year. It is, however, increasingly difficult to maintain the standard of articles with our present scale of authors' fees which barely cover the clerical expense of the authors.

The Association, as custodian of the Goodrich Trophy Fund, has disbursed the sum presented for this trophy, and $54.63 for transportation and other charges connected therewith. It still has in bank, as custodian, $2,000.00 plus interest, to be used in 1928 and 1929 for the trophy for the leadership test for small units, which was held last year in the First Cavalry Division.

K. S BRADFORD, *Major Cavalry, Secretary*

Upon motion, the report of the Secretary-Treasurer-Editor was accepted.

The following were unanimously elected to the offices indicated, there being no other nominations:

President: Major General H. B. Crosby
Vice-President: Colonel Guy V. Henry

Executive Council

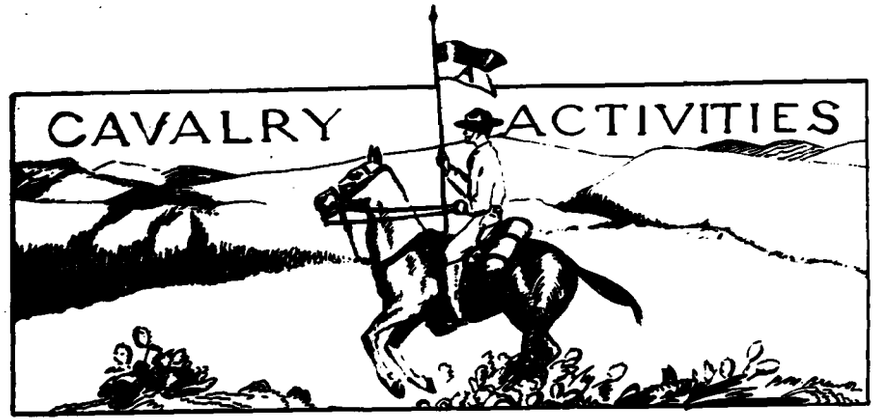
Colonel George Williams, Cavalry
Colonel E. H. Humphrey, Cavalry
Colonel W. I. Forbes, 305th Cavalry
Lt. Colonel A. F. Commisky, Cavalry
Lt. Colonel G. B. Comly, Cavalry
Lt. Colonel V. W. Cooper, Cavalry
Lt. Colonel J. W. Converse, 103d Cavalry
Major H. S. Barrett, 62d Cavalry Division
Captain Royden Williamson, Cavalry

The President, Major General H. B. Crosby, then briefly addressed the meeting, explaining the details and reasons for the new cavalry regimental organization, effective February 1, 1928, and the probable reorganization of cavalry divisional units, now under consideration, and the formation of the cavalry corps in time of war.

Upon motion of the president, a vote of thanks was extended to the retiring Secretary-Treasurer-Editor and to his predecessor, Lieut. Colonel W. V. Morris, for their efforts in behalf of the Association. The motion was seconded and unanimously adopted.

Lieut. Colonel W. V. Morris made a short plea for material for articles for the CAVALRY JOURNAL, explaining that good material was very difficult to get, and that it was just as important for cavalry officers to support the JOURNAL in this regard as in the matter of subscriptions.

There being no further business, the meeting then adjourned at 8:50 P. M. to partake of refreshments.



Method of Effecting New Cavalry Organization

Absorption of Machine Gun Units

BEFORE the new organization there were two machine gun squadrons and one separate machine gun troop on an active status in the cavalry of the regular army as follows:

First Machine Gun Squadron, Fort Clark, Texas.
Second Machine Gun Squadron, Fort Bliss, Texas.
Second Machine Gun Troop (Philippine Scouts), Camp Stotsenburg, Philippine Islands.

Heretofore the machine gun squadron was an organic part of the cavalry brigade and consisted of three troops of four guns each. Considering the two machine gun squadrons, the separate machine gun troop above named, and the machine gun troop of the Thirtenth Cavalry, there was a total of eight machine gun troops of four guns each in the regular army cavalry. The new organization provides for fourteen machine gun troops of eight guns each, thus equipping the regular army cavalry with three times as many machine guns as was formerly authorized. The method of absorption of machine gun squadrons and the separate troop by the various regiments is as follows:

First Machine Gun Squadron, Fort Clark, Texas.

One troop transferred to the Fifth Cavalry, Fort Clark, Texas.
One troop transferred to the First Cavalry, Camp Marfa, Texas.
One troop transferred to the Twelfth Cavalry, Fort Brown, Texas.

Headquarters absorbed by units of the First Cavalry Division at Fort Clark and Camp Marfa, Texas. The troops transferred to the First and Twelfth Cavalry proceeded by marching overland to join their regiments.

Second Machine Gun Squadron, Fort Bliss, Texas.

One troop transferred to the Seventh Cavalry, Fort Bliss, Texas.
One troop transferred to the Eighth Cavalry, Fort Bliss, Texas.

One troop (less organizational equipment) absorbed by the Seventh and Eighth Cavalry regiments. Organizational equipment shipped to the Tenth Cavalry, Fort Huachuca, Arizona.

Headquarters absorbed by units of the First Cavalry Division at Fort Bliss Texas.

Second Machine Gun Troop (Philippine Scouts), Camp Stotsenburg, P. I.

Second Machine Gun Troop transferred to the Twenty-sixth Cavalry (Philippine Scouts), Camp Stotsenburg, P. I.

Conversion of Rifle Troops

In order to provide machine gun troops for other regiments and to reduce the number of rifle troops of each squadron from three to two, commanding officers of the following regiments converted either Troop C or G into the machine gun troop of their respective regiments. The troop not thus converted (Troop G or C) was absorbed by other troops of the regiment and eliminated:

Second Cavalry, Fort Riley, Kansas.
Fourth Cavalry, Fort Meade, South Dakota.
Sixth Cavalry, Fort Oglethorpe, Georgia.
Tenth Cavalry, Fort Huachuca, Arizona.
Eleventh Cavalry, Presidio of Monterey, California.

The following regiments, each of which has its first squadron detached at another post, converted Troop G into the regimental machine gun troop and absorbed Troop C at the station of Troop C:

Third Cavalry, Fort Myer, Virginia, and Fort Ethan Allen, Vermont.
Fourteenth Cavalry, Fort Des Moines, Iowa, and Fort Sheridan, Illinois.

Troops C and G of the following regiments were absorbed in their respective regiments:

First Cavalry, Camp Marfa, Texas.
Fifth Cavalry, Fort Clark, Texas.
Seventh Cavalry, Fort Bliss, Texas.
Eighth Cavalry, Fort Bliss, Texas.
Twelfth Cavalry, Fort Brown, Texas, and Fort Ringgold, Texas.
Thirteenth Cavalry, Fort Riley, Kansas.
Twenty-sixth Cavalry (Philippine Scouts), Camp Stotsenburg, P. I.

The reorganization was effected with due regard to necessity for economy and the desirability of utilizing all materiel, equipment, personnel, and animals to best advantage, with special consideration given to the prompt and effective reorganization of border cavalry regiments. No grade or rating now held by an enlisted man will be lost by him as a result of this reorganization. The permanent designation of units within each regiment (except the Ninth Cavalry, which is a service regiment at The Cavalry School, Fort Riley, Kansas), is as follows:

Headquarters and Band.
Headquarters Troop.
Machine Gun Troop.
Headquarters First Squadron:
    Troop A
    Troop B
Headquarters Second Squadron:
    Troop E
    Troop F

While the above reorganization, effective February 1, 1928, applies to regular army cavalry regiments only, it will, nevertheless, serve as a basis of determining the advisability later on of a similar reorganization for cavalry regiments of the National Guard and Organized Reserves.

4th Cavalry Winter Camp at Rapid City, S. D.

A WINTER camp being rather unusual in these piping times of peace, the camp established by Troop C, 4th Cavalry, at Rapid City, S. D., from December 10 to 16 was a rather unique event.

The purpose of the camp was the salvaging of the government owned airplane hangar at Rapid City, which had been used by the Air Service during the President's vacation in the Black Hills, and the lumber from which was needed for construction work at Fort Meade.

The troop made the trip to Rapid City by motor truck on December 10, 1927. The weather was extremely cold and the ground was covered with snow. Upon arrival, a pyramidal tent camp was established and work on the hangar commenced. Supplies for the troop, including fuel, were hauled from Fort Meade, a distance of thirty miles, by motor truck, and the salvaged lumber returned to the post in the same manner, aided by a wagon train, which hauled lumber in the severest kind of winter weather.

The work was completed on December 16, and the command returned to the post. Over ninety per cent of the lumber used in the hangar was salvaged, and returned to the post in excellent condition. The lumber will be used to construct a veterinary hospital at Fort Meade, which has been thus far without such a hospital.

In spite of the severe weather conditions, the health of the command remained excellent throughout the duration of the camp, and the experience in roughing it was of great value to those who experienced it.

5th Cavalry Polo Notes

A TEAM, consisting of Captains Creed, Barnhart, Cramer and Lieutenant Jernigan and Stadler, was sent from the 5th Cavalry to Fort Brown to enter the Brownsville mid-winter polo tournament. In the open tournament, the 5th Cavalry defeated the Houston Huisaches, 8 to 5, in the first game. Fort Brown defeated the Houston Yellow Jackets. In the final game, the 5th Cavalry defeated Fort Brown, 8 to 5, thus winning the tournament.

In the handicap tournament, the 5th Cavalry defeated the Houston Yellow Jackets, 11 to 7, while the Houston Huisaches defeated Fort Brown, 12 to 6. The 5th Cavalry then defeated the Houston Huisaches, 8 to 5, winning the second tournament.

In February, the same team from the 5th Cavalry was sent to Fort Sam Houston to enter the San Antonio mid-winter polo tournament. In the first round of the circuit event, the 5th Cavalry defeated Fredericksburg, 19 to 8, in the second round, they defeated Austin, 12 to 11, and lost to Kelly Field, 6 to 3.

The first round of the elimination the 5th Cavalry defeated Austin, 7 to 6, and will play Fredericksburg in the second round.

Philippine Marches

ON November 7, 1927, Machine Gun Troop Number 2, commanded by First Lieutenant P. B. Shotwell and accompanied by Lieutenants Edwards and Pearce of Stotsenburg, and Morgan of Manila, left Stotsenburg for a practice march to *Lingayen, Pangasinan*. Camps were made at *Tarlac, San Manuel, Catablan* and *Lingayen*. At *Lingayen*, camp was pitched on the beach. The marches began about 4:30 A. M. each morning and were completed by 9:30 or 10:00 A. M. The Phillips' pack was used during this march. Guns were carried but, in place of ammunition boxes, specially constructed boxes were attached filled with grain. This expedient lightened the load of the wagons and demonstrated the general utility value of the new pack, twenty of which were utilized during the march. The troop returned to Camp Stotsenburg on the 18th, having marched approximately two hundred miles.

The 1st Squadron, commanded by Major A. Q. Ver, P. S., also left the post on the 7th of November for a practice march to *Dinalupihan*. Camps were made at *San Fernando, Lubao* and *Dinalupihan*. On the 10th, Troop B, Captain J. V. McDowell, marched from *Dinalupihan* via the old Spanish trail to *Olongapo* on *Subic Bay*, and returned on the 11th. This is believed to be the first time any troops have traversed this trail since the days of the insurrection. Troop C, Captain N. N. Rogers commanding, marched from *Dinalupihan* to *Balanga* on the 10th and returned on the 11th and in general reconnoitered the terrain over which the 1928 maneuvers of the Philippine Division will be held. The squadron was accompanied by Major H. E. Egan, V. C., and Captain E. E. Brown, M. C. The return march was made in two days and the squadron arrived at Camp Stotsenburg on the 14th of November.

On the 16th, the 2nd Squadron, commanded by Major H. M. Ostroski, left the post. The route was as follows: *Tarlac, Guimba, Cabanatuan, Cabiao, San Fernando, Stotsenburg*. A halt of one day was made at *Cabanatuan* followed by a night march to *Cabiao*, and a halt of one day at that point. Between *Cabiao* and *San Fernando*, the squadron swam the *Pampanga River*. The water was about ten or twelve feet deep and the river about fifty feet wide, but with a rather strong current which made necessary a diagonal crossing of about one hundred yards. The squadron was accompanied by Captain Stone, M. C., and Lieutenant Schweizer, V. C. The total distance marched was approximately 132 miles, and the squadron returned to Camp Stotsenburg November 23.

Hunting at Monterey

ONE of the most pleasant of the gatherings which Colonel Kromer has instituted since he took command at the Presidio of Monterey are the rides followed by breakfast at the Officers' Club. The officers and ladies assemble mounted at the flag pole at about 9:30 A. M. Led by the buglers playing the "Hunt Call," the field starts out. Nothing is wanted to make such an occasion perfect, unless it could be the baying of the hounds, themselves.

The ride held November 23 was conducted by Captain Haines. Moving

at slow gates by the target range and into the forest to Huckleberry Hill, the horses took up the gallop around Sunset Drive to a point on the road overlooking the forest below and the western side of Monterey Peninsula, where the first check was called. After tightening of cinches and several "Ahs" at the beauty of the scenery, the group mounted and moved out into the forest. Down hill and up hill at the gallop, with the spicy wind whistling by, the next halt was made on a hill which commanded a view both of Carmel Bay and the north side of the Peninsula. The remainder of the ride was generally along the Seventeen Mile Drive with the sand dunes and forest on one side and the Pacific on the other.

It is doubtful if there is another place in the entire country where one can combine so much beauty of scenery with so short a ride on horseback. Returning to the Club at noon, it was noted that some ate their lunches sitting. Others stood while eating.

News from Fort Ringgold

THE reoganization of the cavalry caused a great shakeup in the Second Squadron, but business has settled down into the new system and everything is functioning smoothly.

The regimental commander's tactical inspection took place on the 15th and 16th of February. The training inspection was very satisfactory. In the tactical problem it is feared that the Reds gained a moral victory. Everything went fine until the pivot of maneuver ran wild. The enemy failed to press its advantage, however, and the troopers assumed that the Reds were crushed as usual.

Armistice Day at Hollister, Calif.

AT the request of the people of Hollister, Calif., for troops to take part in their Armistice Day Celebration, Colonel Kromer sent the 1st Squadron, 11th Cavalry, (less Troop B). The regimental band made the trip by truck as it was required for Armistice day at Monterey. The distance was about 45 miles and was made in two days. The troops left the Presidio November 9 and marched to Salinas the first day. The next day the trip was made through the mountains to Hollister, which stands in a beautiful valley. The town is surrounded by farms and orchards, the green of which contrasts strongly with the surrounding mountains, which were dry and bare at this time of year.

On Armistice day the squadron and band took part in the parade which was sponsored by the American Legion. In the afternoon the troops put on a gymkhana for the benefit of the people of Hollister. A hotly contested football game was played Sunday between the soldiers and the Hollister chapter of the American Legion. After enjoying a jolly march and the hospitality of the people of Hollister, the squadron returned to the Presidio in high spirits November 14. Members of the squadron stated they had never been so royally treated as they were by the people of Hollister.

Solving of Ninth Cavalry Foraging Problems

HAVING one thousand bushels of corn to harvest on the regimental farm, and without men available for the work, it was decided to perform the duty by volunteers on a holiday afternoon. A problem with situation and requirements was prepared. It could not be known before hand just how many would be available for the task but about 140 men volunteered and were moved by wagon and truck to the farm some four miles from the barracks. In five minutes from the time of arrival the working parties and transportation had been organized and were actually at work. The details are interesting but too long to described here. Suffice it to say that plans were made and executed so that no group had to wait for transportation and no transportation was required to wait for men. In three and one-half hours the provisional troop harvested 1,000 bushels of corn, transported it three miles and established a distributing point near the north end of Engineer's Bridge, as required by the condition of the problem. The work involved the use of the long, one way, bridge over the Kaw River, and the making of two trips by wagon and four by truck.

Enlisted Reservists—306th Cavalry

THE Enlisted Reserve Corps was established under the provision of the National Defense Act of 1920, and, together with the Officers' Reserve Corps, constitute the Organized Reserves. Its development, however, has been sporadic, varying with the interest shown by different organization commanders.

Units of the Organized Reserves are allowed the full complement of officers prescribed in War Strength Tables of Organization and one third of the non-commissioned officers and rated specialists. Those enlisting in the Enlisted Reserve Corps do so voluntarily for a period of three years with the understanding that they are joining a purely war force which can only be ordered out in event of a National Emergency expressly declared by Congress. The same means of training available to the Officers' Reserve Corps on either an active or an inactive status, are provided for the Enlisted Reserve Corps, though no one can be ordered to active duty training without his consent just as in the Officers' Reserve Corps.

The 306th Cavalry now has thirty-five enlisted reservists in all, holding various non-commissioned grades and specialist ratings according to their qualifications and prior military experience. Captain R. C. D. Hunt of Troop F, boasts the first organization in the Regiment, and possibly in the Organized Reserves, to have its full cadre of non-commissioned officers and rated specialists.

Many of these enlisted reservists are taking the correspondence courses, and at the bi-monthly rides at Fort Myer on Sunday mornings there are often so many Enlisted Reservists that an additional instructor has to be detailed.

The Goodrich Trophy Training Test, 1927

By CAPTAIN R. W. GROW, *Second Cavalry*

THE War Department has announced that, upon the recommendation of Major General Herbert B. Crosby, the Chief of Cavalry, Troop G, Second Cavalry, Fort Riley, Kansas, commanded by Captain Louis LeR. Martin, is designated as the winner of the Goodrich Trophy for 1927. Second place was won by Troop E, Eighth Cavalry, Fort Bliss, Texas, commanded by Captain Nelson M. Imboden, and third place was won by Troop G, Seventh Cavalry, Fort Bliss, Texas, commanded by Captain Ceylon O. Griffin.

The following troops were selected for their all-around excellence to represent their respective regiments in the 1927 competition for this trophy:

Troop C, First Cavalry, Camp Marfa, Texas.
Troop G, Second Cavalry, Fort Riley, Kansas.
Troop C, Third Cavalry, Fort Ethan Allen, Vermont.
Troop F, Third Cavalry, Fort Myer, Virginia.
Troop B, Fourth Cavalry, Fort Meade, South Dakota.
Troop C, Sixth Cavalry, Fort Oglethorpe, Georgia.
Troop G, Seventh Cavalry, Fort Bliss, Texas.
Troop E, Eighth Cavalry, Fort Bliss, Texas.
Troop F, Tenth Cavalry, Fort Huachuca, Arizona.
Troop F, Eleventh Cavalry, Presidio of Monterey, California.
Troop A, Twelfth Cavalry, Fort Brown, Texas.
Troop G, Twelfth Cavalry, Fort Ringgold, Texas.
Troop B, Thirteenth Cavalry, Fort Riley, Kansas.
Troop A, Fourteenth Cavalry, Fort Des Moines, Iowa.

Troop F, Third Cavalry, of Fort Myer, Virginia, commanded by Captain Jess G. Boykin, was the 1926 winner of this trophy. Major L. E. Goodrich, Reserve officer, of Miami, Florida, donated the trophy to the cavalry service for annual competition. It is awarded each year to the troop demonstrating the highest efficiency rating in prescribed competitive tests which involve problems in cavalry mobility, fire power, and shock.

The trophy becomes the permanent property of the troop winning it three times. The work itself is a bronze figure of a cavalryman, 1½ by 2¼ feet in size, making a charge with the pistol, and typifies both in man and horse the modern cavalryman.

The sculptor, A. Phimister Proctor, considered one of America's foremost artists, has made a specialty of animals, particularly horses. He did a creditable equestrian statue of Colonel Roosevelt for Portland, Oregon; the *Broncho Buster* and *On the War Trail*, for the Civic Center, Denver, Colorado; and the *Pioneer Mother* recently unveiled in Kansas City, Missouri. Two of his group are on exhibition in the Corcoran Art Gallery, Washington, D. C. He was also sculptor of the buffaloes on the Q Street Bridge and the lions on the Sixteenth Street Bridge, Washington, D. C.

The purpose of the test is to promote enthusiasm in training throughout the cavalry by means of a healthy competition among the troops, and to reward the troop which is the most efficiently trained.

The selected troops are submitted to a test prescribed and conducted by a board of three senior officers of the organization, the results being entered on special rating sheets furnished by the Chief of Cavalry. The test is required to consist of three phases illustrating the proficiency of the troop in mobility, fire power and shock. During the test each troop must consist of at least three complete rifle squads, organized as two platoons, and one complete machine rifle squad. It must not use any individual, animal, material or equipment not regularly assigned or pertaining to the troop on the date it was selected as the most efficient in the organization.

Increased general knowledge of the test and more widespread interest resulted in appreciably better ratings in 1927 than in the previous year. The competing troops received as thorough a training inspection as can well be devised to meet conditions at all cavalry stations. Although a fairer test might be given, were all competitors assembled at the same station and tested by the same board, the rating sheets have been so prepared that different boards at each station, by rigidly adhering to the spirit and letter of the instructions can approach very closely a uniform standard. Even though a troop is not the winner, it can feel confident that a good showing in this test indicates that the year's training has been well conducted and that the troop is an efficient fighting unit.

A study of the ratings of the 1927 test shows some very interesting facts. Fifteen troops competed. In the mobility phase thirteen of these made over 75%, and the two that failed to attain this figure did so on account of lame horses and sore backs. This showing speaks well for the mobility of the regular army cavalry, since in most cases all available horses were used in the fifty mile march, and "cuts" were provided for more than 40 items, ranging from packing the saddle and gaits to cast shoes. There was a greater discrepancy in the fire power phase in which four troops failed to attain 75% of the possible score. Since the variation in known distance rifle and machine rifle practice was slight, the percentage hinged on the fire power problem, where the largest cuts were for poor distribution and few hits. In the third phase (shock) seven troops, almost one-half, failed to attain a rating of 75%. Practically all of the big cuts were made on the pistol attack. The lesson from the last two phases is that more training is needed in combat exercises, especially those in which ball ammunition is employed.

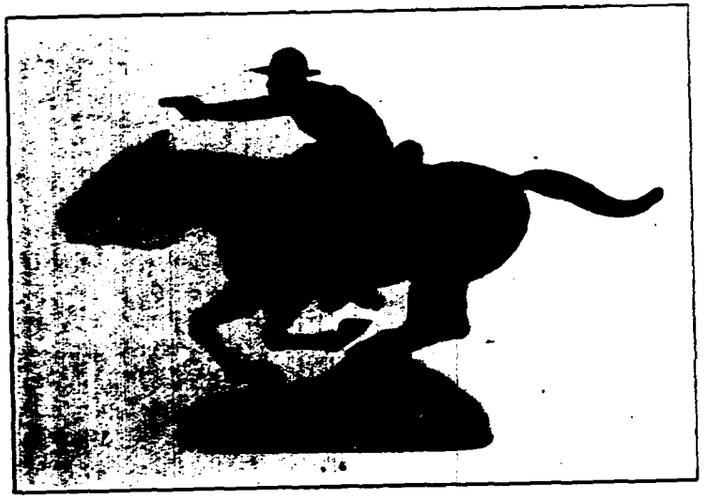
The commanding officer of the winning troop, Captain Martin, graduated from the Troop Officers' Course, the Cavalry School, in 1926, and went immediately to the command of this troop, relieving Captain Julian A. Cunningham. Captain Martin was ably assisted by First Lieutenant Frank T. Turner who was responsible for training in mobility, by First Lieutenant Paul M. Martin who was responsible for training in fire power, and by an exceptionally well balanced, competent, and enthusiastic corps of non-commissioned officers.

How well balanced was the training of this troop is indicated by the ratings they made. In the mobility phase they rated 97.5% of the possible score, in fire power 93.6% and in shock 94.4%. The exceptionally high rating in fire power can be attributed largely to that fact that 30 men of this troop are expert riflemen. Two troops made a slightly better score in mobility, but Troop G of the Second Cavalry was over 5% better than its nearest competitor in fire power, and nearly 1% better in shock. To further emphasize the importance of having a well balanced troop the scores of the first three troops are given:

	Percentage of possible score		
Place	Mobility	Fire Power	Shock
1st	97.5%	93.6%	94.4%
2d	99.5%	88.0%	93.2%
3d	98.2%	85.7%	92.4%

The final analysis of these figures shows that no real weakness existed in any element of troop training among the first four troops, and that the 1927 test was won by *aimed rifle fire*.

The Goodrich Trophy Training Test is and should be a great incentive to troop commanders throughout the cavalry to take stock of their organizations, pick out the weak points, and strive in 1928 to develop a well-balanced troop fit for any cavalry mission and worthy to represent its regiment in this all-cavalry competition.



Olympic Tryouts and Horse Shows, 6th Cavalry

FOLLOWING the receipt of a recent letter from the Chief of Cavalry regarding the Olympic three-day competition, preparations are being made for the construction of courses and obstacles as prescribed. All work will be done in Chickamauga Park and to date all routes for the endurance test have been laid out and the work of selecting the proper locations for the numerous obstacles is being taken up. Work on conditioning and training horses for this event will start in a short time and from present indications there will be several competitors as already several of the officers have indicated their intention to compete in the event.

A 6th Cavalry horse show team has been organized composed of Lieutenants R. E. Ireland, A. S. J. Stovall, Jr., and F. deL. Comfort. This team is now working horses for the shows to be held at Asheville, North Carolina, April 17 and 18 and the Infantry School show on April 21. It is hoped that several green jumpers will be developed to assist the veteran horses of the team. With a few exceptions the same mounts will make the trip that were taken on a similar tour last spring. Our team will leave here about the 14th of April for Asheville, shipping out of there for Fort Benning on the evening of the 18th and arriving at Benning the morning of April 20. Notwithstanding the short periods of rest between the two shows, this trip makes an excellent circuit and appears to have no ill effect on the mounts.

New Machine Rifle Marksmanship Course

THE War Department has approved for the season of 1928 a new Machine Rifle Marksmanship Course for the cavalry.

During the year 1927, the cavalry used a tentative course based on the course for the infantry automatic rifle. This course was somewhat of a makeshift and not entirely suitable for the machine rifle, but was used on account of the fact that the many cavalry units which had not received the new weapons were to use the infantry automatic in lieu thereof.

In the new course all the firing is from the prone position except for inclusion of 10 shots from the kneeling or sitting position in the instruction practice, in order that the soldier may understand that to fire from positions other than prone, in cases of combat emergency, is possible though productive of less accuracy. The prone position is the normal firing position for the machine rifle because its weight and bulk render it difficult to hold steadily in other positions.

The new qualification course has been made more difficult than the tentative course by substituting an eight-inch bull's eye target for the twenty-inch bull's eye and silhouette target at 200 and 300 yards; by including rapid fire in addition to slow fire at 500 yards, by adding slow fire at 600 yards; and by increasing the percentage requirements for qualification.

305th Cavalry Polo

THE 305th Cavalry Polo Squad is now composed of the following players: Major J. M. Thompson, Cavalry, Captain L. N. D. Mitchell, Lieuts. E. A. Town, H. Fisher, J. D. Grannis, and 1st Sergeant L. P. Stradley, Jr. The first practice game of the season was played on December 2nd. Since that time the following scheduled games have been played:

December 16, Freebooters. Won 9 to 4.
December 17, Junior Polo Club. Won 6 to 5.
December 23, First City Troop. Lost 3 to 4.
December 30, Troop C, 103d Cavalry. Won 8 to 2.
January 6, First City Troop. Won 7 to 6.

The 305th Cavalry Polo Team
Left to Right: Major J. M. Thompson, Lieut. E. A. Town, Lieut. H. B. Fisher, Capt. N. D. Mitchell

January 7, West Point at West Point. Lost 5 to 13.
January 14, 110th F. A. Won 6 to 3.
January 21, Philadelphia Yellow Jackets. Won 12 to 3.
January 27, Freebooters. Won 8 to 5.
February 4, 110th F. A. at Baltimore. Lost 4 to 6.
February 11th, Squadron A at New York. Lost 5 to 7.

Colonel Forbes has received an invitation for the polo team to play West Point again next year and was congratulated on the clean sportsmanship of his team. There was not a single foul called on the 305th Cavalry during the entire game.

On February 18, Colonel Forbes and the regimental polo squad gave a dinner at the Racquet Club for the 110th Field Artillery and 1st City Troop polo teams who played a match at the 103d Cavalry Armory later in the evening. Lieut. Mitchell who arranged the dinner is to be congratulated on its great success.

Great credit is due the members of the regiment who have turned out for polo this year. Besides giving their time to practice and games they have dug down into their own pockets to support polo in the regiment.

Sixth Cavalry Polo

FOLLOWING the end of our regular fall season early in December, all of our regular ponies were granted a well earned rest. Shoes were pulled and each morning the string was turned out to graze in the Greenleaf Area.

Upon the close of the season all active players turned their attention to training and developing new ponies for the coming season. Each officer has been assigned one or more green prospects obtained mostly from two carloads of remounts received early in the spring of 1927. An effort has been made to secure only horses of known breeding upon which to work and in this way build up a polo string better fitted to stand up under the strain of a hard strenuous season. It is hoped that by the middle of our spring season that the majority of these ponies will be ready to take their turn in fast play.

A new polo cage has recently been completed in rear of the Officers' Club. This addition to our polo equipment has long been needed and from present indications it appears that its use will be at a premium. Practically all of last year's players are spending a portion of their time batting the ball and getting eye and arm ready for the regular play. The younger players just starting will find the wooden horse invaluable in mastering the details of hitting before taking it up mounted on the polo field.

During the winter polo meetings have been held twice each week. At these meetings informal talks have been given on the different positions, team play, training ponies and other subjects of interest. These meetings have been most beneficial to all players and many difficult points have been ironed out and a better understanding of the game obtained.

Our old ponies were reshod during February and the work of conditioning commenced. The entire string receives long walks over the hills each day and early in March the regular assignment of ponies will be made and further individual work will be given each pony by the officer to whom they are assigned.

Weather permitting active play will be resumed about the middle of March. Polo fans in Chattanooga and vicinity are impatiently awaiting the renewal of the weekly feud between the Cardinals and the Yellow Jackets. These two teams composed of officers from the post play each week on Circle Field and their ups and downs are followed with great interest by their respective supporters.

The regiment will send a polo team to Fort Benning, Georgia, the latter part of April to play a series of polo games with the Infantry School team as a part of the Annual Infantry School Horse and Transportation Show.

Second Annual Mid-Winter Tournament at Fort Brown

HE who dares to forecast Texas weather is sure to come a cropper, even in the favored Lower Rio Grande Valley where sunshine and balmy temperature have sway the greater part of the year. Such was the experience when the dates of the open event of the Fort Brown Annual Mid-Winter Polo Tournament were fixed as January 5, 6 and 8, and for the handicap event as January 10, 12 and 15.—for too much stock was placed in rainfall records of previous years and too little attention given to the fallacy of forecasts. In any event a wet field prevented play until January 11, when the 5th Cavalary met the Huisaches (Houston Riding and Polo Club) team in the first game of the open event.

The play in this game set the pace for the remainder of the tournament by its clean, fast polo. From the throw-in the 5th Cavalry almost immediately took the lead, and though the Huisaches fought aggressively throughout they were unable to offset it—the game ending in favor of the 5th Cavalry, score 8 to 5.

The following day, January 12th, saw the 12th Cavalry win the second game of the open event from the Yellow Jackets (also Houston Riding and Polo Club team) by a score of 12 to 8. Though there were high-spots in which excellent polo was played, the game as a whole was hardly up to the standard of the preceding day.

For the convenience of the Houston players the finals of the open event were postponed until the 18th, and the handicap event commenced on Friday, the 13th—no, no one was hurt! The Yellow Jackets, who were to meet the 5th Cavalry, having played the preceding day, it was agreed that the game would be called at the end of the 6th period and that the 5th Cavalry, who ordinarily carry a 5 goal handicap, would concede only 3 goals by handicap. Aggressive play and good team work again won for the 5th Cavalry with a score of 11 to 5. Strange to say the Yellow Jackets after their hard game of the preceding day showed up to better advantage in this game than in that of the previous day.

On Sunday, January 15th, the Huisaches took on the 12th Cavalry in the handicap series, defeating the latter by a score of 11 to 7, in spite of the 4 goals by handicap which the Huisaches were forced to concede. The Huisaches displayed much better team play on this occasion than in their previous game with the 5th Cavalry, Mr. Steve Farish at No. 1 and Mr. Charles Armstrong at No. 2 doing particularly good work with the stick.

The finals of the open event between the 5th Cavalry and the 12th Cavalry were played off on January 18th, the 5th Cavalry adding another victory to their credit, by a score of 8 to 5. The 12th Cavalry put up an excellent performance in the game, Captain Burt at No. 2 standing out particularly, but the superior mounts and stick work of the 5th Cavalry occasioned a defeat.

The climax of the tournament was reached when, after a number of delays on account of bad weather, the Huisaches again met the 5th Cavalry in the finals of the handicap event on January 29th.

Each of these teams normally carry 5 goals, but due to the substitution of a player for Mr. Steve Farish, No. 1 of the Huisaches, the 5th Cavalry was forced to concede 1 goal by handicap.

The first three periods were brilliantly contested by each team, closing with a tie, but with the beginning of the fourth period the 5th Cavalry staged a rally which the Huisaches had not been able to overcome up to the seventh period, when Mr. "Deke" Randolph, No. 4 of the Huisaches, suffered an accident to his rein hand which weakened their defense so greatly as to leave no further doubt as to the winner of the game. In the final period, with the Huisaches still fighting hard, the 5th Cavalry crowded across two more goals, again winning by a score of 8 to 5, and thereby establishing their right to the plate for both the open and handicap events.

Cavalry Training Around Pittsburgh

THE 308th Cavalry located in Western Pennsylvania has its Headquarters in Pittsburgh, Pennsylvania.

Tactical training is stressed throughout the year. The correspondence schools and monthly regimental meetings are used in the winter, terrain exercises in the spring and the active duty camps in the summer.

Equitation classes are held twice a week from October to June. During the fall and winter equitation, jumping and close order drill is given and in good weather cross country riding with close and extended order troop drill.

Organization of the 26th Cavalry

EFFECTIVE December 1927, the 26th Cavalry was provisionally reorganized along lines similar to the organization adopted for the regiment during the 1927 maneuvers. The regiment consists of a headquarters and service squadron and three rifle squadrons. The Headquarters and Service Squadron contains the Headquarters Troop, Transportation Troop, and the Band, and consists of 113 men in all.

Each rifle squadron contains three rifle troops and a machine rifle troop, and consists of 136 men. The troops are lettered within the squadrons in a manner similar to the old pre-war organization. Troops D, H, and M being the machine rifle troops. A machine rifle troop consists of three squads of two guns each.

Machine Gun Troop No. 2 has been built up to war strength by transfer of men and now consists of three platoons of two guns each.

Troop and squadron commanders have no property responsibility, thus leaving them free for the important duties of training. An administrative officer in each squadron is responsible for all paper work, property, operation of mess, stables, etc. In each of the rifle squadrons there is a captain as second-in-command who is also leader of the machine rifle troop and has a lieutenant as his assistant. Rifle troops have only one officer with them.

Activities At Fort Clark

THE presence of Major General Crosby, Chief of Cavalry, on March 1 and 2, was the occasion of added activities at this frontier post. Always a scene of things primarily cavalry the post presented to the chief on this visit much that reminded him of his own days as a troop officer. From the opening thirteen-gun salute on the morning of the 1st, to his departure on the evening of the 2nd, his time was taken up with watching the local troops at drill and exhibitions by the equitation classes of the ladies, officers and children.

The Los Moras Hunt, one of the features at Clark, entertained with a cross country ride. The Los Moras Hunt course has been much improved by the addition of many new and novel hurdles and jumps along its entire route which parallels the beautiful winding Los Moras Creek and out through open country.

The new open-air riding hall was officially dedicated on the afternoon of February 10 with an exhibition by the ladies' riding class, senior section, and the officers' equitation group. Situated on Los Moras Creek close to the post proper the new hall promises to be the location of many enjoyable events for both officers and enlisted men. An enlisted men's wives' riding class has been active for some time under the expert tutorship of Sgt. Segurd Husby, 5th Cavalry, who also is instructor of the juvenile classes.

An interesting race meet was held at the Fort Clark race track February 18 in which there were five exciting and spectacular matches. A goat-roping contest for the championship of West Texas took place at the close of the races. Shady Lane, owned by Major Robenson, 1st Cavalry Brigade, won the stellar event of the day, the one-half mile final, defeating Joker and North Sea two favorites.

On Washington's Birthday the 5th Cavalry's monthly field meet was held at Los Moras Park before a large and enthusiastic crowd from the post and civilian community.

The 5th Cavalry celebrated its 76th birthday with a dinner and dance at the Fort Clark Club on the 3rd of March. Colonel Wallace B. Scales, commanding the regiment, eulogized the fine work of the unit both past and present and expressed his profound regret that this would be his last 5th Cavalry birthday party as he expected to leave the garrison soon.

Cavalry Adopts Armored Cars

THE Secretary of War has recently authorized the organization of the United States Army's first armored car unit for assignment to the First Cavalry Division, Fort Bliss, Texas.

The initial organization of this unit was made at Fort Myer, Virginia, on February 15, 1928. It is designated as the "Provisional Platoon, 1st Armored Car Troop." The platoon is commanded by Captain Harold G. Holt, Cavalry, who was on duty at The Cavalry School, Fort Riley, Kansas, and who entered the Army from the State of Washington.

Present plans provide that this armored car unit will be sent to Camp Holabird, Maryland, for a course of instruction at the Motor Transport School and that following this course it will be temporarily stationed at Camp Meade, Maryland. Here the personnel will receive instruction in machine gunnery and in the use of the one-pounder guns. Upon receipt of its equipment which is now being developed by the Ordnance Department, the armored car platoon will join the mechanized force which the War Department has ordered assembled at Camp Meade, Maryland, during the coming summer. Eventually this unit will join the Headquarters of the First Cavalry Division at Fort Bliss, Texas.

The types of armored cars best suited to American needs are being studied, and this provisional platoon will assist in experiments as to types. After the initial organization has been completed, it is expected that the platoon will be expanded to a full troop for duty with the First Cavalry Division, which is on duty on our southwestern border. The incorporation of a similar unit in each cavalry division has already been approved in principle by the War Department.

Armored cars, like aircraft, are of special value to cavalry in facilitating reconnaissance and thereby making it possible for the main cavalry forces with supporting troops, including artillery and tanks, to concentrate their chief efforts in the most advantageous direction. Aircraft and tanks already have been allotted to the regular cavalry divisions, although in some cases these units are as yet inactive. The cavalry division of the near future presumably will have not only aircraft, armored cars, tanks, and powerful artillery, but will be provided with a much greater proportion of motorized transportation than now exists. Experiments are being conducted along all these lines.

Motor Trucks to Replace Part of Wagon Transportation in Cavalry Division

THE Cavalry Maneuvers recently held in Texas demonstrated the desirability of including certain motor transportation in the Division Supply Trains and it now is proposed to substitute a company of motor trucks for one of the two wagon companies authorized for the Cavalry Division Train in time of peace. War-time tables of organization will provide two companies of trucks in place of the one wagon company thus eliminated.

The Cavalry Division Train as now authorized consists of the following:

Two wagon companies (60 wagons, each wagon drawn by four mules):

Four pack trains (50 pack mules in each).

The contemplated change reduces the number of mules in the Division Train by 250. It is significant, however, that the Division Train will still require over 500 mules.

This addition of motor trucks provides the Cavalry Division Train with all three types of transportation: motor vehicles, escort wagons and pack mules. Provision for these three types of transportation is considered necessary on account of the diversified terrain over which Cavalry Divisions may be required to operate.

Instruction in the 61st Cavalry Division

By Colonel George Vidmer, *Cavalry*
Chief of Staff, 61st Cavalry Division

HOW we are to instruct our reserve divisions is a problem that affects all regular officers on duty with this component. The experience of this division may be of some help to others. This problem, with all its implications, has been the subject of the most intensive study over a period of years; a constantly rising curve in attendance and interest is the result and the reward of that study.

The first year of instruction conformed to the conventional system of lectures, conferences and map problems on the contoured map. The results were disappointing. Our lecturers, the regular army executives, could not compete with the high-priced entertainers on the Great White Way; the horizontal map failed to present a picture; the problems were not real.

The solution has been a simple one. The topographical map has been discarded, except for historical examples, and the bas-relief map substituted; instead of the map problem we have the two-sided map maneuver; the lecture has been replaced by a simple enunciation of the principles involved in the maneuver, followed by a critique on its conduct. In other words, we give our instruction in the form of a game, in which the students are the players and the instructor is the coach and the umpire. Of course, this is not a new idea, but its importance has never been sufficiently emphasized. The lively interest in this simplified war game and the increasing attendance have fully justified the method.

In connection with the bas-relief map, we have tried the small map issued by the Quartermaster Corps for the use of R. O. T. C. units. This is an excellent map, but the terrain is restricted and suitable only for the limited combat of small units. It was decided to construct a map of our own, and this was done by the regular army personnel on duty with the division. This first map represented a larger area and was constructed of asbestos cement which gave good results; but the map was heavy and unwieldy, and the terrain not varied enough. At present we have under construction a map which promises to fulfil all our expectations. It is made of granulated cork of varying degrees of fineness bound together by a commercial glue. The coarser granulations are used for the foundation and the surface finished with powdered cork and shellac. The various features of the terrain, such as woods, roads, villages, rivers, bridges, etc., will be indicated on the bas-relief in the conventional manner. To facilitate storage and handling, the map is divided into eight sections, each section 3 feet by 4 feet. When set up the map is six feet wide and sixteen feet long. In conducting a two-sided maneuver, a curtain so suspended that it can be raised and lowered and moved along the table is used to screen the opposing situation as desired. This map is purely experimental, and the idea is given for what it is worth. Other units working along the same lines can produce equal if not better results.

In any case the construction of the map is only a detail, a means to an end. The main idea is that the two-sided maneuver on the bas-relief map seems to be the best method to increase the interest of the reserve officer, develop his initiative, and so stimulate and energize his imagination that he can picture himself on the actual terrain, moving himself and his units about in accordance with the rules of the greatest game on earth and the oldest—that of War.

ARMY POLO ASSOCIATION—HANDICAP CHANGES

Name	Old	New	Name	Old	New
Allen, Capt. H. B.	2	1	Craw, Lt. D. T.	2	3
Allen, Maj. T.	2	3	Crutcher, Maj. J. F.	1	0
Argo, Lt. E. Y.	2	1	Cullins, Lt. H.	3	2
Babcock, Lt. D. S.	0	1	Culton, Lt. H. G.	1	2
Baehr, Maj. C. A.	2	3	Daniels, Capt. E. M.	2	1
Bailey, Jr., Lt. G. W.	1	0	Dasher, Lt. C. L.	0	1
Baird, Maj. H. W.	2	1	Davis, Capt. C. E.	2	3
Baker, Lt. H. D.	3	2	Dawley, Maj. E. I.	2	1
Barden, Lt. A. R. S.	2	3	DeBardeleben, Lt. D.	0	1
Barnhart, Capt. F. H.	2	1	De Long, Capt. J. C.	0	1
Bartlett, Lt. W. H.	1	2	Delorimer, Capt. A. J.	0	1
Batson, Maj. R. C.	2	1	Devers, Maj. J. L.	3	4
Baylies, Capt. A. L.	0	1	Devine, Lt. M. A.	1	2
Beaucond, Lt. C.	1	2	Dodd, Lt. F. T.	0	1
Bennett, Lt. A. S.	1	0	Donaldson, Jr., Lt. T. Q.	2	3
Benson, Lt. G. C.	5	4	Dosher, Capt. G. H.	1	2
Beverly, Lt. G. H.	0	2	Dulaney, Lt. R. L.	0	1
Binns, Lt. J. J.	0	1	Elkins, Lt. S. B.	0	1
Blakeney, 2nd. Lt. C. C.	1	0	Engel, Maj. E.	2	1
Blue, Capt. J. W.	0	1	Ewen, Capt. L. C.	1	0
Boone, Maj. A.	1	0	Eager, Maj. J. M.	0	1
Bowley, Brig. Gen. A. J.	1	0	Feagin, Lt. C. W.	2	3
Bing, Lt. R. C.	0	2	Febiger, Lt. P. C.	2	1
Blakeney, Lt. C. G.	0	2	Ferrin, Capt. C. S.	0	1
Black, Lt. F. H.	0	1	Finley, Capt. J. R.	1	0
Bridges, Capt. B. C.	1	2	Finley, Capt. Glenn S.	1	2
Brown, Maj. J. K.	4	5	Fiske, Capt. N. E.	1	2
Brown, Maj. T. K.	2	1	Fitch, Lt. Col. R. S.	1	0
Browne, Lt. Col. B. F.	3	2	Fleming, Capt. P. C.	2	3
Buckley, Capt. H. A.	0	1	Follansbee, Lt. C.	0	1
Burress, Capt. W. A.	0	1	Forsyth, Lt. A. E.	2	1
Busbey, Lt. George	1	2	Forsyth, Col. W. D.	1	0
Browder, Lt. W. F.	0	1	Forsythe, Capt. J. D.	0	1
Brown, Lt. Col. Lewis	6	4	Franklin, Maj. E. L.	0	2
Cannon, Capt. V. M.	1	2	Gay, Capt. H. R.	4	2
Caperton, Capt. J. N.	1	2	Gerhardt, Capt. C. H.	6	7
Carter, Lt. R. A.	1	0	Gibbs, Col. George S.	2	1
Chaffee, Maj. A. R.	2	1	Gillespie, Maj. J. A.	1	0
Chamberlin, Maj. H. D.	4	5	Greeley, Maj. J. N.	1	0
Cheves, Capt. G. X.	1	2	Greenwald, Maj. K. C.	5	4
Clifford, Maj. C. L.	1	2	Groninger, Maj. H. M.	2	1
Clyburn, Lt. J. W.	1	2	Gross, Lt. J.	3	2
Carson, Capt. M.	0	1	Guernsey, Lt. H. J.	1	2
Collier, Lt. J. H.	1	0	Hanson, Capt. H. R.	1	0
Collins, Maj. J. L.	1	2	Harris, Capt. T. A.	1	2
Comfort, Lt. F.	0	1	Hastey, Capt. T. W.	0	1
Corbusier, Lt. Col. P. W.	2	0	Haydon, Capt. P. S.	0	1
Corridon, Lt. J. H.	0	1	Hensie, Lt. W. R.	0	1
Coulter, Capt. H. K.	2	3	Herr, Maj. Fred	0	1
Craig, Capt. W. H.	2	3	Herr, Lt. Col. J. K.	3	4
			Hershey, Capt. L. B.	1	0

ARMY POLO ASSOCIATION—HANDICAP CHANGES

Name	Old	New	Name	Old	New
Hettinger, Capt. J. A.	3	2	Reynolds, Maj. S. C.	2	0
Holbrook, Jr., Lt. W. A.	1	2	Rhinehardt, Maj. C. H.	2	1
Hickman, Jr., Lt. G. W.	0	1	Richart, Maj. D. G.	1	0
Holman, Maj. O. I.	2	1	Rogers, Capt. J. C.	3	4
Horton, Lt. J. B.	2	3	Rodwell, Capt. J. S.	1	0
Huthsteiner, Capt. G. E.	4	5	Roxbury, Lt. E. J.	1	2
Ireland, Lt. R. E.	1	2	Rumbrough, Capt. D. S.	2	1
Irving, Capt. J. H.	2	1	Sands, Maj. A. L. P.	1	0
Jacoby, Lt. L. E.	1	3	Sargent, Lt. C. E.	1	2
Jadwin, Lt. C. C.	2	3	Schucker, F. R.	1	0
Jacobs, Lt. B. R.	0	1	Scott, Maj. O. L.	1	0
Johnson, Lt. H. W.	0	2	Searle, Capt. A. C.	0	1
Jenkins, Jr., Capt. J. M.	2	1	Sharp, Lt. F. P.	2	3
Jernigan, Lt. H. S.	1	2	Shea, Lt. A. F.	2	3
Jones, Maj. H. L. C.	1	2	Short, Capt. J. C.	2	3
Kielsmeier, Capt. S. G.	0	1	Shugg, Capt. R. P.	1	0
Ladue, Lt. L. K.	1	2	Simpson, Maj. W. H.	2	1
Lewis, Maj. J. E.	1	0	Smalley, Maj. Henry R.	1	0
Lucas, Maj. J. P.	2	1	Smith, Lt. C. W.	1	2
McClure, Lt. Mark	2	3	Smith, Capt. Charles C.	2	4
McClure, Capt. R. A.	2	1	Stadler, Lt. J. H.	1	2
McCreary, Capt. M. L.	2	1	Stearley, Lt. R. F.	1	2
McFarland, Lt. C. N.	2	3	Strong, Lt. P. N.	0	1
McIntyre, Lt. Col. A.	1	0	Swift, Jr., Lt. Col. Eben	2	1
Magruder, Maj. M.	1	0	Swing, Capt. J. M.	2	3
Makinney, Lt. F. W.	2	3	Talbott, Jr., Maj. R.	1	2
Marriott, Lt. O. R.	1	0	Taulbee, Col. J. F.	1	2
Mason, Lt. D. P.	2	1	Tayler, Lt. R. L.	0	1
Maxwell, Capt. R. R.	2	1	Taylor, Maj. V. V.	2	1
Meador, Capt. M. F.	1	2	Thomson, Lt. E. F.	1	2
Metcalf, Lt. F. A.	1	2	Thornton, Lt. H. J.	1	0
Michelet, Lt. P. D.	0	2	Truscott, Capt. L. K.	3	4
Miner, Maj. H. E.	1	0	Waddell, Lt. H. B.	1	0
Moores, Lt. Z. W.	0	1	Wakefield, Lt. M. F.	1	0
Morris, Lt. Col. W. V.	3	2	Walker, Lt. J. H.	1	2
Munnikhuysen, Maj. H. D. F.	1	0	Wall, Capt. C. G.	0	1
Neu, Capt. J. P.	2	1	Watkins, Capt. J. G.	1	0
Niblack, Lt. E. A.	1	0	Wahl, Capt. G. D.	0	1
Nichols, Lt. J. A.	0	1	Van Meter, Lt. S. W.	0	1
O'Connor, Lt. W.	1	0	Van Wyck, Lt. H.	0	2
Odell, Warrant Officer P.	1	2	Whisner, Capt. E. B.	0	1
Page, Maj. D. J.	0	1	White, Capt. W. J.	3	4
Palmer, Lt. C. D.	0	1	Wilkinson, Capt. C. A.	4	7
Pence, Lt. G.	0	1	Williams, Capt. E. T.	2	1
Patton, Maj. G. S.	4	5	Winans, Maj. Gen. E. B.	1	0
Pendleton, Maj. W. A.	1	0	Williams, Lt. J. F.	0	1
Pennell, Maj. R. McT.	2	1	Wofford, Lt. J. W.	2	3
Poole, Maj. T.	1	0	Wolfe, Capt. W. R.	1	0
Read, Jr., Lt. G. W.	3	4	Wood, Capt. D. S.	3	4
Reardon, Lt. W. J.	0	1	Yeats, Lt. J. J.	1	2

Cowboy Stuff. Verse by F. W. LAFRENTZ. Etchings by HENRY ZIEGLER. G. P. Putnam's Sons, New York.

Reviewed by A. J. O. Culbertson

I don't think I shall have to belabor myself to convince an American cavalryman that those years of our history known as "frontier days" were not such bad times.

If we could pass down a picket line and see all of the western horses—mustang, bronch and cayuse—which have carried American soldiers in work and in play, we would see some of the sturdiest and noblest animals that ever looked through a bridle, and a certain number which were sturdy enough, but rather ignoble. Yes, many of them had a touch of vice in their systems, and some of them were wholly vicious, but considering them all, and especially those of later days which carried an infusion of thoroughbred blood in their veins, they were a very fine lot. They have performed every feat that has been asked of a horse under saddle —and some feats which were uninvited.

Some soldiers and many civilians have written about these horses and the early days, but all too few of both classes have done so. One reason is that a younger man is usually too busy doing things to spend any time writing about them. Another reason is that after a man has passed the physically strenuous part of his life he is too much occupied with cares and affairs to put down his memories.

There are some exceptions in both categories. An exception to the class of men who led a strenuous life in the West in the early days, and, in spite of being burdened with cares of phenomenal success, has found time to put down a record of the horses and men of frontier days, is F. W. Lafrentz.

Forty-five years ago Mr. Lafrentz published a modest little book of random verse, while in the West. He decided about five years ago to get out a more pretentious volume in the nature of a contribution to frontier literature. This, too, was to be in verse.

As this thought progressed and his reminiscences began to accumulate on paper he engaged the artist Henry Ziegler, an etcher who had made a reputation among the Fifth Avenue art galleries as an authentic delineator of western horses. Mr. Ziegler was to illustrate each of the poems with an etching. Although a much younger man than Mr. Lafrentz, the artist is a Texan of an old family in that state, and had been brought up among cattle, horses, panthers, mountain lions, coyotes, wolves, rattle snakes and other denizens of the Texas plains. So he quickly caught the spirit of the venture and has worked the past two years on the illustrations for Mr. Lafrentz's book.

From this it can be seen that both the author and the illustrator possess the essence of the subject which they have tackled.

The book is to be off the press about the time that this issue of the CAVALRY JOURNAL comes out. There are to be five hundred numbered copies. The first ten are to have original

etchings bound in, and are to sell for $5,000 each. The paper will be the finest hand-made product and the volume clothed in the acme of the book binder's art. The next ten are to sell for $1,000 each, the next ten for $500, and the next twenty for $200, and the remaining 450 copies for $100 each. All of these editions are over-subscribed with the exception of some of the $100 books.

Mr. Lafrentz recently decided to donate the profits on this sale of the book to Lincoln Memorial University, an industrial school for mountaineers at Cumberland Gap, Tennessee, near the geographical spot where the states of Tennessee, Virginia and Kentucky are joined.

Pages 178 and 179 of this issue of THE CAVALRY JOURNAL were taken from *Cowboy Stuff*.

So instead of writing at any length about the quality of the verse and the illustrations, I thought I would better tell you about the men who produced them, and let the picture and the lines speak for themselves. I think they both do this right well. I think that anyone who has seen the real West—and the cavalry is full of people who have—will feel that in "The Tenderfoot" the author and the artist have got the tang of the genuine article.

Editor's Note: By sending to the CAVALRY JOURNAL the above article and the etching and verse appearing on pages 178 and 179, Mr. Culbertson has permitted THE CAVALRY JOURNAL to publish the first story to be printed about the book, as well as to reproduce illustrations therefrom for the first time.

Safari. By MARTIN JOHNSON. 294 pp. Illustrated. G. P. Putnam's Sons, New York—London. $5.00.

Safari is the native term for an expedition into the field. The purpose of the expedition which Martin Johnson undertook was to "record African wild life in its native haunts in film form."

Mrs. Johnson accompanied her husband on safari, and they, together with nearly two hundred natives, "dug in" at Paradise Lake, five hundred miles from the nearest civilization. This lake, which is in the crater of an extinct volcano, was discovered by Mr. Johnson on a previous trip to Africa. Here live probably more wild game than in any other section of the African wilds.

It is particularly interesting to note that, while many hunters go to the jungles seeking records in the killing of game, Mr. Johnson goes solely to study and film them. He and the members of his party killed only for food or to save life.

Their trip abounds in thrills, narrow escapes from death and countless adventures with elephants, lions, rhinos, ostriches, giraffes and other wild animals. Elephants actually came into their little settlement at night and pulled the grass from the roof of the shack in which they slept, or stole sweet potatoes out of their back yard. Once while pictures were being taken of a herd of elephants Mr. Johnson turned the camera over to his wife in order that he might venture forth to arouse the animals' curiosity, so as to get a better film. Almost instantly a big bull saw him and with a furious grunt began a charge in which all the others followed. Mrs. Johnson was terrified, but still kept turning the crank of the camera. When the elephants came within a few feet, she quickly seized her rifle and fired, hitting a fatal spot. Such accounts the author interestingly and vividly relates.

Mr. Johnson returned to this country with a superb collection of both film and still pictures of the fast disappearing wild animal life of Africa "in order that posterity might be able permanently to recall it as it had existed in its last and greatest stronghold." With sixty-six of these remarkable pictures he has handsomely illustrated his book.

Marching Men, the Story of War. By STANTON A. COBLENTZ, illustrated by ARTHUR LAIDENBERG. 471 pp. The Unicorn Press. $5.00.

This book purports to be to warfare what H. G. Wells' *Outline of History* is to the history of the human race. It endeavors to trace the methods and modes of warfare from the head hunting expeditions of the most primitive savages to the poison gas incursions and airplane raids of the World War.

This would make most interesting reading to the army officer were the book confined thereto, but unfortunately so much space has been devoted to apologies for omitting such a war, such a weapon, such a maneuver for lack of space and to descriptions of the horrors of war that the author has only been able to touch the high-spots of technical matters.

Indeed, the horrors of war are so stressed and so cumulative as the book goes on, and the final prophecy in the book of the eventual extinction of the human race through warfare is so pointed, as to leave a strong suspicion that the whole book is mere pacifistic propaganda masquerading under another name.

The author's contention, no doubt true, that warfare has increased in violence and destruction with civilization and its accompaniments of authority and property gives, however, but little hope for the outlawing of war, except through the destruction of that very civilization which he claims is its cause.

Some Famous Sea Fights. By FITZHUGH GREEN and HOLLAWAY FROST. 331 pages, illustrated. The Century Company. $3.50.

Although the cavalry has at several different times in its history been the victor in actions against water craft, mostly river boats, it is nevertheless quite an assignment for a cavalry officer to attempt to review a book on naval warfare. However, as one of the co-authors of the present volume has recently contributed an excellent article to the CAVALRY JOURNAL entitled *On Horses*, it behooves us to attempt to repay his effort by a review of his book.

The authors of *Some Famous Sea Fights* are both American naval officers of high standing. They have selected eight sea fights for description: Salamis, Svold, the Spanish Armada, Gibraltar, the Nile, Mobile Bay, the Sea of Japan and Jutland. The selection was guided, according to the authors, by the desire to show sea-power at widely-spaced epochs and to bring on the scene every great historical navy at least once, avoiding any magnification of our own naval history.

The descriptions are rather technical than otherwise. What layman, for instance, knows off-hand the difference between galleys, galleons, galiots and galleasses? A glossary of terms would not have been amiss for the general reader. One or more sketches accompany the description of each battle and it is interesting to the army officer to see how the immutable principles of land warfare are equally applicable at sea. The flank attack, the massing of strength against the opponents' weakness, reconnaissance, surprise, moral ascendency and aggressiveness have all played their part in naval victories. One is struck particularly by the age-old tradition of the sea, which requires a captain to fight his ship to the last gun against overwhelming odds and, when even that is silenced, to open the sea-valves and go with his crew (of sometimes several hundred men) to the bottom, with colors flying, the band playing and all hands singing, rather than surrender to the enemy.

The description of each fight is oriented by the inclusion of the main features of the general situation existing at the time both afloat and ashore.

Record Flights. By CLARENCE D. CHAMBERLIN. 286 pp. Illustrated. Dorrance & Company, Philadelphia. $2.50.

The first of March released from the printers another book written by a trans-oceanic flyer, Clarence D. Chamberlin, telling chiefly of the adventurous flight to Europe, and relating many humorous anecdotes of this and other flights, and experiences that happened to have come his way.

The first part of the book takes up his record-breaking endurance flight with Bert Acosta as his flying partner in which they beat the Frenchmen, Droulin and Landry's mark by nearly six hours, and established for themselves a record by staying in the air for 51 hours 11 minutes and 25 seconds. He continues with his dealings with Charles A. Levine in preparation for his flight to Germany and finally the flight itself, and almost disastrous landing on German soil, where both Chamberlin and Levine were welcomed with the hearty and enthusiastic delight of the German people.

The second part of the book is a biography of himself, the son of a town jeweler and watchmaker of Denison, Iowa. At the beginning of the war he decided to become an aviator, and immediately applied for the heavier-than-air division where he received his army training and skill that began his famous career, which marks him as one of the leading aviators of the world today. He tells of the typical experiences after the war during what are known as the lean years in aviation, often not knowing where his next nickel was coming from, which he says was the usual rather than the unusual life of an aviator of that time, until the wonderful flight of Colonel Charles A. Lindbergh started the upward trend of commercial aviation as it stands today.

Record Flights is a lively, entertaining and in many ways a very enlightening book, cleverly and amusingly written in the natural manner of a barnstorming pilot.

The Legion of the Damned. By BENNETT J. DOTY. Illustrated. 298 pp. The Century Co., New York and London. $3.00.

For those who take particular pleasure in the reading of adventure, Bennett J. Doty in his "The Legion of the Damned" offers as entertaining and absorbing a tale as has come our way in many a moon.

The author has written of his actual experiences while serving in the French Foreign Legion, which is probably considered one of the most unique and fascinating organizations of its kind in the world; drawing into its ranks men from all walks of life and from all nationalities. In the beginning of his book, Doty tells of his enlistment in the Legion and promises "all the dramatic experiences that have befallen me since that day will be told with absolute truth and fidelity in this book. They will be told with no reservation, no pinkish glossings-over. But also without exaggeration. I wish the book to be a true human document."

This young soldier of fortune has experienced all the best and the worst of life as lived in the Legion, from the severe discipline in days of training, the deadly monotonous and utterly fatiguing work during peace days, to the glories of heroism for which he received the Croix de Guerre. He has written most entertainingly and informingly of the life of the Legionnaires who are a "hard, brawling, tough, dissolute lot; but demons for fighting we found them, and good comrades in stress and combat." He describes many thrilling conflicts with the Druses in which these hard boiled fugitives from justice who were usually an insubordinate, drinking and quarreling lot, were completely changed into the bravest, most enduring, self-sacrificing and obedient of men. An authentic and engrossing book.

The Arabian Stud Book, Vol. III, 1927. Published by the Arabian Horse Club of America, 1580 Woolworth Building, New York, N. Y.

This book contains a preface by Mr. W. R. Brown, president of hte Arabian Horse Club of America, a short history of the Arabian horse by H. K. Rush-Brown, the secretary of the club, an article on the standard conformation and type of the Arab, a description of the principal strains of Arabian thoroughbred stock, the constitution, rules of registration and application for membership in the club, and lists of reference books, abbreviations, owners of living horses and registrations, the last constituting, of course, the bulk of the book.

History of the Great War, based on British official documents, Volume III, Military Operations, France and Belgium, 1915. Compiled by BRIG. J. E. EDMONDS (retired) and CAPT. C. G. WYNNE. MacMillan & Company, London. Price, $5.00; case containing maps, $2.25.

Reviewed by Major C. A. Schimelfenig, Ord. Dept.

This volume covers the activities of the British Expeditionary Force during the winter of 1914-15 and the spring of 1915. The allied plans for the spring campaign in 1915, the Battle of Neuve Chapelle and the 2nd Battle of Ypres are covered in detail and a chapter is

devoted to the expansion of the Army and the development of the supply of munitions up t the formation of the Ministry of Munitions.

This account is authentic and is issued by direction of the Historical Section of th Committee of Imperial Defense. All details have been checked against the French an German records. Notes furnished by the German Reichsarchiv and extracts from Schwarte's "Der Grosse Krieg" are appended to each chapter.

The account of the Battle of Neuve Chapelle March 10-13, 1915, is interesting as it was the first carefully prepared attack by the British against the German trenches. An artillery time table was used for the first time as well as objecive maps and the artillery barrage All subsequent attacks to the end of the war were based on methods developed at Neuve Chapelle.

Half of this volume is devoted to the account of the 2nd Battle of Ypres which began April 22, 1915, and ended May 25, 1915. The first gas attack of the war was delivered by the Germans against French Territorial and Algerian troops who were holding the line on the British left. The attack was a complete success and a gap of 4½ miles was left open by the retirement of the French troops. The Germans made a penetration of 2¼ miles but stopped due to lack of reserves to convert the "break-in" into a break-through and because the effects of gas were underestimated. The determined resistance of the Canadian troops on the right of the gap deterred exploitation of the German success. The description of the remainder of the battle is devoted to accounts of the desperate efforts of the British to regain their lost positions and of the limited objective attacks launched by the Germans.

Many valuable lessons were learned by the British during this battle: the need for abundant supplies of ammunition, the loss of control by higher commanders after an attack is launched, the inadequate communications system and the necessity for immediate counter-attacks by local reserves. If the counterattack is delayed until reserves of higher units are brought up, then a prolonged and heavy bombardment is required.

The shortage of heavy artillery and the totally inadequate supply of ammunition, particularly high explosive, rendered the British attacks impotent against an intrenched enemy apparently equipped with an abundance of each. At the close of the battle the total number of rounds of high explosive ammunition available for the whole British Expeditionary Force on the lines of communication were: 18-pounder, 272; 4.5 inch, 536; 4.7 inch gun, 2338; 5 inch howitzer, 1620; 60-pounder, 379; 6 inch Howitzer, nil; 6 inch BLC, nil; 8 inch Howitzer, nil; 9.2 inch Howitzer, 612; 15 inch Howitzer 10. Offensive operations ceased until the ammunition reserve could recover.

This volume is well illustrated with sketches showing the various positions for use by the average reader and is accompanied by a case containing maps for use by the student. It is an excellent bock for the military student and should be in every well-equipped World War library.

The Rough Riders, A Romance of Theodore Roosevelt and the Spanish War. By HERMANN HAGEDORN. 508 pp. Harper and Bros. $2.00.

This romance combines the historical episode of the participation in the Spanish-American War of the 1st Volunteer Cavalry, or Rough Riders, and their famous leaders Leonard Wood and Theodore Roosevelt, with the love stories of two contrasting types of couples, one from the east, the other from Texas. Both are interesting, but it is doubtful if the book, especially in view of its length, is improved by the inclusion of both. The story of Roosevelt and his Rough Riders alone is sufficient romance for one book.

The author has spared no pains to supplement his personal knowledge of the events narrated by consulting all other available sources of information. The result is an historically accurate novel. The picture of Roosevelt is an intimate and lovable one, which serves to further humanize a great American who is already one of the most human of all our national heroes.

The story parallels so closely the motion picture of the same name (in the taking of which the 1st Cavalry Brigade participated at Fort Clark, Texas) that it is quite evident that one has been taken from the other, although it is not known which is the original.

The Rough Riders would make an excellent addition to any company, troop or battery library.

A Greater than Napoleon, Scipio Africanus. By CAPTAIN B. H. LIDDELL HART. 280 pp., with frontispiece and maps. Little, Brown and Company. $3.50.

Captain Liddell Hart, an Englishman, is military adviser of the Encyclopaedia Britannica, and is well known as a correspondent, critic and writer on military and historical subjects.

His book on Scipio Africanus is more than a biography: it is also a serious military study. The career of Scipio, according to the author one of the least appreciated of all great military leaders, is treated in its military aspects even more thoroughly than from its biographical and political angles, which are nevertheless fully covered. Interest is heightened by the author's comparisons of Scipio's methods with those of modern generals.

Scipio's entire military operations are clearly and simply explained from his first campaigns in Spain, in which he defeated successively the principal of Hannibal's lieutenants, to his final rout of the great Hannibal himself at the very gates of Carthage. The description of all his battles is complete. He was the first great leader to discover the importance of strategy, to recognize the fact that success can sometimes be achieved without the "destruction of the enemy's armed forces on the battlefield" and to realize that slaughter is not necessarily synonymous with victory.

In reading of the strategy of the Spanish campaigns, the reader is warned that the general map illustrating this part of the test is to be found some fifty pages farther on in the book.

Scipio's tactics on the battlefield were always successful. He paid strict attention to all the principles of war as laid down in our training regulations, except that of simplicity. His stratagems and ruses were not simple, but they were based on the conditions at hand, not the least of which were the characteristics and greater numbers of his opponents. His favorite maneuver was the double development. Being almost always outnumbered, he did not hesitate to offset this disadvantage by resorting even to complicated maneuvers. As the United States has not been outnumbered in any of her recent wars, we have been successful with simple maneuvers, but Lee divided his forces successfully in front of Grant, and other great generals have done the same. Some day it may be necessary for us to offset numerical inferiority by stratagem.

Major General Sir Frederick Maurice says of this book: "Captain Liddell Hart has taught us to expect from him thought and originality. In his latest book we have both. He has done the military world a service in rescuing Scipio Africanus from comparative oblivion. The author has more than justified his book. His studies of Scipio's campaigns are lucid and full of lessons in leadership. He shows us Scipio as a master of tactics, and makes good his claim that Africanus is one of the creators of the art of strategy."

The book should be in every complete military library.

Aerial Photographs, Characteristics and Military Applications. By FIRST LIEUTENANT DACHE MCC. REEVES, Air Corps, U. S. Army. 312 pp. Profusely illustrated. The Ronald Press Company. $5.00.

This book is one of a series, published and to be published on aeronautical subjects under the editorship of Lieutenant Colonel C. deF. Chandler, retired, and known as the "Ronald Aeronautic Library." The author of this volume is an expert and former instructor in his subject.

The book is divided into two parts: first, characteristics of aerial photographs; and,

second, military applications of aerial photographs. The first part is clearly and simply treated and profusely illustrated. While not required to know the more technical phases of aerial photography, the line officer must neglect no opportunity of increasing his working knowledge of the use of this new branch of military information, which is destined to be of more and more value in the future. In this opportunity for self-improvement of the line officer lies the book's greatest value.

The second part, military applications of aerial photographs, is, as might be expected, not so good as the first part in which the author confines himself to his own specialty. In neglecting to include a chapter on aerial photographs in cavalry operations, the author has overlooked one of their most prolific probable future uses. Since cavalry operates farther forward than any other branch, except the air corps, from the center of gravity of the army, it will necessarily be relatively more dependent on the use of photographs, as compared to laboriously made maps, than will the other branches of the service. Furthermore, there are not lacking examples of the use of aerial photographs with cavalry, already worked out in peace-time at the Cavalry School and other places, where our cavalry and air forces have had opportunity for joint training.

The Remount. November, 1927.

In *Equine Types—A Study of Origin*, the author, Doctor John Ashton discusses in a most interesting way the origin of the thoroughbred and of its progenitor the Arab. The origin and characteristics of the trotter conclude the article. To one not familiar with the famous sires whose characteristics are stamped upon our thoroughbreds of today we can not too highly recommend this masterly study. The splendid photograph of *Spearmint*, the Derby winner of 1906, which adorns the article, is worth studying as a type approaching perfection in thoroughbred conformation.

Mr. Topliffe Sawyer in an article entitled *A Brighter Down for the Steeplechase Horse*, discusses the increased interest in steeplechasers and gives some of the reasons therefor. The increasing number of races for steeplechase horses will tend to build up a better stock of thoroughbreds, and cause owners to breed for size, quality, endurance and general sturdiness. In the opinion of the author this stock should be valuable in helping to overcome the strain made upon the expensive flat racing stock which is allowed to race before getting its full growth.

Mr. A. J. Culbertson describes the *1927 National Horse Show*, Mr. Edwin Phillips Kohl the *Brilliant Amateur Sport on New Westchester-Biltmore Course*, and Mr. C. J. Fitzgerald the *1927 Metropolitan Racing Season*. The illustrations for all of these articles are excellent and serve to add beauty to a most interesting issue of the *Remount*.

The Remount. January, 1928.

In this issue, Major Henry R. Smalley discusses the *Fundamental Principles of Equitation* in a very interesting way. The author's reasons for a stiff jaw and how to overcome this defense, indicate that generally the rider is at fault. His interpretation of the principles laid down by Fillis clear up many misconceptions which must have arisen in the minds of those who have read "Breaking and Riding." The article shows in a practical way how to command the length of stride as well as the rate of progression.

Any horseman would be proud to posses the colored prints illustrating the article. *"Ned King"—Sporting Artist*, by Mr. A. J. Culbertson. The description of how colored etchings are made is very informative. Other articles are: *Breeding Morgan Horses—Today*, by Mr. John O. Williams, which sets forth the objective of modern Morgan horse breeders: *News and Notes of Thoroughbreds*, by Mr. Topliffe Sawyer, a chatty discourse on the performance of the get of famous sires during the 1927 season. It is interesting to note that *Fair Play*, famous sire of *Man of War*, leads the list of sires of winning throughbreds for last year. Mr. Sawyer also discusses the subject of betting at tracks and the performance of *Billy Barton*, champion cross-country horse of the United States.

The Cavalry Journal. (Great Britain.) January, 1928.

In this issue of the Journal, many good pointers on buying and training polo ponies are presented in *Ideas on Breaking Polo Ponies*, by Lieutenant Colonel Hobson. Since most of our officers must make their own ponies this article should be read with interest. The author gives very practical suggestions some of which are entirely new. His ideas on what to look for in buying a green pony are particularly valuable, and if carefully followed, should prevent one from wasting time and money on polo prospects which from the beginning are unsuited for the game. Another interesting article on horses is *Prejvalsky's Wild Horse*, which gives a description of this rare equine species and makes some deductions as to the part it has played in the ancestry of modern breeds. From the photographs accompanying the article it would appear that the animal has certain well defined characteristics of the donkey.

Interesting additions to the part played by cavalry in the World War are contained in an account of the operations carried out by the *Mhow Cavalry Brigade* on December 1, 1917, and of the *Indian Cavalry at Aden* on March 8, 1917. The Mhow Brigade moved forward, mounted, secured Villers' Ridge and held this position until withdrawn. After securing its objective this unit delivered several local attacks, dismounted. The action illustrates in striking degree the use of mobility to get forward and secure the objective, and the use of fire power to hold the advanced position. The forward movement was made through gaps in the wire or by actually jumping this obstacle. The action at Aden illustrates the usefulness of cavalry in maintaining contact with an enemy and forcing his small patrols to remain within their own lines. Although the author states that Aden was a side show, it would appear that the cavalry performed an important mission in this theater of operations.

The Royal North-West Mounted Police presents a brief history of this famous organization. The author pays tribute to the grand traditions of the Police and enlivens his article with stirring examples of the work done by its members in the far off provinces of Canada. An article entitled, *Accidents—By Flood and Field* is worthy of perusal by those who may be called upon to ford streams with cavalry. Two amusing articles are *Beasts of "Whatever Description"* and *Very Irregular Cavalry*. The latter presents some personal glimpses of the Bashi Bazouks during the Crimean War.

Memorial de Caballeria. (Spain.) October, 1927.

Reviewed by First Lieutenant C. C. Clendenen

Memorial de Caballeria consists very largely of translations, principally from the French.

The October issue contains a continuation of an article begun in a previous issue discussing the military features of the ruins of Numantia and of the tremendous works constructed by the Romans in their seven-year siege of that city. The author, who is anonymous, considers that Publius Cornelius Scipio executed works comparable to or exceeding those of Caesar before Alesia.

This issue also contains extracts from *Our Cavalry in Morocco*, by Captain Moslard, of the French Army, which appeared in the *Revue de Cavallerie* for July-August. Most of the lessons drawn from the Morocco campaign are already familiar to American cavalrymen. Some few of these lessons are as follows:

1. Cavalry must not be frittered away acting as escorts to staff officers, etc.
2. Machine guns must prepare and protect an attack. They must, however, be protected from infiltration.
3. A retirement should be made, usually, by successive echelons.
4. It is dangerous for small forces to camp several days near a center of population the inhabitants of which may be hostile.

The *Present State of the Pure Arab Horse* is a translation of the report of a French commission which visited the Near East in 1925. The commission encountered some difficulty in identifying pure-blooded Arab stallions, but also located districts in which the Arab of legend is still procurable.

The Sport of Polo is an article by General Merry, for beginners at the game. It traces the introduction of polo into spain to the English residents of Jerez de la Frontera. The article reviews, briefly, the known history of polo from the earliest times, and gives a résumé of the rules.

Revue de Cavalerie (France), November-December, 1927, and January-February, 1928.

Reviewed by Major W. E. Shipp, Cavalry

These numbers contain two German estimates of the cavalry taken from the *Militar-Wochenblatt;* one by General von Seeckt, the organizer of the Reichswehr, and the other by General Baron von Rotberg.

Von Seeckt admits that the day has passed when numerous cavalry corps can be employed in mass but to conclude, that cavalry divisions are, after the events of the last war, superfluous and even a nuisance is certainly an error based upon superficial observation. He rather amusingly says that in allowing Germany 18 regiments of cavalry, and 21 of infantry, the Allies hardly had his country's interests at heart, but that he has never regretted this proportion. He stresses the necessity of giving soldiers more training in the cavalry than in the other arms: the importance of morale, equitation and swimming: combat on foot: the instruction of pioneers: the error of allowing officers to transfer from one branch to another, and the impossibility of improvising cavalry in war. A very readable article.

Von Rotberg's opinions are based on personal observations during the War. He believes that the importance of cavalry has been reduced in reconnaissance but increased in combat. The war showed that the German cavalry was deficient in organization, training and armament. Some of the major points brought out by the author are:

1. The cavalry squadron should have at least 200 men—the equivalent of an infantry company.
2. The constitution of a cavalry division after mobilization is a grave error.
3. The artillery group of a cavalry division should consist of 2 batteries of light mortars and 1 of guns.
4. The lance is obsolete. The principal arms of the cavalry are the machine gun, the machine rifle and the rifle.
5. Numerous horseshoers should be trained in peace.
6. Combat instruction is the essential thing.
7. Led horses are usually placed much nearer their units on maneuvers than in war—a dangerous tendency.

Major Michoux contributes an interesting article in two parts, on the battle of Haelen, the first great cavalry combat of the War. He believes that the absurd charges of the Germans in this battle opened their eyes to their tactical mistakes and caused their cavalry to avoid mounted combat in the future on the Western front.

Captain F. Gazin concludes his valuable article on *The Russian Cavalry During the First Days of the War.* He shows clearly the failure of leadership, the usury of effectives by reconnaissance in force, the failure to live off the country, and the final wearing out of all horses by excessive work.

Major de Cosse-Brissac in *A Regiment of Cavalry Under the Ancien Régime. Dauphin-Dragons,* describes the life in a dragoon regiment in 1788 and concludes that there is nothing new under the sun and that the greater part of the instructions and doctrines in the French Army date from that period. Very entertaining. Such an article about one of our own regiments would undoubtedly be of interest.

In the *Sporting Chronicle* accounts are given of the international horse shows in Lucerne, Rome (translation from *Il Cavallo Italiano*), Geneva and New York, and also of the first endurance ride in France since the War—that held from Paris to La Baule. At Lucerne and Geneva, the French teams repeated their triumphs at Rome, Nice and San

Sebastian. A full and impartial account is given of the New York show. The failure of the French to repeat their triumphs of previous years was due partly to the improvement of the Canadian and American teams and partly to the unsatisfactory stabling arrangements at the Garden. The American team had 20 heavy jumpers, which were well trained and well ridden. The French team was very cordially received by every one.

Other articles in these two issues include: *Observation in the Division Reconnaissance Group,* Capt. Pommares: *Notes on the Employment of Cavalry in the Levant as Shown by Missions Performed by the 6th Spahis in* 1925-1926, Capt. Kuntz (the successful accomplishment of many missions by this regiment): *The 5th and 6th Hussars at Rethel, August* 30, 1914, v. Lt. Desazars de Montgailhard: *Operations in Quezzan in* 1927. *Study of a Cavalry Action,* Major Cristiani: and *Essay on the Infantry Division Reconnaissance Group,* Major Boussert.

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The CAVALRY JOURNAL

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EDITOR PRO TEM
Major K. G. EASTHAM, Cavalry

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The United States Cavalry Association

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There is no initiation fee. Annual dues, payable in advance, $2.50, which include subscription to the Cavalry Journal, 60% thereof being so designated.

Any person or organization not eligible for membership may subscribe for the JOURNAL at the regular subscription rates of $2.50 per year. Canadian and foreign postage 25 cents additional.

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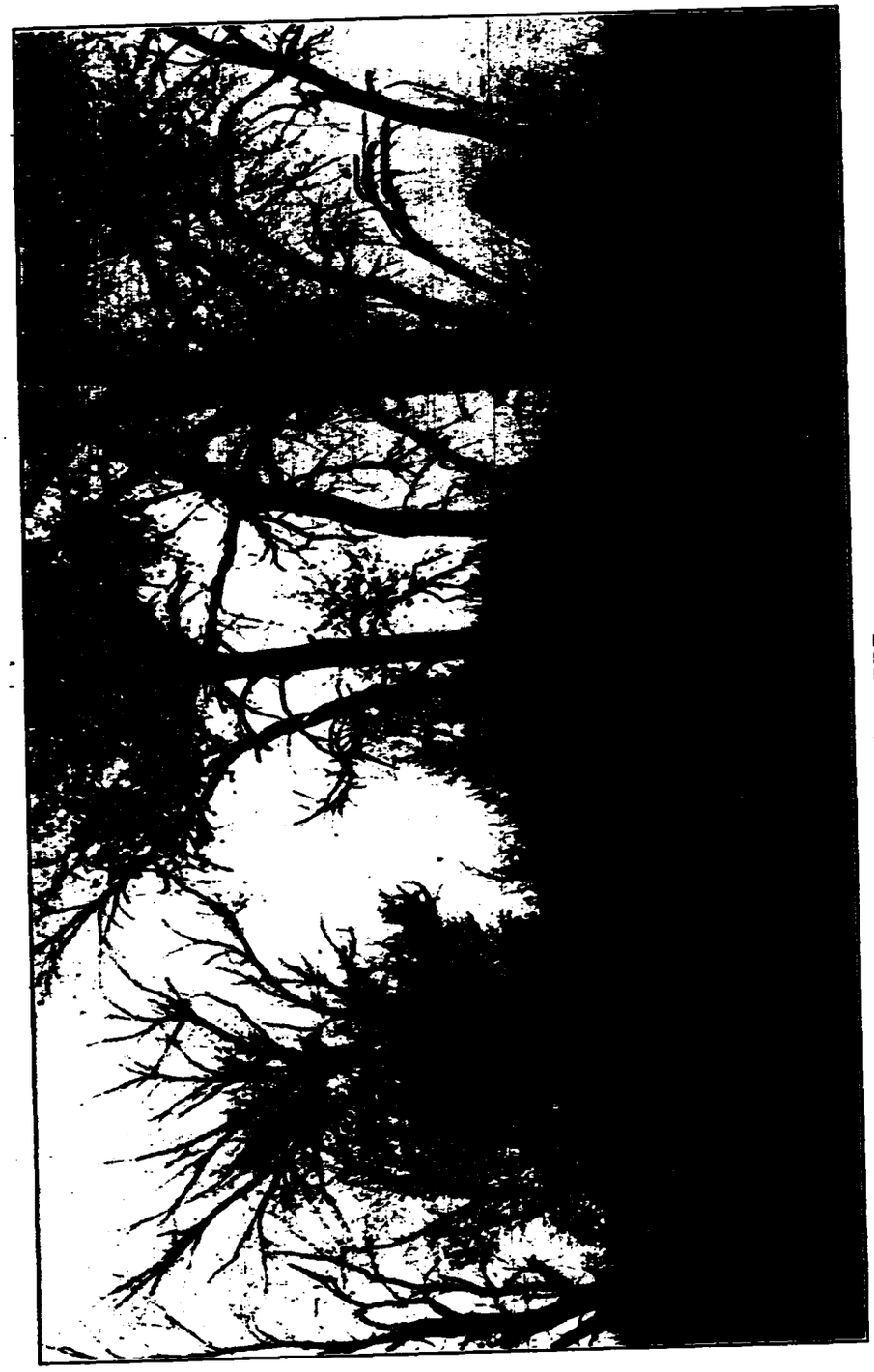

Cavalry Weapons

The
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Fire Power

By Colonel Aubrey Lippincott, *13th Cavalry*

FIRE power and mobility, the two most important assets of cavalry, are of their very nature conflicting. This conflict—which is ever present in varying degree, whether in organization, armament, equipment, or even in training—demands our constant consideration in order that we may achieve that nice balance between the two which is so essential to our war time effectiveness.

In the matter of training we are likely to overlook this desired happy medium between mobility and fire power. This oversight is due, no doubt, partly to the multiplicity of cavalry activities, partly to the inroads upon our time and personnel from the perpetual call for post special duty and fatigue details, and partly, too, to our own natural inclinations that allure us towards those activities in which the horse predominates and thus excuse our negligence toward those equally important duties relative to fire power. It is not surprising, then, if cavalrymen lean rather heavily towards mounted training and often do just enough of the other kind to get by. This, if carried far, develops faddists, of which we have our share.

If we would train our cavalry in accordance with our doctrine as to its tactical employment, we must carry out the conception that both mobility and fire power are necessary, that one is the complement of the other. To develop fire power cavalry is armed with the rifle, machine rifle, and machine gun. To these an anti-tank gun will soon be added, as well as the weapons to be adopted for the armored car troop and the tank platoon of the cavalry division. Only the first three weapons will be touched upon here.

The Rifle

Everyone is reasonably familiar with this weapon and our men are fairly well trained as individuals in its use, due in some instances, perhaps, to the eighty percent qualification requirement. But what about the collective fire of squads and platoons, the instrumentalities through which fire superiority in battle is to be gained? How much time is given to them? How proficient are they? To direct and control the collective fire of a group of riflemen on a target of low visibility, of uncertain frontage, and at an unknown range, and to combine this fire with movement, all the while taking full advantage of such cover as the ground affords, requires understanding of, and practice

in the application of principles that are vital even though very elementary. Without proficiency in such subjects as range estimation, target designation, fire distribution, the use of cover, methods of advancing, and the duties of leaders, we cannot hope to gain fire superiority in combat, no matter how excellent our men may be as individual marksmen.

In order that we may make a very cursory test of our memory of these points, five elementary questions are here listed, and after each is indicated the Training Regulations and paragraph where the correct answer will be found. It is suggested that those sufficiently interested mentally answer each question and then check-up. This will not take over ten minutes. If some

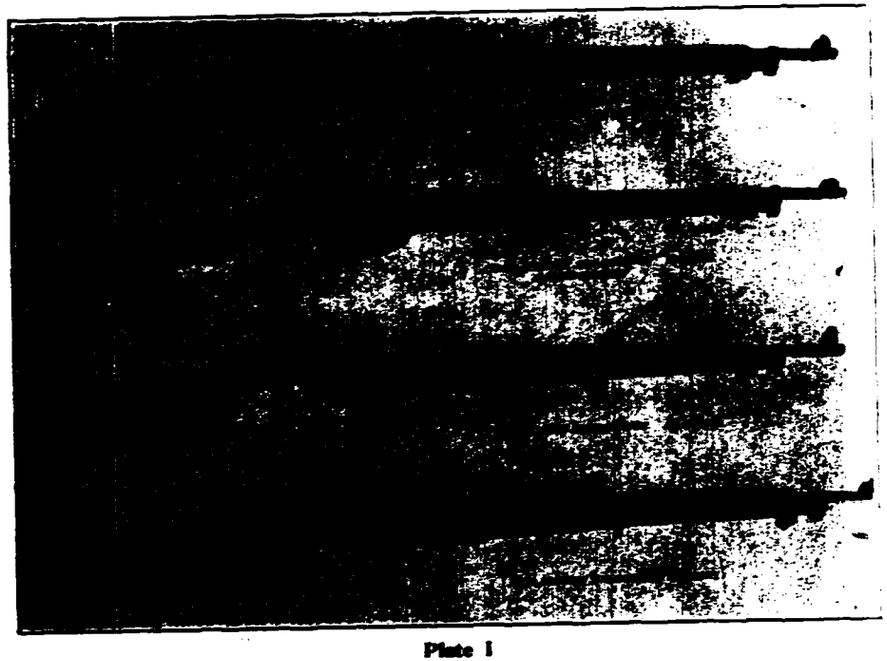


Plate I
Various Types of Rifles

officers find that they have overlooked or forgotten some of these points, it is fair to assume that the noncommissioned officers will know considerably less.

1. Name three methods of target designation. (TR 145-5, Par. 15b.)
2. When designating a target by verbal description, what are the three elements used and in what sequences should they be given? Why? (TR 145-5, Par. 20, a, b, c, d, e.)
3. What methods are generally used to effect fire distribution? (TR 145-5, Par. 30.)
4. Assume that a platoon is engaged as part of a larger force in dismounted combat, and that it is advancing over open ground, not under fire. Make a rough diagram showing the formation of the squads and the position

of the leader, platoon sergeant, scouts, orderly, corporals, and the seconds in command of squads. What are the duties of these individuals? (TR 425-30, Plate VIII and note on page 39.)*

5. Assume that the platoon has now reached a firing position. Where are the positions and what are the duties of:

a. Platoon Leader,
b. Platoon Sergeant,
c. Squad Leaders,
d. Scouts,
e. Machine Riflemen?

(TR 425-30, Plate X and note on pages 50-51.)*

These and similar points should be at the finger tips of all squad and platoon leaders and troop commanders, and the corresponding units should be trained in their application. Otherwise, these units are incapable of producing the fire power that we expect of them. A little time devoted to the principles of musketry and some attention to the elements of dismounted combat for the squad and platoon, as outlined in TR 425-25 and TR 425-30,* with an occasional combat exercise, will go a long way towards putting our training activities in balance.

Before leaving the rifle, a word may be added as to probable future developments. It now seems a certainty that at no very distant time we will be armed with a light self-loading rifle or carbine of somewhat smaller caliber than the Springfield. Then we will have to modify our conceptions as to the rates of fire in battle. This question is one of the important factors in obtaining fire superiority and is worthy of a slight digression. The following discussion is based on a study of the subject made by Colonel W. George McIver several years ago.

In a contest for fire superiority between two forces about equal in numbers, other conditions being equal, the advantage will rest with the side which is able to deliver the greater volume of accurate fire, or, expressed in other words, is able to make the greater number of hits in a unit of time. To illustrate: Suppose two groups "A" and "B," numbering fifty men each, become engaged upon equal terms within effective rifle range. Group "A," for some reason, is able to inflict on "B" a loss of ten percent in one minute's time while "B" inflicts a loss of only five percent on "A." If the fight be maintained on these terms there can be no doubt of the outcome. Continuing the illustration, let us assume that these two groups fire with equal accuracy, thus maintaining the same ratio of hits made to shots fired, and let us further assume that this accuracy is ten percent. But Group "A," through superior skill, fires seven shots per man per minute while "B" fires only five shots per man per minute. Group "A" fires a total of three hundred and fifty shots per minute and the accuracy being ten percent, makes thirty-five hits. Group "B" fires a total of two hundred and fifty shots per minute, and the accuracy being

*Note—Section III, Principles governing Dismounted Combat, were omitted from the War Department publication of TR 425-30. It is included in the edition printed at and used by the Cavalry School.

the same, makes only twenty-five hits. The importance of the time element becomes evident, for one side, merely through a better utilization of time. all other conditions, including accuracy, being the same, obtains fire superiority. The illustration could be continued further to show that even some slight loss of accuracy is admissible for the sake of the advantage gained in shortening the time in which the loss occurs.

Rates of Fire

The rates of fire prescribed for the different ranges in TR 150-10 were based on thorough practical tests, using the Springfield rifle, and were intended to establish standards which could be attained by the average soldier with practice and training with that arm. With the adoption of a self load-

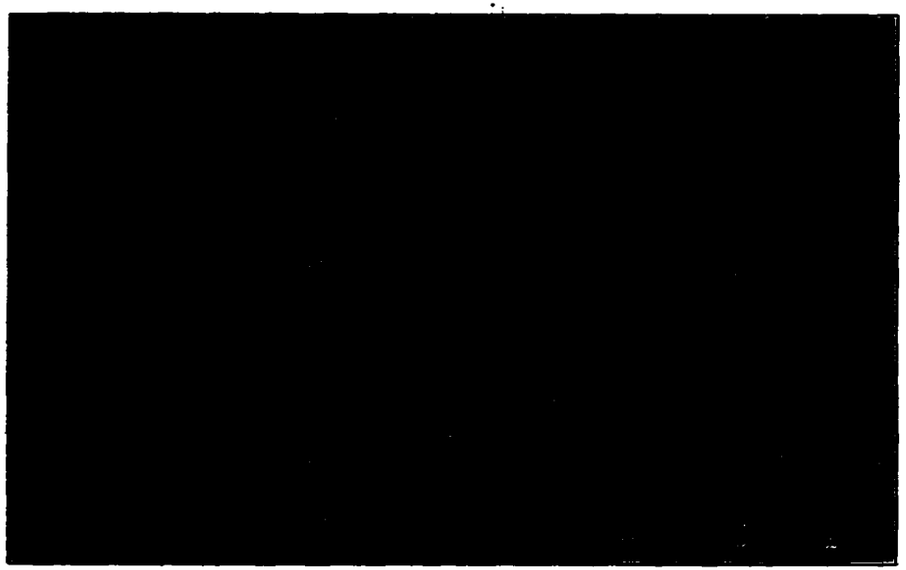


Plate II

Casts Made From Cavities Produced in Plastic Clay by Small Arms Projectiles

RANGE 600 YARDS

1. Caliber .276 bullet (Pedersen) fired into 15 inches of clay. Weight, 1 lb. 7 ozs.
2. Caliber .30 M1 bullet fired into 15 inches of clay. Weight, 2 lbs. 4½ ozs.
3. Caliber .30 1906 bullet fired into 15 inches of clay. Weight 1 lb. 10 ozs.
4. Caliber .276 bullet (Pedersen) fired through 11 one-inch spruce boards, spaced one inch apart, into 15 inches of clay. Weight, 1½ ozs.
5. Caliber .30 M1 bullet fired through 11 one-inch spruce boards, spaced one inch apart, into 15 inches of clay. Weight 12½ ozs.
6. Caliber .30 1906 bullet fired through 11 one-inch spruce boards, spaced one inch apart, into 15 inches of clay. Weight 12½ ozs.
7. Caliber .276 bullet (Pedersen) fired through a one-eighth inch cold rolled steel plate into 15 inches of clay. Weight 15 ozs.
8. Caliber .30 M1 bullet fired through a one-eighth inch cold rolled steel plate into 15 inches of clay. Weight, 1 lb. 1 oz.
9. Caliber .30 1906 bullet fired through a one-eighth inch cold rolled steel plate into 15 inches of clay. Weight 11 ozs.

ing rifle these rates will, for apparent reasons, require revision. Tests already made have demonstrated that with a rifle of this type a rate of aimed fire twice that possible with the Sprinfield can easily be maintained, and this without fatigue to the firer. In this connection the following quotation from a recent report of the Cavalry Board is enlightening. "The semi-automatic rifles averaged approximately forty-seven rounds per minute for four minutes, ninety-three percent hits, and .4 malfunctions per hundred rounds. The service rifles averaged seventeen rounds per minute, eighty-nine and thirty-five hundredths percent hits, and 1.4 malfunctions per hundred rounds. The riflemen were so exhausted after firing the Springfield rifles that several minutes' rest was necessary before proceeding with the semi-automatic rifles. No appreciable fatigue was experienced due to the four minutes' firing of the semi-automatic rifles." The recoil of the Pederson rifle is less than half of that of the Springfield.

Some have questioned the advisability of reducing the caliber of our service rifle on the grounds that a smaller bullet may prove ballistically efficient and may not have sufficient stopping power. From actual tests, caliber .276 ammunition, 125 grain bullet, compares as follows with the .30 caliber 1906 ammunition, 150 grain bullet, and the M1 ammunition, 1926, 172 boat tail bullet:

Remaining Velocities

Range (Yards)	Cal. .30. M-1906	Cal. 30. M1	Cal. .276. 125 grain bullet
0	2700 ft	2600 ft	2690 ft
1000	989 ft	1202 ft	1211 ft

Remaining Energies in Foot Pounds

0	2439	2580	2010
1000	376	555	400

Some idea of the comparative shock effects of these three types of bullets can be gained by referring to Plate II.

The Machine Rifle

This weapon has been a part of our armament but a short time, and in consequence we are not as yet entirely familiar with it. Furthermore, its true capabilities and limitations will be disclosed only after tests extending over a considerable period of time and under varying conditions of service. However, the following characteristics of the weapon are self evident. First, being a shoulder supported arm and having no fixed mount, it is in no sense a machine gun and cannot be used as such. Since it cannot be clamped rigidly in position it should not be used for automatic fire,—that is, fire by bursts,—except possibly at large targets at close range. When fired automatically the dispersion is so great as to be wasteful. Second, it is capable of delivering a very high rate of aimed fire when used semi-automatically, and this rate can be kept up for considerable periods of time without undue heating and

COMPARATIVE FIRE POWER OF OLD AND NEW CAVALRY ORGANIZATION

	HORSES MOBILE (one man per set of fours)				(ONE man per squad)				HORSES IMMOBILE (linked by platoon, one man per platoon)			
	PEACE		WAR		PEACE		WAR		PEACE		WAR	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
TROOP												
Rifles	36	60	60	104	30	69	69	120	34	75	78	152
M R	4	6	6	8	4	6	6	8	4	6	6	8
Total Rifle Power a	56	90	90	144	50	99	99	160	54	106	108	172
REGIMENT												
Rifles	136	360	360	624	180	276	414	720	204	300	468	752
M R	24	36	36	48	24	36	36	48	24	34	36	48
M Gu		8		16		8		16		8		16
37 MM Guns				2				3				3
Total Rifle Power a	276	560	560	1250	300	556	594	1336	324	630	648	1407
BRIGADE												
Rifles	312	480	720	1248	360	552	828	1440	408	600	936	1504
M R	48	48	72	96	48	48	72	96	48	48	72	96
M Gu	12	16	18	32	12	16	18	32	12	16	18	32
37 MM Guns				6				6				6
Total Rifle Power a	652	1128	1530	2520	780	1192	1638	2720	840	1240	[illegible]	[illegible]
DIVISION												
Rifles b	648	1179	1659	2715	980	1335	1875	3099	1035	1419	2095	3387
X Sub	102	102	150	198	102	102	150	198	102	102	150	198
M Gu	24	110c	36	166c	24	110c	36	166c	24	110c	36	166c
37 MM Guns		10		22d		10		22d		10		22d
M G		12		36		12		36		12		36
75 MM Guns	12	12	12	24	12	12	12	24	12	12	12	24
Total Rifle Power a	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4239	[illegible]	[illegible]	[illegible]	3527

Machine rifles rated as equivalent to 5 rifles.
Machine guns rated as equivalent to 10 rifles.
a. Includes rifle platoons only.
b. Includes three Engineer Companies.
c. Includes armored cars, tanks, and airplanes.
d. Includes tanks.

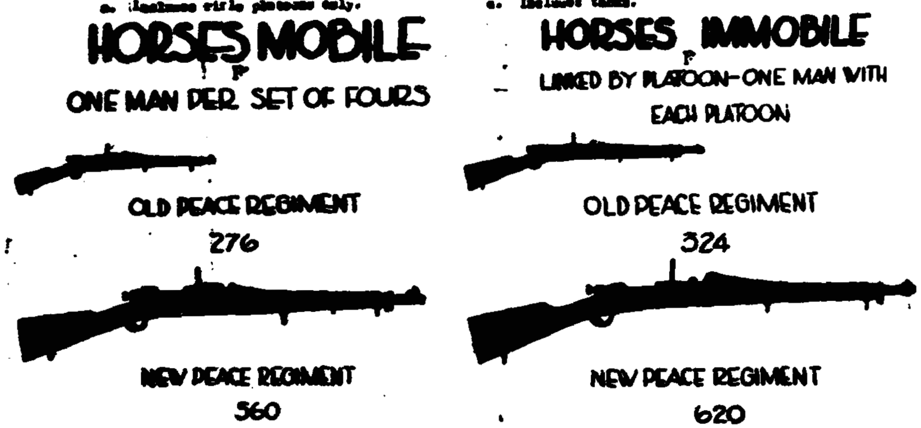


Plate III

without fatigue to the firer. Third, it weighs approximately twenty-four pounds. It is inaccurate, therefore, to state that it has the same mobility as the rifle, for a man cannot carry twenty-four pounds as fast or as far as he can carry nine pounds. Nevertheless, the mobility of the weapon is high and its flexibility such that its fire can be switched readily from one target to another.

Like practically all automatically operated weapons, however, the machine rifle is subject to occasional stoppages, and contains numerous working parts. Hence, unless the personnel of our machine rifle platoons is thoroughly instructed in the mechanism of the arm as well as in reducing stoppages, meagre results may be expected.

The matter of maintaining efficient machine rifle platoons was a particularly difficult problem in the small troops of our recent organization. The characteristic present day rapid turn over of personnel played such havoc with our small troops that very frequently machine rifle platoons dwindled to squads or actually ceased to exist, except in theory. Under these conditions training naturally suffered. However, with the large troops provided by our new organization, and with our new improved machine rifle qualification course, more thoroughly trained machine rifle platoons should result.

The Machine Gun

This weapon is now recognized the world over as the most powerful of all small arms. It stands in a class by itself. Notwithstanding this, however, many cavalrymen have been reluctant to recognize it as a suitable cavalry weapon. Through contact with many officers passing through the Cavalry School during the past six or seven years the following appear to be the principal reasons for this attitude:

First, misconceptions as to the mobility of machine guns.

Second, lack of familiarity with modern weapons of this type and a belief that these guns are always out of order.

Third, opposition of some old timers to changes or innovations.

Machine guns are just as essential to modern cavalry as they are to modern infantry. By greatly adding to the fire power of cavalry they have increased the battle value of that branch enormously. In fact, every advance made in the development of automatic small arms will add to the value of cavalry.

Now that machine gun troops have been made integral parts of cavalry regiments our officers will become more intimate with the powers of these guns and with the methods of their tactical employment, and it is a safe prediction that admiration for them will increase in direct proportion to experience.

In closing, it may be of interest to compare the fire power of the new cavalry organization with that of the old. This is shown in Plate III.

It is evident that we have the means of producing great fire power if we but use them.

The Machine Rifle

By Lieut. Colonel Albert E. Phillips. *Cavalry*

During the World War, Lieutenant Colonel Phillips (then Colonel) was Chief of the Ordnance Machine Gun and Small Arms Field Service under G-4, General Staff, at G.H.Q., A.E.F. He was in charge of field operations of machine guns and small arms.—*The Editor.*

WHY the Machine Rifle? Occupying an intermediate position between the rifle and the machine gun it is quite natural that the machine rifle should be the most discussed weapon of cavalry fire armament. A few riflemen believe that a semi-automatic rifle should replace the machine rifle. Some machine gunners, appreciating the full value of the heavy machine gun, believe that a so-called light machine gun may be substituted for the machine rifle.

Weapons are generally devised or invented to fill a definite need or place in tactics. Many new weapons were developed during the World War. Machine rifles, however, were developed prior to this war. Those belligerents who did not have a machine rifle sorely felt the need for a weapon of this type. And queer at it may seem, our own army was one of those which did not use this weapon, although our infantry and cavalry were armed with machine rifles when our first troops landed in France. And conversely, we landed in France without machine guns but used them during the war.

From 1906 to 1909 our infantry and cavalry were equipped with Vickers-Maxum machine guns. From 1909 until 1917, when we entered the war, our troops were equipped with the Benet-Mercie machine rifles, erroneously called machine guns. The Benet-Mercie was a gas-operated machine rifle weighing approximately thirty pounds, could not be used for machine gunnery and was too complicated for the machine rifle functions of our infantry.

British, French and German Weapons

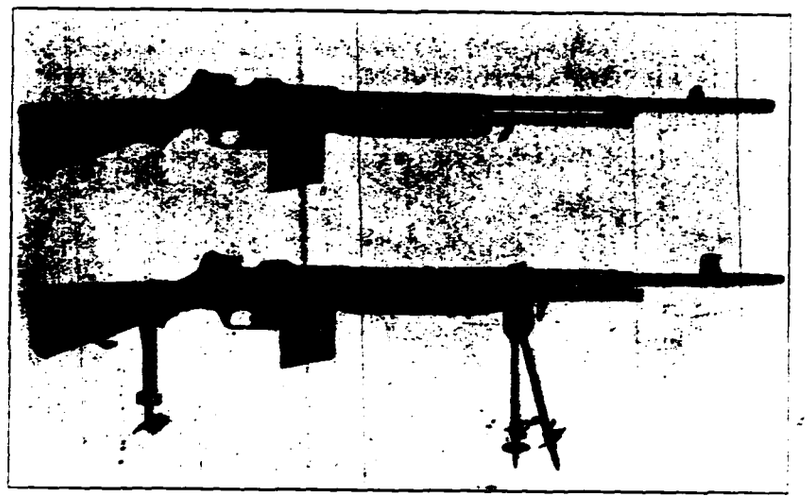
The British cavalry in France was armed with the Benet-Mercie under the name of "Light Hotchkiss." The British infantry, which used machine rifles to full value, was equipped with the Lewis machine rifle, erroneously called machine gun.

The French army did not have a machine rifle nor did it have a satisfactory automatic rifle. This army was equipped with the real Hotchkiss machine gun, a heavier and entirely different weapon from the light Hotchkiss of the British cavalry, and with the Chauchat automatic rifle, devised during the war to counter the effect of the enemy's light machine gun fire. The Hotchkiss was a heavy, gas-operated, air-cooled machine gun. The Chauchat was a very unsatisfactory automatic rifle. The French army suffered heavily by not having a machine rifle or a satisfactory automatic rifle. In many instances the Hotchkiss machine guns were used for machine rifle functions.

As the first units of the American army to land in France were destined to

fight with the French, decision was made to equip these troops with the automatic arms of the French army, consequently, the first twelve American divisions were equipped with Hotchkiss machine guns and Chauchat automatic rifles. Divisions to arrive later were equipped with American thirty caliber Vickers machine guns and Chauchat thirty caliber automatic rifles. The last few divisions to arrive came equipped with both Browning machine guns and automatic rifles: a supply of the Browning automatic arms also arrived in France.

The German army was originally equipped with the German heavy Maxim machine gun in the machine gun companies and, later, the light Maxim machine gun was added as a supplemental arm in rifle companies. As the



Above—The Browning Automatic Rifle
Below—The Browning Machine Rifle with bipod and stock rest

war progressed there developed a need in the German army (and in other armies) for automatic rifle fire to assist the advance of the infantry "from the front and flanks; to outflank centers of resistance, etc.," and the simplest way to solve this problem during the war, for the German army, was to reduce the size and weight of the heavy machine gun to that of the light machine gun. This was not an ideal solution, but ideal solutions are seldom found in war.

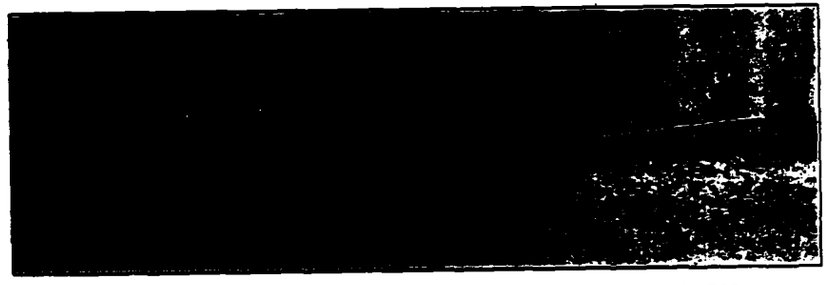
Light Machine Guns and Machine Rifles

The German light machine gun is approximately as heavy as our Browning machine gun. In reducing the weight of the German heavy gun to produce the so-called light gun, the water jackets were made smaller and although water was plentiful along the Western front, hundreds of german light machine guns

were found without water (the guns having ceased functioning) and others with urine in place of water.

The light machine gun of our army would most probably be the Browning machine gun, without tripod, but with a bipod under the barrel and a rifle stock, thus simulating the German gun in appearance, bulk, and weight. We need not compare this weapon with the heavy machine gun and tripod mount; our comparison must be made with the machine rifle. The light machine gun has all the inherent difficulties of the heavy machine gun, requiring water, water boxes, belts, belt-filling machines, etc. The weight of the Browning machine gun with water in its jacket is approximately thirty-seven and one-half pounds. A heavy rifle stock and a bipod would add at least six pounds, making a total of forty-three and one-half pounds when converted to a light machine gun.

The Browning machine rifle requires none of the impedimenta listed for the machine gun. The weapon is air-cooled, has a light bipod, a rifle stock and, in addition, it is equipped with a stock rest with mil mechanism for ac-



The German Light Machine Gun and the Browning Automatic Rifle

curate delivery of fire. The weight of the Browning machine rifle is twenty-three pounds, fourteen ounces. It will fire from six hundred to eight hundred rounds of continuous automatic fire before ceasing functioning and, after laying it aside for a few minutes, fire may be reopened. But machine rifles, properly handled, will never fire six hundred rounds of continuous automatic fire. With six rifles in war, or four in peace, continuous fire by troop is possible by having each one, in turn, take up the fire. For comparative purposes only, we may state that the Browning automatic rifle with its light barrel will cease firing after approximately one hundred and eighty rounds of continuous fire. The German light machine gun will generate steam after three hundred rounds of continuous fire. The Browning machine gun will generate steam after five hundred rounds of continuous fire. The water-cooled machine gun will cease firing when the water is exhausted.

The one "apparent" advantage of the light machine gun over the machine rifle is, being belt-fed, its fire may be moved along the ground to its target. But this advantage is offset by all the impedimenta required and by a waste of ammunition if the strike cannot be observed near the target. In the latter event the weapon is at a decided disadvantage when compared to the machine rifle with its accurate measuring mil stock rest.

In the dismounted advance, the "light" machine gun is not easily portable. Belts are an encumbrance, water a necessity and steam a hazard. Surely such a gun has no place in the cavalry rifle troop.

The Machine Rifle in Fire Tactics

Let us digress a moment to find the place for the machine rifle in fire tactics.

Whether the semi-automatic shoulder rifle will replace the machine rifle in the cavalry rifle troop or not is merely a question of organization. The semi-automatic shoulder rifle cannot replace the machine rifle in fire tactics. The organization and training of the rifle troop would be simplified by not having a machine rifle platoon as an integral part of the troop. And, conversely, machine rifle units would be more efficient were they organized as troops with the machine rifle as the principal arm of the troop. The officers and troopers would then specialize on the weapon. This phase will be discussed later.

The question of armament was thoroughly thrashed out after the armistice by boards of the A. E. F. and the War Department. The writer was a member of the Fiske Board on organization and armament at General Headquarters, A. E. F., and also a member of the War Department on Infantry and Cavalry Armament and Equipment in 1919-1920. The latter board recommended the development of a semi-automatic rifle for the individual soldier—no full automatic fire—the rifle to be clip fed, in place of magazine fed, and recoil operated but capable of being hand-bolt operated should the automatic feature fail. The Browning machine gun was continued for machine gun companies and troops. A big gap then existed between the semi-automatic rifle and the heavy machine gun.

The Browning automatic rifle had come into use during the last few months of the war and its desirable and undesirable features were well understood by the service. This rifle was designed for both full automatic and semi-automatic action. It was light in weight but very inaccurate in automatic fire. In short, it was not capable of sustained fire, could not well be laid upon a definite target and was inaccurate at long ranges. The board contemplated that the proposed semi-automatic shoulder rifle would ultimately replace both the Browning automatic rifle and the Springfield rifle.

How was the gap between the shoulder rifle and the machine gun to be filled? What is this gap in small arms fire? In answering these questions we must again consider the strenuous efforts made by each belligerent in the war to procure a *simple, effective, portable automatic* rifle capable of sustained fire—and this means a machine rifle—to cover the advance of infantry or dismounted cavalry from the front and flanks; to outflank machine gun nests, strong points and centers of resistance; to increase the volume of fire immediately preceding the assault; to hold the key points of captured positions

until advanced machine guns arrive; to follow through during exploitation and to fill gaps between the machine guns during consolidation and in defense. The most successful weapon of the war for this work, and the best use made of the weapon, was the Lewis machine gun (machine rifle) as employed by the British army. But the Lewis machine gun was far from perfect and its magazines were a great encumbrance.

Ranges

The rifle of the soldier is intended for individual fire; as such, it is considered accurate and effective to the full limit of its flat trajectory. Our troops are trained in rifle firing up to six hundred yards, with but little practice and usually poor results beyond that range.

The machine gun with tripod mount is most effective at those ranges where rifle fire is least effective, namely—between eight hundred and fifteen hundred yards. But the machine gun is also effective beyond fifteen hundred yards to the limit range. Machine gun functions are many and varied and this weapon, like all weapons, has its limitations; and one limitation is its weight and necessary impedimenta which relegates it to its proper radius of action.

The machine rifle then, found its true place in war between the soldiers' rifle and the machine gun. In well trained hands the machine rifle is also very effective where rifle fire is least effective, in the eight hundred to fifteen hundred yard gap.

Cavalry Need for Machine Rifles

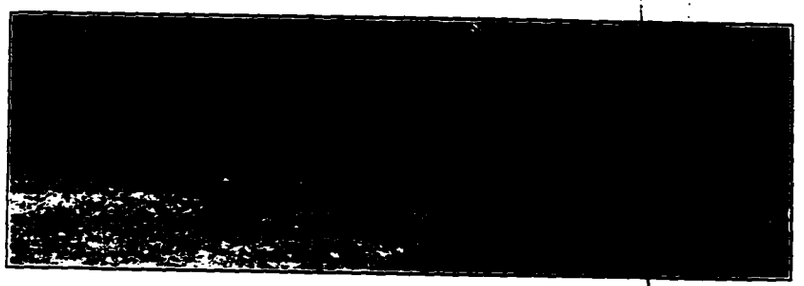
The next logical question is: Why was the cavalry instead of the infantry, armed with the machine rifle? The infantry had only recently been equipped with the Browning automatic rifle and with the war over, effort was made to cut down every ounce of weight and to await developments. Many experienced infantry machine gun officers advocated the adoption of the machine rifle in place of the Browning automatic rifle.

The cavalry problem was somewhat different. Portability was not a controlling factor, althought an important one. Many, if not most, cavalry targets are at long range (this point was stressed by Russian and British cavalry), and reasonable accuracy and rapid measures for hitting all targets are required.

The machine gun had been taken out of the cavalry regiment by the Superior Board A. E. F., and put in the brigade. Fire power approximating that of the machine gun was required for the detached missions of smaller cavalry units. Three machine rifles have the equivalent fire power of one heavy machine gun at machine rifle ranges. Even with machine guns in the regiment there is a distinct field for machine rifles not only in dismounted but also in supporting mounted action. Here then was an opportunity to profit by war experience by arming the cavalry with weapons, the characteristics of which fitted tactical requirements. The semi-automatic rifle for the individual soldier; the machine rifle to fill the gap between the soldier's rifle and the machine gun for the close and immediate support of rifle troops, with the machine gun (thirty caliber) for its larger functions. Development of a fifty caliber machine gun and a new one pounder were recommended.

Between the Browning machine rifle and the light machine gun, the board had two Browning machine guns which were converted to light machine guns, and chose the machine rifle. The machine rifle is as effective as the light machine gun with none of the disadvantages of the latter weapon.

With the war over, the War Department was not inclined to purchase any new types of weapons—at least until we had a breathing spell. And, as we had used so many types of small arms during the war we were striving for simplification. As the Ordnance-Cavalry member of the board, the writer proposed the development of a machine rifle using the mechanism of the



Right—Chauchat Automatic Rifle, Cal. .30
Left—Chauchat Automatic Rifle, Cal. .8 m. m.
Center—Browning Automatic Rifle

Browning automatic rifle, thus simplifying and standardizing parts and supplies.

The principle of gas operation of the Browning rifle was undesirable but there was no other way of obtaining a machine rifle at the time. Gas operated small arms (unless perhaps of the heavy machine gun type which may be cared for in rear positions) have no place in war, and in writing the specifications for the semi-automatic rifle the board specified "recoil operation" or similar principle. The board contemplated that when a semi-automatic rifle was developed and adopted, similar mechanism, though some parts might be heavier, would be used for a new machine rifle.

Expert Gunners Required

The great fire power of machine guns and machine rifles is wasted unless an expert fires these weapons. This expert must be qualified in all the mechanical methods of fire—to get out of the gun all there is in it—and to quickly apply this fire to the target. If we accept the statement that most targets for cavalry are moving, then the machine gun and the machine rifle are the ideal weapons for such targets. The fire of either of these weapons may be placed on the target almost instantly.

The most important data required in rifle firing is the "Range to the target." The machine rifle with stock-rest in mils is an ideal weapon for ranging. Whenever the strike can be observed, the second burst of fire may be placed on the target.

The machine rifle with stock-rest is equipped for many forms of indirect fire by simple, rapid means and methods. Brevity will admit of only a few examples of fire here, though many others are available. The examples given are from actual field service.

Example of Overhead Fire

At Aquas Calientas, Mexico, in the Pershing expedition, the Squadron of the 10th Cavalry under Colonel W. C. Brown, with machine rifle troop attached:

> Target: Enemy firing from house. Two machine rifles covered the doors and windows firing over a squad of soldiers that advanced and captured the enemy. No casualties. Enemy fire ceased when machine rifles fired.

Examples of Competitive Fire Between Rifles and Machine Rifles

After the troops had assembled at Colonia Dublan, Mexico, and had completed target practice, various tests and competitions were held. Comparative firing tests were held between the two squadrons of the 10th Cavalry and the Machine Rifle Troop of the regiment. The writer was in command of the latter troop. The first test was at silhouette targets placed irregularly in the brush at six hundred yards from the starting point. The troops advanced to within two hundred yards of the targets, firing at intervening ranges. There were approximately forty men to each of the eight troops, or three hundred and twenty riflemen. Four machine rifles were in the Machine Rifle Troop.

After the eight troops had completed firing the writer computed the results and decided that three machine rifles would give equal results. The troops hit about sixty percent of the targets. The fire of three machine rifles hit eighty percent of the targets (every target that was seen) with one third less ammunition than the rifleman.

It was then decided to hold a second or special test and this time at long range. The fact was overlooked that rifle fire is least effective at long range. A group of field targets was assigned to the rifle troops and another to the machine rifle troop. Firing was to start at a pistol shot. The range as determined by the machine rifle troop was eleven hundred and twenty-five yards. This sight setting was given to the rifle troops who refused to accept it and used the average estimate of range estimators.

At the signal to fire, the machine rifle troop fired one burst of about five shots short of its target for range adjustment. A mil measurement of two mils gave us the range for all four guns and one hundred percent of the targets were knocked down before the eight rifle troops found the range. The rifle troops hit about fifty percent of the targets.

Machine Rifle Efficiency

There are two methods of organization for machine rifle units.

One method is to place the machine rifles of each squadron in a separate troop. The other method is have a machine rifle platoon as an integral unit of each rifle troop. The first method favors technical efficiency: the second method is supposed to favor tactical efficiency. The enlarged cavalry troop, even without the machine rifle platoon, is a highly complicated piece of mechanism, requiring all the time available for training, and all the skill of its commander for the many forms of mounted and dismounted action. The infantry company commander has neither the horse nor mounted action to consider, yet his time is fully occupied.

Many cavalry officers are primarily interested in horsemanship, in handling the maneuver elements and do not want to be bothered with the strictly

Left—Vickers Machine Gun, Cal. .30
Right—Hotchkiss Machine Gun, Cal. .8 m. m.
Center—Browning Machine Gun, Cal. .30

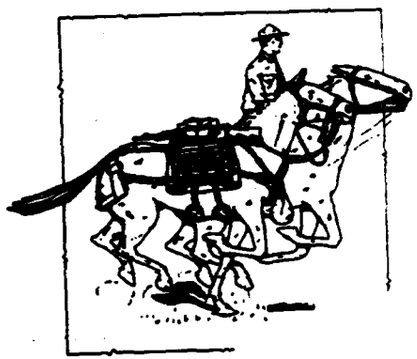
fire elements or pack saddle units. These officers believe in highly trained cavalry but prefer to have their fire support come from units skilled in gunnery. A minority of cavalry officers is interested in the technical training and employment of automatic arms and the other fire elements of cavalry. This division of interest can be utilized to the fullest advantage by assigning the officers of each class to corresponding units.

The cavalry soldier of rifle platoons is kept fully occupied in order to become proficient in one enlistment, yet he has less work to do than the soldier in the machine rifle platoon, who is trained as a cavalry soldier, in addition to machine rifle training and the care of pack animals and pack equipment. The machine rifle soldier would be more efficient were his status the same as that of the machine gun soldier. More time is required to acquire skill in tactical training than in technical training, but this truism applies principally to the officers. The cavalry rifle soldier must be skilled in each type of training; the machine rifle soldier primarily in technical training. Tactical training is of small value to a fire unit—or to associated units requiring fire support—unless the fire unit has technical skill.

A machine rifle troop in each squadron would afford a better opportunity for acquiring tactical skill by all concerned—the squadron commander in particular—than by retaining machine rifle platoons in each rifle troop. The squadron commander would assign technically trained machine rifle platoons to cavalry rifle troops, according to the tactical mission, duty, or requirements of tactical training. This principle is applied to machine guns in infantry battalions. Officers of rifle troops would have more time for all training and especially tactical training were they not required to train machine rifle platoons. Duty with, and command of troops, is highly important for all troop officers. A machine rifle troop in each squadron would afford renewed opportunity for many troop officers.

Machine Rifle Course in Firing

The machine rifle course in firing is the next most important matter for consideration. The course should simulate that of the machine gun; not that of the rifle. If we fire only single shots up to six hundred yards we never will have efficient machine riflemen. six hundred to fifteen hundred yards is the machine rifle's principal field of fire. Much of the firing should be at field targets. And short bursts of from three to five shots the most generally effective method of fire for the machine rifle with stock rest or, for the machine gun, for the enemy will usually be partially concealed or at least not standing still. The number of targets hit in a minimum of time is what counts in war.



Chemical Warfare Weapons and Cavalry

By Captain G. A. Moore *(Cavalry), C. W. S.*

CHEMICAL WARFARE—can it interest cavalry with a mortar as a smoke producer, in number of rounds required, fourteen times as efficient as the 75 and three times as efficient as the 155; a white phosphorus hand or rifle grenade ensuring casualty within ten yards of burst; a smoke candle, weighing two pounds, maintaining a screen fifteen times as wide, in proportion to ammunition weights, as the cloud from a 75 shell, and wider than that from a 155 shell; a gas projector which, in batteries of one hundred and twenty, delivers as much gas with one round as one round from all the artillery of the corps, and an airplane mustard atomizer which in twenty-five seconds can make in an area 7000 feet by 400 feet absolutely every living thing a casualty? Do these rough comparisons challenge the attention of the cavalry? Must the cavalry have these aids?

The use of Chemical Warfare weapons and munitions by cavalry, of course and apparently, in cases where cavalry holds a part of a line in stabilized situations, would be coextensive with and similar to their use by the infantry.

However, in the normal role of cavalry it would seem that the life of the mounted branch—mobility—should be the decisive criterion by which the application of chemical weapons and munitions by cavalry would stand or fall.

In reviewing the authorized doctrine of the cavalry and the chemical warfare service, there appear to be many cases where the weapons of the chemical warfare service may be of such value to the cavalry that nothing other can do the job and aid in mission accomplishment nearly so well.

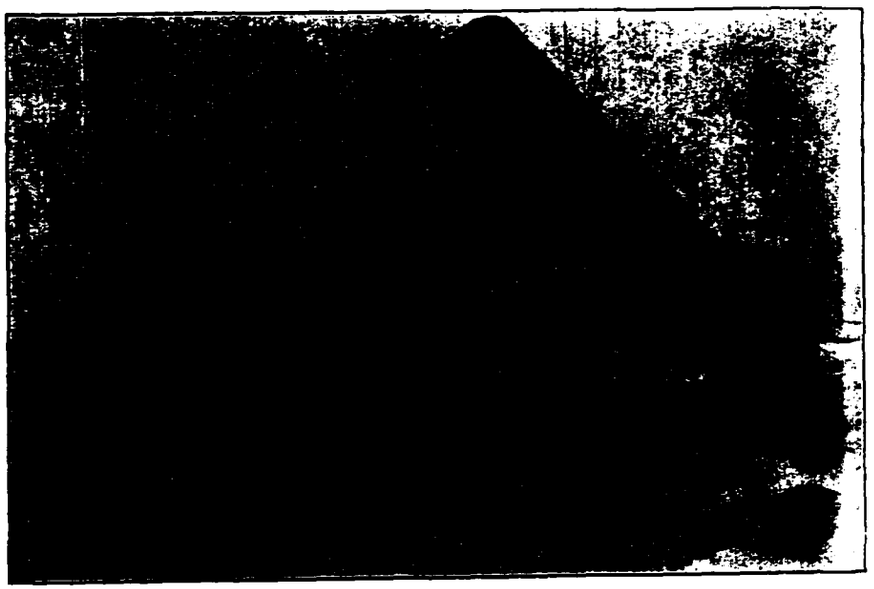
Chemical Warfare troops at present are Army troops. They may be attached to any subordinate units. Their weapons are the four-inch Stokes Mortar, the Livens Projector, and the Chemical Cylinder. In addition to the above, candles are filled and issued by the Chemical Warfare Service. The chemical munitions filled by the Chemical Warfare Service and issued by other services are grenades, air corps bombs, and artillery shells.

Mortars

The Four-inch Stokes Mortar. This is a smooth bore, muzzle loading, high angle weapon, moderately mobile, suitable for projecting gas, smoke and incendiary or high explosive agent. It is effective against small definite targets, for casualties, to produce blanketing smoke, and to screen movements behind one's own lines. As at present transported by carts, it has the mobility of a slow moving rifle company on the march. The weight of the mortar, including a ninety-pound, fifty-one-inch barrel, a hundred and twenty-pound baseplate, a thirty-two-pound bipod, accessories, tools and spare parts, totals two hundred and sixty-seven pounds, equipped to fire.

The shell weighs about twenty-five pounds, and its efficiency varies from twenty-seven to thirty-six per cent. (Efficiency of shell is the ratio of the agent filling to the total weight of the complete shell.)

A complete round consists of the shell body; booster, of which the parts are gaine tube, detonator and felt washer; Mk XI allways (percussion) fuze; and the propellant charge of which the parts are a twelve-gauge cartridge and silk bag powder rings. Some of the fillings at present are six and eight-tenths pounds of phosgene (CG), six and six-tenths pounds of chloracetophenone (CN), and nine and half pounds of white phosphorus (WP). It has been esti-

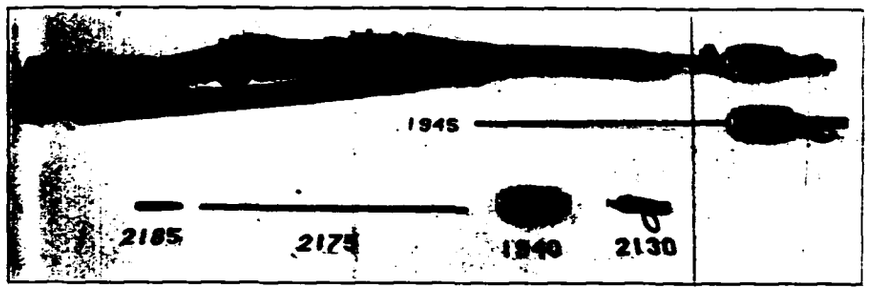


Projector, Livens, Complete with Ammunition and Accessories for Firing

mated, as mentioned before, that as a smoke producer the mortar is three times as effective as the 155 howitzer, though, of course, at a much shorter range. A 75 shell, for instance, contains one and three-sixteenths pounds of mustard gas and a 155 shell, eleven pounds; a chemical mortar shell contains about seven pounds. Range varies from two hundred to twelve hundred yards. This weapon can fire, for short periods, fifteen rounds per minute; its average rate is ten per minute. At a sixty degree elevation it has a hundred and twenty-yard deflection at one thousand yards.

The Four and Two-tenths-inch Chemical Mortar *(Experimental)*. This new weapon is rifled and has a range up to twenty-five hundred yards. It probably will have a slightly greater sustained rate of fire. Due to the rifling of this mortar its accuracy is improved over the smooth bore mortar.

The Livens Projector. This is a crude form of high angle mortar, of a barrel length of two feet nine inches and a weight of one hundred and five pounds, with a baseplate weighing thirty pounds, having a twenty-one and seven-eighths-inch by seven and five-eighths-inch shell of sixty-four pounds, forty-seven per cent efficient, capable of being discharged electrically either with the shell in the mortar or outside it. The fillings, among others, may be phosgene (CG), mustard (HS), Titanium tetrachloride (FM), HE, and Chlorpicrin (PS). The barrel is two feet nine inches long and eight inches in diam-



Grenade, Combination Hand and Rifle, C. N. Live, Complete, Showing Assembly

eter. The projector is installed either in full or semi-surface set-up, i. e., either fully buried or half buried at forty-five degrees. The complete outfit consists of the projector, the shell, the propellant charge and the firing accessories. The shells, placed in the projector, are wired in series, and the battery is fired with an exploder box.

By surprise this weapon delivers large quantities of agent in high concentrations on targets up to fifteen hundred yards. The range is governed by the amount of propellant. About two hundred and twenty-five pounds of material are required for each projector installed. One round only is fired per set-up.

Grenades—Candles—Cylinders

Chemical Grenades. These weapons, with respect to filling, are designated as gas, smoke, or incendiary, and with respect to operation as of the burning or exploding type. They may be projected by hand or with the rifle; the range of the former is about thirty-five yards, and of the latter up to two hundred and seventy-five yards. The hand grenade weighs less than a pound and the rifle grenade about a pound and a half. These weapons are used for casualties, screening, blinding, harassing and destroying material.

The size of each is three and three-eighths inches by two and one-eighth inches. At present both hand and rifle grenades contain white phosphorus and chloracetophenone (CN). Recent experiments have demonstrated that personnel within ten yards of the point of burst of a WP grenade will be certain to be a casualty at once.

Candles. Chemical candles burn about two minutes, being a weapon of opportunity. The HC candle weighs two pounds and the toxic smoke, diphenyl-

aminechlorarsine (DM) candle about nine pounds. The smoke candle (HC placed five to a hundred yards will perform the same screening duty as sixtee: 75 shells or seven 155 shells. The two-pound candle is five and seven-eighth- inches by three and three-eighths inches by one and one-half inches, and th toxic smoke candle seven inches by two and seven-eighths inches. The H(candle may be fired electrically, like livens shells. Taking advantage of favor-

Grenades, C. N., and W. P. Hand and Rifle, Complete

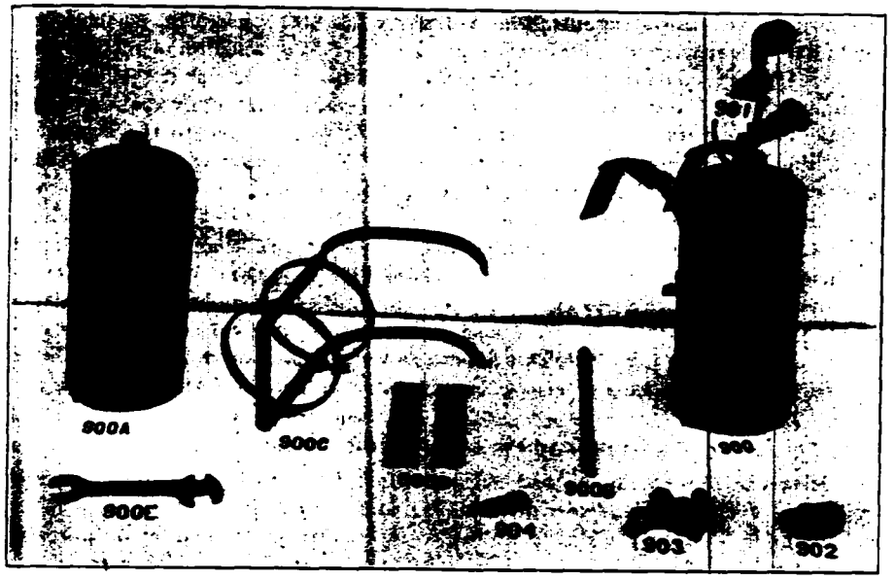
able terrain and wind, these weapons may screen flanks, river crossings, movements within one's own lines, or they may be used to draw fire. The DM candle, a substitute for the cylinder, is a harassing weapon, causing coughing, sneezing, headache, vomiting and physical and mental depression. It penetrates all but the most modern masks.

Candles, C. N. Smoke Substitute, D. M. and H. C.

In addition to the weapons and munitions thus far described, it may be mentioned that the artillery has various kinds of chemical filled shells, having

an efficiency of from ten to fifteen per cent. The fillings at present are for the 75, HS, CN and WP; for the 155 howitzer, HS, CG and WP; and for the 155 gun, HS.

Cylinders. The Portable Chemical Cylinder Mark I, Type I. This eighteen-inch by eight-inch gas container fitted with a shoulder carrier weighs forty-eight pounds and contains thirty pounds of agents, having thus an efficiency of about sixty-two and one-half per cent, the highest efficiency of any chemical weapon. It is used for cloud gas attacks, of course, emitting the gas from



Cylinder, Chemical, Portable, Mark I, Complete with Accessories

one's own lines. Its limitations are meteorological conditions, and the quantities that can be transported to the point of release. Non-persistent agents, especially CG, released in a wind of about seven miles per hour, preferably from six o'clock, give the cylinder its best opportunity. It has the advantage of having the best mobility for weight of gas carried and the installation causes no noise. This cylinder, fitted with a nozzle, which minimizes loud hissing and lessens the freezing at the nozzle, is usually fired electrically in large groups of several thousands.

The Airplane

By means of special containers and dischargers, which can be dropped as gas tanks are gotten rid of on occasion, the bomber, at high altitudes and even at night, by a pressure apparatus, permitting the liquid to fall as in still air like rain, can sprinkle large areas with liquid gases. With the non-pressure attachment any type of plane, flying low, can release liquid agents, at once

atomized by the rush of air, with accuracy on a target in the path of the wind. The chemical air bomb is the third manner of utilizing the plane in chemical warfare.

The radius of action of the plane, the resultant increase in depth of attack and the potency of the chemical agents used, especially mustard, may influence the organization of the theatre of operations, in particular with regard to supply and concentration factors. At present there is no practical method of protection against liquid mustard. It burns all skin with which it comes in contact. Impregnated clothing protects only against vapor mustard; impervious clothing, though proof against liquid mustard, is hot, sticky, heavy, and prevents skin breathing; it therefore cannot be worn long and limits mobility.

This means of projection of liquid vesicants, embracing the element of surprise, denies large areas by rendering them uninhabitable, or makes certain practically one hundred per cent casualties of those subjected to the attack, or remaining in, or entering the area after the attack. A target of a standing man fifty yards down wind from point of release of simulated HS in a recent experiment had some 600,000 droplets on its exposed front. Targets four hundred yards' distant were plentifully covered with more than sufficient liquid to ensure casualty. In atomizing the plane flies from one hundred to three hundred feet from the ground at a speed upwards of two hundred miles per hour. Add to this that the plane also can screen by ground smoke or by curtains, and one sees a practical potential weapon of unlimited capabilities. Liquid mustard has never been dispersed from an airplane in this country.

Employment of Chemical Agents

How can these weapons and munitions be of use to the cavalry? Several quotations from *Field Service Regulations* and *Employment of Cavalry* might be of interest—"Large Cavalry units are frequently reinforced by infantry in motor trucks." "When Cavalry is required to occupy and hold important advance positions it is, when practicable, reinforced by infantry in motor trucks, artillery and machine guns." In the above cases, the cavalry will probably move by roads and the chemical troops attached to the infantry can march to the point desired, taking with them their weapons and munitions.

Again—"The ability of Cavalry to conduct delaying action makes it an especially important element of the rear guard when the main body has succeeded in getting sufficient distance from the enemy; it may then constitute the principal element of the rear guard." "Cavalry covers the retirement and retains contact with the enemy." Would quantities of candles, dumped by the retiring infantry, be of use to the cavalry in effecting their own withdrawal? "The duty (counter-reconnaissance) will be much simplified if the terrain is favorable, the mountain chain with only a few passages and an unfordable river with only a few bridges, a dense forest with few roads are very advantageous." "When a bridge must be held against marauding bands of the enemy . . . or when a bridge is not desired for use by our own troops but is to be denied to the enemy" (defense at the crossing). It would seem that

the use of chemical agents, transported in these situations by chemical troops with the attached infantry, would be of great value. One might visualize, for instance, a terrain feature such as a pass of even the width of a mile at which a pursuing enemy must be stopped by the cavalry in order to permit the main body, the infantry, to escape. Three hundred and twenty-four livens shells, filled with mustard gas, set up by the retiring troops, exploded by a few squads, when the cavalry is ready to retire, statically by electricity (without the projector), would effectively mustardize an area one mile wide and one hundred yards deep. (These shells are a load for eight escort wagons). Pursuing enemy could not mistake the presence of the agent, and if the enemy insisted on passing over this area within a few hours his casualties from this mustard would either totally prevent his immediate continuance of the pursuit or so cut down his rate of march that the pursuit would be ineffective. To accomplish this same mission at a range of four thousand yards, five thousand nine hundred and forty artillery shells of the 75 calibre and one thousand and eighty of the 155 calibre would be required.

In the above connection in the matter of the cooperation of the infantry and the cavalry in withdrawing from action the *Employment of Cavalry* states: "In the withdrawal from action, the infantry will hold on until the last moment or until ordered by higher authority to withdraw and will be covered in its withdrawal by the Cavalry which can still hold for some time and rely upon its mounts to effect its own withdrawal."

Field Service Regulations states that smoke screens may be effectively employed to cover the movement of withdrawing troops. Due to the high efficiency of chemical mortars, one platoon of mortars will consume about one-fourteenth as many shells per hundred yards of smoke screen as a battery of 75's. The use of these weapons by infantry attached to cavalry would be equaly effective in the counter attack as in the withdrawal, for in the *Field Service Regulations* we find the following: "Surprise is obtained by . . . . concealing the location and movements of the counter attack elements; and by concealing the location, direction, time and intensity of the counter attack. The main body, at all costs, must deny the enemy important observation stations essential for hostile control and development of coordinated fire power and power of maneuver, thereby placing the enemy at a disadvantage and providing a favorable opportunity for counter attack." Also, in defensive positions, we find this: "Surprise is employed to increase the effectiveness of movement and fire power. Surprise is obtained by denying the enemy observation of the interior of the defensive position by concealing the location and movements of the elements of the defense and the location, direction, and time of counter attacks."

Considering the pursuit, we read: "Whenever practicable, cavalry advances along roads paralleling the enemy's line of retreat, delivering repeated attacks against hostile flanks, carrying out destructions along his line of retreat, attacking convoys and attempting to beat the enemy to defiles, bridges and critical points. Having reached these last-named objectives, the proper

use of chemical agents, particularly vesicants, could so effectively hamper the speed of withdrawal as to permit the pursuing main body to catch up.

"Counter-reconnaissance is accomplished by engaging the enemy with a view to restricting his observation or by denying to the enemy entrance into a certain area or passage of a certain line." In the performance of these duties cavalry might welcome the added weapons of smoke and vesicant

Pack Outfit, Phillips, Experimental. Weight of Pack, Loaded, 248 Pounds

agents, particularly the latter in areas not to be used at once by their own troops.

Conclusions

Without adding a pound of equipment to the cavalry, without changing its organization, having in mind always that its mobility must not be lessened, being ever mindful of its constant search for additional fire power and casualty producing agents, as well as increasing its ability to effect surprise, whether cavalry is employed in advance or rear of the main force, especially so long as infantry is attached to it in the first case or it is attached to the infantry in the latter case, it seems to be reasonable that chemical warfare troops' weapons and agents can be of inestimable value to the cavalry in the better accomplishment of its missions.

Sword, Lance and Pistol

By First Lieutenant Frederic de L. Comfort, *Cavalry*

ALMOST *since the beginning of time, these weapons have been the distinctive arm of the cavalry service. The early Assyrian cavalry, in the year 700 B. C., riding without saddle, were armed with the sword and lance. When the Greek cavalry was organized about 400 B. C., we find them still armed with the same weapons. The cavalry of Alexander the Great at the Battle of Arbela, 313 B. C., was used to great advantage. Although his cavalry was composed of several different types of armament, Alexander placed most reliance upon his two chosen regiments heavily armed with both the sword and the lance. In both of these regiments, the horse, as well as the rider, was protected with a heavy armor. The sword as then used was chiefly for cutting, but about the year 200 B. C., the Romans, recognizing the superiority of the point over the cut, commenced to train their soldiers accordingly. At about the same time they also recognized the vast superiority of iron over bronze and commenced the making of iron swords in place of bronze ones. During the Second Punic War the bulk of the Roman Legions were armed with a short thrusting sword which could be used for cutting as well as thrusting should the occasion arise. The thrust, as used by the Romans, became so effective that during the next two hundred years they clung to the thrusting sword, and were so efficient in its use that enemy armed with the heavy, unwieldy cutting sword were reluctant to attack them.*

The awe and respect in which the sword was regarded by these ancient soldiers is well exemplified in the actions of Atilla, the Hun, when in 450 A. D., he appeared before his army grasping an ancient sword in his hand which he represented as the God of War worshipped by their ancestors, in order to instill in them the same dash and aggressive spirit which the old sword portrayed.

The advent of the knight brought another change. Both man and horse arrayed in heavy armor rode slowly out to give battle to the foe. We still find the sword and lance the chief weapons of the knight although in some instances a shield was added. At the Battle of Hastings in 1066, the Norman knights were so armed while the infantry was mainly armed with the bow, although the sword was still retained for hand-to-hand encounters. In addition to the sword and lance some of the English knights were armed with a so-called hatchet which had a very sharp blade about a foot long and was used only for cutting. In one instance, an English knight attacking a Norman with the hatchet, missed the helmet, struck the horse and completely severed its neck. Turning from his victory, the knight found another Norman charging down on him with the lance, and being unable, with the hatchet, to divert this attack, was killed. The Normans placed great reliance and confidence in the sword, and during this battle used it very effectively, but for cutting chiefly.

By the sixteenth century, the sword had become narrower and more pointed

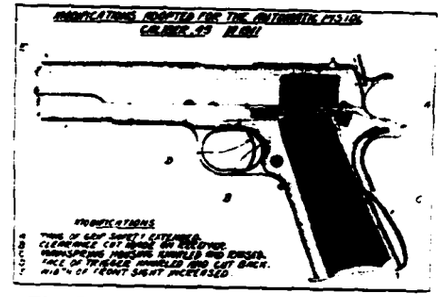
and its use as a weapon for thrusting began to predominate. The perference of the old Romans for the point was rediscovered under new conditions, and during the reign of Charles V the modern art of fencing originated. The cavalry, however, still carried the sword and lance. This sword was used more as an auxiliary lance and was utilized almost exclusively for thrusting. The rapier had reached the height of its glory and the word sword, except for war was almost forgotten.

With the beginning of the seventeenth century, the firearm had made its appearance and we find cavalry armed with the pistol, and in some instances, the carbine, in addition to the sword. The cavalry of Gustavus Adolphus in the Thirty Years War was armed with both the sword and the pistol. His cavalry was trained to charge in three ranks. The first or front rank only was allowed to fire, and then only when about to close with the enemy. The second rank, at times, was also permitted to use the pistol, but when it had been once discharged, both ranks were trained to draw saber and push the charge home. The troopers of all ranks were equipped with two pistols, and while the first two ranks fired only one pistol, keeping the other in reserve, the rear rank charged entirely with the sword, keeping both pistols in reserve. In contrast to this, the cavalry of Frederick the Great was only permitted to fire the pistol mounted when the hostile cavalry had commenced to retreat or to withdraw from the impending charge. Some leaders, however, at this time prohibited the use of firearms in the charge. The battle of Waterloo was filled with the cavalry actions of both sides. Early in the engagement, the British cavalry charged with the saber, Ney's French batteries, sabering the cannoneers, cutting traces, killing horses and rendering the guns useless to the French for the remainder of the day. Some of Napoleon's cavalry were using a straight thrusting sword very similar in design to the present day French cavalry sword.

The Pistol

The advent of the firearm naturally wrought many changes in cavalry combat. At first, these pistols were only single-shot and vastly different in caliber and appearance. As we are mostly interested in the American military arm, let us trace briefly the pistol as issued to our army. At the outset of the American Revolution there were no government arms factories and arms were purchased by the different Committees of Safety for arming the troops. As the army was then composed mostly of infantry, the pistols issued were for mounted officers and messengers. Most of the pistols of this period were of French or British make and even those made in the states followed them very closely in appearance and design. Although the government had established a few factories for making arms, it was not until about 1800 that an earnest effort was made to equip the regular army with government made arms from the arsenals at Springfield and Harpers Ferry. Arms were still purchased by the government from the citizen gun-makers but chiefly for issue to the militia and volunteers. Prior to the War of 1812 there were only 5,278 officers and enlisted men in the regular army and the two government armories could not supply the demand. Upon the increase of the regular army to 35,579 enlisted

men, following the War of 1812, the government armories could not supply the demand and contract and purchase arms were issued to the regular army as well as the militia and volunteers. The first pistol made by the government armories is believed to have been the Model 1804 Harpers Ferry. This pistol is very interesting as it was the earliest rifled pistol issued by any government to its regular army. This pistol was a flintlock, 54 caliber with a ten-inch



The Present Regulation Colt Automatic Pistol, Cal. .45

barrel. It was first issued only to officers on duty on the frontiers where the Indians were hostile. In 1842 the government commenced the issue of percussion single-shot pistols in lieu of the flintlock. It is interesting to note that the Mexican War was fought largely with the flintlock.

About 1836 the Colt revolver made its appearance, but it was not until 1847 that the government contracted for a number of these revolvers, some of which were used in the Mexican War. 1855 the government armories made a pistol carbine, the Model 1855 Springfield. This pistol was found to be very accurate and was issued to the cavalry, but did not come up to expectations as its line of fire was vastly different when used as a pistol and when it was used as a carbine with the shoulder stock. The early experience of the men on the western frontier with the revolver is too well known to mention here.

Weapons of Mexican and Civil Wars

Both the Mexican and Civil Wars are filled with cavalry actions. We find many instances in the former where our cavalry armed with the saber and pistol was opposed to the Mexican cavalry armed with the lance. The charge of a squadron of the Second Dragoons (Second Cavalry) commanded by Captain May at the battle of Resaca de la Palma is interesting. Riding in column of fours down a narrow road, the squadron charged a battery of Mexican guns, attacking with the Saber and capturing the guns, although at the objective Captain May found only six men still with him.

At the beginning of the Civil War the South had a decided advantage over the North in its cavalry. The Southerners were natural horsemen and accustomed to the use of arms while the men of the North were not. The

cavalry under Turner Ashby, attached to Jackson's Army in the Shenandoah Valley in 1862, was far more efficient than the Federal although not so well armed. The majority of the Southern cavalry showed a strong predisposition for the pistol over the saber. The Federal cavalry was armed with both the saber and the revolver. Although there were many different types and makes of revolvers used during the war, the preference seems to have been decidedly

Colt Revolver, Cal. .44, Used Extensively During the Civil War

in favor of the Colt. Recently Mr. Walter Cline, an authority on Civil War arms, of Chattanooga, Tennessee, has been conducting a series of experiments in firing the Civil War revolvers. From the results obtained, their accuracy

Upper—The Savage, Cal. .36, Revolver
Lower—The Starr, Cal. .48, Double Action Revolver
These Weapons Were Also Used During the Civil War

is remarkable and they compare well with the weapons in use to-day. It is interesting to note that records show that only nine hundred and thirty-three saber and bayonet wounds were treated in the Federal Hospitals during the war.

The Lance

Both the North and the South conducted some experiments with the lance as at that time a great part of the European cavalry was armed with it. The lance requires highly trained personnel and horses, which fact alone may prohibit its use in any hastily organized army. The lance has many advantages and when in the hands of highly trained troops has proven very successful. Authorities well versed in its use however vary widely in their opinion as to its real value as compared to the saber. The lance has a longer reach than the saber although it is firmly believed that a good swordsman can defeat an equally good lancer. A charging force armed with the lance must produce a high state of morale among those so armed and vice versa. The lance is very effective in charging artillery and wagons due to its advantage in reach. It is very cumbersome to carry, increases the load on the horse, and is much in the way riding cross-country, through heavy woods and in dismounting to fight on foot. The lance affords the trooper a decided advantage over the pursuer armed with a saber, but in the melee the lance may become a handicap

Wide World Photo

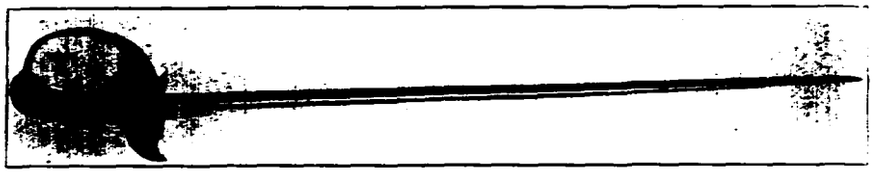
The Charge of The Royal Scots Greys

due to its unwieldiness and the saber become an asset. With the saber in the hands of men trained in its use, the ultimate desire in a charge is to close with the enemy, while with the lance with its greater reach, the kill is accomplished before actual closing, if at all. History has furnished many examples of combat with lance versus saber, lance versus lance and lance versus fire power and from the results the value of the lance as a weapon cannot be denied. It is not the number of casualties that will claim the victor in any cavalry action but the side who drives home its charge with whatever weapon it may be armed is the one who will send the enemy survivors from the field, grossly exaggerating the powers of the enemy.

There are many different engagements during the Civil War where the saber and pistol were used that are too well known to mention again here. In a recent conversation with a former Federal cavalry officer he related a number of personal experiences showing the uses of the saber and pistol. His regiment was active in the cavalry operations in Alabama, Georgia and Tennessee. The regiment was armed with the Spencer repeating carbine, the saber and the revolver. The saber was used almost exclusively in all charges where

the organizations charged as a unit. Each soldier carried one revolver and the officers carried two, usually in pommel holsters. The revolver was used extensively in the melee following the charge. At the battle of Mossy Creek, the regiment charged with the saber, a dismounted force three times its own strength, forcing the immediate withdrawal of the dismounted men. The saber during the engagements was used practically exclusively for cutting.

As the war progressed the use of dismounted action was gaining in favor



The Present Regulation Cavalry Saber

and both sides began to rely more on the pistol or revolver. In November 1864, a troop of Mosby's cavalry armed with the revolver charged a troop of Federal cavalry armed with the saber, and in the ensueing melee the Federal loss was twenty-four percent killed while the Confederates lost one percent.

Weights and Lengths Of Sabers

Following closely after the close of the Civil War in America came the Franco-Prussian War and later the Boer War. The lance and saber were used extensively with varying results. There were several changes in the armaments of the foreign armies and just prior to the World War we find the saber being carried by all the leading countries of Europe and the lance by all except Austria-Hungary. None were totally equipped with the pistol although

The Civil War Cavalry Saber

officers and non-commissioned officers carried it practically without exception. The comparison of the different sabers of some of the leading armies is interesting. Taking the average dimensions of the British, French, Italian, Dutch and Japanese swords and comparing the result with our own saber reveals some interesting facts. The average length of blade is thirty-four and eighty-five hundredths inches while our blade measures thirty-five and one-tenth inches. The average weight is two pounds eleven and one-half ounces while the weight of our saber is two pounds six ounces including the knot. Ours is the lightest saber of the group excepting the Japanese which is three and one-half ounces lighter. The British, French and Italian use the straight thrusting sword while Holland and Japan use the saber.

The Point and the Cut

Let us consider briefly the relative merits of the point and the cut. In spite of all the improvements in the art of war, man to man combat has been and still is the deciding factor in battle. Every branch of the world's military forces is equipped with a hand arm. The infantry considers the bayonet indispensable, not only for the number of its casualties, but because of the moral effect and the aggressive and offensive spirit which bayonet training instills in the men. What the bayonet is to the infantry, the sword is to the cavalry. It has often been said that the American soldier will always resort to the cut in any time of stress and excitement regardless of what they have been taught. One cannot deny that men once trained in the use of the point and realizing its deadliness on fast moving horses would never abandon it for the cut. Without the speed of the horse to consider, the cut might have a chance. British experience in Palestine indicates that speed is not an absolute essential to drive the present sword home. In one engagement, the British commander said "point your sword at the enemy's belly and ride him down." History tells us that in Palestine there were thirty-two successful and two unsuccessful cavalry charges. In practically all of these charges the losses among the mounted men were small while the losses to the enemy were very large and in practically every case were inflicted by the saber, using the point almost exclusively. In a charge delivered in line or other close order formation, where the cut is used exclusively, the speed of the horse is discounted and the trooper is limited to the use of the front cut only due to the nearness of other troopers. The cut requires more accuracy and timing than the point, and although the point will not always be successful, in practically all cases it gives the greatest chance of success. Men are naturally excited during a charge or melee and the cut is bound to be by a few men who have momentarily lost their heads. For this reason the saber must be sharp. Remember the essential qualities of a good sword are *sharpness, balance,* and *elasticity* with *firmness.* An attack correctly made is a perfect defense against either a point or a cut. History tells us that whenever man has relied on brute strength and courage alone he has used cutting or thrusting weapons whenever he has come to hand to hand encounter. In charging with the point the prone position of the trooper reduces the available target, aids the speed of the horse, outreaches and hence outkills the enemy cut and transforms the horse into a charging, steel pointed weapon. In cutting more of the person is exposed than in the point. With the edge, one either parries or cuts, while with the point the cut is parried while the blade is still in line with the opponent's body and the actual attack is being delivered. The cut, which through a man's clothing may only bruise, is spectacular. It is the silent point that kills. It is far more pleasant for a man to believe that he will only receive a bruised head than to think of a sharpened steel point exploring his insides. One saber thrust in the abdomen is far more likely to prove fatal than a cut

on any part of the body. Oriental swordsmen will admit that no cutting swordsman can fight on equal terms with one using the long thrusting sword Against infantry the point is the only attack that can outreach the bayonet. Among wagons or trucks and artillery where the men can gain shelter behind the wheels, the cut is useless and the point is the only thing. The lance and revolver or pistol are both equally as effective as the saber in the attack against infantry, wagons or artillery. The point is superior to the lance as a thrust delivered at the point of the lance deflects the point and allows the lunge of the saber to go home. The tendency of the lancer is to strike high at the moment of contact.

Training with the Saber

All instruction with the saber must begin with learning and mastering the elementary position dismounted. A good swordsman is one who instinctively and automatically knows and executes any desired movement of himself, his sword or his mount necessary to carry out his wishes to overcome obstacles or opponents which may arise during combat. To such an end is our instruction with the saber directed. The purpose of all saber training is to make vigorous, offensive, thrusting fighters. We can no more make a good swordsman by teaching him the manual of the saber on the parade ground than we can make a good rifle shot by teaching the manual of arms. Beginners will naturally not have faith in the saber but as the instruction progresses and their work shows improvement it will invariably result that another has been converted to a strong believer in the powers and possibilities of the saber as a weapon. Mounted instruction should follow immediately after the trooper has mastered the positions dismounted. After the trooper has mastered the movements at the slower gaits all work should be done at a gallop. A drawn sword must always be associated with speed. Saber training is training in suppleness, speed, horsemanship and agility—all true cavalry qualities.

Form

Another important point is *form*. Form is the art of doing a difficult thing well and in the easiest and simplest manner. Every sportsman who desires to improve his own particular game will make a careful study of the best form and then try and pattern his own after it. Too much stress cannot be placed on form in swordsmanship or in handling the pistol. In making an attack with the saber it is essential that the blade and arm be in one and the same straight line. With the pistol it is essential that the barrel is in prolongation of the forearm in order to secure the best results. Foes of the saber will often say that the saber will break. An unbreakable saber cannot be made unless it is far too heavy for any practical use. It is just as logical to say that any firearm is valueless as they all will cease to function at some time or other. As stated above the pistol must be in prolongation of the forearm. It should be almost second nature to assume this position. The pistol is fired with a straight thrust toward the target, not thrown down on the target. This latter practice was common with the old revolver. It is probably

the result of an old custom. Most of the old revolvers were single action and the throw down facilitated the cocking. The throw down followed a rather decided throw back which was done with the old percussion cap weapon in an effort to throw out the fired cap which might otherwise fall down into the mechanism and cause the revolver to function poorly or jam. The pistol goes always hand in hand with the saber, and it should be instintictive for the trooper to return pistol, once emptied, draw saber and continue in the attack. For effective work with either the saber or the pistol, a thoroughly trained horse is essential. The horse must be trained to run straight and fearlessly no matter what might be encountered. The effective range of the saber is only five or six feet and that of the pistol only about forty yards, but actually the range of both is only limited by the strength of the morale which governs its actions. History tells us that the longer the range of the weapons employed, the greater the distance at which the men will fight. The ideal cavalryman is one who, when he closes with the enemy, things of nothing but riding hard in straight lines, checking and turning, firing his pistol and lungeing viciously at everyone wearing the enemy uniform. It is an established fact that the saber has never failed when in the hands of those who have the skill and courage to use it, and have placed in it the confidence it so well deserves. Cold steel is still a supreme arbiter of the fight, whether it to be the bayonet, lance or saber. In a melee, the trooper must always keep on the alert, moving at speed toward one opponent, then check and ride on a straight line at another. Always menace your opponent with whatever weapon you may be armed. Attack with speed, viciousness and dash rather than await being attacked. Make every possible use of the speed and handiness of the horse. The weakest point of attack for a swordsman is the left rear and an enemy caught in that position must be attacked. Should a swordsman ever find himself attacked at his own left rear use thrusts and cuts at the pursuer and at his horse to gain time to maneuver and get into a position to attack.

Power of Saber, Lance and Pistol

The power of the saber, lance and pistol is not measured by the number of their victims, but by the effect produced upon those who survive their destroying powers. Dead men tell no tales, but a thousand panic-stricken fugitives, justifying, by their exaggeration of the enemy's prowess, their own flight from the field may well destroy the morale of an entire army. Cavalry is an arm of opportunity and its weapons are those of opportunity. Nothing is too good for the cavalry leader, who, recognizing the opportunity, seizes it and leads a successful cavalry charge. The cavalryman's best weapon is his horse and regardless of the weapon, the best man on the best horse will win. A passive attitude will lead to ruin. The mounted soldier must always be ready for an encounter which may last only a few minutes but be famous for centuries.

The Cavalryman and the Rifle

By Brigadier General James Parker, M.H. D.S.M., *U. S. Army, Retired*

The views of one, who, for fifty years, has been an ardent advocate of training with the rifle for mounted as well as for dismounted action.

THE eternal principles of cavalry remain the same throughout the centuries. At times, by the change and improvement in arms, the importance of cavalry has been obscured. But the horse has always given increased efficiency to the soldier.

Let us cease to visualize, as a scene of possible operations, the closely populated sections of Europe. Let us turn our eyes to the vast spaces of our own continent, our own hemisphere. Let us look to Canada, Mexico, Central America, and South America. On American terrain there will be no such thing again as armies without flanks. In the collision of mobile forces much of the paraphernalia of siege warfare will disappear.

Let us dismiss from our minds these thoughts, this incubus of gas, gas masks, of grenades, of flame throwers, of tanks, of heavy artillery. These things do not belong to a marching army. "Compared to materiel the importance of men is as three to one." The human element is always the more important. As in the days of Genghis Khan and the days of Napoleon, success will depend upon men and mobility. Or, as Forrest said "on getting there fustest with the mostest men!"

Useful Cavalry Missions

The mobility of an army, the freedom from interference of its marching columns, depends upon the cavalry which precedes it, envelops and protects it, and forces a passage for it through the enemy's outlying detachments. The cavalry, if properly handled, will explore the territory in front of the army. By fighting mounted, as well as dismounted, it will drive away the hostile cavalry. It will discover and make fruitless the enemy's attempts at ambush. It will seize and hold strong points in advance. By fire action it will hold up and delay the enemy's march. It will force his premature deployment. When conditions are suitable, it will execute great raids into the enemy's country, raids of armies of mounted riflemen, interrupting the enemy's communications, his mobilization, capturing his depots, his outlying detachments, placing him on the defensive, forcing him to retreat. That these things have been done, will be done, is shown by history.

Cavalry in the World War

But say some, times have changed; these things were not done in the last war! They are mistaken. In Palestine under Allenby three divisions of British cavalry, passing around the Turkish flank, marched seventy miles in thirty-six hours. Destroying the depots, the nerve centers of the Turkish army, they forced it to a hurried and disorderly retreat. Intercepting and attacking its detachments, in fourteen days the British cavalry completely destroyed the Moslem army, capturing one hundred thousand prisoners and one thousand four hundred guns.

These people who despise the horse ignore the feats of the British cavalry in Mesopotamia, of the Russian cavalry in Asia Minor and later in Poland, of the French cavalry in Bulgaria, of the German cavalry in Russia and on the western front at the beginning of the war.

The best exposition I have read of why on the western front cavalry accomplishment is not even more evident, is contained in an article on Cavalry in the World War in the Encyclopedia Britannica, new volumes, 1926, by Lt. Col. Charnington, British Army. He claims that only the British cavalry understood the power of offense and defense given by the rifle. They had learned it in South Africa.

The French had ten cavalry divisions, the Germans ten, the English one. The German cavalry was often misdirected and had few opportunities to make good. Their principal service was in slowing up the advance of the British army through the thirty-mile gap between Kluck and Bulow in the battle of the Marne—an advance which if promptly made might have changed the complexion of the war. In 1915 the Germans sent most of their cavalry to the East. In the great break-throughs of March and May, 1918, the Germans had no cavalry, a fact to which Ludendorff attributes the failure of those offensives, saying "without cavalry it is impossible to reap the fruits of victory." One cannot study those tremendous attacks and their ultimate failure without being convinced that with a sufficient force of cavalry properly used, the Germans then would have won the war. There was nothing between the German army and victory except distance and the fatigue of the foot troops.

In their retreat to the Marne in 1914 the French placed three divisions on the exposed left flank and seven in the center. Who can doubt that an American force of this size properly handled could have delayed greatly the advance of the German columns? But the French, instead of our rifle, had an inferior carbine; the annual target allowance was fifty rounds; the men were not trained in dismounted action. Mounted they made many gallant attacks, but with little success.

Opportunites for Independent Action

In war one often sees one army retreating, another army pursuing. In such a case cavalry is specially suited as a delaying force. Occupying strong points such as villages, railroad embankments, river crossings, woods, etc., it can resist until the last moment, without fear of being cut off, since its horses provide a means of escape. By proper dispositions a small body of cavalry can thus deceive the enemy into believing it is confronted by a considerable force of infantry, thus forcing the enemy to deploy, delaying him in his advance. Close country, much cover, woods, hills, etc., are favorable for such resistance, since the horses can be concealed and surprises made possible. Wooded country was the terrain in which our cavalry forces operated during

the Civil War, a war in which the proportion of cavalry to infantry increased every year.

It should not too often be impressed upon the young cavalry officer that it is in the cavalry more than in any other arm that the junior officer, the captain and the subaltern, gains an opportunity for independent action. Both the army that advances and the army which retires or stands fast have their fronts covered by a line of detachments, great and small, of cavalry. In the inevitable collisions which occur, squadron against squadron, troop against troop, platoon against platoon, all the conditions of war, of campaign, of battle are produced in miniature. The officer in command must know when to charge, when to fight on foot; when to attack, when to retreat; when to use the pistol, when the saber. He should be experienced in ambush. When surprised by an ambush he must know whether to dismount, to retreat, or to charge. If he is going to dismount, what about his horses now under fire—should he not first retreat to cover? Being engaged with an enemy detachment, is a flank attack possible under the circumstances? What patrols are necessary to protect his command from surprise?

I give the above as a sample of some of the almost infinite conditions of combat the cavalry detachments protecting the front of an army are liable to encounter. The commander of such a detachment is on a small scale an "army commander." To learn how to conduct himself under such circumstances he cannot rely upon books; he cannot depend upon his natural good sense and resourcefulness. "Combat exercises" are a part of training that has been neglected. They must be practiced by every force of cavalry, no matter how small. To prevent collisions, however, it must be possible to bring the horses of the command to a halt from a gallop quickly; and the men must be good riders.

Training the Cavalryman

But say some, long training and long experience are necessary to make a trooper. We stubbornly persist in this statement in face of the evidence of all wars, that after the first collision of armies only a short time elapses before large replacements of new horses and new men are necessary in the cavalry. It was not the long training of cavalry that made the troops of Forrest and Morgan, Custer and Sheridan so formidable. It was good leadership. There are many poor as well as good leaders among cavalry officers.

Many men, infantry and cavalry, will never make good riders, but it is astonishing how many infantrymen take to the horse when called upon to do so. Upon several occasions I have had to convert infantry into cavalry. In 1916 near Brownsville, the Richmond, Virginia, "Blues," a battalion which had been infantry for over 100 years, at the demands of the War Department were transformed into cavalry. After three weeks' drill they participated in a maneuver of ten days and nights, a maneuver remarkable for the distances traversed and the fatigues encountered. At West Point the cadet, before he graduates, rides one hundred sixty hours. Take a doughboy who is a good shot with a rifle, who knows his infantry drill, who is disciplined and who can love a horse, give him one hundred sixty hours of mounted training and you have gone a long way towards having an efficient mounted rifleman. The West Point yearling who has had sixty hours of riding thinks he is a horseman. In two weeks of track riding, in the saddle five hours per day, total sixty hours, the recruit may be made fit for incorporation in the troop.

No nation maintains in peace enough cavalry for war. With us, in war not only must our small regiments be enlarged but many new regiments be formed. Half of the armed forces of our neighbor to the south is cavalry. And why? Because when distances are great, population is sparse, and supplies are difficult to obtain, fast moving forces must be used to obtain advantage. If the enemy is mounted it will not avail us to chase him with infantry. It is conceivable that in a war on this continent we might be obliged to mount a third or more of our infantry. Fortunately, with fifteen million horses in the United States, we are in a position to do it.

It is not at all unlikely that if this were done, and a large portion of our infantry were to be converted into mounted riflemen, it would be found more convenient to adopt our old Regiment of twelve troops, which has done so much good work in the past. Indeed the passage from the infantry regiment of three battalions of four companies each into the cavalry regiment of three squadrons of four troops each, would be effected with little friction. It is questionable further if our new European regiment is as efficient for the work to be done on this continent as the old American regiment. A troop of sixty-five to seventy-five men has the proper proportion of men to officers, and is not too bulky to be under control. In column of twos one hundred men stretch an eighth of a mile, in column of files a quarter of a mile. A troop of seventy-five men is a proper administration unit. The small troop has always been used in our army with good results.

The Rifle is the Principal Weapon

The British drill regulations after the Boer War announced "The rifle is the principal weapon of cavalry." This dictum holds as good today as then. Do we not in the cavalry attach too much importance to the machine gun and the machine rifle? The reason why the rifle was virtually discarded by some troops in the World War was that few knew how to use it with effect. "Among the blind the one-eyed man is king." In Mexico, the machine gun, in the hands of experts, is of great importance—the reason is the rank and file are poor shots. But give the soldier good musketry training and the machine gun loses its supreme value. In my cavalry brigade I demonstrated time and again that the same number of men using the rifle could make more hits in three minutes on a line of silhouettes at 300 yards than the machine gun platoon.

Incidentally, I demonstrated that the rifle used mounted, is more effective than the pistol. Teach your men to use the rifle mounted—you may run out of pistol ammunition!

As for the *Arme blanche*, give the men a short, light machete-like cutting and thrusting weapon. Nothing is to be gained by extreme length. The Romans conquered while their swords were short. With cavalry charging against cavalry determination and speed means much: the length of the weapon, little. The cavalryman who relies on the length of his weapon does not wish to close. As for a ponderous sticker like our present sword it will be discarded on the wayside when our horses get thin. The useful light machete would be preserved by the soldier for service in camp, and on the rare occasions of the charge against cavalry it will make good, as it did in Cuba.

The rifle is the "principal weapon." But mark this point, neither infantry nor cavalry are fit for war unless they can shoot with accuracy. This fitness, by present methods of training, is, for new troops, difficult to obtain. By the slow process laid down in firing regulations, months are required. The ranges demanded are difficult to obtain, and when obtained will qualify only a few troops at a time. To meet this exigency I devised special course "B," a miniature target course, published in the Musketry regulations of 1903. In 1911, in an emergency, I put four hundred twenty-nine recruits through the course, two weeks' intensive aiming and position drill, five days' firing, one hundred seventy shots. At the conclusion of the course a test showed their accuracy at the regular skirmish run, was half that of sharpshooters. In this course the target "ranges" are in the camp, and a thousand or more men can fire at the same time.

Much time is now wasted in long range firing. The apparent dimensions of a target at one thousand yards, in height and breadth, are one-tenth of the apparent dimensions of the same target at one hundred yards. That is, the apparent area is as one to one hundred. The target is thus over one hundred times harder to hit, there are one hundred times as many misses. The killing is done at the short ranges.

A soldier who can hit the eight-inch bullseye reasonably often at a range of two hundred yards is a first-class shot. To make his fire in battle effective at the longer ranges, all that is necessary is to require him to raise the leaf of his rear sight. For the same reason a soldier who at fifty feet can hit the three-quarter-inch bullseye of the miniature (simulated) target reasonably often, is fit for battle. But this practice must be conducted with service ammunition so that the soldier will become accustomed to the recoil and noise.

In preparing training schedules for war it must be remembered that time is of supreme importance. Every practicable method should be utilized for abridging the time provided the training is not endangered. One great difficulty encountered in raising new cavalry is that the horses are new, untrained, fractious, and that the men have not yet learned to ride. The only remedy for this is to cut down the feed of the horses. As soon as the men have obtained some confidence in the saddle, let the horses feel their oats.

Cavalry, Airplanes and Tanks

There are many popular delusions now current about cavalry, which have to be combated. One of these is that airplanes have made cavalry less necessary for exploration and reconnaissance. As a matter of fact, the army which dominates the air (which would always be the case with us in this hemisphere), can not only protect its cavalry from being bombed by the enemy, but is able to make the exploration of our cavalry more efficient by transmitting information of the movements of the enemy's main columns, thus enabling our cavalry to oppose them. Thus flanking movements like Kluck's, before the battle of the Marne, might have been greatly delayed by an efficient force of mounted riflemen.

These critics also lose sight of the fact that at night or in weather of poor visibility, airplanes, for reconnoitering, are valueless.

Some claim that cavalry is too expensive. It is probable that in this country, where the infantryman costs almost one thousand dollars per year, the extra cost of the upkeep of the horse is less than one-fifth of that of the man.

Some claim that motor trucks, transporting infantry swiftly, will afford a means of dispensing with mounted riflemen. In the Brownsville District in 1916, I discovered that trucks moving through a close country will have to be preceded and protected by cavalry, else they will be held up and captured by the cavalry of the enemy. Motorcycles I found were useless to scout in advance, since they could not move off the road.

Still others make the point that tanks will take the place of cavalry. Leaving out the fact that tanks have great difficulty in going through woods or over rocky hills and mountains, or in crossing rivers, we may say that tanks are more liable to help cavalry than displace that arm. As at Cambria, they may, in great battles, open a passage for the cavalry through the enemy's center. They are, as the French call them, "cars of assault" and are best suited for that purpose. But even in that connection, a battle with tanks on both sides has not yet been staged or apparently even studied. But the idea of displacing cavalry with machines its preposterous.

Since the coming of the breech-loader and since the Cavalryman has become the mounted rifleman, his value has enormously increased. While he is ready mounted to fight cavalry, he is now like an infantryman with seven-league boots: when dismounted, formidable as infantry, man to man: when mounted, a danger to the enemy's flank, his rear, his communications, his depots of supplies, his outlying detachments. The rifle is his principal arm. Mobility, ability to strike at a distance is his supreme, his unique, value.

Employment of Machine Guns

By Lieut. William P. Campbell, *7th Cavalry*

THE combat employment of a military weapon is based primarily on its characteristics. Consequently it is necessary to know its powers and limitations to understand its tactical use. Machine guns have certain peculiarities possessed by no other weapon; these make them particularly suitable for employment with cavalry.

In discussing the use of machine guns, certain principles laid down in the *Employment of Cavalry* should be kept in mind, viz.:

1. Cavalry's mobile armament may secure the power of movement by diminishing enemy fire.
2. The proper employment of fire power will always aid the success of mounted combat.
3. Rapid movement and fire usually go together.
4. Mounted and dismounted action should be supported by fire power whenever necessary.
5. The characteristic action of cavalry is rapid mounted movement supported by effective and intense fire.

From these principles it is seen that machine guns must and do fulfill certain requirements, viz.: mobility, rapidity in going in and out of action, flexibility of fire, ease of control, sustained intense fire power of great volume, all around traverse, and direct as well as indirect fire.

General Considerations

Mobility—Cavalry machine guns, in pack and properly handled, can go wherever the units to which they are attached go, and do not reduce their mobility. However, when the guns are unpacked and advanced by hand—an exceptional procedure for cavalry machine guns—the rate of march is maintained with great difficulty. In any attack where the fire of machine guns is necessary, they will have time to occupy firing positions while the cavalry maneuvers to the line of mounted departure. This emphasizes the necessity on the part of cavalry commanders of giving early warning to their machine-gun commanders and thoroughly acquainting them with the cavalry plan of action.

Concealment—In pack, either at a halt or in motion, machine guns are exceedingly vulnerable. Thus their place in column should be such that their intense fire power can be made quickly available, although far enough back to avoid surprise by small arms fire. Invulnerability will depend largely on invisibility. By reason of its small personnel (only six square feet are required for gun and crew), the machine gun can use the slightest cover and thus escape being seen by the enemy. Hence the possibilities for surprise effect are great. Since but little cover is required for concealment, a difficult target is presented. These characteristics make machine guns most valuable in cramped localities where sufficient fire power by other means is not feasible.

Mount—It is the fixed mount (tripod) that places the machine gun in a class distinct from other automatic weapons. This tripod makes the machine gun

the only cavalry weapon capable of either direct or indirect accurate long-range fire, and the only one which can conquer darkness, smoke, fog, and rain. It allows a complete horizontal and all necessary vertical traverse; allows fire to be switched from target to target without change of position; simplifies adjustment and control of fire; is applicable to moving targets; reduces the human factor in firing; denies areas to the enemy, and permits efficient fire to the extreme effective range of small arms ammunition.

Fire—The principal characteristic of the machine gun is its ability to produce a large volume of rapid and sustained fire. Fire is its only type of action. Such distinctive features as rapid production, large volume, sustained fire, and quick ability to register on a target, are of great importance to mounted combat, as cavalry action requires maximum fire support developed in a minimum of time. The correct application of fire embraces the rate of fire, the trajectory, and the resultant shot group.

Mechanically, the machine gun is capable of a cyclic rate of fire of 500 rounds per minute. The Browning Machine Gun has fired 20,000 rounds in less than 45 minutes with but three stoppages, and has fired 39,500 rounds without a breakage. When the gun is laid, a burst of from 5 to 8 shots per second can be placed on a given area. However, the average rate of fire varies from 100 to 250 rounds per minute. With a well-trained troop moving at a gallop, all eight guns can be placed in action in less than 30 seconds.

The cone of fire is narrow, dense, and deep, which facilitates observation of strike and adjustment. As the fire can be accurately and quickly adjusted, machine guns are of great value in a cavalry action, because the period for any necessary fire support is short. Due to the concentrated cone of fire, it should be employed against deep, narrow targets whenever possible. Therefore, seek to obtain oblique or enfilade fire at all times.

Because of the effectiveness and intensity of machine-gun fire, a greater portion of the rifle troops are permitted to engage in the fire fight or to act mounted. In mounted attacks there must be detailed coordination between the fire units and the maneuver elements—extreme team work is necessary—control of fire must be absolute. These requisites are practicable with machine guns as their fire is concentrated in the hands of one man. Surprise effect, so essential to cavalry action, is easily gained.

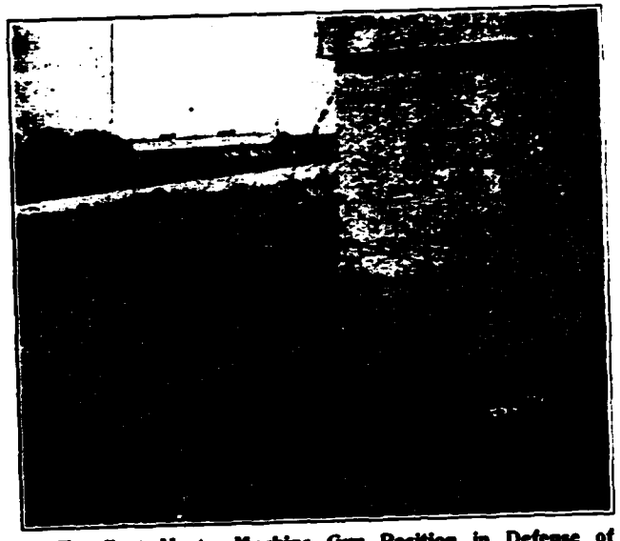
Morale—A sudden burst of rapid, well-aimed fire from a concealed position, at an opportune moment, produces a most disheartening and demoralizing effect on the enemy. Troops fear machine-gun fire more than anything else on the battle field. The regular machine-like crack of machine guns lowers the morale of the enemy and raises our morale by instilling in us a certain sense of security.

General Principles of Machine Gun Tactics

No matter how great the cavalry commander's interest in machine guns and his dependence on them, much must be left to the initiative of the machine-gun commander. For this reason it is important to outline certain general principles for the employment of machine guns. These will insure their constant readiness

to resume the offensive under all conditions, which alone promises decisive victory.

Machine guns act by fire alone, so are incapable of independent action. They prepare an offensive movement or repulse an attack, but cannot themselves gain ground. Use them to assist forward movements, to aid in seizing and holding positions, to cover flank attacks and the retirement of flanking detachments when driven back. Although superiority of fire is essential for positive



An Excellent Hasty Machine Gun Position in Defense of a Village

results, it is a principle that only the necessary number of guns to accomplish any task should be employed. As far back as the Franco-Prussian War, Von Moltke emphasized "beware of useless concentration: concentrate only for a definite purpose, a decisive battle." It is also desirable that the commander of the force should at all times have at his disposal reserve machine guns for meeting the unforseen contingencies of battle.

Machine guns should be constantly employed in pairs (Cavalry Machine Gun Section). Even breaking up the platoon reduces combat efficiency because there are then four guns without an officer's supervision. The cavalry commander decides where and when the machine guns are to be employed, but the machine-gun commander should be allowed to select the means and methods to accomplish his mission. Although there should be a definite responsibility fixed on the machine-gun commander, the role assigned his unit should be given broadly, leaving to the machine-gun commander great initiative.

Reconnaissance—To insure their effective employment, machine-gun units must obtain for themselves special reconnaissance information in addition to the

general data furnished by troops assigned such missions. The machine-gun commander must be constantly familiar with the situation to his front. He usually makes a personal reconnaissance with the cavalry commander before entering the action and is then able to order a logical deployment of his units exactly in accordance with the desires of the commander of the force. His reconnaissance must continue during and after the action.

On the march, during the approach or withdrawal, and previous to combat, the machine-gun commander, in order to obtain immediate information of every situation, rides with the commander of the rifle troops to which the machine guns are attached. The machine-gun commander should know:

1. The probable intention and course of action of the enemy: the location and disposition of his troops, their size and character: the enemy's equipment and morale: and his method of employing machine guns as well as his machine-gun localities and strong points.
2. The general character of the terrain such as the location of high ground, hills, ridges, ravines, ditches, stream beds, bridges, woods, roads, wire, and covered approaches.
3. Possible location for machine-gun lead animals.
4. Whether the terrain favors mounted or dismounted combat.
5. Probable positions of enemy observation posts, front lines, supports, and reserves.

In defense, the machine-gun commander should note the existence of natural obstacles, and possible places for constructing dummy guns: the best defensive positions for machine guns: possible approaches and routes of withdrawal: fields of fire: likely avenues of enemy approach and ground over which he might attack: areas of concentration for reserves: and localities which afford good cover for enemy machine guns when firing. After making his reconnaissance and locating his gun positions, the machine-gun commander should forward the cavalry commander a sketch showing:

1. The location of each gun.
2. The sector of fire of each gun.
3. The principal targets of each gun.
4. Adjoining units.

Positions—Here again the orders given machine guns—firing positions—should be in general terms because frequently they may render more effective support from adjoining zones and better positions usually will be discovered after a more careful reconnaissance. It should be emphasized that the first consideration in occupying firing positions is to get the guns into the positions without exposing them to enemy fire or observation. The only invariable rule is to post the guns so that they can accomplish the mission assigned.

The weight of machine guns should gravitate toward the flanks from where they can combine cross fire to the front and protection of the flanks. Our Training Regulations state that the ideal positions for machine guns in supporting an attack are on commanding ground, preferably to the flank, which permits overhead fire. On the other hand, the Germans taught to the end of the World War that, "commanding points will not be used." In a document on "German Principles of Elastic Defense," Ludendorff writes that it is even unwise to place

guns on narrow ridges because they always draw fire and are difficult to hold. Von Thaer, a well-known German General Staff officer in the World War, taught that machine guns should be concealed on slopes and in hollows, and never placed on commanding ground.

Positions on reverse slopes should be avoided so as to obtain direct fire unless enemy machine guns and artillery make forward slopes untenable. Because of the vulnerability of lead animals and the necessity of ammunition supply, all positions should have covered approaches. Woods, trees, crops, banks of rivers, canals, railways, ditches, hedges, debris, mounds of earth, cuts and folds in the ground afford good positions and covered lines of approach. When frontal fire is not necessary nor possible, guns may be sited behind oblique ravines, knolls and slopes. Wood piles, planks and logs may be used for concealment. During village fighting, windows, doors, and holes in roofs may be

A British Machine Gunner During World War Harassing Enemy Supports

used as gun positions, provided the guns are set well back in the shadows. Consequently, guns should command these same enemy positions as well as all cross streets.

Avoid places easy to recognize such as cross roads, single objects, spots easily located on the map, conspicuous heights, thickets, knolls and buildings. Machine Gun Training Regulations give the following requirements for perfect machine-gun positions:

1. Defiladed approaches for the guns to within close or effective range of target.
2. Command of enemy positions and good fields of fire.
3. Permit direct flanking fire on the target, continuity of fire with neighboring guns, and overhead fire if required.
4. Good observation of fire on enemy position.

5. Cover from view and if possible from fire.
6. Good alternative positions, usually to a flank, for occupation if the guns are located by artillery.
7. Facility of movement and communication to the front, flank, and rear.
8. Defiladed approaches and good cover for lead animals.

Targets—Machine-gun targets are classified according to their nature as infantry, cavalry, artillery, tanks, etc.: and with reference to their movement as fixed or stationary (trenches, buildings, machine guns in position), transient (infantry lines, observation and staff parties), and moving (cavalry at fast gaits, small bodies of mounted men, trucks, motor cars, artillery on the move, marching infantry, wagon trains). The machine gun has no destructive power and is ineffective against materiel. Favorable targets are deep and dense, with relation to the line of fire, such as columns, or lines taken in enfilade. Unfavorable ones are broad and shallow such as frontal fire on a skirmish line. In this case the long narrow beaten zone of fire is not utilized.

Infantry halted or in close order march formation presents a remunerative target, but in attack its waves must be taken in flank. Dismounted cavalry is engaged the same as infantry, but mounted cavalry should be fired upon whenever and wherever it appears, provided the range and tactical situation permit. It is most vulnerable at a halt and in close formations, but harassing machine-gun fire is extremely annoying, creates confusion, and disorder, and causes premature deployment. This last may even disrupt the enemy plan of action. Cavalry and artillery lead animals offer superior machine-gun fire objectives. There will be few opportunities to engage artillery, only when marching in limbered formation, at the moment of occupations of position, and upon reconnaissance parties. However, there was a case during the World War when a Canadian Machine Gun Company almost completely annihilated a battery of German Horse Artillery going into position.

Against tanks and armored cars machine-gun fire is ineffective, but barricades and obstacles may be placed in roads, and these swept by fire to halt their progress. Enemy machine guns are not good targets, but their personnel is profitable. Planes, motor cars, trucks, reconnaissance groups, staff parties, signalmen and observers are fleeting but vulnerable. Bridges, trenches, buildings, obstacles and woods are themselves unremunerative, but their exits are valuable where the enemy desires to cross or emerge from them.

Communication—The necessity of maintaining lines of information between the different echelons of a somewhat mixed command—communications within the machine-gun unit and with the troops to whom the machine guns are attached—must be realized. When machine guns and cavalry act together, it is of vital importance. The responsibility therefor rests with the machine-gun commander, and is carried out by his limited headquarters personnel. However, if the machine-gun commander loses touch with the cavalry commander, the latter should take effective and immediate measures to regain his liaison.

The means of communication provided in machine-gun organizations are as follows:

1. The machine-gun troop—telephone, very pistol, panels, and messenger.
2. The machine-gun platoon—very pistol, and messenger.
3. In addition, machine-gun officers and non-commissioned officers will find the semaphore of inestimable value for short-range communication, although it is not required by regulations. The effectiveness of the support given by machine guns to rapidly moving rifle units and to the charge is largely dependent upon simple means of communication.

Ammunition Supply—Great expenditures of ammunition, particularly with machine guns, are required by the conditions of modern warfare. Commanders of all ranks must see that the necessary economy is constantly exercised and that all possible steps are taken to insure timely replenishments, because there must be no anxiety as to ammunition supply on the part of troops engaged in battle. This is especially true of machine gun organizations, as they fight by fire alone, and must be absolutely sure of their ammunition supply to render efficient support to rifle and shock units.

The amount of ammunition required by machine guns depends on varied factors, such as the number of guns to be employed, the duration of the engagement, the rate of fire, the amount of supporting artillery fire used, and whether the machine guns are to lay down any harassing or interdictory fire. The machine gun troop carries 3,000 rounds per gun in pack (enough for 30 minutes' fire at 100 rounds per minute) and the remainder in the combat wagon. Belt filling machines, additional water, and extra oil (one-half pint per day required per gun under war conditions) also are carried in the combat wagon. So, machine gun units must have their combat wagons close at hand. When operating with rifle units, machine gun organizations habitually will be accompanied by their combat wagons, which then come under the command of the Supply Officer of the rifle unit to which attached. However, before and during an engagement it often will be advantageous to place the machine gun combat wagons under the immediate control of the machine gun commander. These wagons should contain the maximum possible amount of ammunition consistent with the mission, and they should be pushed as far forward as cover will permit, because the packs are refilled at the combat wagons. This forward movement of ammunition is especially difficult and requires strict supervision. Only in cases where the ammunition supply is in certain danger of collapse should reserve machine gun platoons be used as carriers for platoons in action. At such times the machine gun commander is authorized to request additional men as carriers from the commander of troops.

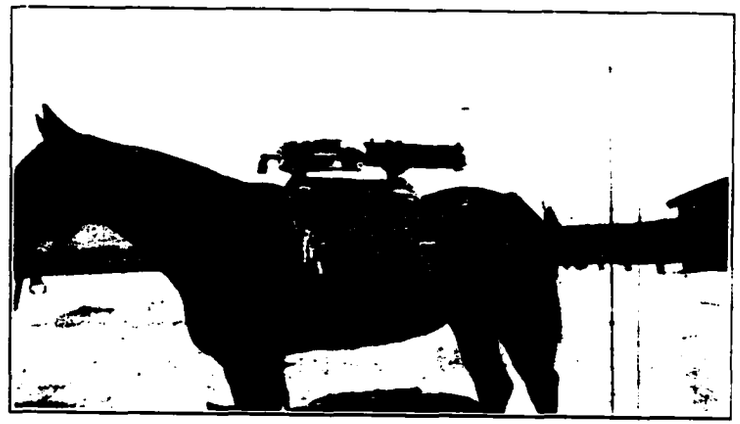
Although dumps may be established under a few obvious conditions, such as a determined holding attack, they must be avoided, as a rule, because they tend to immobilize the cavalry by delay and cause the loss of ammunition in case a rapid withdrawal is ordered. Both the cavalry and machine gun commanders must consider the following in reference to machine gun ammunition supply:

1. The amount of ammunition needed immediately, and the amount for future actions.

2. The farthest point ammunition can be carried by pack and the distance it must be carried by hand.
3. The character of the ground to be crossed, number of men necessary and method to be used.
4. Location of combat wagons.

If the above general principles are departed from, as they may be in exceptional cases, the sole justification must be an affirmative answer to the question: "Does the result hoped for justify the expenditure of ammunition?"

Smoke—Machine guns, with their means of indirect laying, are the only cavalry weapons that can effectively penetrate a smoke screen. If the enemy suddenly puts a smoke screen across his front during a bombardment, it may be assumed that he is forming for an attack under cover of the smoke. Then



An improvised method of carrying the Browning Machine Gun, illustrating its possible use with the pack horse in motion, in an extremely hasty withdrawal. The gun has been fired from this emergency moving position with fair results.

the machine guns would put all their fire on the smoke screen. But if such a screen is put down by the enemy without any artillery preparation, it should not necessarily be taken as an indication of an enemy attack, because smoke screens are used often to conceal reliefs or other movements, the arrival of armored cars, or tanks, and to locate hostile machine guns by drawing their fire.

Machine Gun Lead Animals—Lead animals mean even more to machine gun units, than horses do to cavalry troops, because a cavalryman can advance without his mount, but machine guns are almost immobile without their pack horses. Of course, the tactical situation influences the position of machine gun lead animals, but the cavalry commander should allow them to be brought as close to the firing position as enemy observation, enemy fire, and local cover will permit. With the drivers leading the gun and ammunition horses, it is surprising how far forward they can be taken without being exposed. In order to insure a rapid withdrawal, it is necessary for machine gun lead horses to be

much nearer in a delaying or rear guard action than in a stubborn defense when there may be artillery shelling by the enemy.

Machine gun lead animals should be near roads when possible and always to either flank of the guns instead of directly in rear to avoid overs from concentrated fire on the machine gun positions. Banks of streams, ravines, deep washes, steep reverse slopes, fills, quarries, buildings, and woods afford excellent protection (the latter especially in case of enemy aerial activity). In this connection it must be remembered that machine guns draw artillery fire. In general, each machine gun platoon furnishes local protection for its own lead animals, but when in an isolated position, an escort (which would have to be drawn from the cavalry) might be necessary.

Visual or voice communication is essential and habitual between guns and lead animals, because the machine guns are never moved by hand except for very slight changes of position. The length of time required for a machine gun to advance to a new position, and the length of time it may remain in action when withdrawal is contemplated, is dependent largely on the distance the lead animals are from the guns.

Security

Advance Guard—It is the business of a cavalry advance guard to take aggressive and bold action, to grip, hold, and outflank the enemy rapidly to compel him to reveal his disposition. These functions make it necessary that great fire power be available when required. Machine guns are well suited to such a mission, because of their rapidity in opening a large volume of fire, long-range fire power, mobility, and ease of control. These characteristics allow the advance guard to hold ground already gained, to develop the enemy's strength, to delay him, to render him cautious, to cause him to deploy at long range, and to break off an action suddenly without bringing on a general engagement.

The mission of the machine guns with an advance guard may be to:

1. Force a premature deployment of enemy forces.
2. Delay or prevent enemy movement.
3. Assist in driving off hostile detachments.
4. Hold high ground, good defensive positions, cover important approaches, bridges, defiles, and other essential terrain features.
5. Lay down bands of fire where needed and protect weak flanks.
6. Cover a deployment of the main body by holding the enemy on a wide front.
7. Assist in an attack.
8. Take part in fire pursuit of enemy forces.
9. Cover withdrawal of advance guard when not supported by main body.

The factors which determine the number of machine guns assigned to an advance guard are the nature of the terrain and the proximity and character of the resistance expected. When the country is flat or densely wooded, the proportion of guns with the advance guard is less than where the country is rolling and affords good opportunities for flanking and overhead fire. If contact is expected early there should be at least a platoon with the advance guard squadron or a section with an advance guard troop. The advance guard in general will have relatively the same proportion of machine guns as the main body.

The machine gun commander marches with the advance guard commander, although the machine gun unit ordinarily will march with the rearmost element of the advance guard. Or in case a machine gun troop is assigned to a squadron on advance guard duty, one platoon may march with the support and two with the reserve. This rearward position of machine guns in an advance guard assures:

1. Greater security to the guns.
2. Gives greater latitude in selecting firing positions.
3. Makes the approach to firing positions safer and easier.

If time permits, the advance guard machine guns should be assigned a definite role in the attack. They should direct their fire on points in the enemy's rear as soon as their fire becomes masked by the advance. If the advance guard succeeds in dislodging the enemy from his position, the machine guns should be moved forward by bounds to join in the fire pursuit and to assist in repelling hostile counter attacks.

Flank Guard—The same general principles relative to the use of machine guns with advance guards apply to their employment in flank guards. Their mission remains the same, and their importance is equally as great. The proportion of machine guns to attach is determined by the intended conduct of the flank guard in case the enemy is met—the more defensive the action, the more guns should be added (depending, of course, on the size of the flank guard and on the nature of the terrain). The position of the flank guard machine guns in column is determined by the direction of the expected enemy—forward if the attack is expected from the front, and to the rear if the attack is expected from that direction. The most important use of machine guns with flank guards is when they form part of a cavalry flank guard protecting the flanks of infantry in battle.

Rear Guards—In no phase of warfare are machine guns more valuable than during a retreat. Their mobility combined with ability to force formed columns of the enemy to deploy at long ranges, to resist an attack, to deny the enemy bridges, defiles, and other critical points in the route of advance, to support counter-attacks, and to cover a withdrawal make them of inestimable value to a rear guard. Their proportion should be large, depending only on the number of guns available in the command and the tactical situation.

As a rear guard retires by echelons, which are about equal in strength, machine guns are usually equally distributed in those echelons. A wide and deep field of fire should be secured, and all roads and approaches over which the enemy may advance must be covered. To secure surprise effect, it will be desirable in many cases to withhold fire until the enemy is at close range. Successive positions should be selected from 1,000 to 2,000 yards apart when there is any choice. The Rear Guard Commander should detail a small escort, three to six cavalrymen per gun, for the rear guard machine guns to insure their security and their constant effectiveness.

Outposts—The principles governing the employment of machine guns in outpost are the same as those governing their use in defense. Their disposition

depends on the size of the force, the intentions of the commander, the proximity of the enemy, the features of the terrain, and the nature of the cavalry outpost. Machine guns are an ideal resisting weapon in outposts because of their mobility, the rapidity with which they can be moved from place to place, their adaptability to night firing, and their ease of concealment.

Usually the greater number of guns are assigned to the supports and placed near the line of resistance, but some may be with the reserve. Ordinarily they are not assigned to outguards, although important pickets or detached posts may require them. Their missions should be to:

1. Command all approaches, roads, defiles, etc.
2. Sweep all ground between the outguards.
3. Provide long-range harassing fire.
4. Give anti-aircraft protection.
5. Protect front and flanks of supports.

Of most importance is the fact that the proper use of machine guns in outposts permits the employment of the fewest possible number of men.

Screening

Both offensive and defensive cavalry screening operations are assisted greatly by machine guns. Von Bernhardi teaches that, "The principal task of the offensive screen is to defeat the hostile cavalry; and for this object all available force must be concentrated." Consequently, machine guns, the cavalry's chief fire weapon, should form part of this force, because they relieve a large portion of the rifle units for reconnoitering and observing to the front, with their rapid volume of fire assist forward movements, and form strong covering positions that can be used as rallying points in case the forward elements are driven in.

Of the defensive screen, Von Bernhardi says: "Of great importance, first and foremost, is the nature of the obstacles on which it is based—water courses, canals, bridges, and woods." Machine guns sited for direct fire to cover these obstacles and all other avenues of approach will greatly stiffen the defense. In case of only a few guns they should be held in rear as a mobile reserve and ordered quickly to any threatened point. When cover is not available all guns should be prepared to do anti-aircraft firing, should fire on enemy bodies at long ranges, and employ harassing fire often.

Reconnaissance

In both strategical and tactical reconnaissance machine guns can be used to great advantage. They should be attached in the proportion of one platoon (4 guns) to a squadron. In case the enemy is encountered their support may be decisive. The mere sound of fire from machine guns may be sufficient to scare off small enemy detachments which are incapable of resisting a determined attack. The usual principle of fire and movement governs the use of machine guns with reconnaissance detachments. Their missions are to:

1. Assist in laying ambushes.
2. Assist in driving off minor enemy patrols.
3. Assist in protecting detachment in emergency.
4. Support mounted and dismounted attacks.

5. Draw enemy's attention to one point, while information is gained at another.

Raids

Machine guns are as important to this method of semi-independent warfare as to reconnoitering duty, and are similarly employed. In advancing, the raiding force should utilize the accurate long-range fire of the machine guns, then when the destination is reached, machine guns can be posted to hold the enemy at a distance, while mounted action completes the mission of destruction or capture. The conduct of the guns with raiding detachments is as follows:

1. When in camp, use the machine guns in outpost.
2. During the advance, avoid firing unless attacked.
3. Fire on planes only in self-defense.
4. When supporting rifle units, cooperate completely, so that the cavalry can accomplish its mission.
5. When withdrawing, engage all enemy targets in active pursuit.

Anti-aircraft machine gun protection for a wagon train while on the march.

Attack and Defense of Convoys

Both motor and wagon convoys are attacked and defended by cavalry with machine guns attached. Fire on this class of target should be opened by surprise, preferably with part of the machine guns attacking the head of the column and others firing on the tail of the convoy simultaneously. In case the convoy has a mounted escort, the rifle units engage it while the machine guns are sweeping the convoy with dense fire. In defense, unless there is a large number of guns, they should be kept with the main body of the train rather than frittering them away as part of security units. If available, a platoon of machine guns should be assigned to the advance guard for the purpose of holding critical points until the column passes, and the remainder placed at the head and tail of the convoy proper. With a long convoy it is well to place a section or platoon

of machine guns in the center. While in movement one or two guns should be mounted always in wagon or truck bodies for anti-aircraft defense. When the convoy camps, the machine guns are used as part of the outpost or placed at the four corners of the park.

Machine Guns In Defense

Defensive tactics are basically the tactics of holding wide fronts with relatively weak forces. Machine guns constitute the framework of any cavalry defense because they give rigidity to particular points in the defensive organization by the power of their fire and give elasticity to the whole structure by their ability to fight in any direction. When time is available to plan the occupation of a position the disposition of the machine guns should be made first and the dismounted rifle units built up around them. Machine guns should be placed and sited so as to cover the entire front, especially the flanks and faces of combat groups, strong points, and centers of resistance with a series of crossing bands of fire. Alternate emplacements for each gun are selected and prepared so as to accommodate quick changes of position. Dummy emplacements are constructed and the work partially concealed.

The missions of machine guns in a cavalry defense may be:

1. To economize rifle units.
2. To protect the flanks of the position.
3. To sweep with long-range fire important routes of approach.
4. To interdict enemy concentration points and put over harassing fire day and night.
5. To stop minor attacks and check and disorganize main attacks.
6. To defend the battle position and limit penetration.
7. To put down preparatory fire and support counter attacks.
8. To cover a withdrawal and act as a mobile reserve of fire power.

In defense the machine gun platoon is the basis of control, while the guns are divided into forward and rear guns. Forward guns are those on important points to the front and are laid primarily for covering the front lines with bands of fire. They employ direct fire. Rear guns are those placed on commanding ground in the rear of the battle position. They are used to fire standing barrages and concentrations on particular targets or groups of targets, and do anti-aircraft work. Anti-aircraft sections or platoons should be placed about the defensive positions in the form of a big triangle, 500-1,000 yards to a side, the guns at each apex. This plan insures anti-aircraft protection in all directions. The advance of the enemy is the signal for all guns to open fire at maximum practicable rates. As large bursts betray the gun position by sound, smoke clouds, and muzzle blasts, the use of small bursts is habitual except when attacked mounted. Then all guns open with the maximum rate of fire.

Machine Guns In Delaying Actions

Any force whose mission it is to delay the enemy should be liberally supplied with machine guns. In numerous German and Austrian tactical studies, it is stated that Allied machine guns formed the chief impediment to their progress during attacks. Here should be emphasized the importance of deliberate observed harassing machine gun fire, and of methodical annihilating fire.

When it is intended to break off before serious losses are sustained, the following principles apply to machine guns:

1. Maximum fire power must be obtained when the enemy first appears. Fields of fire at medium and long ranges are necessary.
2. Distribution in depth is not important, but flanks must not be neglected.
3. Wide intervals between guns is permissible in order to deceive the enemy as to real strength. Such deception is also aided by use of alternate positions.
4. Main avenues of enemy approach should be covered, especially narrow areas where the enemy must cross, such as bridges, defiles, etc.
5. Machine gun lead animals should be held close with covered routes of withdrawal available. Retirement is by bounds, one platoon or section covering the withdrawal of another. New positions should be reconnoitered before withdrawal and should be from 600 to 1,400 yards to the rear.
6. While the sacrifice of guns is never desirable, the defense should be bold and determined.

When delaying actions must continue for a certain length of time regardless of losses, the considerations shown below should govern the conduct of the machine guns:

1. Certain means of limiting the success of an enemy who has made a partial advance are the employment of concealed machine guns in depth and in checkerboard positions.
2. Depth and the possibility of counter attack call for a certain amount of overhead fire.
3. Close defense by a series of cross bands of fire should be provided.
4. Small rifle escorts (3 to 6 men per gun) should be left with each machine gun section of first line troops.
5. Routes of withdrawal, though desirable, are not of such great importance

Machine Guns in Withdrawals

In a tactical withdrawal, the majority of the machine guns should be attached to the front line troops, as they cover the whole movement. Rear machine guns should be assigned to support the withdrawal of the front line troops and guns. Here again effort is directed toward securing medium and long-range fire on the enemy approaches, particularly roads, and on the vacated positions. In studying holding actions and withdrawals, the Germans maintain that, "The superiority of an active defense, carried out in the spirit of an offense, should be strongly emphasized. On the other hand, there are but few points on the ground which must be held at all costs. We have been obliged to learn to adapt ourselves to the inevitable loss of a number of positions, which we considered it absolutely indispensable to hold, after we had incurred heavy casualties to no purpose. The morale of the troops will never be lowered in such cases by a voluntary withdrawal at the right time in accordance with orders, if they understand the reason for such a step, while the obstinate retention of positions, which have obviously become unfavorable to us, must destroy their confidence in their commanders."

Machine Guns in Dismounted Attack

Attacks succeed by a proper combination of fire and movement, other things being equal. Enemy strong points are neutralized or immobilized by fire and

their weak points broken through by movement. In the dismounted attack the commander should be certain that the machine gun commander understands the special situation and the plan of action, and must give him all available information of the enemy, his position, strong points, frontage, depth, and flanks, so that the machine guns can be used to best advantage.

In commands the size of brigades and larger, machine guns are divided into forward and rear guns, which are employed as in the defense. The former furnish close fire support by direct fire, and the latter direct or indirect long-range covering fire. The usual number of guns alloted to a cavalry regiment is the machine gun troop of eight guns (in addition to the anti-tank platoon) and the the cavalry squadron the platoon of four guns. The missions of these guns with regiments and smaller units are to:

1. Assist rifle units in obtaining superiority of fire.
2. Neutralize woods, villages, and other strong points.
3. Concentrate on targets holding up the attack.
4. Fill gaps in the line with fire.

An effective Machine Gun position with a strong detached post near a farm house.

5. Consolidate positions won.
6. Pursue enemy with fire.
7. Cover reorganization of rifle units and economize use of riflemen.
8. Repel counter attack and cover a possible withdrawal.

The initial order for the attack should include: machine gun tasks during fire attack and the assault, tasks upon the capture of the position, and tasks for

the action subsequent to the assault. Each machine gun unit (section, platoon, troop) should be given a definite mission and target. All machine guns are charged with anti-aircraft fire, but they do not cease firing on important ground targets to attack isolated planes. The form of fire—standing barrage, rolling barrage, concentrations, overhead, etc.— depends on the plan of action, the number of guns available, the enemy's dispositions, and the visibility and the terrain. When near the enemy, machine guns move forward by bounds by sections (2 guns) or platoons (4 guns). They can be pushed out under cover of darkness, fog, smoke, or bombardment, and establish themselves in long grass, ditches, shell holes, etc. By concentrating on hostile strong points and enemy machine guns, they will aid greatly the advance.

The Mounted Attack

In mounted attacks the machine gun should be considered as a pivot of maneuver and every available gun should be in action. An idle machine gun is a waste of power. Von Bernhardi states: "The universal principle must always hold good for cavalry, that when a decisive struggle is in prospect, all possible strength must be concentrated for it." As many guns as the situation will permit should be employed as one unit under one commander. In general, machine guns should never form part of a charge or melee or be sent into a position without previous reconnaissance. However, in large commands, where the immediate objective must be held at all costs, some guns may follow the mounted supports or reserves into position.

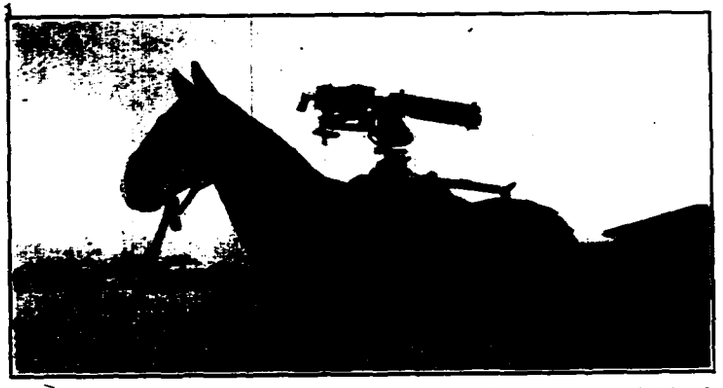
Against Infantry—Deliberate prepared mounted attacks against infantry require much fire support and good coordination in the employment of fire and maneuver. So, again, the machine gun commander should be informed in detail as to the plan of attack. This plan may include a determined fire preparation followed by a sudden launching of the mounted attack or a sudden opening of fire immediately preceding and accompanying the charge. The former plan is the more important except when surprise is possible. As hostile machine guns are the most serious obstacle to the successful mounted attack, they should be neutralized as soon as possible.

The guns may be placed on one or both flanks of an assault, or on commanding ground in rear for overhead fire. A combination of all three is occasionally possible, depending on the terrain. The employment of machine guns on the extreme outer flank is to be guarded against, as they generally will be able to remain effectively in action longest on the inner flank. It is important that the line of fire be at an angle of 90° from the direction of the assault. When friendly mounted troops are over 1,500 yards from the guns, overhead fire should not be used.

When the machine gun fire is not sufficient it is good practice to push forward machine rifles on the flank farthest away from the assault to within their effective range of the target, usually about midway between the machine guns and the enemy. When the fire is no longer safe, due to the arrival of the assault wave at the enemy position, it may be stopped or lifted to rear areas on

enemy supports. A portion of the guns may be moved rapidly to the ground won while the remainder cover their advance and any further movements of the assault units. If the assault is successful, some guns should follow in immediate pursuit.

Against Cavalry—Machine gun tactics used by cavalry against infantry are similar to those employed by cavalry in deliberate actions against cavalry. The machine gun commander should have even more latitude in selecting his gun positions, and the sooner the adoption of a plan of action, the sooner can his fire force the enemy to assume formations favorable to attack by our maneuver elements. The machine gun units should be advanced early, even pushed forward recklessly to within effective range of the enemy, and thus be prepared to keep him at a distance and force him to disclose his strength. Fire should be directed at the enemy reconnoitering parties and at his fire elements, especially when mounted or in pack. On the other hand, machine guns may be concealed so



A good hasty method of packing machine guns in case gun and tripod hangars are suddenly destroyed.

as to engage the enemy frontally, while the cavalry attacks the flank; or they may gallop out to a flank and enfilade the enemy, while the cavalry attacks in front. Machine guns are sometimes used to secure the position from which the assault is to be launched or from which the preparatory fire is laid, but it is better to gain these positions under cover and then use the machine gun fire as a surprise.

A maneuver which has proven valuable is for the machine guns in pack to advance behind assault units over a covered area and drop off at selected firing positions, while the cavalry maneuver to a flank attack, assisted by the fire of the guns. Another practicable ruse is to conceal the guns in a position, then have the assault elements draw the hostile cavalry under the fire of the machine guns and deliver the assault while the enemy is at a disadvantage.

Hastily Prepared Mounted Attacks—If machine guns are to be successfully used in this type of action, the machine gun commander must have a thorough knowledge of cavalry tactics as well as a complete mastery of the technique of

machine gunnery. There may not be time for any definite instructions to be given the machine guns, and lack of action on their part may result in defeat, while quick fire support on the machine gun commander's own initiative may mean victory. As machine gun units when mounted always march in combat formation to a flank or front and can go into action at short ranges in thirty seconds, careful consideration should be given their use in emergencies.

At times, such as when a cavalry force might decide to cut its way through a numerically superior enemy, the machine guns should remain in pack and maneuver with the supports or reserves. Then they could be used as part of the rear guard. When surprise is possible, full use should be made of machine gun fire action, which may or may not be accompanied by shock. Then the maneuver elements operate against one flank of a column and the machine guns search the head or rear, the maximum effect will be obtained. Should the column wheel to attack the assault units, it will then expose itself to the most deadly machine gun fire—enfilade.

Exploitation of a Success

In the break through, the duties given machine guns will be to support mounted attacks, prevent threatened counter-atttacks, and make impossible an organized enemy retreat. In the pursuit, machine guns may be attached to units in direct pursuit, flank pursuit, and strategical pursuit. Best results are obtained by the machine guns following in rear of the enemy, while the rifle units use their speed to check him from the flanks and heads of his retreating columns. The cavalry may seize tactical points along the enemy's line of retreat, thus causing him to bunch and afford good targets for automatic weapons. While short-range fire should always be sought, long ranges permit pursuing columns greater freedom of action, save casualties from enemy fire, and give more harassing targets. Their chief missions will be surprise attacks against the enemy flanks and overcoming hostile rear guards.

The importance of machine guns as an integral part of cavalry and their employment have been greatly stressed in this article because the Franco-Prussian, the Russo-Turkish, the Manchurian, and the World War have proven that it is no longer possible to employ the cavalry charge unsupported by fire on the modern field of battle. Let us, then, be neither fascinated nor dazzled by the glories of a past that cannot be recalled. On the contrary, we should look for new resources and wider spheres of action, knowing that great achievements are the reward only of hard and assiduous labor. With the spirit of Seydlitz and Stuart to inspire us, we can strive for an even greater cavalry than that developed by our ancestors. May our motto be:

"Fire and Shock."

Machine Guns Against Aircraft

By Major John C. Mullenix, *Cavalry*

Formerly Commanding Officer, 1st Machine Gun Troop, The Cavalry School

MILITARY experience has well determined the appropriate tactical and strategical employment of the various combatant arms. However under the insatiable thirst of man for scientific progress, new weapons, new defenses, and new agents of destruction are constantly developed. During the World War, a struggle of giants locked in a death grapple in which neither side could muster sufficient force to drive its opponent into the open and there finish him off, the inexorable instinct of self-preservation forced the mental, physical and industrial resources of the contending nations to the limit. Necessity, as ever the "mother of invention," seeking new means of giving successful battle, brought to the hand of the military commander new applications of known weapons and methods, new types of organizations, highly developed instruments of fire power, lethal and obnoxious gases, and the aeroplane. Scientific progress in all of the foregoing agents has made tremendous strides since the World War. This refinement of the art of war must have its inevitable effect on military operations, organization, and tactical methods.

Tactical principles or laws appear to be as immutable as the law of gravitation. Methods, armament, and organization change with scientific invention and equipment, and all arms of the military service must be alive to modern conditions and weapons. The measure of a combatant arm is its ability to fight. The victories of the future, as in the past, will perch upon the banners of the military arms that are properly organized, modernly equipped and armed, and skillfully led in accordance with sound tactical principles. All of the arms must face certain general conditions of the modern battlefield such as hostile aircraft and chemical agents. Each arm will also face conditions that are more or less peculiar to its particular functions, employment and radius of activity. Therefore organization, tactics and equipment should be based upon certain general conditions, taking into consideration the probable employment and radius of operation of the specific arm involved. Cavalry functions as shown (generally) below should therefore govern its organization and armament.

The Role of Cavalry

1. Security and Information: This includes all types of reconnaissance, advance, flank and rear guards.

2. Covering or Screening: To guard or mask the concentration of armies or the maneuver of units in some phase of the battle or the advance.

3. Seizure of Strategic Locations: Mountain passes, stream crossings, commanding positions.

4. To Defeat The Enemy Cavalry: When the activity of enemy cavalry is such as to interfere seriously with our own forces it must be located and driven from the field.

5. Delaying Actions: To delay the enemy as your own force retreats in its attempt to escape. To contain the enemy at one point while your own force attacks him at another point. To harass his troops.

6. Exploitation of a Success: Where a gap has been made in the enemy's line, to go through and cut communications, break up liaison between units, and destroy railroads, bridges, etc.

7. Pursuit: In case of a severe defeat to an enemy on his entire front to turn the situation into a rout or panic.

8. To assist the army in winning the decision in the main battle. This is the most important and vital use of cavalry.

Necessity for Greater Mobility

Cavalry, to fulfil the foregoing functions and to meet modern battle conditions must develop its equipment, formations and organization. These factors must be balanced to maintain ample mobility and ample fire power. I believe that both of these vital elements are deficient at the present time and therefore beg leave of the reader to diverge for one moment and make a plea for the radical reduction of the equipment now carried by the cavalryman and his mount. That equipment should be rigidly limited to the articles absolutely necessary to live, move and fight effectively. Future conflict demands the gas mask for horse and man. The carrying of these articles entails more weight. The wearing of them radically reduces mobility. Equipment must be lessened and loads lightened. Mobility will be at a greater premium than it has ever been in the past in order to permit rapid maneuver by ground troops, to offer poor targets to hostile aircraft and also to move certain units into formations and positions suitable to attack low-flying planes. Open formations and use of cover offer some protection, and celerity of movement thus increases in importance. Equipment must be reduced to permit these defensive movements and formations. However, occasions will arise when formations and cover are impracticable to obtain—also when our own aircraft will be unable to protect our columns or bivouacs. Are we therefore to be unable to function—to be at the mercy of hostile planes "straffing" us with bombs and bullets or spraying us with liquid mustard?

The Menace of Hostile Aircraft

The modern airplane with its fragmentation bombs and machine guns is a factor that must receive attention. The huge gas bombs filled with lethal agents must be considered. However, I believe that the greatest menace of all is the hostile plane spraying liquid mustard. There is no practical method of protection aginst liquid mustard at the present date. Liquid mustard penetrates all clothing, rubber, and leather, and burns all skin with which it comes in contact. The burns are hard to heal and prone to infection. Its vapor is more poisonous than the vapor of hydrocyanic acid. Liquid mustard will persist on the ground, grass and underbrush from several days to several weeks. The hostile planes, equipped with mustard tanks and flying low, can release the liquid mustard on its target. This method of projection of vesicant

agents would enable enemy planes to infect large areas and cover large targets within a few seconds and cover the targets so effectively that practically every man and animal would be a certain casualty within a few hours. This would also be the case of any personnel or animals entering, passing through, or occupying the infected area. A recent test of this method with simulated liquid mustard showed six hundred thousand drops of the agent on the standing figure of a man fifty yards down wind from the point of release. Ample drops of this liquid to cause casualties covered other targets extending to four hundred yards distant from the point of release. These planes fly from one hundred to three hundred feet from the ground and at a speed approaching two hundred miles per hour. Another feature of the attack is that a plane precedes the real attack covering the target with smoke which enables the other planes to attack with but little danger from anti-aircraft fire from the columns or bivouacs.

Source and Utilization of Fire Power

If cavalry is to function effectively it must be independent of formations, cover and the protection of its own air corps, and it must be able to *abruptly* stop the hostile plane before it can deliver any such attack as described above. Any method of defense against aircraft must include formations that reduce vulnerability and visibility of ground troops and, above all, thoroughly trained air scouts and means of giving the alarm for hostile planes.

That independence can be attained through fire power and particularly through the fire power of automatic arms. Those arms, to be effective, must be potentially able to deliver enough fire, must be properly organized and distributed, skillfully manipulated, and *numerous enough to perform the mission*. These factors involve many others, such as animals, transportation, forage and ammunition supply. It is felt that those phases can be met without great difficulty. Proper formations and powerful automatic arms will enable cavalry to "march divided, fight united."

Machine rifles, an integral part of every rifle troop, have certain possibilities in defense against aircraft. The Browning automatic rifle, fitted to a light bipod and fed with a rugged type of magazine holding at least one hundred rounds, would also offer a quick and flexible volume of fire with certain advantages embodied in a light, air-cooled automatic arm. I believe, however, that the definite and conclusive answer to the hostile low-flying aircraft is the well-handled machine gun. A machine gun troop of eight Browning machine guns, Model 1917, is now included in every cavalry regiment; the war strength troop has twelve guns of this type.

Methods of Handling the Present Machine Guns—Machine Guns in Camp or Bivouac

The proper tactical operation of the present machine gun organization provides a considerable defense to cavalry troops in camp, bivouac, or on the road. In camp or bivouac the guns should be placed in positions where they can cover both troops and animals and preferably where the fire of all guns can be concentrated on any planes flying close enough to be dangerous.

Machine Guns on the March

Machine guns, on the march, must be distributed at intervals in the column. A suggested method would be a platoon with the Advance Guard, and a section following Regimental Headquarters and each Squadron about as shown in the diagram. Distribution of the guns will follow various methods depending on the tactical situation, the activity and proximity of both friendly and enemy planes, the cavalry mission, terrain, etc. The method of distribution of the machine gun units must be flexible in order to meet the varied situations arising from road conditions, terrain, nearness of the enemy, activity of hostile planes, strength of the advance guard, etc. Advanced machine gun units must seize commanding points and go into position covering the entrances and exits of defiles, remaining in position until the main body

has cleared the dangerous points. This is especially important as a single plane armed with a mustard gas spray could, if unhampered in its movements, cause practically one hundred percent casualties in the targets subjected to its attack. These advanced units must be quickly replaced by others in their stations in the column as soon as it emerges from the defile. This can be done by displacing all of the machine gun units forward and having the guns which were in action take the place of those that were near the tail of the column. During halts machine gun units should move to positions commanding air approaches to the troops and be prepared to fire on hostile planes, taking care not to disclose the position of the column by ill-timed or ill-advised fire. These methods will make a considerable amount of rotation of units on the march with consequent wastage of horseflesh and some loss of control. However, these are disadvantages which, of necessity kept at a minimum, must nevertheless be accepted as exigencies of modern warfare and therefore met as practically and efficiently as possible. This method of guarding the marching cavalry column can be done with the present organization. A slight modification of the machine gun mount may be required.

Machine Guns in Action

Machine guns in action must be able (by means of a suitable mount or adapter) and be prepared to fire on attacking planes just as they they engage any other target; however their normal employment will be against ground targets. The forward guns will usually be fully occupied with ground personnel and animals, hence guns in rear positions can better be assigned to anti-aircraft duties. Machine guns with the reserve may be in position and able to protect the reserve. Personnel in position and led animals have little protection other than cover, concealment, open formations and rapid movement even though the guns are extended in depth. These are important measures but still are inadequate. Hostile planes must get direct hits with machine gun fire and fragmentation bombs to inflict casualties. A mustard-spraying

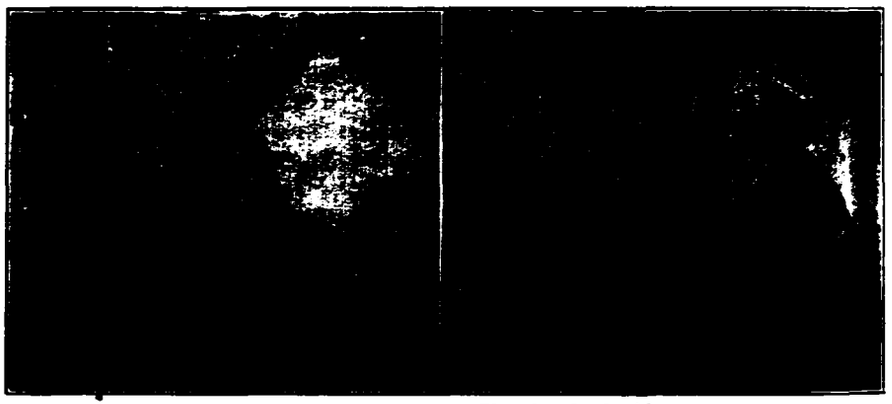
plane has no such problem. Once the personnel or led animals are located the plane can spray the area which they occupy and cover the foliage, grass, underbrush and ground with liquid mustard. Even though men and animals immediately evacuate the area they are inevitably contaminated with liquid mustard from the grass and bushes. It can no more be avoided than the dew. In a few hours all of this personnel and the animals would be certain casualties. This problem must be met. The present number of machine guns is inadequate to meet this menace and in addition perform their normal combat functions.

More Machine Guns Vital

An adequate number of machine guns of suitable type and properly organized must be provided. In considering anti-aircraft weapons, among the main factors is the question of whether it is better to use the present type with certain modifications or to evolve new weapons. If the present types can be readily adapted to the needs and can perform their functions satisfactorily it is obviously a distinct advantage to use them. This adaptation must provide that no substantial requirements of either ground or anti-aircraft tactical or mechanical measures are neglected or evaded.

Modified Mounts

There are certain modified mounts and adapters for use with our present machine guns. These appliances have resulted from the recognition by military men of the necessity for protection against attack by aircraft and are of

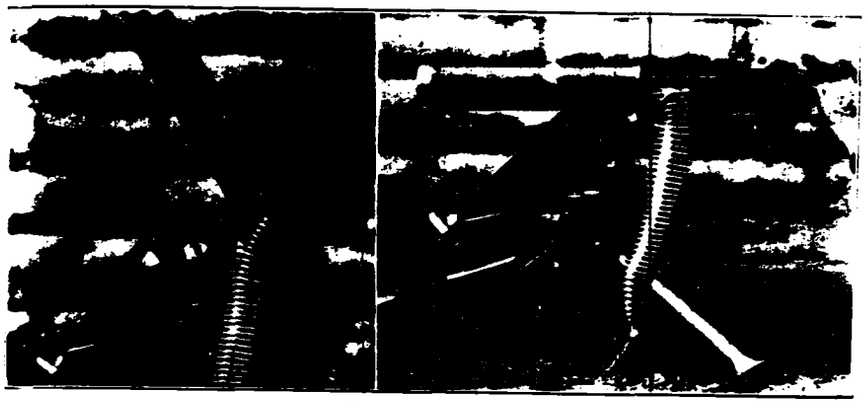


The Lippincott Adapter. Showing both sides.

more or less value in meeting the problem. Several of them are briefly discussed below.

The Lippincott Adapter.—This is a metal bracket that is carried in rack along the trail leg of the tripod. It can be adjusted to the tripod after the tripod itself is set up. It is light, easily manufactured, inexpensive, requires no change in the present gun, tripod or pack equipment. It is easily carried with the tripod and, it is believed, would give satisfactory results with guns

already in position to protect a bivouac or led animals. It could be used with machine gun units to cover the march through defiles but it is doubtful if it could be gotten into action rapidly enough from pack to repel a sudden attack from planes.



The Burch Adapter

Left: In position for Anti-aircraft Fire. Right: In position for fire on Ground Targets

The Burch Adapter.—This is a small metal extension for trunnion mounting on the forward portion of the cradle. It is light and inexpensive and requires a slight but easy modification of the cradle. It does not permit firing against ground troops when the gun is mounted for anti-aircraft fire. The

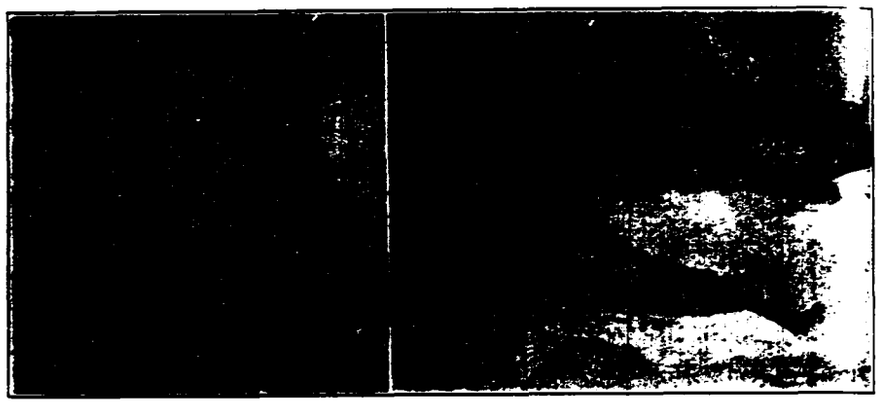
The Heavey Modification

same general remarks as apply to the Lippincott adapter also apply to the Burch modification.

The Heavey Modification.—This is simply a hole through the two side

plates between the trunnion pin hole and the reinforcing stirrup, permitting the gun to be mounted on the elevating screw. Only about sixty-five degrees elevation is possible.

The McAleese Device.—Oval plates with holes to accommodate the elevating screw pin replace the trunnion block bushings and the gun is mounted on the elevating screw.



The McAleese Device

Left: in position for Anti-aircraft Fire. Right: in position for fire on Ground Targets

The Mullenix Bipod.—This is a device designed only for anti-aircraft firing when going into action from pack. This bipod, with which I am naturally more familiar than any of the other devices, was constructed at Fort Riley and made with but one idea in mind—to protect a cavalry command on the march from hostile low-flying aircraft. The only bipod made was constructed of rough iron, no attempt being made at accurate machining or fitting of the parts. It has certain disadvantages. To meet hostile aircraft speed of action is paramount. This bipod has speed. It was easily packed and carried well. All of the other disadvantages can be met by having it made from good materials and properly made by competent mechanics in a well-equipped shop.

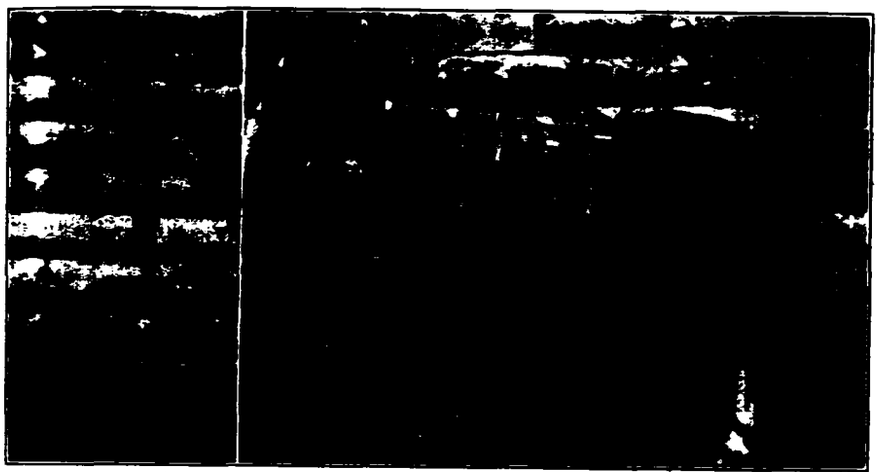
The device consists of a light bipod about four feet in length with a "goose neck" at the top. The gun, mounted in this goose neck, is carried in pack. It weighs about ten pounds, provides an immediate all-round traverse and can be elevated from about twenty degrees to one hundred and eighty degrees. It is easily made, inexpensive, and *provides the vital factor of speed in going into action from pack*—average seven to eight seconds—consistently under ten seconds.

Two methods of carrying it were used, using the same modified harness. The illustration shows it carried as the near-side load on an ammunition horse. These loads balanced within a few pounds and the gun rode well at all gaits on the roads (short marches) and over the hills at Fort Riley.

The second method was to carry it on the gun horse. The regular gun-

horse load is to carry the tripod on the offside, the gun and a box of ammunition on the nearside, and the spare part roll as the top load. The only change made was the nearside load as shown in the illustration. The loads balanced within one pound.

The gun was carried "half loaded," the gunner riding on the nearside and the driver on the right side of the pack animal. Certain factors, of course, must be changed and improved before the device is practical. It is too long, but



The Mullenix Bipod as used in action and as packed.

can be cut down without loss of speed or ease of manipulation. An ammunition clip or container should be attached to the gun. A band with a handle should be placed around the gun to enable the gunner to handle the gun quickly whether hot or cold and to fire more accurately. A modified hanger is required. It is believed that this device, properly constructed and handled, offers an opportunity successfully to meet the hostile plane with the present or a new type of machine gun, machine rifle, or automatic rifle.

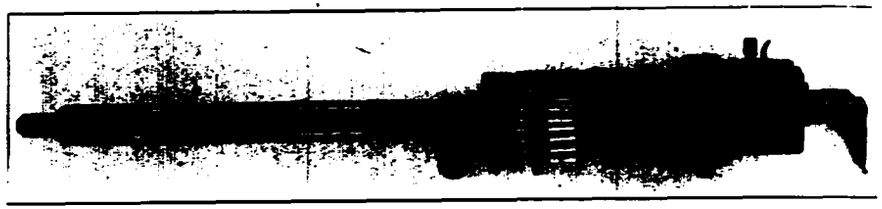
Type of Machine Gun Required

Without entering into a lengthy discussion of various types of guns and mounts it is believed that an anti-aircraft gun should have certain attributes. Time of going into action should never exceed ten seconds. The gun should be able to deliver at least a hundred round burst repeated several times if necessary, and should have a rate of fire from one thousand to twelve hundred rounds per minute. The gun and mount should be light enough to be easily and quickly handled and manipulated by the gunner. The gun and mount should have an all-round traverse and an angle of elevation from twenty degrees to one hundred and eighty degrees. It must be easily packed, ride well, and be of a sturdy type. Many other points are also essential. It may be watercooled or aircooled. The relative merits of both types are well known

and need no discussion. A word of comment only—the watercooled gun has the particular disadvantage of added bulk and weight. These factors should be at a minimum consistent with performance, especially with anti-aircraft weapons where speed is vital. The aircooled gun cannot deliver sustained fire. However, a gun designed for anti-aircraft defense will seldom, if ever, be called upon to furnish sustained fire. Airplane attacks will be short and sharp, every attempt being made to take advantage of the element of surprise, hence the quality of sustained fire is not outstanding.

Type of Machine Gun Available

The gun offering the most advantages for anti-aircraft purposes with cavalry troops is the present aircraft type Browning machine gun as shown



Aircraft Type Browning Machine Gun. Air cooled.

in the illustration. This is an aircooled gun with a heavy barrel, capable of one thousand to thirteen hundred rounds per minute. It can deliver one hundred round bursts, is light, sturdy, can be easily packed, and with certain small additions and modifications could well be adapted to anti-aircraft purposes. Mounted on a well-constructed bipod, suspended from a point approximately in alignment with the barrel and therefore about in the line of recoil, with a handle for the gunner's left hand, and container or a hundred round clip for ammunition this modified gun would offer a powerful defensive weapon. It could be put into action quickly from pack, probably from five to seven seconds, would afford a high rate of fire, sustained as long as necessary, and, loaded with a high ratio of tracer ammunition would furnish an effective defense for cavalry troops. Its tactical use would not be confined solely to the march but it should be employed to cover the picket lines and bivouacs, to protect the led animals of the gun squads and rifle units, to cover the flanks of the machine gun units, and provide protection for the personnel of all units while in action or reserve.

Type of Anti-aircraft Organization Needed

Tactical necessities produce weapons to meet them. Weapons being developed, suitable organizations must be formed to transport and man the weapons to meet the tactical situations. The airplane furnishes the chief impediment to the successful accomplishment of cavalry missions. Cavalry, however, must push on to fulfil those missions which frequently permit of no delay, therefore, the march must be free from serious interruption. Anti-aircraft guns must be so organized that they can assure cavalry forces of se-

curity from successful attack. If the regular watercooled gun (Browning machine gun, Model 1917) now issued to machine gun troops were adapted for this purpose it could be transported on a modified hanger and by simply adding a gunner and driver with their animals to each machine gun squad. This could also be done with the proposed gun and in either case would have the advantages of not forming another organization and would also provide a replacement gun in each squad. However, in view of the probable tactics of hostile planes and the different radii of operation of the gun squads, this would very likely lead to confusion, loss of control and lack of coordinated effort. Therefore, as a basis from which to work, it is suggested to have the anti-aircraft guns formed into separate units either as extra platoons of the machine gun troop or as a separate troop. In view of the different functions of these organizations and the unwieldy bulk resulting from combination, it is proposed to form these guns into a troop and combine the two troops into a machine gun squadron under a field officer. A very small staff and headquarters would be needed.

The Anti-aircraft Machine Gun Troop

The proposed troop would be organized along the following lines:

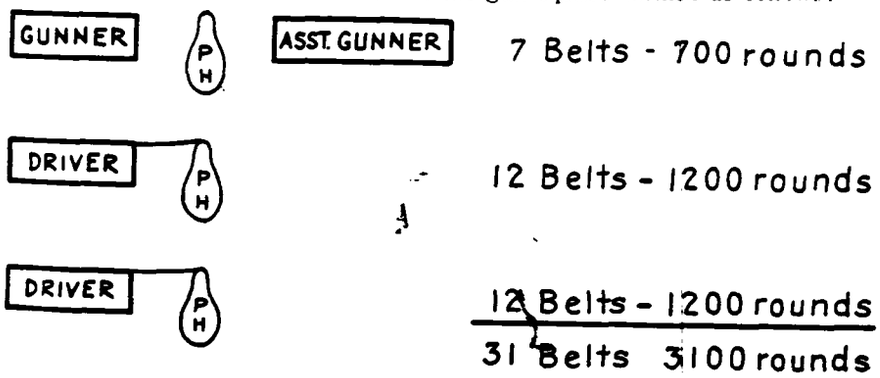
Troop Headquarters.
Three Platoons of four guns each.

Without going into all of the details the line up of a platoon would be about as follows:

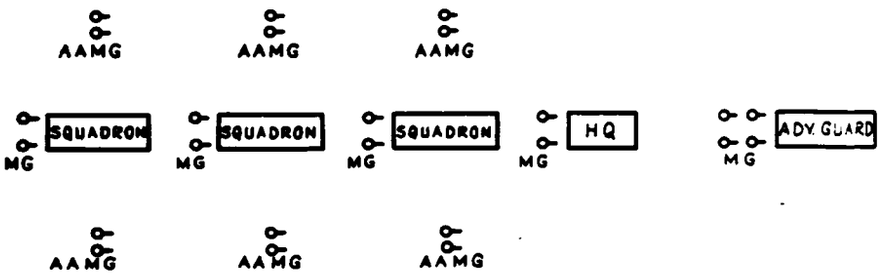
Platoon Headquarters: 1 Lieutenant. 1 Platoon Sergeant. 2 Messengers.

Section 1 Sergeant			Section 1 Sergeant	
Squad Corporal	Squad Corporal	Section Leader	Squad Corporal	Squad Corporal
Private	Private	Squad Leader and Gunner	Private	Private
Private	Private	Assistant Gunner	Private	Private
Private	Private	Driver	Private	Private
		Driver		

Ammunition would be carried and the gun squads formed as follows:

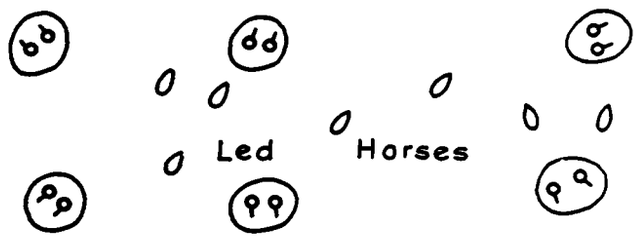


The organization would be disposed on the march about as shown in the diagram. The gun sections would march out on the flanks of the column constituting an additional measure of security against surprise attacks. This formation would prevent the aircraft from covering all of the troops and machine gun units with smoke to cover a mustard or bomb attack. These units would either move by bounds or parallel the march of the column depending on the terrain, and would have to use every precaution to prevent being surprised and captured by ground troops.



In camp or bivouac these guns should be stationed at points from which they could go into action immediately to repel air attacks.

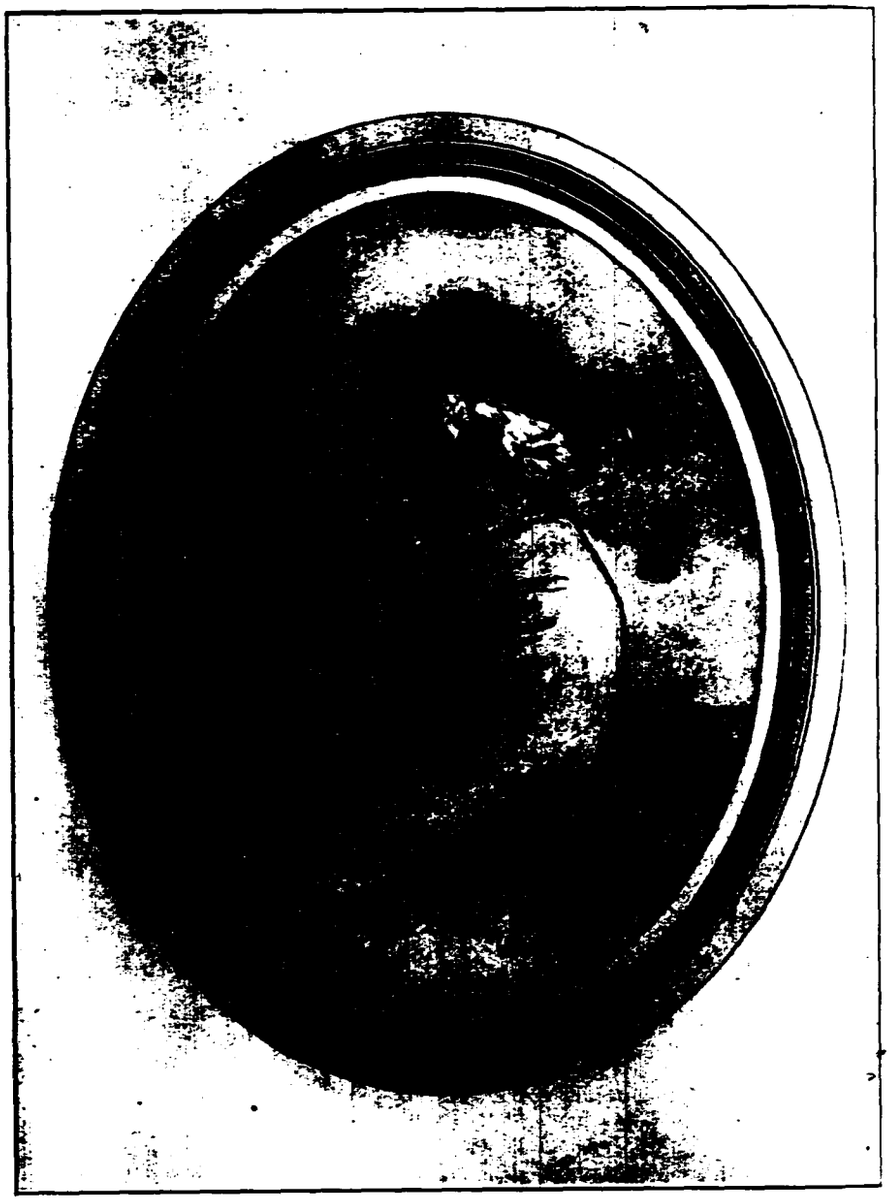
In action they should cover the flanks of the other machine gun units from ground attack and cover the led horses of the rifle and machine gun units.



Time, thought and experimentation will develop suitable anti-aircraft weapons, proficient organizations and correct tactical methods of employment both of troops and weapons. The absolute certainty on the part of aircraft

personnel of encountering violent and accurate automatic fire on the slightest provocation will go far toward providing marching troops with a measure of immunity from the hostile aircraft threat. The airplane menace is a real one. If the air attack succeeds, especially with liquid mustard, the troops thus assailed are defeated in their mission and perhaps exterminated. The one real method of combating the hostile plane is to put it out of action *before it can deliver its attack*—that is just before its attack is launched or in the first few seconds of that attack.

"Thrice armed is he who hath his quarrel just
But four times armed is he who gets his blow in fust."



"Hugo Meynell, Esq." by Gordon Ross
Published by Ernest R. Gee, New York

Forefathers of Fox Hunting

By A. J. O. Culbertson

SOMEWHERE near the year 1770 a hard-riding era was ushered into England. Keen followers of the sport of riding to hounds, whether they took their chase or turf religiously, or for the frolic, found that the period introduced a sporting necessity of jumping or negotiating all obstacles.

Of the various characters in that day, Gordon Ross, sporting artist of New York, has produced six colored prints of outstanding, strongly marked personalities, who best represent the traditional worship that the country squire had for his quadrupeds. These rigorous and straight-riding gentlemen left enviable records for riding to hounds that a century more of the sport has failed to shatter.

The hazardous horsemanship of the age, less than a decade before the American Revolution, must have worked tremendous hardship upon the Colonials had they been required to meet the English on the field of battle with cavalry, had the Army of Occupation possessed any considerable number of English foxhunters.

Hugo Meynell, Esq.

The first of this group of portraits that Mr. Ross has so splendidly engraved on copper is Hugo Meynell, born at Bradley Hall, near Ashbourne, in 1735. Of his life in the annals of sport, it can best be said that he is known as the Father of Fox Hunting, and author of the Meynellian Science or Fox Hunting upon system.

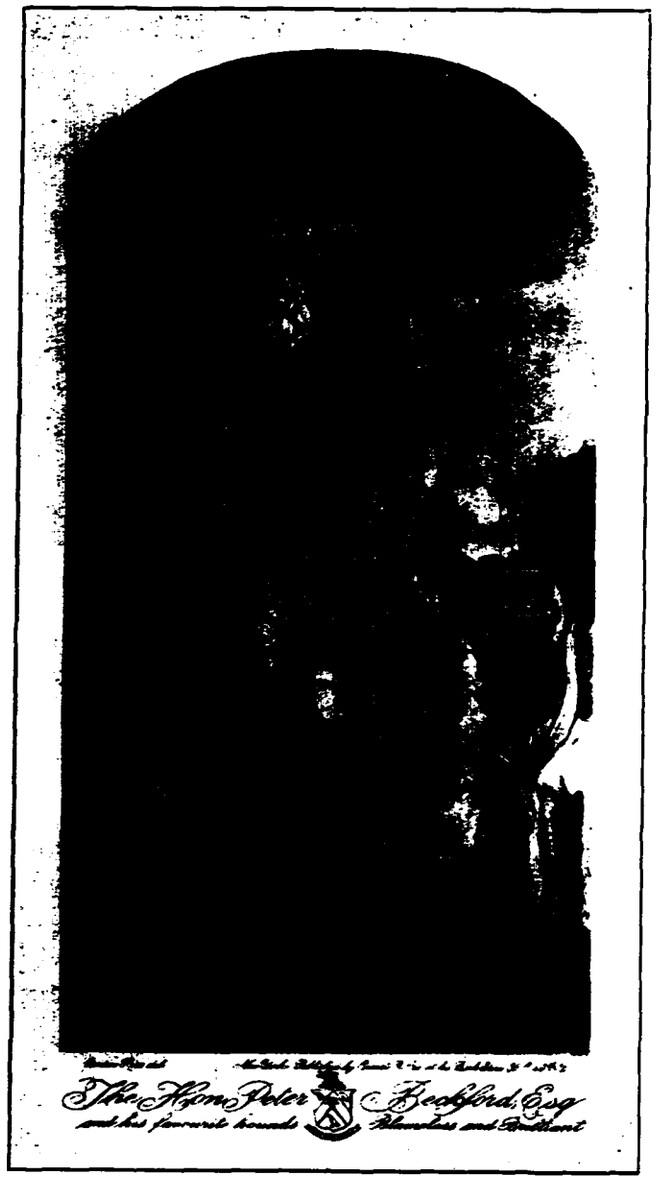
The half-dozen portraits with which this article is concerned, of eminent sportsmen in the eighteenth and early nineteenth centuries, together with a recent reprint of "The Meynellian Science" (since the original edition is practically extinct), have been published by Ernest R. Gee, 35 East 49th Street, New York City.

Hugo Meynell hunted his hounds for nearly fifty years. At eighteen years of age, when most lads are chiefly concerned with academic or social functions, Meynell had purchased Lord Ferrer's hounds and had settled down to a career as M. F. H. The outcome of his devotion to horse and hound is the modern system of foxhunting.

Meynell gave himself over to the breeding of hounds for nose, stoutness and speed. He met with such success with his extraordinarily well-bred pack that they eventually became the source from which issued the best hounds in England.

Meynell was styled by admiring friends, as "The King of Sportsmen."

The engraved surface of Gordon Ross' portrait of Meynell measures ten and one-half inches by eight inches, is oval-shaped and carefully water-colored by hand. The portrait is a happy one, showing him in his old age



"Peter Beckford, Esq." by Gordon Ross
Published by Ernest R. Gee, New York

with tie wig, Master's cap and pink coat. This portrait is used as the frontispiece for "The Meynellian Science."

Peter Beckford

Five years the junior of Meynell was Peter Beckford, Esq. (1740-1811). He was the grandson of Peter Beckford, governor and Commander-in-Chief of Jamaica and a cousin to William Beckford, the celebrated lord mayor of London.

Beckford, an eminent sportsman and master of foxhounds, gained his pre-eminence among foxhunters due to the fact that he was the first English writer to describe minutely and accurately the whole system of the sport of hunting. This he did in a very readable work entitled "Thoughts upon Hare and Foxhunting; also an account of the most celebrated Dog Kennels in the Kingdom." A writer in the *Retrospective Review* of that time said: "Never had fox or hare the honour of being chased to death by so accomplished a hunter." Posterity is, indeed, fortunate in having had such a gallant and adroit Rider to Hounds in the early stages of its history, and one who was also a man of letters, leaving considerable memorabilia to succeeding Followers of the Chase.

The name "Peter Beckford" once rang through all the hunting countries and sporting circles of England. Beckford was a wide reader of classical and modern literature, as shown by his published works. Another important work of Beckford's, which came out in 1781, was his "Essays on Hunting: containing a philosophical inquiry into the nature and properties of Scent on different kinds of Hounds, Hares, etc." This work remains authoritative.

Of Peter Beckford's personal life, both in the public eye and private, much can be said as to the man's variety of accomplishment. He married Louisa, daughter of Lord Rivers, in 1773. His son, William Horace, in 1802, by a special patent granted, succeeded to the barony and became the third Lord Rivers. Peter Beckford, representing Morpeth sat in Parliament in 1768. The year 1787 found Beckford traveling in Italy shortly before the outbreak of the French Revolution. His experiences moved him to write what has since been considered an extremely amusing report of his journey. It was published a few years after his return under the title "Familiar Letters from Italy to a Friend in England." In it he entertainingly describes visits to Voltaire, Rousseau and many other celebrated personages. An incident is related of his meeting Laurence Sterne in Turin, in which he had "Passed hours with that eccentric genius that might have been more profitably employed, but never more agreeably."

Throughout Beckford's varied affairs—domestic, political, travels and letters, he remained true to a consuming devotion for horse and hound until his death, on the 18th of February, 1811. Then past seventy, he had but lately ridden in the chase.

A tribute to his love for horse and hound was paid by Sir Egerton Brydges, who said: "Never was huntsman's dinner graced by such urbanity

"Thomas Assheton Smith, Esq." by Gordon Ross
Published by Ernest R. Gee, New York

and wit. He would bag a fox in Greek, find a hare in Latin, inspect his kennels in Italian, and direct the economy of his stables in exquisite French."

The Ross portrait of Beckford is a full-length, fascinating picture of Beckford as a young man, appropriately encircled by his favorite hounds, with trees and manor house in the background. This series of pictures was begun in 1924, the Beckford portrait having been completed by Mr. Gordon Ross in 1926. The artist spent a great deal of time and thought to the execution of this picture, and has been rewarded with a truly remarkable portrait.

Thomas Assheton Smith, Esq.

The best and hardest rider England ever saw was Thomas Assheton Smith, Esquire; sportsman for sports sake, born in Queen Anne Street, Cavendish Square, London, on the 2nd of August, 1776.

Smith was educated at Eton, being sent away to preparatory school at the age of seven and left to stand for himself in a fashionable school with older boys. Except for his natural sturdiness, he would have soon headed whimpering homeward. Afterwards he went to Oxford. From 1821 to 1841 he sat in Parliament as a conservative for Andover and Carnarvonshire.

His life was devoted almost entirely to sport. In his youth he had been a cricketer, having made the Eton eleven and later playing with the Bullingdon Club. Up until he ran for Parliament he appeared often at Lords. His early athletic successes were not to be compared to his far greater conspicuous achievements later in the hunting field.

From 1806 until 1816 he was master of the Quorn in Leicestershire. In 1834 he bought a large number of Sir Thomas Burghley's hounds, which he magnificently augmented with the entire pack of the Duke of Grafton in 1842.

Thomas Assheton Smith's energies were prodigious. He hunted his own hounds four days in the week, sometimes having two packs out at the same time. No less considerable was the lavish hospitality he extended at all times to his foxhunting neighbors. His income permitted the maintenance of a large establishment, and as an exemplary host and country squire he conducted all arrangements with great judgment.

He received a tremendous ovation and public demonstration in approbation of his hunting activities, when at Henry Greene's seat at Rolletson in Leicestershire, in 1840, at sixty-five years of age, Smith was proclaimed by an assembly of two thousand horsemen the First Foxhunter of the day. He continued in the hunting field until late in life, following the hounds up within a few years of his death, in 1858, at the age of eighty-two.

Another sport of kings occupied much of his time. While widely contrasting to horsemanship, Smith was much interested in yachting. He was for many years a member of the Royal Yacht Squadron, and difficulties arose when he attempted to introduce steam yachting into the squadron. In his lifetime he had five sailing yachts and eight steam yachts.

Smith, approaching seventy years of age, built a glass conservatory at Tedworth. The sunlit riding hall, three hundred and fifteen feet by forty feet, permitted him to take horse exercise in later years.

"Nimrod" by Gordon Ross
Published by Ernest R. Geo. New York

Mr. Ross' portrait of Smith measures seventeen and one-half inches by twelve inches, and is a companion picture for the three remaining portraits. Of these well-known foxhunters, no portraits have been available before, and the Ross portraits have done much to revive and stimulate interest in these Forefathers of the Chase.

While showing a splendidly staunch man of middle years, mounted for the hunt, Mr. Ross's portrait could well be that of a judge advocate rather and the stalwart cricketer of years before. The background is an authentic delineation of the country he hunted. This portrait was published in 1926.

Charles James Apperley "Nimrod"

Charles James Apperley (1777-1843), an English sportsman and sporting writer, was better known as "Nimrod," under which pseudonym he published works on the Chase and the Turf. Apperley was born at Plasgronow, near Wrexham, in Denbigshire.

The years 1805 to 1820 he devoted almost entirely to foxhunting. In 1821 his numerous contributions to *The Sporting Magazine*, which were a series of racy articles, aided in doubling that publication's circulation.

Mr. Pittman, who was a proprietor of *The Sporting Magazine*, arranged to keep a stud of hunters for "Nimrod," with which he made tours to various hunts. Besides this, Apperley received a handsome salary. The death of the publisher led to a lawsuit with the other proprietors for money advanced, and Apperley, to avoid legal difficulties, fled to the Continent in 1830 and lived near Calais, where he subsisted entirely by the earnings from his writings. He died in London in 1843.

His most important works are: "Remarks on the condition of Hunters, the Choice of Horses, etc." (1831).

"The Chase, the Turf, and the Road." (1837.)

"Memoirs of the life of the late John Mytton" (1837), and various adventures of the "Nimrod" tours, etc.

His Memoirs of Mytton—the Wild Hare Mytton—are interesting in that Mytton, though born twenty years after Apperley, died ten years before his biographer. They had this in common, the love of the hunt, and that when pressed with monetary impedimentia they both hurdled the Channel to Calais. The dangerous, racy pranks of Hazardous-Horseman Mytton made excellent copy for Horseman-Litterateur "Nimrod."

Mr. Ross' portrait of "Nimrod" was published in 1925. The intelligence of the face seems greatly centered about the eyes, which peer with keen observation and valuation.

John Mytton

John Mytton (1796-1834), a very colorful and eccentric sportsman, was born September 30, 1796, at Halston, Shropshire.

While an infant his father died, leaving him a fortune estimated at more than a quarter of a million in ready money and an income of around $50,000 a year.

"John Mytton" by Gordon Ross
Published by Ernest R. Geo, New York

He was educated at Westminster School and at Harrow. It is said he was expelled from both. He knocked down a private tutor to whom he was subsequently sent, so he got off to a good start in the life that was to be lived impetuously and end so abruptly.

Whether for a lark or for reasons disciplinarian, it is not known, but when he was twenty years of age he joined the 7th Hussars and served with them in France for a short time.

He became Master of Fox Hounds in 1817, hunting what was later known as the Albrighton country. He was an owner of race horses and kept a large stable, but never bred a good horse.

Mytton returned to Parliament a Tory for Shrewsbury, but resigned. He held the office of High Sheriff for Shropshire and Merionethshire.

He was popularly known as "Jack Mytton," a man of great physical strength and reckless courage, with an inordinate love of conviviality and a strongly developed taste for practical joking. He was also a good shot. Many stories are told of his recklessness.

On one occasion he is said to have driven a tandem at night across country for a wager and successfully surmounted a sunken fence, three yards wide, a broad deep drain, and two stiff quickset hedges.

It was reported that he would sometimes strip to his shirt to shoot wild fowl in bad weather.

Once the rumor circulated that he followed some ducks, in puris naturalibus.

Chroniclers of the times have alleged that one night he set fire to his night shirt in order to rid himself of hiccoughs.

He drank from four to six bottles of port daily.

It was inevitable that this reckless, spendthrift manner of living would soon lose Mytton his fortune. At thirty-five years of age his inheritance had been dissipated, his effects at Halston were sold and he was obliged to take refuge at Calais from his creditors. He died of delirium tremens in King's Bench Prison in 1834, at the age of thirty-seven.

Mr. Ross' portrait of Mytton shows him mounted, in pink coat and silk hat, with the manse snugly clustered among trees in the background. Mytton's deep, watery, yet dark eyes, suggests one who lived well but not wisely. The firm chin and rugged set of his shoulders, however, indicate his hardihood.

Robert Smith Surtees, Esq.

Robert Smith Surtees (1803-1864), English novelist and sporting writer, was a member of an old Durham family of Hamsterley Hall. He was educated to be a solicitor, took rooms in Lincoln's Inn Fields, and began contributing to the old *Sporting Magazine*.

In 1830 he compiled a manual for horse-buyers, in which he combined his knowledge of the law with his taste for sporting matters.

Surtees is best remembered for his highly entertaining and ludicrous character "Jorrocks." In his "Jorrocks' Jaunts and Jollities" he gave birth

"Surtees" by Gordon Ross
Published by Ernest R. Gee, New York

to one of the hunt's most humorous narratives and brain children. It deals with the sporting experiences of a Cockney grocer. These stories of Jorrocks and his adventures suggested the later and more famous "Pickwick Papers" of Charles Dickens.

"Handley Cross," a novel published in 1843, also featured Jorrocks and elevated him to the position of a country gentleman and a Master of Fox Hounds. This and many subsequent volumes of Surtees' were illustrated by the incomparable John Leech, whose pictures of Jorrocks are everywhere known and were the chief means of ensuring the stories' lasting popularity.

Surtees became a major in the Durham Militia and High Sheriff of the county in 1856.

His friend "Nimrod" urged him to try his hand at a novel, the result was "Handley Cross."

Surtees was a keen observer, very tall, and a good horseman, who, "Without ever riding for effect, usually saw a deal of what hounds were doing."

The brilliantly humorous original illustrations of John Leech did much to perpetuate the life and characters of Surtees' novels. Jorrocks, the main character, a grocer, possessor of a county seat, representing all that was best of Cockney vulgarity, but the quintessence of good humor, absurdity and cunning, led a progressive life in the *New Sporting Magazine* from 1831 to 1834.

Surtees had a positive objection to seeing his name in print and his "Horseman's Manual" was the only one of his books to which he affixed his name.

Of the six portraits by Gordon Ross, the one of Surtees is, perhaps, the finest. It possesses a stately, incomparable dignity. Only faintly can the humor of the creator of Jorrocks, Soapy Sponge and others be discerned about the corners of Surtees' mouth. The protruding chin and sharp eyes show the penetration, yet imperturbability, of Surtees.

For the past two years Mr. Ross has been engaged in painting portraits of horses. He has also published two-colored steeplechase prints from his own address at 33 Fifth Avenue.

The 1928 Olympic Team in Training

By Captain W. B. Bradford

MOST of us have sat in for a hand of "draw." We have received our quota of cards, all that the dealer would let us have, have studied them, discarded a few, perhaps a majority, and received new ones to replace those that were rejected. Possibly the new hand disclosed a full house. Probably not. In any case, the game was played with the cards that we found after the final draw.

The captain of the 1928 Olympic Team is in a situation somewhat similar to that of the poker player. He has had a large quota of horses sent him for the Games. Most of these have been studied and discarded for some good reason, and others drawn. Now there are in the stables just those with which he must play the game and nothing more may be expected from the dealer. Army organizations, army officers and civilians have all been most generous in offering what they have had. There have been horses sent to Fort Riley, where the team is in training, from San Antonio, from the border, Fort Leavenworth, Milwaukee, Pittsburgh, Washington, New York, Virginia, Philadelphia, West Point, Los Angeles, Fort Sill, and a large quota from the Cavalry School. All of these have been given as thorough a try as limited time would permit, and finally a few selected that were thought to be the best prospects because of their ability, soundness and state of training. Many that were rejected are undoubtedly excellent horses, better perhaps, than some that were retained. But in making selections, those that are responsible have had to ask themselves many questions. "Is he sound? Is he sufficiently capable? Does he lend himself readily to training over big, strange obstacles without wings? Has he the courage to face an absolutely strange course without faltering? Can he go the distance and stand the punishment?"

The number that can meet all requirements is appallingly small. Many that are now in training lack in one or more important qualifications. But they are good material, and the best that is available. The horses at present constituting the Olympic Stable are as follows:

Three Day Horses (For Equestrian Championship)

		Owner—
1.	*Misty Morn*	Major Sloan Doak, Cavalry
2.	*Bones*	Mr. Jack Lapham of San Antonio
3.	*Strike Breaker*	Major A. E. Wilbourn, Cavalry
4.	*Diplomat*	Lt. J. W. Wofford, Cavalry
5.	*Ozella*	Lt. J. M. Callicutt, Field Artillery
6.	*Norraine*	Lt. E. Y. Argo, Field Artillery
7.	*Pathfinder*	Remount Service, Washington, D. C.
8.	*Shorty Kromer*	The Cavalry School
9.	*Beau Geste*	Capt. F. L. Carr, Cavalry
10.	*Star Shooter*	The Cavalry School
11.	*Verdun Belle*	Capt. F. L. Carr, Cavalry
12.	*Peter Prime*	Mr. O. L. Prime, Milwaukee

Performance Jumpers (For Jumping Championship)

1.	*Jack Snipe*	The Cavalry School
2.	*Sandy*	The Cavalry School
3.	*Nigra*	The Cavalry School
4.	*Colleen*	Mr. Victor Mather, Philadelphia
5.	*Proctor*	U. S. Army, Fort Leavenworth
6.	*Timber Cruiser*	Lt. E. Y. Argo, Field Artillery
7.	*The Wop*	Lt. E. Y. Argo, Field Artillery
8.	*Miss America*	The Cavalry School
9.	*Joe Aleshire*	The Cavalry School
10.	*Dick Waring*	The Cavalry School
11.	*King*	Fort Leavenworth
12.	*Rocket*	Mr. Richard Mellon, Pittsburgh
13.	*Queen's Own*	West Point
14.	*Messenger*	Major O. I. Holman, Cavalry
15.	*George Williams*	The Cavalry School
16.	*Fairfax*	Major J. R. Underwood, Veterinary Corps
17.	*Gedney*	The Cavalry School

The equestrian events of the Olympic Games habitually consist of three separate contests. The first is known as the Equestrian Championship, or Three

Day Ride. It was planned and is intended for officers' chargers. A schooling contest is held on the first day, a severe cross country ride on the second, and jumping in the stadium on the third. A thoroughbred horse, or a horse of thoroughbred type, is required.

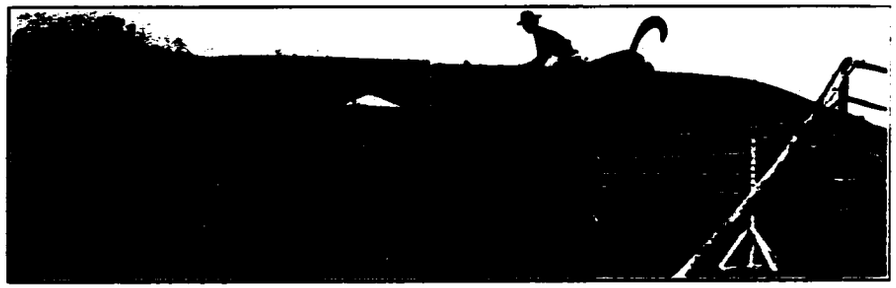
The second contest is for the Schooling Championship. There are at present no horses known of in America that could be schooled sufficiently in so short a time for this event. The United States will not be entered.

The third event is the Jumping Championship. This is over an *unknown course*, consisting of sixteen obstacles, varied as to height and breadth. The course may be from one thousand yards to slightly more than a mile in length, and must be galloped at a speed of fourteen miles per hour.

The personnel at present gathered at Fort Riley in training are: Brigadier General W. C. Short, Team Manager; Major Sloan Doak, Cavalry, Team Captain; Major H. D. Chamberlain, Cavalry; Major O. I. Holman, Cavalry; Major C. P. George, Field Artillery; Captain A. W. Roffe, Cavalry; Captain R. C. Winchester, Cavalry; Captain F. L. Carr, Cavalry; Captain W. B. Brad-

ford, Cavalry; Lieutenant E. Y. Argo, Field Artillery; Captain P. T. Carpenter, Veterinary Corps, Team Veterinarian. Captain F. H. Waters has been with the team until recently, but was relieved at his own request to accept a detail that would not have been open to him after June first.

The training now being conducted differs for Three Day Horses, and for Jumpers. The former are required to school and gallop in a severe cross-country test, as well as jump. Monday and Friday of each week are devoted to schooling, one hour; conditioning, one hour; jumping, under saddle, one hour. Jumping includes practice over the Cavalry School steeplechase course, as the steeple chase is included in the cross country phase of the ride. On Wednesday, the program is the same, except that jumping is on the longe. On Tuesdays, Thursdays and Saturdays, three hours are devoted to conditioning. One hour is at the walk, the horse being led by a groom. The remaining two hours are under the saddle, with an officer up. Much time is devoted to rating, the trot being about ten miles per hour, and the gallop twelve, fifteen, twenty

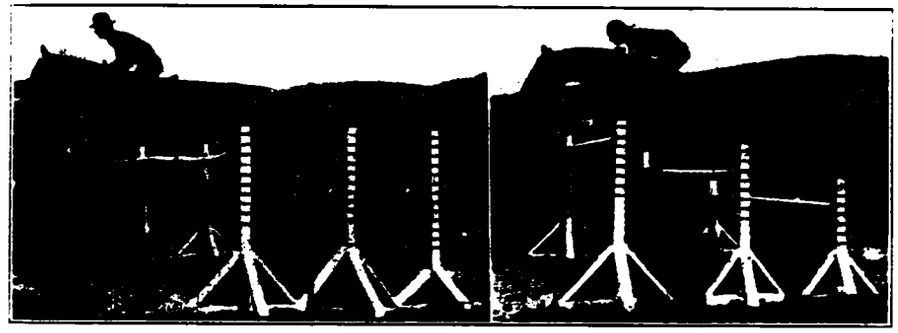


and twenty-two and one half, the exact ratings depending upon the natural gaits and individual ability of each horse. Cross country conditioning gaits are normally fast, the trot averaging ten miles per hour, and the gallop fifteen. On conditioning days, Three Day Horses cover distances of from fifteen to twenty miles each in the course of the day.

Jumpers must have galloping ability, but of a lesser degree. They must be fit physically, and their muscles hard. On Mondays and Fridays, they are ridden over jumps, and in addition, are given conditioning work for one and one half hours. On Wednesdays they are longed over big varied jumps, ranging up to five feet four inches in height, giving them the habit of facing confidently obstacles of extraordinary size. Oxers and in-and-outs especially are employed, the oxers being built up as high as four feet eleven inches. In addition, there is one hour of conditioning. Tuesdays, Thursdays and Saturdays are devoted to conditioning. The periods are from two to three hours, depending upon the individual. The work consists largely of walking up and down hill, and periods of from five to fifteen minutes at the gallop. Jumping under the saddle is done entirely out of doors, obstacles without wings. On the longe, it is indoors.

The obstacles being used are the same for the two classes of horses, though they vary as to size. Three Day Horses are now jumping obstacles at four feet two inches, with a breadth of six feet. Water jumps are much wider. The courses consist of from fifteen to twenty jumps, with total distances of from ten to twelve hundred yards. Every conceivable type of obstacle is employed. There are water, ditch and bank jumps, and combinations of these with other obstacles. For instance, there is a triple bar, with six-foot spread, and water five feet beyond; a ditch in-and-out, with ditches eight feet wide, four feet deep and twenty-four feet apart; double oxers; combinations of ditches and post and rails; an in-and-out consisting of a post and rail, with five feet of water on the far side, followed at twenty-four feet by the exact reverse of this jump; another in-and-out spaced at thirteen feet, followed by a double oxer at twenty-one feet. The painting of the jumps is often changed. There are no wings. Everything possible is being done to confirm all horses in the habit of going on and over anything that might be placed in their paths.

The team will consist of the manager, team captain, veterinarian and six other officers. Nine enlisted men and sixteen horses will go. Teams will con-



sist of three entries for each event, all of whom must finish the entire course in order that the team may score.

Present plans call for the continuation of training at Fort Riley until June eighth. The team will then ship to the Westchester Biltmore Club at Rye, New York, in response to a very kind invitation from Mr. John McEntee Bowman. The hot weather of Kansas will thus be avoided and final training and preparation will be conducted under favorable conditions. On July tenth, the team ships for Holland, arriving about July twentieth. Stables, quarters and training grounds have been secured at Hilversum, twenty-five kilometers from Amsterdam. Training will be resumed there and continued until August ninth, the first day of the Equestrian Events of the IX Olympiad.

These plans, so rapidly approaching consummation, are the result of much thought and care. That they are possible is due to the army loyalty of Colonel Pierre Lorillard, Jr., of Tuxedo Park, N. Y., and other civilian horsemen.

Since the close of the World War, Colonel Lorillard's interest in the service and especially in the horsemanship activities of the service, has been wholehearted and continuous. That the army has been represented in recent Olympics and in the eastern international contests of the past few years has been due to his effort, and the time and thought he has so freely given. According to present law, the War Department is unable to direct activities of this kind where expense to the government would be incurred. Were it not for the unfailing loyalty and interest of our civilian friends, such representation and competition would be impossible.

None are more aware of this fact, and more appreciative, than the members of the team and those who are in charge of its activities. It is realized that the service and its civilian friends have the right to expect a real effort. This effort has been made, and nothing has been neglected in the preparation of such horses as are available to the team.

"The Horses Come Before Anything Else"

When Mr. Barry Shannon was called to the colors during the World War, he was manager of Colonel Edward Riley Bradley's famous *Idle Hour* stock farm near Lexington, Ky. Upon departing for military service, Mr. Shannon's brother, Jim, took over the management of the farm. The following letter by Mr. Barry Shannon was written to his brother in order that the latter might benefit by the experience of the former who, on his return from the army, reassumed his duties as manager of *Idle Hour*. The letter contains so much sound advice applicable to any horseman that it is here reprinted, with the consent of Colonel Bradley and The Thoroughbred Horse Association Bulletin where it first appeared in print.—*The Editor.*

DEAR Jim:

I am writing you this letter for your own advantage, and I hope you will take it in its right sense.

To begin with I must tell you that the interest I am now taking in Idle Hour Farm is for your own benefit. I naturally liked the farm and knew every nook and corner of it, so I can describe every end of it to you from here.

The horses come before anything else and you must always bear this in mind. No matter how much work is to be done on other jobs, be sure the horses have been attended to first.

Get a leather-bound note-book of good size. Books with paper or composition backs wear out. Start your book with the broodmares. They will be the foundation of your horse work. Put the name, breeding and first two crosses of the mare at the top of the page. The above is very necessary for ready reference and also in registering and selling. Take the markings of each mare and familiarize yourself with the mare's appearance and you will soon learn to know them. When you get a number of mares of the same color you will always find there is a distinguishing mark of some kind—such as punch-firing, saddle marks, grey hairs, etc. Next record your yearlings and then the foals.

The first thing to do after breakfast is to go on a tour of inspection. Look each animal over thoroughly, no matter if you saw them all close the day before, for things like these can happen: halters slip over the ear; thrush, causing lameness; kicks under arm pits that do not show up and many other things that require a close inspection to see. Never depend on the men for these inspections. Their main idea is to get through a day's work the easiest way.

See that the stalls are level to the door sills with clay, and that the straw is thrown well back against the wall, so center of stall may dry. Lime should be placed over wet spots daily. Notice feed boxes to see if horses clean up their food, also notice that no old bran or mash be allowed to remain in feed boxes. The feed room should be cleaned thoroughly, a box of medicine and oats should be in each feed room. Do not allow rubbish, bottles, wire, etc., to collect there, for careless persons never throw a match anywhere save in

such places. Watering troughs should be cleaned weekly and a little lime put in the trough—not too much, though.

The weanlings will soon start to discharging at nose, and unless cured up this fall, will surely break out fresh again in the spring. Use Knoma oil, one ounce daily, and swab out nose at same time of dose. Best time to give will be in the evening, say around 3:30 or taking up time. Give hot bran mash every night beginning December 1st. I got great results from this. Yearlings come to spring in glossy coat and fatten quickly, also you will have less sickness.

Have feet trimmed first of each month—not too close, just round off the rough places. Keep salt handy at all times in the barns and do not be afraid you will have too much ventilation, however, do not have a draft. Have the back shed on the west side of the eighteen-stall barn on the hill covered with canvas. I mean this for cold weather, say along in January, or even sooner.

Now the mares, when you wean their foals, require very close attention for three weeks. Milk them twice a day, night and morning, the first three days. Each time after milking rub with camphor oil. Some of the mares are abundant milkers and must receive special attention. Remember that the supply of next year's milk depends a lot on the drying up of this year. Should any of their bags swell and become feverish, get prescription called Anodyne mixture from Dr. Ed Hagyard. Use the same as camphor oil. Whenever you have to keep the mares up on account of cold weather, cut down their feed. Same applies to yearlings.

For the foaling season get a good watchman and explain to him the duties of man during this important period. Quick action on the part of a watchman during foaling season saves many a foal. After a mare has foaled see that she comes to her milk, and give her good hot mash and plenty of solid clover hay. Turn foal out if weather permits, but never allow him to lie down. Keep man near at all times.

After going on tour of inspection after breakfast, stay out until 10:30, then come to office and answer phone calls and do necessary ordering and attend to your correspondence, until dinner. Rest until 2 p. m., and then go out again. This time look after your farm work. A very necessary thing is that your teamsters and farm men return to their work at 1 o'clock. The afternoon slips by quickly and unless this is attended to you will not accomplish much. After the corn is cut and shocked, have the manure hauled to the furtherest end of the field while weather is good. This enables you to haul to the outer edges in bad weather. Keep all the teams together when possible; also all your men. Concentrate your farm work. When the farm men scatter, they lay down.

Now, during good weather, fill the stalls at the new barn and do necessary grading. Make it the same as barn near boarding house. Put rock gravel under the shed extending out under eaves of barns. Get barn in shape now. Buy heavy water buckets for this barn. Real heavy.

Get the general ledger from the book-keeper. Go over it once a week.

Study the different accounts and then you will know how you are running. This year will run high, as so many changes have been made. Salaries are higher. Feed costs more, etc.

Start taking inventory now. Save old inventories and put your new one with it. Do not let accident insurance run out on automobiles.

When feeding silage to cattle, feed morning and night. Cut the fodder with silo cutter and blow into the loft of the old mule barn. This is a great thing. You get the same food value of the fodder and save all the hauling in wet, bad weather. Feed to cattle on snow during midday of bad weather. Keep in mind all the time. Feed, Feed, Feed. Your stock will repay you. Nothing will give you more pleasure on a cold day than to go through cow and cattle barns and see the stock well bedded and eating and under cover.

Get yourself a solid gum coat, high top shoes, good buckskin gloves and overshoes. Have plenty of dry clothes to change.

Keep your office neat and tidy, your desk clean of all papers. Burn old newspapers. Have clean blotters, pen and ink always; also special delivery stamps and ones, twos and threes. Arrange your important 'phone numbers on desk. Always leave word at farm where you can be located in town and where on farm. Instruct cooks to keep a slate handy at 'phone, to put all calls down and to call you immediately for important ones.

Always keep medicines up. Have Knoma oil, boracic acid (large quantity); spirits of nitre, iodine, arnica, eye salve.

Wet days let your teamsters clean and oil their harness; grease their wagons; sharpen axes and saws; clean grainery; gather up sacks; return them and get credit; stop any leaks of oats in grainery. Put up saw mill at once. Haul wood to near door of power house. Stack in a neat pile and have men cut up a lot for the residence and the mash house. See that men keep the mash house clean. If you don't it will look like a pig pen.

Now, as to your hogs. Put seven or eight in a separate pen now. Get them ready for killing, but only kill two at a time. Use farm men for killing. Keep close watch on tobacco barn. Mighty close to pike. Examine the bulks so you will miss any.

Paint all the farm wagons, one at a time. Let one dry thoroughly before starting another. Also paint cart. Assemble all tools, mowers and machinery to tobacco barn after the stripping is well under way. Repair and order all parts for plows, rakes and mowers. This keeps your men going and you conserve time and will be ready to start out any time. Keep rivets and a punch handy at work horse stables so men can repair harness. Insist that wagons are greased weekly. Send one wagon to town twice a week. Bring out freight, lime, salt and all heavy stuff. Always keep one barrel of oil on hand. When the track cook comes home, put him in charge of the bunk house. Hold him responsible for all blankets and linens.

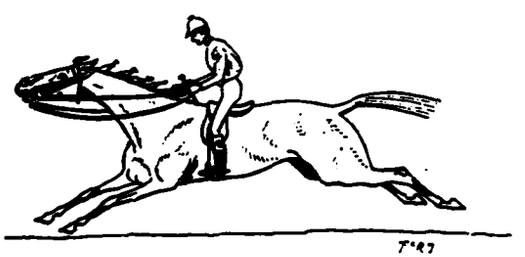
Make Saturday afternoon a cleaning up afternoon. Call farm men in from other duties. Send one wagon through woods to clean brush. Let them go two or three on wagon. Have another wagon with hammer, nails and saw;

extra plank and posts. Make a round of the fences. Keep all pull gates in order with rope and pole on them and properly hung. Let the men cover as much fence as possible and make a note where they left off so they can resume work following Saturday.

Know where your men are at all times. Be good to them, but strict. Fire all disturbers and kickers. Go up into the lofts now and then. Find how you stand on feed. Check all bills. Know where each thing was used. Mark what account it goes to and O. K.

Do not let stationery run out. Take care of all details, no matter how small. Have a notebook. Make out your plans for following day. On Sunday afternoon go over the farm with a couple of the men and exchange ideas. Don't argue with the men. Sift their views over in your own mind and act on your own judgment. Never worry. Things always adjust themselves with a little assistance. Read all the turf news. Keep posted on farm journals. File this letter away. It's practical experience and can't be bought. Write when you have a chance. Best wishes.

BARRY.



Motorized and Cavalry Divisions

By Colonel Mauriz Wiktorin*

EDITOR'S NOTE—Colonel Mauriz Wiktorin, Austrian Army, started his service in the cavalry, took part in the beginning of the World War in a cavalry division as a General Staff officer, and is at present a colonel, General Staff Corps, Austrian Army, with station in Vienna. He is occupied constantly with questions concerning modern cavalry, has published several articles in Austrian, German, Swedish and Swiss military magazines, and has delivered many lectures on the subject. This article, setting forth his views, has been written for The Cavalry Journal at an opportune time, while the question of motorization and mechanization are in the minds of all military men.

THE question of organization of motorized army units (Divisions or Brigades) occupies constantly the military circles of all governments.

There is no doubt that the technics will succeed within measurable space of time in creating motorized units which will be sufficiently mobile to be suitable for combat, and can, therefore, be well used for special purposes. It is unquestionable also that there will be only a small number of such units. Motorization of the whole army, even in countries with high industry, best system of roads, abundant supply of fuel and oil and money, is an utopia for many years, probably forever.

We will examine here the question whether, and to what extent these motorized units can replace the cavalry. For this we will have as an example a motorized division, as proposed by the French Generals Camon and Boullaire, and compare it with a modern European cavalry division.

Reconnaissance and Terrain

The principal condition for the use of motorized units on a large scale depends on the terrain, which must be neither too mountainous nor swampy nor covered with forest; must have many good and wide roads with strong bridges; and the roads must be kept constantly in good condition.

Let us first examine the main mission of a cavalry division, the reconnaissance. If the motorized division has to replace it, it must take up the reconnaissance also.

A motorized division will use for the reconnaissance, in the first place, the motorcyclists and armored cars of the light bridage. But they depend for the present time almost entirely on the roads, thus they can see and report only what is going on on the roads and close to them.

The mission of a reconnoitering force includes searching along the whole front of the enemy in order to establish his strength and the distribution of his forces. The enemy must be observed continuously; that is, the reconnaissance detachment must follow the enemy everywhere, also across the terrain. The touch with the enemy must be maintained constantly.

The reconnaissance detachments must also be ready for fighting, as no details on the enemy can be obtained otherwise. This requires not only rather strong forces but also machine guns and artillery guns. Furthermore, the combat must be conducted on the terrain only. Also, the reconnaissance takes place mainly on the terrain, away from the roads. Speed and mobility are especially important. There is no doubt that here the rider is superior to the motorcyclist. As soon as

the motorcyclist leaves his motorcycle in order to be more mobile, he sacrifices his speed and runs the additional danger of losing his motorcycle. Even if there are at times motorcycles which can be used on the terrain, the rider with his horse, which can jump over obstacles and climb, will still be much superior.

Finally, the eyes are most important for the reconnaissance. Therefore a comparatively large number of men is necessary for this style of work. Four hundred motorcyclists of a motorized division are not sufficient.

In order to reconnoiter the sector of a cavalry division of from twenty to thirty kilometers in width, twice as many motorcyclists, that is, eight hundred of them, are necessary. This is, of course, out of question, as the motorized division will be too large.

In case the enemy's reconnaissance is to be prevented, cavalry can easily put obstacles in the path of the motorcyclists and armored cars which are restricted to the roads, and then attack them by surprise. On the other hand, the cavalry can avoid a stronger enemy by a quick movement into the terrain, make a detour and appear again at another place. In one word, all these actions can be accomplished by the cavalry much more easily and more quickly than by the motorcyclists, although the latter are much more mobile than mounted men while marching on the roads. But this speed of motorcyclists can be useful only as long as there is no enemy.

Thus we see that the reconnaissance work of the cavalry can not, for the present time, be accomplished either by the aviators alone or the motorized units alone. Aviators, mounted men and motorcyclists must cooperate in reconnaissance work. Good results can be obtained only by this cooperation.

Length of Column and Rate of March

Let us compare now the conditions on the march. About ten kilometers per hour and a daily accomplishment of from eighty to one hundred kilometers is considered reasonable for a motorized division. But motorized divisions can march almost only during the night, as they can otherwise be easily discovered and attacked by airplanes. An automobile column is easily affected by the attacks of airplanes. Besides, the element of surprise is lost. If the automobile column marches during the night, its speed is only from six to eight kilometers per hour. Stops in the movement of long automobile columns occur during the day and especially during the night. These delays last sometimes an hour, or even longer. Thus the speed is, in practice, still much slower than calculated. For example, during the French maneuvers in 1925, a motorized detachment moved during the night only five kilometers per hour, and at another time even only three kilometers per hour.

Motorized units can not move day by day without interruption. Rests must be made. Drivers must put their autos in good order.

A cavalry division marches from six to eight kilometers per hour during the day and from four to six kilometers per hour during the night if the horses are in good condition, and can march for several successive days at an average of fifty kilometers per day. Thus there is not a very great difference in the speed of the march between the motorized and the cavalry division.

While actually marching, a motorized division moves one and one-half times faster than a cavalry division.

Now, how is it with the length of the march column? A motorized division has about six hundred automobiles and about four hundred motorcycles. An automobile needs, taking into consideration the intervals, fifty meters; one motorcycle, five meters, considering that the motorcyclists ride by two; that is, five meters provides room for two motorcycles. This gives us as a length of column thirty-two kilometers during the day time. At night, when, owing to safety reasons, the automobiles must be driven at greater intervals, the column is almost fifty kilometers long.

It is clear that the command of such a long column is very difficult. If possible the division marches, of course, on several roads but this can not always be done as other troops of the army occupy other roads and columns are usually moving in both directions.

A cavalry division has a length (without trains), if the riders ride by two, as usually, of about ten kilometers during the day time and not more than fifteen kilometers at night. Therefore its length is only one-third that of a motorized division. Be mindful also that the march of a motorized division must be well organized and regulated very accurately, the same as is necessary for movement by rail, otherwise stops and accidents may easily occur.

Flank Protection on the March

So far we have compared only the march of a motorized division with a cavalry division without taking into consideration the enemy's action except occasional airplane attacks which can be prevented by our own aviators.

In this case the motorized division is, of course, superior to the cavalry division in speed, as we say in "strategical mobility," although not as much superior as might be believed prior to examining closely all the conditions discussed above. Conditions change entirely as soon as the enemy's counter action is taken into consideration. Then the question is of "tactical mobility" and utilization on the terrain.

Every march must be protected. How is a motorized division protected? By the airplanes flying at far distance. In the front and the rear the roads are protected by motorcyclists, armored cars and light tanks. More difficult and more important is the protection from both sides, the flanks. Protection of flanks must be carried on off the roads, that is on the terrain. Therefore automobiles which can move on the terrain, that is armored cars provided with caterpillar tread or light tanks must be used which, distributed on the whole length of the column, accompany it on the flanks. But these cars cannot, in the first place, move as fast as the automobile column on the road. Thus the automobile column must regulate its speed according to that of the protection on the flanks. In other words, the speed of a motorized division in the sphere of operation of the enemy is still much lower than previously calculated. Therefore the main advantage of a motorized division, its higher speed, is partly lost.

The flank protection must also make searches for the enemy on the terrain.

How can it do this? It must under certain circumstances leave the armored cars, examine forests and villages, attack and disperse the enemy. This question can not be solved easily since time and force are necessary in the first place. The French mention especially the importance and difficulty of the protection of the flanks. They think of the use of reconnoitering armored car squadrons which must move at a speed of from six to eight kilometers per hour, and each squadron must search through, "comb through" from three to six kilometers of width.

It is interesting to mention that even the Frenchmen think of the protection of motorized units by the cavalry as this is still the most simple and quickest means. Anyway, this important question is still not solved. It is clear that the protection of the flanks of a cavalry division during the march is much easier and simpler as either several columns are formed or single squadrons are sent as flank guards.

Protection Against Aircraft

Protection of a motorized division on the march against airplanes is important also as the highest disaster can occur easily if the long unprotected automobile column is attacked by the enemy's airplanes by surprise. Our own airplanes must be used for protection in order to drive away the enemy or at least to report his approach. Along the whole line of march anti-aircraft batteries must be placed at certain intervals. They must relieve one another and move again quickly forward to occupy new positions.

A cavalry division can protect itself against attacks of airplanes much easier. It looks either for cover on the sides of the road or it disperses at a gallop into many small groups so that only a small, mobile target which is difficult to hit is offered to the airplanes.

A motorized division which moves in the sphere of operation of the enemy must also take into consideration that roads and bridges are sometimes destroyed and must be repaired in order to make the further movement possible. It can not move over the terrain in order to avoid this like a cavalry division can. This causes again a considerable loss of time, besides the division remains during this time immobile and unprotected.

Deployment for the Battle

From the moment the enemy's efficacious artillery fire is to be taken into consideration, that is at at least ten kilometers from the enemy, the motorized division can not move farther, as the automobile columns will soon be destroyed, or at least brought into great disorder by the artillery fire. It is seldom possible to come closer to the enemy by using additional roads or to move in several small columns protected by the terrain. Thus the troops must be unloaded, moved forward over the terrain and organized into groups for the expected battle. From this moment on the troops of motorized units have no longer a greater speed than an ordinary infantry division. On the contrary, they are more immobile as they have only a few horses at their disposal. Thus machine guns, ammunition, trench mortars, etc., must be carried by the soldiers

themselves. Telephone lines must be established and combat reconnaissance accomplished on foot only. The artillery must go into positions close to the roads and a change of position is difficult and requires a long time.

It is at these moments that a motorized division is even less mobile than an infantry division and these are frequently moments when great speed is necessary as, for example, in order to reach a section of the terrain before the enemy does so.

Horses in Trucks

To make a motorized division mobile it must be provided from the beginning with a great number of horses loaded on trucks. Two or not more than three horses can be loaded on one truck. The French, for example, consider that a modern infantry division loaded on automobiles must carry with it at least three hundred horses in order to move forward the machine guns, infantry guns, scouts, telephone men and field kitchens. This requires from one hundred to one hundred and fifty automobiles for horses only. The division needs fourteen hundred automobiles and the column has a length of seventy kilometers. Thus it is absolutely impossible to provide the division with more than this number of horses, the others must be brought by empty trucks after the division is engaged in battle. Up to this time the division is immobile.

How much easier is it again with a cavalry division. Divided into single squadrons and batteries, protected by the terrain and, if necessary in gallop, it can move much closer and much quicker to the enemy before the troops are dismounted and forced to use their rifles.

Another difficult question for a motorized division is what to do with the great number of automobiles after the troops are unloaded. The automobiles can not stay on the road, they must be taken away, and very quickly, in order to make room for the other automobiles and not to be destroyed by enemy fire.

The automobiles must not only be brought sufficiently far to the rear, they must also be distributed, still on the roads only, and protected from the enemy's airplanes. It is indeed not easy to give correct orders for the automobiles and to find places for them. If they are wanted again they must be brought from far distances. The troops are in the mean time immobile. Then follows the loading of the troops which requires much time, and means for the troops moments of great weakness. Here also everything is much easier for a cavalry division. It can distribute its led horses into small groups and send them back at a gallop, keeping them close enough for having them at hand in case of need. The horses can easily be protected against airplanes by the terrain features or in forests. The horses can be brought to the troops quickly. The mounting and limbering up is done in a few minutes and the cavalry division moves on.

Mention could be made of other details in order to show that a cavalry division is far superior to a motorized division as far as "tactical mobility" and utilization of it on the terrain is concerned. The French have tried this experiment during maneuvers and the commander of such a motorized detach-

ment said afterwards: "Strategic mobility of my detachment is considerable, but tactical mobility is zero!"

Large trials with motorized detachments were made in 1927 also in England on a training ground for troops. It was shown there also that motorized troops work very well under certain conditions, especially in peace time and on a training ground, but that skillfully directed cavalry works with better results on the usually encountered terrain.

Thus one arm can not be replaced by the other, they both must work together.

Comparing finally the combat force of a motorized European division with that of a European cavalry division we have the following figures:

	Rifles	Machine Guns	Guns	Armored Cars	Tanks	Airplanes
Motorized division	1500	208	40	6	15	6
Cavalry division	2000	162	46	8	0	12

The combat force of the two divisions is almost equal. Cavalry can not be replaced by motorized units only. An army of the future must have both, cavalry divisions and motorized divisions, each of them must have its special purposes and the numerical proportion must be fixed.

The cavalry must of course adapt and utilize everything offered to it by the technics in order to be up-to-date and capable of accomplishing its missions. Its principle must be: "To ride in order to be able to fire and to fire in order to be able to ride."

Thus a cavalry division should be provided with armored cars to be used on roads, motorized artillery, infantry on trucks which can move on the terrain, airplanes, and under certain circumstances also with light tanks in order to increase its combat force and to use these motorized units at suitable places. The trains must also be motorized as much as possible in order to decrease the number of the horses. But the main element of a cavalry division must nevertheless be *cavalry* and *horse artillery*, quickly and easily movable over the terrain.

Cavalry Combat Packs

By Lieutenant Colonel Albert E. Phillips, *Cavalry*

THE Combat Power of Cavalry! How little understood by the people of the country and by even the majority of military men. When we speak of infantry or of artillery we have a very definite idea in mind of the functions and even the power of these arms in battle. But few people indeed, unless they are not only students of the military art but experienced, progressive cavalrymen who have handled the two elements—*fire and maneuver*—of modern cavalry—understand or fully appreciate the true value of this cavalry.

Everyone, according to his knowledge of cavalry, his theory, or his thoughts of the moment, places a value on cavalry. The majority of civilians have in mind mounted sabermen or mounted riflemen. Military men of other branches usually speak of cavalry in terms of mounted riflemen or mounted troops. Many have a mental picture of the World War battlefield in France with its system of trenches and wire, and others, of old fashioned, lightly armed cavalry. It gives everyone a thrill to watch a battery of field artillery galloping across country and then swing into position and action. A greater thrill awaits you if you have not seen a well trained cavalry machine gun troop at the extended gallop, across ditches, over obstacles, into action with its deadly fire in a few seconds and out of action just as quickly to another position.

For a considerable period after the World War we were told that airplanes would render cavalry valueless only to find that they have increased its value by relieving it of long distance strategic and reconnaissance missions and by assisting it in combat.

We now hear of a prospective mechanized force which "may" replace cavalry. As mechanized forces assist infantry so will these forces assist cavalry. As the air force assists cavalry from the air, the mechanized force will assist cavalry from the ground. It will relieve cavalry of many burdensome duties and further assist it by the attachment of units. But the mechanized force will not replace cavalry for there will still be unbridged streams to cross and cavalry can swim. There will be hills and valleys without roads: mud, sand, woods and other insurmountable obstacles and, the mechanized force will not be able to live off the country. In the World War mechanized forces assisted cavalry by arriving first on the scene of action and cavalry assisted mechanized forces by crossing ground which retarded the mechanized force.

Cavalry—the one swiftly moving ground force which can negotiate any form of terrain—increases in value as it makes use of its principal assets by utilizing mechanized units of equal and greater mobility.

Cavalry now has many forms of its three types of action—dismounted, mounted and combined action. When restricted solely to maneuver elements,

combat strength was dissipated by sacrificing maneuver power for fire powe
One of the best ways to defeat maneuver elements is to pin them to the grou
and, conversely, fire elements can best be defeated while they are moving. B
adding fire elements to cavalry the maneuver elements are freed to make fu
use of the great power of maneuver.

The value of cavalry in reconnaissance and counter-reconnaissance
acknowledged, but its value as a fighting force in war is not fully understo
Fire and movement is the gospel of infantry and, though mounted cavalry ma
occasionally attack without fire, fire support is the basis of all attacks. Fire
Speed and Surprise is a good attack gospel for cavalry: for every moment
delay in the slow moving dismounted attack increases the loss of life and give
the enemy time to counter the attack. Adequate fire support is required
both infantry and cavalry.

Supporting Elements and Means of Transportation

We need not discuss the wheeled and tractor artillery of large cavalry forces nor air supporting units: we are concerned here only with the means of transport for the fire elements of cavalry and associated combat units. The fire elements of regimental cavalry are:

Machine rifle units, with fire power of each machine rifle approximating that of one light machine gun.

Machine gun units of rifle caliber.

37-m m or one Pounder Guns.

The associated integral combat units of regimental cavalry are:

Demolition units capable of considerable destructive effort, and radio communication units.

In the higher organization of cavalry we find:

Machine guns of 50 caliber, armored cars, light tanks, and horse artillery. We also find radio and telephonic communication units, requiring special transport.

The value of this combat power to cavalry largely depends on the means of transport adopted. It is quite obvious that the means of transport for all regimental units, and for brigade communication units, except special motorized units, must be similar to that which transports the cavalry soldier—the horse. Pack transportation must be used. But pack saddlery suitable for transportation at cavalry gaits has been a stumbling block for the cavalries of all armies.

Let us consider our own case:

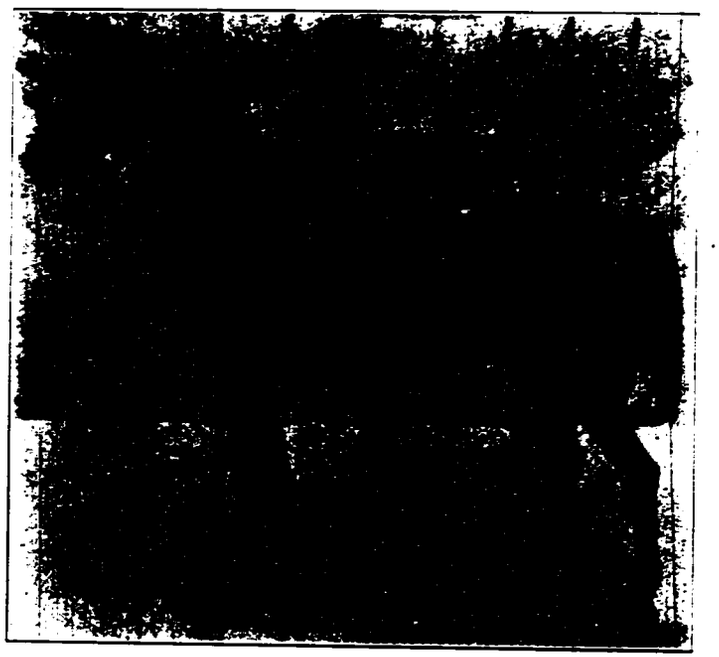
From 1906 to 1909 we conducted a three year service test of American and European pack saddles with negative results. Not finding a suitable pack saddle we continued to use the American aparejo for cavalry packs.

The first real war test came in 1916 when three of the four cavalry machine gun troops that marched into Mexico with the leading regiments of cavalry fell out of the columns in from seven to ten days, thus leaving three of the regiments without machine guns.

In 1917 the World War found us without pack saddlery that could be used by the newly organized divisions and we were forced to purchase carts for transporting infantry machine guns.

In 1919, upon our return from France, the War Department organized a board for testing pack saddlery and assembled pack saddles from all the important military powers and invited inventors to submit pack saddles for test. The aparejo and two other American saddles were in the test. None of the pack saddles proved satisfactory, the foreign saddles being the first eliminated.

From an intimate knowledge of the design and construction of the pack



The Machine Gun Load

saddles of the principal military powers it can be stated that not one of these saddles is designed to properly conserve horse flesh. We were then face to face with the problem of developing suitable pack saddlery.

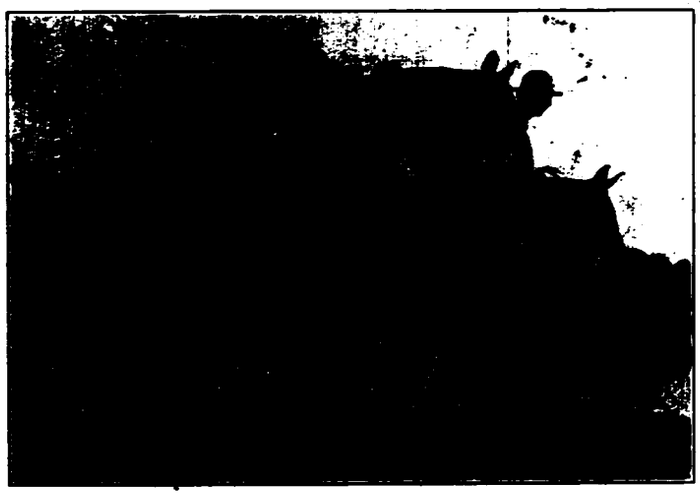
The War Department accepted the writer's offer to develop a pack saddle which would be suitable for cavalry and merely directed that the saddle be of "simple but scientific design."

Development of a satisfactory pack saddle, however, only solved part of the problem—two other major parts remained to be solved; one of these was to find or develop a pad for use under the saddle. Neither blankets, canvas lined coronas nor any article commercially available was satisfactory. The writer then developed the woven mohair pad. This pad is soft, cool and prac-

tically indestructible: it shapes itself instantly to the conformation of the animal and absorbs the friction between the saddle and the animal. This pad cannot, of itself, be a cause of injury.

The remaining major part of the problem was the "positioning of pack saddle loads." Heretofore pack saddle accessories, such as hangers and carriers for loads had been designed and pack loads positioned by the supply department issuing the load. It may be stated that not one of the many loads issued was correctly positioned, and it was not reasonable to expect them to be so positioned. The "dead load" requires expert positioning as well as the "live load," and this applies with especial force to cavalry pack loads.

Equal weight on each side of a pack saddle does not necessarily result either in a balanced load or a correctly positioned load. In general, a pack load is correctly positioned when it lies close to and well upon the saddle,



Machine Gun Pack. Phillips Pack Saddle and Accessories. A complete Fighting Unit of Gun, Tripod, Ammunition and Spare Parts

equally balanced transversely although side weights may differ slightly and, longitudinally, a slight excess of weight placed forward of center. Longitudinal, or front and rear positioning, is of more importance than transversal balance. With the three major parts of the problem solved, there remained another problem of almost equal importance—and this problem will be present whenever the accessories for a pack load are being planned.

With the pack saddle designed and loads positioned to admit of equal mobility with cavalry maneuver elements, it was necessary to provide means for rapidly releasing and securing the loads for "speed into and out of action." As offensive action is based on the maneuver elements, the fire elements of cavalry must be equipped—as well as horsed and manned—so as never to cause delay.

The hangers and carriers for all newly designed pack loads are therefore equipped with simple, efficient, quick-fastening and quick-release devices. Devices must be designed to fill the requirements of the load.

The animals carrying the armament loads of the machine gun and the machine rifle while moving at the gallop may be halted, loads unpacked and fire opened in from eight to ten seconds.

Mobility on the March

Occasionally the question is asked: Have the pack units equal mobility with other cavalry units? As a basis of action, let us first compare the weight carried by the trooper's mount and that carried by the pack horse. The *full pack* of the cavalry soldier, that is, his saddle, rifle, ammunition, etc., weighs from ninety to one hundred pounds, and, if we take the weight of the soldier at only one hundred and fifty pounds we have as a minimum, two hundred and forty pounds, on a saddle of exceptionally small bearing surface. At least ninety pounds or approximately forty percent of the weight is "dead weight," and much of this dead weight—the rifle for example—is poorly distributed.

If the McClellan saddle is of the old type with quarter straps, the muscles of the horse under the cantle of the saddle are so constrained and bound that the horse cannot travel at natural gaits.

Now for the pack horse—the pack horse is equipped with a saddle of considerable bearing surface for the load carried—this bearing surface grip reduces the "grip" required of the cinchas, therefore minimum cinch pressure is required. Cinch pressure is applied mainly on the front cinch, thus allowing the rear of the saddle to swing or move both transversely and vertically *with* the hind or propelling members, just as the officers' saddle swings.

The authorized pack load is approximately one hundred and forty-six pounds of a total weight of two hundred pounds over the weight bearing parts. While this is a dead load, it is distributed over a greater bearing surface and better positioned than the total load on the trooper's mount—and weighs at least forty pounds less.

Mobility of our new pack units now largely depends upon proper selection and training of pack horses and pack teams. If we assign the "culls" to carry the packs we cannot expect even average marching or maneuvering ability from pack units.

As the troopers of our fire elements and other pack units do not carry rifles, sabers, rifle ammunition, etc., their horses carry much less weight than the horses of the rifle trooper, therefore the pack units should outmarch the full pack rifle units. But do not burn up the energy of the pack horse by requiring it to remain loaded at every halt, while the trooper's mount is unloaded. Remember, it is not the length of the march but hours in the saddle that kills. If there is not time to remove the load at halts the cinchas may be released quickly by the quick release devices.

On ordinary marches, herding the pack animals will relieve both riding and pack animals and, as pack animals should not ordinarily be halted except

for water or to adjust a pack, the pack units will arrive in camp far ahead of the rifle units. Do not make the comparison here between cavalry and cargo pack trains for our cavalry pack units move at cavalry gaits.

Mobility in Maneuver

Our pack units have equal mobility in maneuver with other cavalry units. One of the most interesting demonstrations witnessed by the writer was given by Major Merchants' Squadron of the 8th Cavalry with Captain C. R. Johnson's Machine Gun Troop of the 2nd Machine Gun Squadron attached, in the 1923 maneuvers of the 1st Cavalry Division. These troops made an extended gallop for approximately one mile, over mesquite covered ground, with the pack animals frequently jumping over the bushes, ditches, etc.—No packs were lost.

TOM'S LETTER

Dear Ed,

Well I was reading the other day about where in there daily holdup in Chicago the bandits used Machine Rifles to intimate the usual crowd of delighted spectators. Ed, there is something fishy about that on account of I dont believe that them bandits was cavalryman and cavalryman are the only ones which are required to use the machine rifles. Its funny what a bunch of pretty smart fellows like you and me and Foch devote all our lives to thinking up weapons of destruction when Nature has provided us with so many in the 1st place. Take the verbal dart for inst. which is a wise crack made vive voce. Why just the other day I was saying to a girl how fair minded I was and that I could see good in anything. Well, she says, you cant see good in the movies when you first go in can you? But then Ed wise cracks is getting so common in the young generation I was almost afraid to bring home a easter bunny at easter to give to my kid so I says Now listen, this is a easter bunny and I want no wise cracks from you.

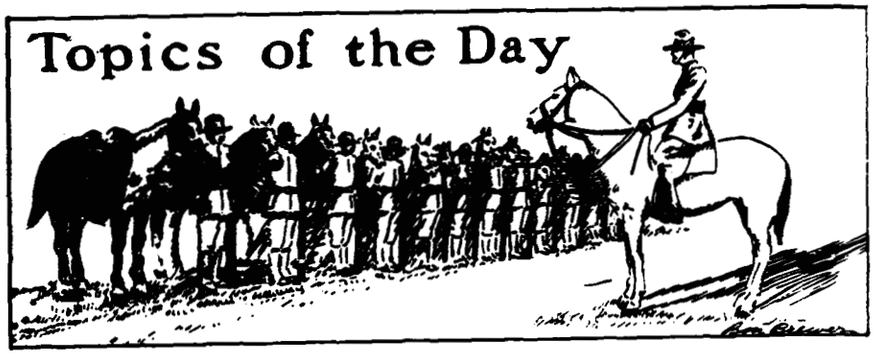
No sir, Ed, the mouth is a great verbal weapon—not that we cavalryman say much especially these days that the air service has the air so to speak. We are like the woman which had got a bushel of clams which she put in the basement. The next morning every clam had caught a mouse. You can easily see that that illustrates something—I wouldnt know what except that there is something in being a clam if you want to catch a mouse. Many a man can talk his way out of something into which he has got himself into. Talking is pretty safe because not many people ever listen to you but are just waiting till you stop so that they can start talking. Take Leavenworth for inst. if we had of listened to everything which the teachers said we would now know all they know and wouldnt have been humilated with so many U's. If people wasnt allowed to talk until they had something to say—well Ed, you guess what would happen to Congress and to the Service Schools, and what would it be like living with the little wife? Dont ask me Ed, I wouldnt dast say.

The hard thing for many people to understand is how the horse can be regarded as a weapon against anybody else except the person which rides it. That shows Ed how little the "desund des mains" is understood—it and equitation in general. Suppose you was a enemy pivot of maneuver Ed armed with 1 of them machine rifles and suppose Ed you happened to look up from trying to hold it down somewhere near the ground and suppose you was to see our maneuvering force come cantering in proper balance doing "haunches cut" well Ed I bet you would be scared. There is still some opposition to the sabers but thats silly when you think of the moral effect of the sun shining on the cavalrymans flashing saber when we was charging behind the cavalry tanks. All is not old that titters Ed and remember that morals is to the physical as 3 is to 1. Many people say that Cavalry dont charge no more but the local merchants says that isnt so and what is needed of cavalryman is a little more collection. Just the other day a wise John wrote a editorial in the Chicago Tribune saying "Cavalry wont have no more need for his spurs" on acct of the cavalry being moved in trucks, etc. etc. I laughed over that Ed because as long as theyse horses spurs will be used to hold on with and to prove that officers is in the cavalry.

A fellow whispered to me at dinner the other night just as the waiter was giving me the meat course, he says Tom, save your best fillets for brood mares. Well Ed he might have fooled me once but I was too smart now so I whips back Yr loopy big boy cause brood mares dont eat meat and I know it. Everybody laughed at him Ed so you can see the old nimbled wit is still with me.

Yr friend TOM.

Topics of the Day



Army Polo

By The Army Central Polo Committee

ORDERS were issued by the War Department for the assembling of the following named officers at Mitchel Field, Long Island, as the Army Polo Squad for 1928:

Major George S. Patton, Jr., Cavalry, Office of the Chief of Cavalry, Washington, D. C.
Major C. C. Smith, Cavalry, Fort Leavenworth, Kansas.
Captain George E. Huthsteiner, Cavalry, Fort Sam Houston, Texas.
Captain Candler A. Wilkinson, Quartermaster Corps, Fort Reno, Oklahoma.
Captain Chester E. Davis, Cavalry, Fort Bliss, Texas.
Captain Peter P. Rodes, Field Artillery, Fort Bragg, North Carolina.
Lieutenant Morton McD. Jones, Cavalry, Fort Bliss, Texas.
Captain Charles H. Gerhardt, West Point, N. Y.
Lieutenant Mark McClure, Sixteenth Field Artillery, Fort Myer, Virginia, was wanted for the squad, but is not available for the detail.

Major G. S. Patton will captain the team that defends the Junior Championship title won by the Army last year. Major Patton represented the United States in the Modern Pentathlon at the Olympic Games at Stockholm in 1912. In this event Major Patton was awarded fifth place, in a field of forty-two competitors, the first four places having been won by Swedish entries. He is an experienced polo player. He was a member of the Army Squad that played on Long Island in 1921. Later he played in Washington while stationed at Fort Myer. In 1926 he captained a team which won the Inter-Island Polo Championship in Hawaii for the first time since 1912 when, with the arrival of the Fifth Cavalry at Schofield Barracks, an Army team first entered the annual competition. Major Patton's string of private mounts will enable him to be well mounted.

Major C. C. Smith, a hard rider and bold player, joined the Army team on Long Island last summer for a few weeks. Major Smith was a member of

the Fort Leavenworth team that won the Inter-Circuit Championship, and the Twelve Goal Championship in 1926. For the past few years he has played on the Fort Leavenworth and Cavalry School teams in the Rocky Mountain circuits, at Fort Snelling, Kansas City, and elsewhere. Prior to this he played at Fort Bliss, Texas.

Captain Peter P. Rodes, captain of last year's Army team, has had a wide polo experience in recent years. In 1925 he went to England on Major L. A. Beard's team that won for the second time the British-American International Military Championship. Last summer he led the Army team on Long Island that competed creditably in the Open Championship. Captain Rodes is a graduate of the United States Naval Academy, where he captained the Navy football team. He first came into prominence as a polo player at Camp Grant, Illinois, in 1921, when his team won the Mid-Western Circuit Cup and the Westleigh Cup. During the past winter while on duty with his battery at Fort Bragg, North Carolina, he has found time to work on some prospective mounts for the Army team.

Captain C. A. Wilkinson needs no introduction to the polo world, having achieved the distinction last summer of being the first Army officer ever named a member of the American International Squad. Captain Wilkinson first gained considerable polo experience on the Pacific Coast in 1921. He came east as a member of the 1924 Army team. In 1926 he played on the Fort Leavenworth team that won the Twelve Goal Championship and the Inter-Circuit Championship. Last season he led the attack of the Army Junior Championship team, and of the Army team that played in the Open Championship. He also played on the 1927 Cavalry School team in the Twelve Goal Tournament. His spectacular play stamped him as one of the most colorful players ever developed in the Army. By virtue of his phenomenal progress on Long Island last year, he was boosted from four to seven goals handicap by the United States Polo Association, a handicap only held in the Army by Captain Wilkinson and two of his teammates, Captain Rodes and Captain Gerhardt. During the past winter Captain Wilkinson has been on duty at Fort Reno, Oklahoma, where, in addition to his other duties, he has aided materially in the special training of mounts.

Captain Charles H. Gerhardt, a member of last year's Army team, is an all round athlete by instinct and training. After his West Point days, when he played on the varsity football, baseball, and basketball teams, he turned his attention to horsemanship and polo, along both of which lines he has been uniformly successful. His playing at Fort Riley in 1924 attracted the attention of Major L. A. Beard who took him to England in 1925 as a member of the United States Army team, which defeated the British Army team in the second British-American Military Championship Tournament. In 1926 and 1927 Captain Gerhardt played prominently on the Army Junior Championship team. His most recent accomplishment in polo was his leading of the West Point Officers' team that won the Class A Indoor Championship of the United States.

Captain George E. Huthsteiner played back on the Army Junior Cham-

pionship team last year, and the team entered by the Army in the Open Championship. He also played on the First Cavalry Division team which won the 1927 Twelve Goal Championship, and the Inter-Circuit Championship and Twelve Goal Championship in 1925. Captain Huthsteiner has been stationed in Texas for a number of years, and, therefore, has had an unusual opportunity to play continuously year in and year out. During the past winter he has been playing on the Fort Sam Houston team in the San Antonio Mid-Winter Tournament. He is a sturdy and experienced player.

Captain Chester E. Davis has reached the Army Squad by way of the Inter-Circuit Tournament. After having played on the Cavalry School and Fort Leavenworth teams during the past few years, he came east last summer as a member of the First Cavalry Division on teams that won the Twelve Goal Championship and reached the final in the Inter-Circuit Tournament at Narragansett Pier. In February and March of this year, he played on the Cavalry Division team that won the Southwestern Intra-Circuit Championship and Southwestern Handicap Elimination Tournament at San Antonio, Texas. Reports from those tournaments indicate that his playing during the past winter has been uniformly dependable.

Lieutenant Morton McD. Jones is a young player of promise who started his polo in Germany. For a number of years he played in San Antonio on the Eighth Corps Area Headquarters team. In 1926 he accompanied an Army team to Mexico City where the Americans were successful in winning all of their games. The following year he played civilian polo at Colorado Springs with the Houston Polo Club, and at Denver with the Denver Club. This past winter he has been in California with a First Cavalry Division team. Lieutenant Jones is an accurate stroker.

The above list will permit of a new team being trained for the National Junior Championship Tournament. This will give an opportunity for the training of further players and will widen the pool of selection for the British-American International Military Matches, probably next year. Captains Rodes, Wilkinson, and Gerhardt are included to form the nucleus of a team for the Senior Championship, Open Championship, and other high goal events, in order that they may have the added experience of one more season of fast polo prior to the British challenge. It is quite possible that some of the lower handicapped players brought on this year will give them a hard run for their places on the team.

In connection with the next British-American Military Tournament, which may be played in 1929, it has been suggested that the British and United States Armies be represented by the champion regimental teams of the respective services, rather than by an all-Army team as in the past. While such representation may be desirable in Great Britain, it is not looked upon with favor from our point of view. The excessive distances separating some of our regiments, the interruption of training that would result, make almost impossible the holding of any kind of a tournament necessary for the determination of the championship regimental team of our Army. Also, the

constantly shifting personnel of our American regiments prevents that permanency of line-up which is conducive to the quality of polo desired in international tournaments. Accordingly, the Committee does not share the opinion that the International Military Tournament would fulfill the purposes for which it was inaugurated in 1923, were it to be limited to a match between regimental teams representing the two countries.

Army polo enthusiasts are gratified over the success of the Cavalry Division team from Fort Bliss in the recent San Antonio Mid-Winter Tournament. Major Terry Allen led his four through the 1928 Southwestern Intra-Circuit Tournament and the 1928 Southwestern Elimination Handicap Tournament, winning both, thereby repeating the feat of the team which represented the Cavalry Division in 1925 and 1927. As a result the Southwestern Circuit will be represented by an Army team in the Inter-Circuit Championship to be held in Cleveland, Ohio, during the coming summer. In commenting on the play of his team, Major Allen stated "the principal asset of the team was its well balanced team-work." This opinion was confirmed by all who saw the games.

The Cavalry Division team lined up as follows:

Captain C. E. Davis	No. 1
Major Terry Allen	No. 2
Captain T. E. Voight	No. 3
Captain C. L. Stafford	Back

The scores for the Southwestern Intra-Circuit Championship were:

Air Corps Training Center 11	Twelfth Field Artillery 4
First Cavalry 13	Fifteenth Field Artillery 6
Fifth Cavalry 19	Fredericksburg 8
Austin 22	Stonewall 16
Camp Wood 13	Eighth Corps Area 12
Cavalry Division 15	Alamo Freebooters (San Antonio) 9
Air Corps Training Center 6	First Cavalry 5
Fifth Cavalry 12	Austin 11
Camp Wood 11	Ninth Infantry 8
Cavalry Division 10	Abilene 9
Air Corps Training Center 6	Fifth Cavalry 3
Cavalry Division 14	Camp Wood 11
Cavalry Division 12 (final)	Air Corps Training Center 9

The Southwestern Elimination Handicap Tournament resulted in the following scores:

Air Corps Training Center 24	Fifteenth Field Artillery 6
Fort Sam Houston 12	Alamo Freebooters 9
Twelfth Field Artillery 9	Stonewall 7
Fifth Cavalry 7	Austin 6
Fredericksburg 19	Ninth Infantry 4
First Cavalry 5	Abilene 4
Cavalry Division 14	Air Corps Training Center 7
Fort Sam Houston 20	Twelfth Field Artillery 7
Fifth Cavalry 13	Fredericksburg 6
Cavalry Division 16	First Cavalry 10
Fort Sam Houston 13	Fifth Cavalry 8
Cavalry Division 10 (finals)	Fort Sam Houston 9

In a letter from Mr. F. S. O'Reilly, Secretary-Treasurer of the United States Polo Association, received recently, the Committee was informed that the Open Championship will be played at Meadow Brook Club in September. The Inter-Circuit and Twelve Goal events will be played at Cleveland, Ohio, approximately the last two weeks in August. The time and place of the Junior Championship have not been decided. With reference to the Junior Championship, the Committee has recommended that it be played on Long Island during the month of July.

Colonel Henry C. Whitehead, Quartermaster Corps, has been designated at the Polo Representative, Eighth Corps Area, Fort Sam Houston, Texas, to succeed Lieutenant Colonel William F. Jones, who has been relieved from duty at Eighth Corps Area Headquarters. Colonel Whitehead's experience in matters pertaining to the horse and his interest in polo assures a continued enthusiasm in the game in the Eighth Corps Area, which boasts of more actual play, the year around, in the number of teams participating in games, than any other part of the country.

Two More Types of Guns for Cavalry

UPON recommendation of Major General Herbert B. Crosby, Chief of Cavalry, two new weapons are to be added at once to the armament of cavalry regiments. They are the 37-mm guns for employment against hostile armored cars, light tanks and machine gun nests, and the anti-aircraft machine guns mounted on cross-country cars. These two types of weapons are to augment the machine guns of the regimental machine gun troop. The anti-aircraft section of the machine gun troop will be equipped with three cross-country cars upon each of which is mounted an anti-aircraft machine gun, and the one pounder section will be provided with three 37-mm guns packed on horses. As it is possible that all cavalry of the future will have mobile tanks, the inclusion of one-pounders to combat these tanks becomes imperative.

The addition of these two weapons to the already greatly increased armament of cavalry, with its recently doubled artillery fire-power, is in keeping with the constant endeavor being made by the Chief of Cavalry to utilize most advantageously all mechanical devices particularly suited to mounted combat. Other weapons recently authorized for the cavalry are:

Armored car squadron
Light tank company
Air service.

The armored car squadron is a distinct addition to the new war strength cavalry division. It consists of a squadron headquarters and three armored car troops, with a total strength of thirty-six armored cars. The personnel provided is eighteen officers and two hundred and sixty enlisted men. The troop of twelve armored cars is organized into three platoons of four armored

cars, with a troop personnel of five officers and eighty-four enlisted men. In peace-time but one troop will be authorized for the cavalry division. Although armored cars were used but little during the World War, it is evident that they may prove of great value for cavalry, particularly on reconnaissance, advance guard duty and screening. It is thought that our armored cars should be highly mobile, of light or medium weight with comparatively light armament. The armor will be proof against small arms only, so the cars will depend principally upon mobility for their protection. Undoubtedly armored cars will increase the radius of reconnaissance and save horse flesh for cavalry under some circumstances.

The recent addition of the light tank company to the cavalry division, both in peace and war, is also of importance. It is believed the light tank now being developed by the Ordnance will be sufficiently fast and mobile for use with the Cavalry. To be of value for such use it should be capable of twenty-five to thirty miles an hour on roads and twelve to fifteen miles an hour across country.

Experience in the First Cavalry Division, Fort Bliss, Texas, has indicated that an observation squadron of airplanes should be an integral part of a cavalry division. Heretofore it has been planned to attach such a squadron whenever necessary. This has proved unsatisfactory and a division air service now has been incorporated into the cavalry division organization, both war and peace strength. This air corps unit consists of an observation squadron of thirteen airplanes and a photographic section. The War Department is of the opinion that the battle value of cavalry increases with the breadth of vision bestowed by aircraft. In future operations, the air service will save cavalry by making distant reconnaissance and by early indication to the cavalry of the location of hostile enemy forces to be engaged. It will also furnish mounted troops valuable assistance in reconnaissance of routes.

Mechanization of Combat Forces

MECHANIZATION of battlefield forces is the subject of an extensive official study which recently has been completed in the General Staff of the War Department. This study has not received such definite approval as to constitute a doctrine, but undoubtedly it portrays some basic considerations which will govern further study and experiment throughout the service.

The basic theme of the study is the question of how mobility with high striking power can be restored to the battlefield. Tremendous strides have been made by science and invention in transportation and communication, and mobility has become one of the outstanding developments in modern economic life. Each year people travel farther and get there quicker, through motorization.

This has brought military science and tactics to a turning point. The two elements necessary to decision in land warfare, from the days of the chariot and javelin of Alexander, have been fire superiority and movement. Whenever either fire or movement neared a point of impotency a radical change has been made in the tactics to strengthen the weaker element.

Movement has always been of great value since the days of armored knights, when battles were won almost without fire, and due principally to movement alone. The World War witnessed the reverse. Fire power, beginning with the invention of gunpowder, steadily increased with high explosives, long-range artillery and automatic weapons. The World War, especially in France, found fire power so highly developed that the costliness of tactical movement made it prohibitive at times.

The sensational advances of the automatic industry in the past ten years have opened the subject of mobility to new studies by military leaders throughout the world. American military students naturally study the subject from the standpoint of means whereby our military forces may use to best advantage the predominant position held by our commercial automotive industry.

These studies indicate that the element of movement, with its companionate principle of surprise, may be restored to battlefield tactics by some degree of mechanization.

The basic principles of war remain immutable, but these studies reveal the possibility of new methods of application for those basic principles. The basic principles include the principles of mess, economy of force, movement, surprise, security, simplicity and cooperation. The development of a mechanized force for employment in battle would utilize to some degree all these seven of the nine principles of war. The study suggests changes in methods and doctrines of training for employment of the mechanized force under the basic principles. Therefore, an intensive study of the development of a mechanized unit and experimental work in operation of such a unit will entail a study of possible revisions of the tactics and technique of the separate branches.

There is a distinction between mechanization and mortorization in this study. Mechanization is defined to be the application of mechanics to the combat soldier on the battlefield, with a view to increasing his mobility and his protection and striking power.

Motorization of the supply branches: that is, substitution of motor-propelled for animal-drawn vehicles in the supply echelons, presents little difficulty from the procurement point of view. Commercial development in the United States of the automobile would permit a comparatively simple process of change-over from peacetime to military requirements in an emergency. Special bodies for cars and similar changes would create no problem to the manufacturers. The personnel problem likewise is solved by the civil-life training of man in handling of automobiles.

The study, then, is limited to combat tactics and the utilization of a mechanized force on the battlefield.

Motors Will Not Displace Infantry and Cavalry

THAT complete mechanization or motorization of armies is impossible and that infantry and cavalry divisions must continue to form the bulk of land forces in war is indicated by studies made in the War Department General Staff.

Radical changes in the methods of employment of infantry and cavalry, and in their organization and equipment may result, however, from the introduction into armies of certain completely mechanized units. Complete motorization of an army, which would mean completely doing away with animals except for cavalry, is not viewed as a possibility in the present stage of automotive development. Furthermore, the limitations set by weather, terrain and vulnerability have caused the officers who are studying the problem to arrive at the conclusion that complete mechanization would be undesirable as well as impracticable. Infantry and cavalry may in future, however, expect improved weapons and more of its transport in keeping with developments of a motorized age.

Mechanized units of great fire power will restore movement on the organized battlefield. This element of movement has been gradually disappearing since the invention of gunpowder.

Such mechanized units, the studies reveal, will not only have greater marching speed, but will greatly exceed the sustained cross-country speed of present troops. The advantages attributed to a mechanized unit include increased mobility, increased protection, increased fire power, increased offensive power and decreased casualties.

The mechanized unit would provide shock troops of great striking power and limited holding power. It would relieve the infantry and cavalry from functions of attack in certain critical situations that under present conditions prove most costly in human life to the attack force. In such attack the mechanized unit would give its own operating force better protection than possessed by present attack units due to the characteristics of both mobility and shelter. After an attack by a mechanized force the infantry could advance through lessened hostile resistance to consolidate and hold gains in ground.

Increased fire power would be provided for a mechanized force through its ability to utilize more automatic weapons, to transport more ammunition with each weapon, and the ability to maintain supply of ammunition in cross-country vehicles of greater speed than animals.

Elements considered in the study of mechanization include the light tank with effective speed; armored cars for cavalry divisions; an effective reconnaissance car and other special units.

Army Officers to Specialize in Motor Mechanics

INDICATING that the rapid progress in motorization makes it mandatory that the training of army officers as motor mechanics should be emphasized, Major General Charles P. Summerall, Chief of Staff, has stated—"At

an early date a situation must be reached where there will always be available officers for assignment to motorized units who have had courses of instruction and have qualified as expert motor mechanics."

To provide these expert motor mechanics, the Secretary of War has authorized the establishment of an advanced motor transport course at the Field Artillery School, Fort Sill, Oklahoma, and the Coast Artillery School, Fort Monroe, Virginia, beginning with the next school year, for a number of selected graduates of the Battery Officers' Courses of the preceding school year.

It is thought that the needs of the cavalry, with respect to motor transportation, in view of the wide assortment of vehicles with which that arm may at some future time be provided, will best be met for the present by sending specially selected cavalry officers to attend the various courses in motor instruction at other service schools. The Secretary of War, therefore, has authorized seven cavalry officers be distributed approximately as follows for the school year of 1928-29:

The Quartermaster Motor Transport School, Camp Holabird, Maryland—4 officers.

The Field Artillery School, Fort Sill, Oklahoma, Advanced Motor Course—1 officer.

Basic Principles for Experimental Mechanized Force

THE War Department has instructed the Commanding General, Third Corps Area, that in planning the work of the Experimental Mechanized Force, which will be assembled at Fort Leonard Wood (Camp Meade), Maryland, about July 1st, the following basic principles will be followed:

"The completely mechanized force is a self-contained unit of great mobility, great striking power, and limited holding power.

"It should not be considered as a divisional unit but rather, because of its special characteristics, as a force of special mission in the accomplishment of which and in exploitation of which troops of infantry or cavalry divisions will cooperate.

"The role of the mechanized force is essentially offensive.

"Tanks are principal attack elements of the mechanized force.

"The tactics of the force as a whole shall be predicated upon supporting and assisting the attack of the tank elements, and upon quick consolidation and securing or exploiting the success gained in the tank attack.

"Other arms are added as auxiliaries, to furnish the element of holding power which tanks lack, security, maintenance of command, fire support, facility of movement, and supply.

"Surprise, speed, and depth of penetration in the attack should characterize the operations of a mechanized unit. Its tactics should be devised to assure these.

"All members of the force should be imbued with a spirit of the utilization of the speed which modern equipment will afford.

"The force should be regarded as a tactical as well as technical laboratory. While it will have to operate this year with considerable obsolescent automotive equipment, it is nevertheless expected that much information as to tactics and technique will be derived which will be of benefit to further development.

"The capabilities and limitations of such a force should be studied not only in the light of the bulk of obsolescent material furnished this year, but also in the light of a force equipped throughout with material of the more modern experimental types furnished. For this purpose the four MI tanks to be furnished should be used to the maximum."

Tactical Work of Experimental Mechanized Force Outlined

IN conducting the tactical work of the Experimental Mechanized Force which is to be organized at Fort Leonard Wood (Camp Meade), Maryland, about July 1, 1928, the War Department has informed the Commanding General, Third Corps Area, that it is thought the development of technical methods for application by such a force to tactical problems is of greater importance than the solution of the tactical problems themselves.

To this end, thought and experiment will be directed by the commander of this force along the following lines:

"*Route Marches.* Proper methods; grouping and subdivision of column; relative speeds; economical rates; capabilities on roads of varying character; capabilities off roads; supply on the march; camping and bivouacking methods; special methods and training necessary for night marches; duties of engineers in facilitating the march; equipment needed.

"*Marches in the presence of the enemy:* Means of reconnaissance; means of security; liaison with air units; anti-aircraft security and defense; liaison and maintenance of command in the marching column; tactical subdivision of the force on the march; security within the force itself; the use of the mechanized force as a security detachment for troops of other (present day) characteristics; value of the motorcycle, cross-country car, armored car as security elements.

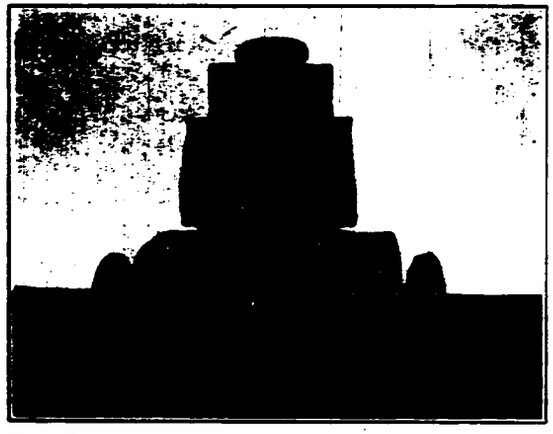
"*Reconnaissance:* The employment of means within the force to obtain information prior to engagement; the motorcycle, cross-country car, armored car; means for rapid communition with Air Corps.

"*Command:* The means of insuring command in a force of this character; character of command posts moving or fixed; the means of communication to be employed; liaisons to be maintained between components of the force; organization of the command and staff of the force and its components to assure rapid handling of intelligence; rapid decision and formulation of plan, rapid transmission of order; effectiveness of supply.

"*The tactical methods of the force in the approach* alone or when carried

by other forces. Approach formations; front and depth required for development and deployment; methods of concealment from ground and air; methods of diminishing noise; conduct of approach march; security and information during the approach; functions of auxiliary troops, engineers, signal, etc., during the approach; order of components in the approach; initial positions of artillery; disposition of rear echelons; the best means and weapons for supplying smoke screens in the attack of mechanized units.

"In the attack: Formations, width, depth of the tank attack; cooperation between neighboring tank units; missions for light tanks; missions for medium or heavier tanks; liaisons to be maintained by and with tank units; special tactics to take advantage of the speed of modern tanks, based upon experiment with four MI tanks to be furnished; command of tank units in the attack;



New Czechoslovakian Tank with Wheels and Tracks

security elements; means for protecting flanks; combat patrols, composition and equipment; battle reconnaissance.

"Fire support: Character of artillery supporting forces; methods of maintaining contact with advancing tank elements; methods of maintaining adequate observation; methods of displacing forward to continue to cover an attack of rapidly moving elements pushed to great depth; transference of artillery liaisons to the infantry when that force has relieved tank elements in the attack or is consolidating ground won; ammunition supply within a mechanized unit; method of maintaining liaison with the force command when the latter is moving; tests of fire of artillery in defense against tanks using salvaged tanks.

"Infantry support: The organization, tactics, and equipment which infantry will need to enable it to support the tank elements rapidly and without causing the latter to lose advantage of modern tank speed; methods of quickly mopping up; methods of rapidly advancing machine guns and other infantry weapons, wire, intrenching materiel; organization of the infantry command;

liaisons with other components of the force; defense against tank attack, including tests of fire of infantry weapons particularly the latest 37-mm gun as an anti-tank weapon, against salvaged tanks at your disposal.

"Engineers: What should be the special equipment of the engineer component of a mechanized unit? Can they assist the advance of such a unit with improvised materiel? What should be the span of bridge materiel with this force? What tools are needed by these engineers? What character of transportation is needed?

"Supply, Administration, etc. Division of units into combat and supply echelons; methods of handling the latter; should they be grouped and administered by one officer at one place location near echelons on the march; in combat; field repair of automotive materiel; where accomplished; vehicles needed; character of repairs to be sent to motor repair shops; supply of oil and gas to tanks during course of operations; vehicles needed; economy of personnel at rear echelons; ammunition supply of mechanized unit., control; method."

Keeping Horses in Condition at Low Cost

By Wayne Dinsmore, *Secretary, Horse Association of America*

More than one hundred farmers, noted for having good horses and mules that are kept in excellent condition at low cost, have recently sent reports to the Horse Association of America on their methods of feeding and management.

The thing that stands out most prominently in these reports is the use of pasture to reduce maintenance costs and the further fact that the horses are turned out whenever not at work—either in dry lot, before grass is fit to turn on, or in pasture after the grass is past the washy stage. Many report using good, bright oat straw as part of the roughage, supplementing this with some timothy hay and a feeding of alfalfa or clover hay three times a week.

Such leguminous hays are fed for their tonic effect on the kidneys and bowels. Alfalfa or clover, fed in amounts approximating five pounds per animal three times a week, have a tonic value far in excess of their actual food nutriments. Alfalfa is the better of the two, but clover can be used where alfalfa is not available. In either case, the hay should be clean and free from dust. If dust is in it, it should be shaken out thoroughly before the hay is placed in the manger.

The majority of farmers prefer oats, although some are using corn as a part of the ration. The amount fed per day when horses are at hard work is from 1 pound to $1\frac{1}{4}$ pounds per hundred pounds live weight of horse. Thus, a 1,600-pound horse will receive from 16 to 20 pounds of grain per day. Nearly all report that they cut the grain ration in half on days when horses are idle, and the majority emphasize the importance of having barn lots sloping, preferably to the south.

Emphasis is also placed on having well-drained barn lots where the horses can be turned out and have reasonably dry footing, even immediately after a rain. Many make mention of having hay racks in the barn lots, where oat straw and some hay can be placed for the horses to eat when out in the lot, the idea being to have the horses turned out in the barn lot during the spring, when they will get fresh air and sunshine, and will be provided with roughage to eat before the pastures are sufficiently far along to permit turning on them.

The value of sunlight is now generally recognized, and turning idle horses out in the barn lot promotes their health and reduces the labor involved in caring for them. Many farmers report that they turn the horses out in the barn lot at night during April and May after the horses have had their evening feed; as they say that the horses go out and roll, stretch, feed for a while from the hay racks, and then lie down and rest more comfortably than if they were tied up in the barn. This reduces the work of cleaning out the stables to a negligible point, as the horses are in for only a couple of hours in the morning, an hour at noon, and a couple of hours at night.

Pastures are used by virtually all men having low costs on horses and mules, but nearly all reporting declare that they do not turn out until the grass is fairly firm, as they do not want to put the work animals on pasture at a time when the grass is so green that it will scour the animals.

Another point emphasized by many farmers is that, for the first week of pasture they turn the animals out for only an hour at night and then put them back into the dry lot; for, as one farmer expressed it, they "do not want the horses to have too much green grass for the first week or ten days, but try to taper them into it gradually." After becoming accustomed to it, the horses are turned out on pasture all night, five or ten acres near the barn being reserved exclusively for the use of the work animals at night and on days when they cannot be used or are not being used in harness.

Many farmers emphasize the fact that the first part of April is the time to reinforce pastures for horse use and many advise disking lightly—with disks set fairly straight—the small pasture that is being reserved for horses and then sowing a combination of grasses. Where sweet clover or alfalfa do well, these generally are sown; and some brome grass, timothy, red top, blue grass, and other grasses known to do well in any given locality are put together in a mixture, which is sown on such pastures.

The land is then cross-harrowed with a spike-toothed harrow, slanting slightly and loaded down with plenty of weight. This covers the seed which has fallen in the disk marks; and many farmers report that after disking, seeding, and harrowing, they spread five or six loads of sheep manure or well-rotted cow manure over such pasture, which is then held free from stock of any kind until June first. Then horses are turned on it. Where soil is sour, it is well to add lime before seed is sown.

As one farmer expressed it, "old pasture treated in this way will produce twice as much feed as other similar pasture untreated." Thousands of farmers may well consider the methods suggested by the practices of these successful

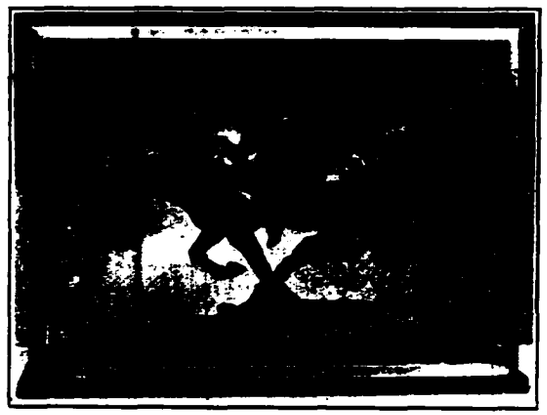
farmers, who are noted not only for having good horses but for keeping their animals in good condition at low cost.

Many of these men report their annual costs to be less than $60, which they attribute largely to the fact that they cut the grain ration in half when the horses are not working, do away with it entirely where the horses are idle for several days, utilize dry lots and pastures to cut barn labor to a minimum, and carry idle horses through the winter on corn stover and oat straw without the use of any grain whatever in the case of mature horses. Young growing animals, however, receive some grain.

The Slocum Trophy

LIEUTENANT Colonel Stephen L'H. Slocum, U. S. A. Retired, has presented the 8th Cavalry with a handsome trophy as a token of the esteem in which he holds the regiment in which he served for many years.

The trophy is to be awarded each year to the troop of the 8th Cavalry considered the most proficient in mobility, fire power and shock. It has been suggested that it be awarded to the troop selected each year as the regimental entry for the Goodrich Trophy Training Test. Or, providing more than one troop of the 8th Cavalry takes part in the Goodrich Trophy Training Test, to the troop of that regiment making the highest score in the above test.



The Slocum Trophy

The trophy is the bronze statuette "Pursued" sculptured by A. Phimister Proctor; height 17 inches, plinth 13¾ inches by 4¾ inches; mounted on a black Belgian marble base, 20 inches by 7 inches; with a cast bronze plate 15 inches by ¾ inch in front with the inscription "SLOCUM TROPHY" in raised letters and a wrought bronze plate 18 inches by ¾ inch in rear engraved "presented to Eighth Cavalry by Colonel Stephen L'H. Slocum" and "Awarded to Troop 'E,' 1927." A glass case with bronze corners accompanies the trophy.

Biltmore Forest-Asheville Horse Show

THE Biltmore Forest-Asheville Horse Show, held at Asheville, N. C., on the 17th and 18th of April, was one of the leading equestrian events held in the South this year. Entries in the show came from practically all of the southeastern states and from many of the more northern states.

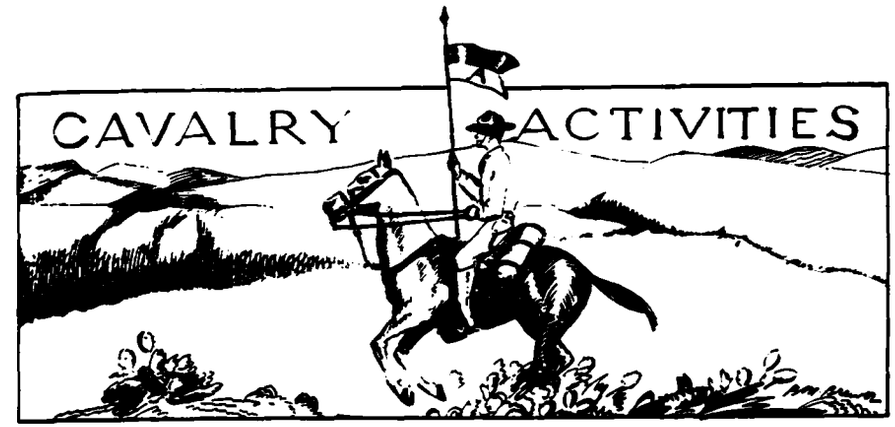
All records were broken for total number of entries, wide-spread interest and representation shown by the spectators and the excellence of the horses entered in the event. In one class of the show at least three champions of other southern horse shows were entered. Two hundred and forty entries were recorded for the various events and in addition to the civilian entries the United States Cavalry was represented by the Sixth Cavalry delegation from Fort Oglethorpe, Georgia. Troop F of the National Guard at Asheville and

George Bryson, Jr., on Moonshine

by the National Guard Troop from Statesville, N. C. The cavalry units were an important part of the show, the cavalry horses being entered in the hunting classes, the special officers' charger class and in several of the horsemanship and gaited classes.

In the high jumping class Lieutenant Comfort of Fort Oglethorpe won first and second places with *Red* and *Babe*, Sixth Cavalry horses, while third place was taken by *Douglas*, ridden by Corporal Daniels of the Statesville National Guard Troop. In the hunters' class Lieutenants Ireland and Comfort took second and third places, respectively. Lieutenants Ireland and Comfort won first and second place in the polo ponies class. The Sixth Cavalry also carried away the laurels in the officers' charger event with Lieutenant Ireland first, Colonel Henry Coates second and Lieutenant Stovall third.

A unique performance was that of George Bryson, Jr., five year old son of Sergeant Bryson of the North Carolina National Guard at Asheville, N. C., who carried away all three prizes in the children's jumping class. Young Bryson was matched against seven other contestants and was the only one to negotiate the jumps. He rode a full grown cavalry horse, *Moonshine*, in this event.



1st Cavalry Notes

ON February 27th the regiment was reviewed and inspected by the Division Commander, Brigadier General G. V. H. Moseley.

On March 3rd the Chief of Cavalry made his annual visit, and was tendered a review.

The annual training inspection was conducted on May 11th and 12th: the Corps Area Commander, Brigadier General Albert J. Bowley, the Division Commander, Brigadier General G. V. H. Moseley, and the Brigade Commander, Brigadier General LeRoy Eltinge, were all present. The first day was devoted to review, drills, and inspection of barracks and stables. On the morning of the second day the regiment participated in a problem held on the Mitchell property east of the post. To the regiment was attached Battery A, 82d F. A. Battalion (horse) and one plane. The enemy was outlined and to it was attached one plane. The battery moved to Marfa from Fort Bliss by truck, bringing materiel and personnel only. Horses were supplied for the officers by the regiment; for draft and other use mules from the post supply were used and even with the unaccustomed motive power the battery functioned in excellent fashion both in the review and in the field exercise.

Organization Day, 6th Cavalry

FOLLOWING a long established custom, the regiment assembled at the flag pole at 10:45 A. M. May 4th to appropriately celebrate the anniversary of the birth of the 6th Cavalry. The ceremony was open with a prayer by the chaplain following which the regimental commander, Colonel T. A. Roberts, addressed the assembled regiment. He spoke of the accomplishments of the regiment in the past and the excellent record it has always maintained. He then addressed the twelve oldest men from point of service in the regiment who were assembled in rear of the standards. It was largely through the efforts of these men, he said, that the regiment has been able to reach and maintain its high standard. All of the men who joined the regiment during

the past year were assembled in front of the standard and formally presented. The colonel pointed out to these men that the old soldier was one whose standards could well be copied by the younger men of the regiment. Captain H. A. Myers, the regimental adjutant, then gave a short history of the regiment.

At noon all the troops celebrated with a special dinner, to which all non-commissioned officers in the post were invited. In the afternoon the annual baseball game between the oldtimers and the officers was played with the former winning by the score of 5 to 3. The celebration ended with a tea dance for the officers and in the evening the annual Military Ball for the enlisted men was held in the gymnasium.

Annual Tactical Inspection, Fort Oglethorpe

THE annual tactical inspection of the troops at Fort Oglethorpe was conducted by Major General R. P. Davis, Commanding General Fourth Corps Area, on May 1st, 2d, and 3d. General Davis and his staff arrived at the post the morning of the 1st, and following the salute, were escorted by Troop A, Sixth Cavalry, to McDonald Field where the 6th Cavalry, 3d Battalion 22d Infantry and Detachment Medical Corps were formed for review in his honor. Following the review, Troop F received a warning order to prepare to entrain for a temporary change of station. The remainder of the regiment returned to the post and during stables was inspected by the Corps Area Commander or his staff. In the afternoon the entire regiment was assembled for massed calisthentics following which each troop executed the movements of basic drill, dismounted.

On the morning of the 2d, officers' call was sounded and a warning order issued to the assembled officers for the regiment (less Troop F), to take the field immediately and march to Catoosa Target Range. Troop F, in the meantime, had received orders to commence the actual entraining and loading at 7:00 A. M. The loading was completed in one and one-half hours, which was well within the prescribed limit. The troop was then ordered to detrain and join the regiment at Catoosa. Upon arrival at the range, a complete camp was erected and later inspected by the Corps Area Commander. The infantry had also left the post and camped for the night in Chickamauga Park.

In the evening situations were issued to both the cavalry and the infantry for a problem the next morning. By noon of the 3d all troops were back in the post and the officers assembled at Post Headquarters for a short critique. General Davis spoke highly of the regiment and the troops at the post and expressed great satisfaction in the efficient manner in which all concerned had performed the tasks assigned and in closing stated "I consider the 6th Cavalry a crack regiment."

News from Fort Ringgold

THE 12th Cavalry was gathered together at Fort Ringgold in April for the annual tactical inspection. Social activity took on great acceleration during this time, but only one horse trade was accomplished.

The inspection was very satisfactory. In the tactical phase the enemy made the mistake of dispersing his force and was defeated in detail.

Polo suffered a setback when a rise in Olmos Creek caused a small flood which inundated the field, washing away fences and side boards. Temporary construction has been erected to keep out cattle while the fence is being put in. A new polo stable has just been built and a bunch of green ponies were ready to go into slow polo when this disaster occurred.

The new polo stock is half bred or better, raised in Texas almost exclusively. Most of the prospects are private mounts but there are a few remounts from last year's arrivals that show lots of class.

12th Cavalry Annual Inspection

ON April 3rd, the Fort Brown garrison marched to Fort Ringgold, Texas, for ten days' combined maneuvers with the remainder of the regiment. The commander, Lieutenant Colonel Eby, 12th Cavalry, commanding in the absence of Colonel Willian T. Johnston, who is on sick leave, conducted several problems with the regiment prior to the tactical inspection. This was the first opportunity for combined training of the regiment since the reorganization, and proved highly instructive.

The Corps Area Commander, Major General T. Q. Donaldson, conducted the Annual Tactical Inspection of all units on April 13th and 14th. The night of April 13th-14th and the morning of April 14th were devoted to a field problem, the Corps Area Commander conducting his critique of the problem on the afternoon of that date. His remarks as to the state of training of the regiment and its readiness for field service were very gratifying to the command.

On the afternoon of the 14th, the Corps Area Commander, accompanied by the Regimental Staff, motored to Fort Brown for inspection of the Post.

On April 16th, the Machine Gun Troop left for Fort Brown, while Headquarters Troop and Toops A and B remained at Fort Ringgold for a few days to fire the qualified men in record practice. On April 19th, the remainder of the 12th Cavalry (less 2d Squadron) returned by marching and arrived at Fort Brown, April 22d.

12th Cavalry Polo

THE Fort Brown polo team participated in the Houston Spring Polo Tournament from April 22nd to May 6th. While the team did not win any cups, it gave a creditable account of itself considering the strong opposition encountered.

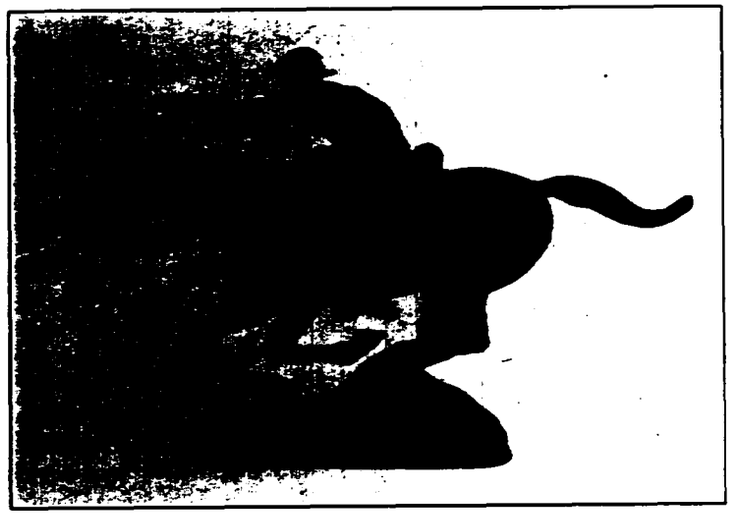
There were nine teams entered in the tournament among which were Army teams from Fort Sam Houston, Texas, Fort Reno, Fort Brown and Kelly Field. The civilian teams were from Dallas, Witchita Falls and three teams from the Houston Riding and Polo Club, which sponsored the tourna-

ment. Superior stick work and team work on the part of the Fort Sam Houston team decided the tournament in their favor.

During the Polo Tournament, a horseshow was held, in which Captain Franklin and Lieutenant Garver each won a first place in jumping and received handsome cups, as well as placing in several other events.

Presentation of the Goodrich Trophy

ON May 3, 1928, the 2d and 13th Cavalry and Battery D, 18th Field Artillery, assisted at the presentation of the Goodrich Trophy to Machine Gun Troop, 2d Cavalry (formerly Troop G). The ceremony was held on the western slopes of Morris Hill. It opened with not a man in sight, except the



The Goodrich Trophy

combined bands in rear of the reviewing officer, the Commandant. At a signal, the troops appeared from concealed positions west of the Redoubt, and, advancing at the trot, formed a square. At a second signal, Troop G, 2d Cavalry, advanced into the center of the square and received the trophy. The troops then passed in review at the trot and gallop, continuing the latter gait beyond the reviewing ground to a position behind the Redoubt from which they emerged a moment later in three waves, charging straight at the reviewing stand, while the battery fired several volleys of blanks across their front. The charge was checked just short of the Reviewing Officer and the regiments trotted off in column of platoons. The ground in the vicinity of Morris Hill affords spectators a beautiful view and permits a greater variety to ceremonies than can be had on the flats. A similar ceremony was held for Brigadier General Frank Parker upon the occasion of his visit on May 19th.

Cavalry Band Organized for Mass Concerts

THE War Department has been informed of the organization, for concert purposes, of an eighty-piece band at The Cavalry School, Fort Riley, Kansas, under the direction of Warrant Officer Sidwell, 13th Cavalry. The bands of the 2nd, 9th and 13th Cavalry are combined there on certain occasions for mass concerts. The first appearance of this huge musical organization was at Fort Riley, Kansas, on May 11th. Each of these mounted bands is well known throughout Kansas, Oklahoma and Missouri, having played concerts in an average of twenty-five cities and towns during the past year.

Cavalry School Horseshows

A SERIES of nine horseshows has been held during the winter, sponsored by the Academic Division, the 2d, 9th, and 13th Cavalry, and Battery D, 18th Field Artillery. All were indoors except the last on May 23rd, Organization Day of the 2d Cavalry. The holding of frequent shows has kept up interest among all officers and men of the post who have kept horses in training. All shows include open jumping classes and ladies' classes. The regimental shows included classes for enlisted men as well. Classes for polo ponies, chargers and hacks, and gymkhana events were interspersed throughout the season. The result has been the development of the best horseshow competition that the Cavalry School has had in years.

The Cavalryman's Cup

WHAT are the requisites of a good cavalry officer? Briefly, he must be able to handle weapons efficiently, to care for horses and to ride, to determine quickly and accurately the best solution of any likely tactical situation, to teach all under his command their duties, and, finally, and most important, he must be able to lead his troops in battle. The purpose of The Cavalry School, Fort Riley, Kansas, is to train officers to be good cavalrymen. Most of their remaining service is spent in practicing and perfecting those things taught at the school.

While no one test has ever been devised to determine the proficiency of an officer in all the essentials of a cavalryman, nevertheless, each year at graduation time at The Cavalry School, various tests of ability in some one particular line are held. Heretofore the various cups and prizes awarded during graduation exercises have been given solely for excellence in equestrian events.

This year for the first time there is offered a new trophy, called "The Cavalryman's Cup" to be awarded for "general all around excellence and proficiency embracing all phases of the duties a cavalry officer may be called upon to perform in the field." The tests for this cup are scheduled as part of the graduation events held at Fort Riley during the first ten days in June.

Included in this competition is a phase contemplated to show the contestant's skill with his pistol, mounted and dismounted. Each entrant is also required to demonstrate his skill with sabre and rifle. He is also judged on the performance of his remount in the Annual Remount Competition. Since the training of his mount covers a period of nine months, this phase alone is a demonstration of almost a year's work, and includes a rating of the remount's gaits, conformation, stamina, condition, jumping ability, schooling and ease of handling over sabre and pistol courses. The contestant's place of finish in the now famous fifty-mile "Night Ride" will also be counted in his total score for The Cavalryman's Cup. This ride, which is acknowledged to be one of the severest equestrian tests held throughout the entire service, constitutes a measure of the entrant's ability to negotiate at speed a long distance over an unknown course at night. The winner usually covers the course in about six hours or less. Finally the inclusion of the student officer's grades in the General Terrain Exercises, held annually as the culmination of the year's instruction in cavalry tactics, inject into the competition an element of academic rating.

The system of rating the contestants is indicated below:

Pistol qualifications (mounted and dismounted)	100
Rifle qualification	100
Sabre qualification	100
Remount competition	250
Night Ride	200
General Terrain Exercises	250
Total	1000

The winner of The Cavalryman's Cup, which is a handsome old-English trophy, can well take pride in its possession, for it marks the highest all-around proficiency in the subjects taught at The Cavalry School, the subjects in which a cavalry leader must excel.

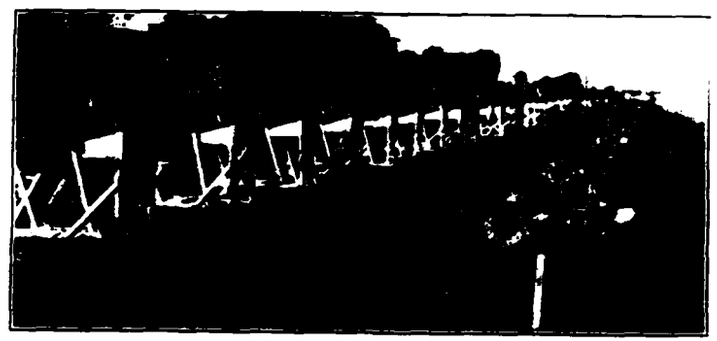
Students Take the Field

ONE hundred and twenty-five officers of the Cavalry School, Fort Riley, Kan., including the entire student body and instructional staff, spent a week in the field under conditions approximating actual warfare. Regular officers, National Guardsmen and Reserve officers, in command of Lieutenant Colonel Copley Enos, established a camp six miles south of Junction City where various tactical problems were worked out. Later in the week the camp was moved to the Maloney Ranch near Skiddy, where wide areas of grazing land cut by numerous ravines makes an ideal maneuver ground for cavalry troops. Various problems of command, staff and supply occupied the attention of the student officers during this field training.

The Cavalry Rifle and Pistol Team, 1928

THE Cavalry Team Tryouts, this year, are being held at Ft. Riley, Kansas, on the old National Range. Quite a bit of work has been done on improvements on the range, and it is believed very satisfactory results will be obtained in training at this station. Captain A. H. Norton, 8th Cavalry, who was captain of the 1927 Cavalry Team, has again been selected to head this year's team.

A squad of about forty candidates has been ordered to Fort Riley. About fifteen are officers. The squad is nicely balanced in regard to experienced and inexperienced competitors. It is very fortunate, in many respects, that the tryouts are held at Ft. Riley. The trials here open up a wealth of new material in young officers just graduating from the school—these candidates might otherwise be completely overlooked. Also the cavalry regiments, at this post,



The Firing Line at Camp Perry

make it possible to order up additional enlisted candidates, due to saving in transportation.

The Cavalry Matches will be fired here about the middle of June. These matches are:

Regimental Team Championship, won in 1927 by the 5th Cavalry (Sgts. Reed and Such).

Offhand Championship, won in 1927 by Sgt. Jensen, 7th Cavalry.

Ft. Bliss Trophy (1000 yard match), won in 1927 by Sgt. Christensen, 2nd Cavalry.

Individual Championship, won in 1927 by Sgt. Christensen, 2nd Cavalry.

Pistol Championship, won in 1927 by 1st Sgt. Harris, 1st Cavalry.

There has been added for 1928 a Rapid Fire Championship Match.

Suitable medals and trophies are awarded winners of each match.

The candidates for the team are:

1st Cavalry: Sgt. Harris, Sgt. Owens.

2nd Cavalry: 1st Lt. Phillips, Pvt. Christensen, Sgt. Reynolds, Sgt. Crismon, Sgt. Cross, Sgt. Swift, Sgt. Benkowsky.

3rd Cavalry: Sgt. Blazejevski, Sgt. Wells.

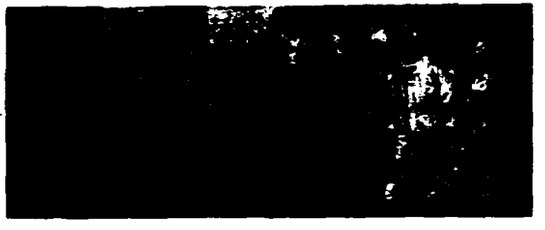
4th Cavalry: 2nd Lt. Bridgman. 2nd Lt. Merrick. Sgt. Messier.
5th Cavalry: Sgt. Such, 1st Sgt. Lawrence.
6th Cavalry: Sgt. Corum, Sgt. Edwards.
7th Cavalry: Sgt. Jensen, Sgt. Elliott.
8th Cavalry: Sgt. Wilzewski, Sgt. Yeszerski. Sgt. McDaris. Corp. Saneski.
10th Cavalry: 2nd Lt. Claussen, 1st Sgt. Sharp. Sgt. Blunt.
11th Cavalry: 2nd Lt. Riepe, 1st Sgt. Nowell. Sgt. Barrett.
12th Cavalry: 2nd Lt. Greenhalgh, 1st Sgt. Kirby. Sgt. Adams.
13th Cavalry: 2nd Lt. Carleton, Sgt. Gates. Sgt. Rubino, Sgt. Jacobs.
14th Cavalry: Sgt. Schonieczny, Sgt. Krumpholtz.
Cavalry School: 1st Lt. Burcham, 1st Lt. Stillinger. 1st Lt. Thorpe. 1st Lt. Swift.
Other Sources: Capt. Heavey, 1st Lt. C. J. Harrold. 2nd Lt. F. J. Thompson.

Fort Myer Society Circus

THE Annual Society Circus was held in the post riding hall, Fort Myer, Virginia, the afternoon and evening of March 24th.

The entrance was covered by a large canvas, the hall gaily decorated with flags, bunting and carnival colors putting the spectators in a favorable atmosphere to appreciate the performance.

The circus started with a grand parade led by the ring master in a 2HP. glass carriage model '98. Following were the tandems in white trappings, the hunt in pink coats, real Indians and cowboys, demure bareback riders, the



quardrille band, animal wagons with animals inside, stage coach, tallyhos and clowns.

After the parade the spectators were rapidly carried to the far West as

exemplified by the cowboys, Indians and stage coach; to merry England by the hunt, hounds, tallyhos and pink coats; to Madison Square Garden by the quadrille and tandems; to Valley Forge by the Artillery in Continental uniforms and finally back to Fort Myer by the monkey drill and rough ride.

A number of Washington debutantes assisted the troops of the command by taking part in the hunt, quadrille and tandems, giving their afternoons during March for rehearsals.

307th Cavalry Races

LIEUTENANT Colonel Earnest, commanding the 307th Cavalry, has with other horsemen been instrumental in inaugurating cross country racing around Richmond. On May 12th four fine races were put on at Curl's Neck Farm, at which some five thousand spectators were present. The result of these races so far as our Cavalry is concerned is very favorable. The nnmber these races so far as our Cavalry is concerned is very favorable. The number the knowledge of conditioning acquired in preparing for such contests is becoming more general.

Fort Ethan Allen Horseshow Team

THE Horseshow Team from Fort Ethan Allen, Composed of Captain Booth, Lieutenant Duffy, Sergeant Nickerson and Corporal Wood, took part on May 3, 4 and 5 in the Hartford Horseshow, which was held in the Troop B Armory at West Hartford, Conn. Many handsome animals were entered in this show, which is one of Hartford's big annual society events.

The army team had only regular army horses with which to work and yet, though handicapped, made a sensational record.

In the novice class, with jumps at three feet nine inches, Sergeant Nickerson won first place, and Lieutenant Duffy third place. In the lightweight open jumping, Sergeant Nickerson won second place, and Lieutenant Duffy fourth place. In the enlisted men's jumping, Sergeant Nickerson won first place, and Corporal Wood second place. In the troopers' mounted class, Sergeant Nickerson won third place. In the middle-heavyweight open jumping, Lieutenant Duffy won third place, and Sergeant Nickerson fourth. In the four-foot-six Touch and Out jumping, Corporal Wood won first place.

Notes from Fort Des Moines

THE annual spring horseshow was held in the riding hall on March 3. The affair was attended by the Governor of Iowa and his staff.

The Regimental Commander, conducted a course in equitation for all officers of the garrison from November 1st to March 31st. The progress made during this instruction was quite noticeable. Special instruction was given in schooling.

The present polo squad consisting of Captain G. H. Dosher, 18th Field Artilley, Lieutenants J. H. Walker, C. H. Martin and G. W. Busbey has been greatly strengthened by the addition of the following officers who have been recently assigned to the regiment—Major J. D. Kelley, Captains M. S. Williamson, P. S. Haydon and B. M. Creel. Some new ponies have been received from the Remount station at Fort Robinson, Nebraska, and are being worked out daily in the riding hall under the supervision of the team Captain, Lieutenant J. H. Walker.

Upon the reorganization of the Cavalry on February 1st, 1928, a shipment consisting of eighty-eight horses was received from Fort Riley, Kansas.

Spring Training was started on April 1st. The regiment, under the supervision of Lt. Col. A. G. Hixson, 14th Cavalry, is making rapid progress with this work.

Athletics at Fort Meade

THE arrival of the regimental Headquarters and second quadron of the 4th Cavalry at Fort Meade during the past summer, uniting the regiment after years of separation, has given an added impetus to regimental activities of all kinds and has had an especially beneficial effect upon athletics. The opportunity offered officers and enlisted men at Fort Meade to participate in their favorite sport has helped immeasurably in building up morale and overcoming the disadvantages arising from the isolated location of the post.

An inter-troop baseball league is now in full swing, all organizations having teams between which double-header games are played each Wednesday afternoon. In addition, a regimental team has been entered in the Black Hills League, in competition with five other teams from the larger cities of the Hills. The schedule of league games includes ten outside games and ten home games played on the Fort Meade Diamond.

Boxing has been developed into the most popular year-round sport at this station. Boxing cards are held on the last Monday of each month and have proved remarkable drawing cards for both soldiers and civilians. In most cases the civilian attendance has far exceeded the post attendance, coming from all parts of the Black Hills. In all of the main events the policy has been to match civilians against soldiers, while the preliminaries have been for the most part between soldiers. The Post Hospital and several of the troops have their own rings for the training of men of their own organization. The monthly boxing events during the summer will be held in a recently constructed open-air boxing arena, with a capacity of approximately three thousand. It is expected that the increased accommodations will result in even larger audiences.

During the past winter a swimming pool was constructed on the reservation by damming up a small stream just south of the post proper. This has now filled nicely and is available for swimming in summer and skating and other sports in the winter. During the past spring, the pool was stocked with some two thousand trout by the State of South Dakota.

With Majort R. I. Sasse as polo manager, three polo teams have been organized from the officers of the 4th Cavalry. Forty ponies have been placed in the polo stables as the string for the 1928 season, and a new field has been constructed in the immediate vicinity of the post.

In an effort to develop new polo mounts from green material, each playing officer has been training from one to three remounts. Several of the ponies thus developed have already been played in fast polo.

A tentative schedule has been arranged with teams from Pierre and Hot Springs, and a tournament for the championship of South Dakota will be played at Fort Meade on July 27th and 28th. In addition, a regimental team will be sent to the tournament at Colorado Springs, Colo., in August.

Inactive Training Period, 305th Cavalry

REGIMENTAL day, April 17th, brought to a close the most successful Inactive Training period in the history of the regiment. The training commenced on October 1, 1927. The attendance at all activities was larger than ever before, in fact, the equitation class became so large that it was necessary to divide it into two sections, the advanced and basic.

Equitation classes were held twice a week for two-hour periods on Wednesdays and Sundays. During these periods instruction was given in the following subjects: Equitation, jumping, cavalry drill, saber work mounted, pistol mounted, care of animals and stable management.

In addition to the drill periods tactical training was carried on at the monthly conferences, map problems, map maneuvers and war games.

Regimental Day, 305th Cavalry

ON April 17th the regiment, in compliance with Army Regulations, held its fifth Regimental Day Celebration in Philadelphia, which was the most successful ever held. The program was carried out in true cavalry style as follows:

Exhibition ride at 6:00 P. M., 103rd Cavalry Armory. Only twenty-four members of the equitation class could ride due to a shortage of equipment and horses. The members riding made an excellent appearance. The well groomed horses furnished by Captain Campbell, Q. M. C. School, equipped with the white bridles, saddle cloths, tie ropes, and bandages, loaned the regiment by Ft. Riley and Ft. Myer, showed to advantage. The appearance of the riders

in their new uniforms was very favorably commented upon by the distinguished guests present. The ride given in honor of General H. B. Crosby, Chief of Cavalry, was a silent one and was carried through in most excellent style. It consisted of over thirty movements and jumping exercises without reins or stirrups.

The reviewing stand was decorated with the regimental standards and cavalry colors.

Following the program at the Armory, the regimental dinner was held at the Racquet Club, at which Colonel William Innes Forbes, Commanding

305th Cavalry Equitation Class

the 305th Cavalry, presided. A miniature cavalry camp in the field was laid out in regulation form on the table at the dinner.

General H. B. Crosby, the principal speaker of the evening, gave a highly interesting talk on the Cavalry Army and complimented the regiment on its fine esprit.

Colonel William Innes Forbes, commanding the regiment, in compliance with Paragraph 7, Army Regulation 345-105, reviewed the activities and the accomplishments of the officers and men of the regiment during the past year. Colonel Forbes thanked Captain Wood and Captain Campbell, in the name of the whole regiment, for their kindness in allowing the regiment to use their equipment, horses and armory for the drills, conferences, and tactical rides. Without their cooperation inactive training in the regiment would not be possible.

10th Cavalry Polo

THE 10th Cavalry Polo Team returned from Los Angeles, California, the 24th of March after a successful stay of one month at Midwick in tournament play.

The team was composed of Captain R. C. Gibbs, team captain and No. 3, Captain C. M. Hurt, No. 1, Lieut. B. G. Thayer, No. 2, Lieut. H. G. Maddox, back, Lieut. R. W. Curtis, substitute.

Lieut. Colonel Lewis Brown, Jr., Polo Representative at Fort Huachuca, was in charge of the training of the team which was picked from some twenty-eight players.

Stonewall Jackson: The Good Soldier. By ALLEN TATE. 322 pp. Illustrations and Maps. Minton, Balch and Company, New York. $3.50.

Stonewall Jackson stands forth in this new biography as a figure romantic and compelling, not only to Southerners but to all Americans. His eccentricities, religious tendencies, high-mindedness, and extraordinary military abilities are clearly portrayed in this fascinating narrative.

In the early chapters of the book we learn of General Jackson's parentage, and of his boyhood days at Jackson's Mills, Virginia. Following this, his cadetship at West Point and service during the Mexican War, resignation from the army, professorship at the Virginia Military Institute, and entrance into the Confederate Army are taken up chronologically. The chapters devoted to the history of his campaigns, beginning with the first battle of Manassas and terminating with his great achievement at Chancellorsville, where he received his mortal wound, are most interesting and are easily understood by the non-military reader as well as the military student.

Jackson, born and bred a Virginian, first commanded a brigade of the Army of the Shenandoah, which was comprised entirely of Virginians and came to be known as the famous "Stonewall Brigade." It is interesting to note the characteristics of these Virginians. Jackson at first found it difficult to find officers, the Virginians considering it a greater honor to serve in the ranks. They were hard to discipline, and there was very little saluting of officers, "for they were born free men; they had been brought up to believe in personal liberty. Many came from large plantations; others from small farms; all of them intensely felt their independence."

At first his men thought that he was most peculiar. They could not understand his fanatical secrecy in his maneuvers, his incessant praying and his association with preachers. In the early stages of his campaign in the Shenandoah Valley, his tactics were particularly bewildering to his men, for his method of advance appeared to them as retreat. This soon became known in both North and South as "Stonewall Jackson's way," and he was a hero everywhere, being cheered always by his own men and, on some occasions, by the Federal troops.

There was, perhaps, no other general in the Southern Army whose tactical ideas so closely resembled those of General Lee as did Jackson's. Between these two generals there always existed the deepest sympathy and affection. That Jackson held the confidence of Lee is shown by the fact that the latter always assigned him the most important missions on the field of battle, and Lee, hearing of Jackson's wound, said: "He has lost his left arm, but I have lost my right." In speaking of Jackson's loyalty, Lee said: "Straight as the needle to the pole, he advances to the execution of my purpose."

The book is fully illustrated with maps and reproductions of contemporary portraits, caricatures and photographs, and with decorations by Philip Kappel.

The Life of Andrew Jackson. By JOHN SPENCER BASSETT, Ph.D. 766 pp. Illustrated. The Macmillan Company, New York. $4.50.

The Life of Andrew Jackson by John Spencer Bassett is a pure biographic study. After tedious years of labor in research Mr. Bassett has made corrections in earlier works on the life of Jackson, has added further valuable historical facts, and has made this a thoroughly exhaustive and scholarly subject. He chiefly points out that it is his purpose to make of his book a complete biography in which Jackson is in the center of the picture, and the history of the times is placed in the background. His effort has been to give a more clear understanding of Jackson himself, and "to show in the faithful story of his life the exact trace he left on the nation's history."

In his opinion Jackson was of a class of powerful personalities in which are Julius Caesar, Bismark and Wellington. He found admiration and support in the hearts of the average American, wherein lies the simple secret of the Jacksonian movement. Out of the war he became a great political force in direct contrast to Scott and Grant whose glories led them into political life, only to dim in their new achievements. In Jackson's case his political ventures became the crowning point of his notable career. The book contains an excellent account of his presidential campaign, and his untiring fight for the recharter of the Second National Bank.

From a military point of view "few American generals have equalled him in courage, promptness, perseverance, resourcefulness, and the ability to command the confidence of his officers and the obedience of his private soldiers. These were natural qualities, and they are much more than half the making of a great soldier; but they were not all. He lacked—for he had no opportunity to acquire—the trained officer's knowledge of military technique. . . . So far, therefore, as his short career witnesses, the 'Hero of New Orleans' was a man who would blunder against his opponent and then defeat him by sheer fighting."

Skyward. By COMMANDER RICHARD E. BYRD. 359 pp. Illustrated. G. P. Putnam's Sons, New York. $3.50.

Although "Skyward" is in a sense an autobiography, it is more the inspiring tale of adventure that has been made the background for the telling of the story of aviation from the very beginning. Commander Byrd has modestly omitted much that we would like to know of his own life and achievements, as few aviators have had the thrilling experiences he has had. Even from an early youth he was a born adventurer, and at the age of twelve made a trip around the world alone. He has been officially cited twenty times for bravery, and has received the four highest medals our country can give: Congressional Medal of Honor, Congressional Life Saving Medal, Distinguished Service Medal and the Distinguished Flying Cross.

Byrd is known as the scientist in aviation, and all of his daring adventures have been solely in the name of science. His North Pole flight was made with the hope of discovering some unexpected scientific phenomena as well as to encourage public interest in aviation. In his famous flight to Europe in the America he could have carried enough extra fuel to have kept him in the air until daylight had he not taken with him eight hundred pounds of scientific equipment and two extra observers to show that passengers can also be carried. He left in bad weather to prove the reliability of aircraft, as he realized that the future trans-Atlantic plane could not wait for ideal conditions, and that such flights are necessary to all progress. The story of this flight alone is one of the most thrilling in the history of aviation in view of the fact that for nearly twenty-four hours the crew of the America saw neither land nor water.

His chapter on *Spectacular Flights* is particularly interesting as he says "that no matter how hazardous an endeavor may be, it is justifiable when the end sought is human knowledge and augmented progress • • • Spectacular flights accelerate progress, for when the flight is decided upon, then necessity in some cases produces inventions and developments which in the ordinary course of events, would tend to be very slow and uncertain. • • • Sensational flights are the italics in the story of aviation's progress."

Then there is the story of his Polar expedition, when for the first time in human history the North Pole was circled by aircraft. He gives an interesting outline of his plans and preparations for his coming flight across the South Pole, which is in the throes of an ice age and where he soon hopes to see "an ice age in full swing." This new adventure is looked upon by those who know as the most daring piece of exploration ever undertaken, and there have been many of his friends who have tried to dissuade him from this project without the least satisfaction. "How great it will be," he writes, "to look down in on tens of thousands of square miles of regions never before gazed upon by humans. I must admit, too, that although the primary object of the expedition is scientific, it will be most gratifying if we succeed in planting the American flag at the South Pole, at the bottom of the world!"

He ends his fascinating book in speculation on the future of flying. In his opinion "flying will be seen to have done more to promote human welfare than any other human agency. • • • Surely it brings mankind closer together, knits the interests of the world, and helps spread knowledge and understanding without which there can be no lasting peace."

A. E. F. Ten Years Ago in France. By MAJ. GEN. HUNTER LIGGETT. 335 pp. With maps and illustrations. Dodd, Mead and Company, New York. $3.00.

This is an excellent and authentic story of the American Expeditionary Forces in France written by the distinguished soldier, Lieutenant General Hunter Liggett, who commanded the 41st Division, the 1st Army Corps, A. E. F., and the 3rd Army Corps, A. E. F. It is a most valuable contribution to the history of the war and gives in outline the American participation—the leaders, the preparations, the battles, and the final return of the troops.

While expressing the greatest respect and highest regard for the British and French commanders, the author is perfectly frank in the criticisms he believes they deserve. Particularly illuminating is the story of the diplomacy and leadership of General Pershing, who is pictured as being constantly confronted with problems designed to place American troops under foreign control.

Throughout the book, one is impressed with the complete and sympathetic understanding General Liggett possesses of the American soldier. He relates most vividly scenes of actual battle, the daring feat of Sergeant York, the plight of the Lost Battalion, which he says was really never "lost," and numberless other incidents of interest.

It is interesting to note from the following quotation the author's feeling of the great need of cavalry when the Third and Fifth Corps drove the enemy across the Meuse: "Had I had two divisions of American cavalry the morning of the second, Von der Marwitz never would have got across the river, and how I prayed for that finely trained cavalry division at San Antonio which transport difficulties had kept in Texas, chafing at the bit. The French cavalry are horsemen only. American regular cavalry is highly mobile infantry as well: it can fight and pursue on horse, but it is as much at home on foot with the rifle as the infantry."

Great Captains Unveiled. By CAPTAIN B. H. LIDDELL HART. 274 pp. With maps. Little, Brown and Company. $3.50.

Captain Liddell Hart, the widely read English military critic, has in this volume analyzed the careers of six great captains. He takes them up chronologically beginning with Jenghiz Khan the founder of the Mongol Empire, then Sabutai who carried the Mongol menace into Central Europe, followed by the careers of Marechal De Saxe, Gustavus Adolphus, Wallenstein, and General Wolfe. The latter he calls "Grandsire of the United States."

The author points out while referring to Jenghiz Khan and Sabutai, the latter

having "conquered thirty-two nations and won sixty-five pitched battles," that "Asia has produced consummate military leaders who in strategical ability may vie with any in history."

Of Marshall Saxe he says: "In its human interests, few careers, and fewer minds are more arresting than that of the natural son of Augustus II of Saxony, for Saxe was a man built on the large scale—in his physique, in his intellect, in his outlook, and in his excesses."

Gustavus Adolphus is pictured as the founder of modern war, so skillfully and effectively did he adopt to the unchanging foundation principles of war the new conditions brought about by the increasing importance of firearms. Gustavus is accredited with providing us with perhaps the earliest example of *fire and movement*, the first to recognize the importance of *mobility*, and the originator of these material elements of warfare—*hitting, guarding* and *moving*.

Wallenstein, the predominating figure of the Thirty Years' War, a Czech by birth, is described as the "greatest of political-military adventurers, who rose to power only surpassed in modern history by Napoleon." The author interestingly traces the career of this great captain from his boyhood days, through his campaigns over Germany, to his assassination while commander-in-chief of the second of the large armies he organized, equipped and led to victory. Wallenstein, "the first grand strategist," is looked upon by the author as having been the first to grasp the principle of *unity of command*.

The life and service of General Wolfe are treated in more detail than is the usual custom of the author. The preparations for and the execution of the battle of Quebec are well explained. In the closing pages, the author indulges in some fanciful theorizing as to what might have happened during the American revolutionary period had Wolfe not been killed earlier at Quebec.

The book, although in a sense a military study, is delightfully arranged, and contains only such phrases of strategy, tactics and armaments as are most readily understood by any reader of history.

It should be in every complete military library.

Reputations: Ten Years After. By CAPTAIN B. H. LIDDELL HART. 316 pp. Illustrated. Little, Brown & Co., Boston. $3.00.

Reputations: Ten Years After is a succession of short biographies of some of the outstanding commanders of the World War, namely: Joffre, Falkenhayn, Gallieni, Haig, Foch, Ludendorff, Petain, Allenby, Liggett and Pershing. In this day of hurry, when few have the time or the inclination to indulge in the more lengthy reading of the conventional type, this book offers, in condensed form, a tremendous amount of information.

Captain Hart tells us that he has approached his subjects in a purely historical manner, and has endeavored to treat them in the manner of a portrait painter. He has, with a great deal of skill, succeeded in making each stand out as a strikingly vivid portrait.

To make more certain that his history may come most nearly to the truth he has delayed publishing the book until now. For a considerable period of time he has been gathering information from documentary sources, collecting impressions for his "portraits" from men who were intimate with them during the war, and, out of this general source of knowledge, he has formed the pictures which he has so cleverly placed before us. With each general's career he gives his life's history, his preparations towards fitting himself for his responsibilities, and the outstanding features of his war record.

Although scathing in some of his criticisms, at times showing evidence of personal prejudice, and unrestrained in his judgment and verdicts, the author has produced a work interesting and ingenious, and containing bits of wit. Perhaps he might

have shown more tolerance with the actions of the men he discusses and, at the same time, have considered more carefully the tremendous problems with which they were confronted.

The age and experience of the leaders has caused no perceptible diffidence in the work of the author. In many instances one may take exception to his charges of incapacity, but notwithstanding this, he impresses one with his ability as a fearless young military critic.

George Washington: The Human Being and The Hero. 1732-1762. By RUPERT HUGHES. 580 pp., illustrated. William Morrow and Company. $5.00.

This is the first of four volumes that Rupert Hughes is writing on George Washington, and takes up the first thirty years of his life, which he speaks of as the important formative period. He considers that too often Washington's biographers have "helped to perpetuate as a devitalized deity one of the most eager, versatile, human men that ever lived," and it has been his object to show that "the truth makes Washington a real and lovable as well as admirable." In this respect Mr. Hughes has highly achieved his purpose. Being a novelist and dramatist, he has made the most of all that goes toward the making of a very readable book, and although he frequently uses a "perhaps" or a "must have," it is nevertheless intensely appealing to the imagination.

Mr. Hughes has tried to make of his work almost an autobiography of Washington, as he has let him "tell his own story as fully as possible in his own words" through the great storehouse of Washington's own writings in his letters and diaries. These are delightfully charming with their misspelled words and incorrect grammar, and give many glimpses into the life of the times and of Washington's contemporaries. He has quite naturally made a very human episode of Washington's love for Sally Fairfax and says that this, "one of the most poignant of romances, finds its proper place in his biography for the first time."

In writing of Washington's part in the French and Indian War, Mr. Hughes has made an earnest effort "to deal fairly with the French, the English, the colonists, with Braddock, Dinwiddie and all others who were at times Washington's warmest supporters, at times his most ardent opponents." This picture of the very patriotic young Colonel Washington who was always resigning his commission is highly dramatic, and brings to view his many disappointments as he had "to grope for his faith and he missed few of the pitfalls, the thorns and torments of the way."

This volume closes with his marriage and apparent retirement to his farm which had been sadly neglected during his many years of campaigning. At this time little did he think of the great rebellion against his King in which he was soon to assume the leading role.

George Washington: The Rebel and the Patriot, 1762 to 1777. By RUPERT HUGHES. 694 pp. Illustrations and maps. William Morrow & Company, New York. $5.00.

This is the second of the four-volume biography of George Washington which is being written by Rupert Hughes. It begins with the year 1762, where the first volume left off, and carries on the story of George Washington from then (his thirtieth year) to after the Battle of Trenton, which is considered by many as having been the turning point of the Revolutionary War.

The author tells us that, as in the first volume, he has endeavored to let Washington tell his own story in his own words, and has tried "to see his world and his times as they must have looked to him, not as they appear to a backward gaze across a landscape filled with tall oaks that were once acorns, and monuments that were once men."

The material for the portion of the book devoted to the Revolutionary War was obtained from a thorough study of documents relating to the campaigns. The author

states that he has "endeavored to cling to Washington's own text as far as possible ... the welter of contradictions, and to remain with him in the story of the Revolution."

"There is a tense drama and moving pathos in the story of this period of Washington's life—the drama involved in the changes of his life, the drama of leadership and of war—the pathos shown in many affecting incidents told by Mr. Hughes of a great soul struggling against almost overwhelming odds."

Life and Letters of Matthew Fontaine Maury. By JACQUELIN AMBER CASKIE. 191 pp. Illustrated. *Richmond Press, Inc., Richmond, Va.* $3.00.

This is a short, simple and excellently done biography of a man who spent a busy and fruitful life in the naval service of his country, and who is apparently little known outside of his native state of Virginia where he is dearly loved and highly honored. Recently when his name was proposed for the "Hall of Fame" a writer on the staff of a New York daily seemed very much surprised and admitted that he "had never even heard of him."

This little book brings to light the many outstanding abilities and achievements that aptly brought him the sobriquet, "The Pathfinder of the Seas." He was the founder of the National Observatory and Signal Service. At his suggestion the United States Naval Academy at Annapolis was founded. His Charts of the Winds and Currents completely changed the commerce of the world, and from this alone, nations saved millions of dollars annually and their kings and emperors honored him with medals and decorations. He is said to be "the most decorated person born on American soil." It was through Commodore Maury's genius, observation and knowledge that the first Atlantic Cable was successfully laid.

At the outbreak of the Civil War, Maury, like many other noted Virginians, gave his services to the South, and by his electric torpedo invention and his harbor defense plans caused much damage to the Federal forces, whose "navy lost more vessels by torpedoes than from all other causes whatever."

"He has been an honor to Virginia, an honor to America, and an honor to civilization, and in gratefully recognizing this we do but honor ourselves."

Riding and Schooling. By MAJOR R. S. TIMMIS, D.S.O. 170 pp., 62 illustrations. Vinton and Company, Ltd. $3.00.

The volume contains forewords by Lieut.-General Sir Charles T. McM. Kavanagh, K.C.B., K.C.M.G., C.V.O., D.S.O., late commanding the British Cavalry Corps in France, and Lieut.-Col. M. F. McTaggart, D.S.O., late 5th Lancers. The author needs no introduction to the American public, his earlier books, *Modern Horse Management, Horsemastership, Riding and Driving,* and *Lameness in Horses,* having been widely read on this side of the Atlantic, and he having been seen in the leading horse shows of the United States.

The book contains chapters on almost every phase of equitation, and, although prepared in more or less narrative form, is readily adaptable to use as a text book. The underlying theme is the adoption of patience, understanding and love toward the horse and the discontinuance of cruel methods formerly used by some trainers. In the chapter devoted to the Psychology of the Horse this principle is ever stressed. He teaches that patience and caresses bring love and confidence which are so necessary in horse training.

The book contains chapters on the elementary subjects of saddling and bridling as well as the more advanced subjects of jumping, schooling, feeding and horsemastership in general.

The prevention and treatment of saddle galls, the proper use of the legs and hands, methods of teaching young horses to jump and conformation are all discussed in a manner easily understood by the beginner and of interest to all.

Although his methods are not always in accord with those taught at our Cavalry Schools, the book as a whole should be of great value to one unable to receive such instruction.

There are sixty-two illustrations and drawings, most of them being used to supplement the text.

Scouting Thrills. By CAPTAIN G. B. MCKEAN. 235 pp. The MacMillan Co. $1.00.

The book contains twelve chapters, each in itself a short sketch of some particular event during the World War.

The author, who was a member of the Canadian forces in France, has apparently relied on his diary for the subject matter. He states early in his book that it is a series of stories written to entertain and possibly to thrill, but not to instruct. Most of the stories deal with patrolling in No-Man's-Land, which work was done generally in the Canadian army by units known as Scouts.

Although it is stated in the body of the book that the primary purpose of it is to entertain boys, the book is, nevertheless, interesting to grown-ups as well, and contains many elementary principles of scouting which might well be followed should the same situations arise in the future. However, it is not a text book in any sense. It is a picture of courage, enthusiasm, and skillful execution of work conducted by small patrols in No-Man's-Land.

The author entered the war as a private in the Intelligence Section, serving first as a sniper, later as an observer, and finally as a scout. At the close of the war he held the rank of captain, commanded a unit of scouts, and by his daring and skill had won for himself the most coveted decoration of the British Army—the Victoria Cross.

This would be an interesting volume for any troop, battery or company library.

The Cavalry Journal (Great Britain), April, 1928.

Reviewed by Major John T. McLane, Cavalry

The personal sketches in the April issue of Major General John Gaspard Le Marchant, by Brevet-Major A. R. Godwin Austin, and of Field Marshal The Earl Haig, by an anonymous author, give interesting sidelights on the lives of two great cavalrymen. General Le Marchant was the founder of a system of professional education for officers and established both the Staff College and the Royal Military College. It is pleasing to note that in his scheme for a military college, General Le Marchant planned "a school more or less on the lines of West Point." In addition to being a student, the subject of the sketch was a fearless leader of cavalry, and fell at Salamanca leading his men in a mounted attack. The tribute to Field Marshal Haig is a glowing recital of the outstanding characteristics of this great soldier. A cavalryman, he typified all of the things for which the cavalry spirit is the symbol. His passing was, indeed, a blow, not only to the British Empire and the British Army, but to the world. We remember with satisfaction his faith in the future of cavalry as evidenced by his official report on the World War. No one can read this appreciation of Marshal Haig without the feeling that here was one who possessed in the highest degree all of the qualities for which we of the cavalry should strive.

Nery, 1914, gives some interesting history of the action at Nery, France, in which the British 1st Cavalry Brigade and the German 4th Cavalry Division participated. As a result of this fight the German 4th Cavalry Division was unable to act effectively and failed to locate in time the threat that menaced von Kluck's open right on the 5th of September. This affair was apparently a chance encounter in which the elements of mutual surprise were present. The initial advantage lay with the Germans, but through their failure to act quickly the British were able to bring up reinforcements and turn the tide in their favor. As is generally the case in cavalry actions, this was a time for the German cavalry to act, and not spend too much time in estimating the situation.

Some Thoughts on Modern Reconnaissance, by Major Hume, presents in outline the first phase of the operations of French and German cavalry in Belgium in August, 1914. The author deduces from these operations that fire-power upset the preconceived ideas and tactics of both sides, thus causing each to accomplish little. Now that we have the tank and armored car as well as attack and bombardment aviation, the reconnaissance role is even more difficult than in 1914. The solution suggested for over-

coming these difficulties is the addition of armored cars and tanks to cavalry organization rather than the creation of a mechanized force. This is a very interesting article on a subject which is receiving a great deal of attention in our own service.

Those who have ridden a frisky remount in the snow at Fort Riley will find much that is reminiscent in *Notes on Riding in Sweden*. The article on *The Ancestors of the Tanks*, by Colonel Fuller, shows that the idea of protected mobility is not new. As war carts were used as far back as the twelfth century B. C. *Du Groupe de Reconnaissance* describes the organization and employment of French corps and divisional cavalry.

Memorial de Caballeria (Spain), November, 1927.

Reviewed by 1st Lieut. C. C. Clendenen, Cavalry

The issue of the *Memorial de Caballeria* for November contains a continuation of the report of the French Commission which visited the Near East in 1925 to purchase Arab stallions for the French remount service.

This issue contains an interesting article entitled *A Lesson of the First Civil War*, by an anonymous author. The article discusses the operations of the guerilla forces during the Carlist War of 1833-40, and particularly the operations of the bands under the famous guerilla leader, Cabrera. The author believes that "if Spain had had a leader of the caliber of Cabrera when fighting against the French, Napoleon would have found Spain a hard nut to crack."

The Horse Should Disappear from the Strategic and Tactical Field is the title of an article which recently appeared in a Madrid paper. Writing under the same title, in this issue, of the *Memorial de Caballeria*, Commandant Carlos Jaquotot, a cavalry officer, criticizes the article, and reaches far different conclusions. Commandant Jaquotot quotes copiously from the article, the author of which believes that the development of mechanized forces has rendered the horse entirly obsolete. After examining the arguments on which the conclusion is based, Commandant Jaquotot concludes that motorized concentrations can be effected only behind a protecting screen of horsemen—that the horse is still indispensable.

This issue of the *Memorial de Caballeria* also includes a short reprint from the *Bulletin of the Royal Spanish Academy*, discussing the differences between the equine terminology of Spain and Spanish America. These differences, it may be noted, are much more marked, apparently, than similar differences between England and the United States.

Commandant Abeilhe, of the Staff, in the first installment of an article on *Voluntary and Militia Service*, suggests the formation of a national volunteer militia, to be superimposed upon the regular organizations, in time of war. Thus, for example, each infantry regiment would include two permanent battalions, and a militia battalion, which would train with the regulars, each cavalry regiment would include two militia squadrons which would train with the regular squadron and each artillery regiment would include one militia "group."

Memorial de Caballeria (Spain) for December, 1927.

Reviewed by 1st Lieutenant C. C. Clendenen, Cavalry

Memorial de Caballeria for December, 1927, contains several articles which are of considerable interest to American officers.

An anonymous author who signs himself "A," writes upon *The Educational Work of the Chief*." He points out that the commander who finds fault with every act of his subordinates and the commander who is too easily pleased are equally bad,—that the subordinates of neither are being properly trained for battle. "A" emphasizes a point with which we are all familiar, but which is, nevertheless, too frequently overlooked, that "on the day of battle it is not rifles, sabers, cannon nor airplanes which the leader will command; it has always been and will always be *men;* in the past armed and equipped in one manner, tomorrow in another, but always *men*." The author continues by bringing out that many of the disasters of the past have been caused by lack of mutual understanding and sympathy between chiefs

and their subordinates. He believes that the chief's *principal* peace time duty is the professional education of his officers so that such understanding and sympathy will be developed to the utmost. "Preparation for war is much more than drills, firing, maneuvers, schools, conferences and themes. Even in places far removed from the military atmosphere there are frequently encountered occasions for completing the officer's education and for moving his spirit and intelligence.

The December issue includes the first half of a lecture entitled, *Cavalry Exploited the Success at the End of the Great War*. The lecture was given to the officers of the Regiment *Dragones de Montesa* by Captain D. Antonio Aymat Mareca, who is a graduate of the Escuela Superior de Guerre. Captain Mareca cites several instances from military history of both successful and unsuccessful pursuits. He mentions the raid of the Cavalry Division Formulier Lucinieres during the Battle of the Marne, and analyzes failure of the French cavalry to pursue the German retreat. The greater part of the first part of the lecture, however, is taken up with a discussion of the transition from open to position warfare. Although Captain Mareca brings forward no new material, he marshalls his facts in an order and with a significance which should be pleasing to every cavalryman.

The November and December issues contain a short article by M. Louis Mercier, Inspector General of Native Affairs in French Morocco, in which he traces the development of Arab equitation, from materials drawn from Arab sources.

The second and concluding installment of Commandante Abheilhe's article on *Preliminary and Voluntary Service* urges the establishment of a Royal Guard, modelled after a similar establishment in Italy. This guard would be a corps d'elite, which would attract picked men. In time of peace it would be at the disposal of the civil authorities, for the preservation of internal order, but in time of war it would become an integral part of the army.

The Remount, March, 1928.

Reviewed by Major John T. McLane, Cavalry

In *Saratoga—and Some Observations on Training*, the author, Lieutenant Colonel Gordon Johnston, describes the attractiveness of Saratoga and the interesting types of people one meets there. By far the most interesting people are the trainers. No two are alike and no two follow the same methods in preparing a horse for a race. The article concludes with a compilation of the methods which seem to underlie the methods of most good trainers.

The subject of horse-breeding is of interest to every cavalryman. It is ably treated in *Some Elementary Principles of Horse Breeding*, by Major C. L. Scott. The commonest errors are cited and the principles which must not be violated are stated in a very practical way. Proper feeding of mare and colt is stressed and various rations recommended.

Horse Power Economy in Town and on the Farm, by Mr. Wayne Dinsmore, gives some interesting facts on the usefulness of the horse as compared with the motor vehicle. There is little danger of the horse being supplanted by motors on farms and in certain industries in cities. Other articles include: *Team Work in Polo—A New Trend in the American Game*, by Mr. Peter Vischer, which discusses the development of team play in American polo; *"Dude" Ranches*, by Mr. James T. Gratiot, a description of what a "dude" ranch is and how Easterners become for the nonce real Westerners; *Courage*, by Mr. Thornton Chard, an account of how cow ponies faced wild animals during an African hunt; and *Balance*, by Major Wilfrid M. Blunt, a discussion of balance from the military point of view.

MORE NEW BOOKS

In addition to the books reviewed elsewhere in this issue of the CAVALRY JOURNAL, the following have been read in our Book Reviews Department, and are recommended to our readers. Lack of space precludes the usual more lengthy review. Special attention is invited to the prices.

Some Memories of A Soldier. By MAJOR GENERAL HUGH LENOX SCOTT. 635 pp. Illustrated. The Century Company, New York. $5.00

The life story of one of America's greatest living military men.

The A. E. F. in Battle. By DALE VAN AVERY. 373 pp. Maps. D. Appleton & Company, New York. $3.00

In this book any veteran or his family can find the account of his adventures, both in their isolated conflicts and in their relation to the conduct of campaigns as a whole. No important engagement is omitted. All other readers will find it not only complete and accurate, but a thrilling record of American military history.

Rank and File. True Stories of the Great War. By THEODORE ROOSEVELT. 279 pp. Illustrated by Captain John W. Thomason, Jr. Charles Scribner's Sons, New York $2.50

A series of simple, impressive narratives of the Great War. Gathered from Colonel Roosevelt's own experiences and from those of others.

A Subaltern On the Somme. By MARK VII. 229 pp. E. P. Dutton & Company, New York $2.00

A simple and beautiful record of desperate days in trenches on the Western Front. Dignified and charming stories.

Horse-Lovers. By LIEUT. COL. GEOFFREY BROOKS, D. S. O. 357 pp. Illustrated by "Snaffles." Charles Scribner's Sons, New York. $3.50

The latest book written by the author of *Horse Sense and Horsemanship of To-day*. A narrative telling more about the imaginary personality, Mr. X, and his horse.

About England. By M. V. HUGHES. 365 pp. With 45 line drawings, head and tail pieces, and frontispiece in color. William Morrow & Co., New York $2.50

A book about England for the person who is going there, who has been there, or who wants to know more about English life and customs.

The Reserve Officers' Handbook. By MAJOR A. C. M. AZOY, JR., C.A.C. Res. With foreword by Major General R. L. Bullard. 236 pp. Diagrams and Illustrations. Robert M. McBride & Company, New York. $1.50

A Manual of Reference of the Fundamentals of Military Training and Usage, prepared especially for officers of the Reserve component of the Army of the United States. Recommended by General Bullard for its "great usefulness." Based on latest War Department publications. Includes all arms of the service. A handy, condensed, accurate and up-to-date guide.

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EDITOR
Major O. L. HAINES, Cavalry

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The United States Cavalry Association

DESIGN

1. The aim and purpose of the Association shall be to disseminate knowledge of the military art and science, to promote the professional improvement of its members, and to preserve and foster the spirit, the traditions, and the solidarity of the Cavalry of the Army of the United States.

Article III of the Constitution.

Organized November 9, 1885

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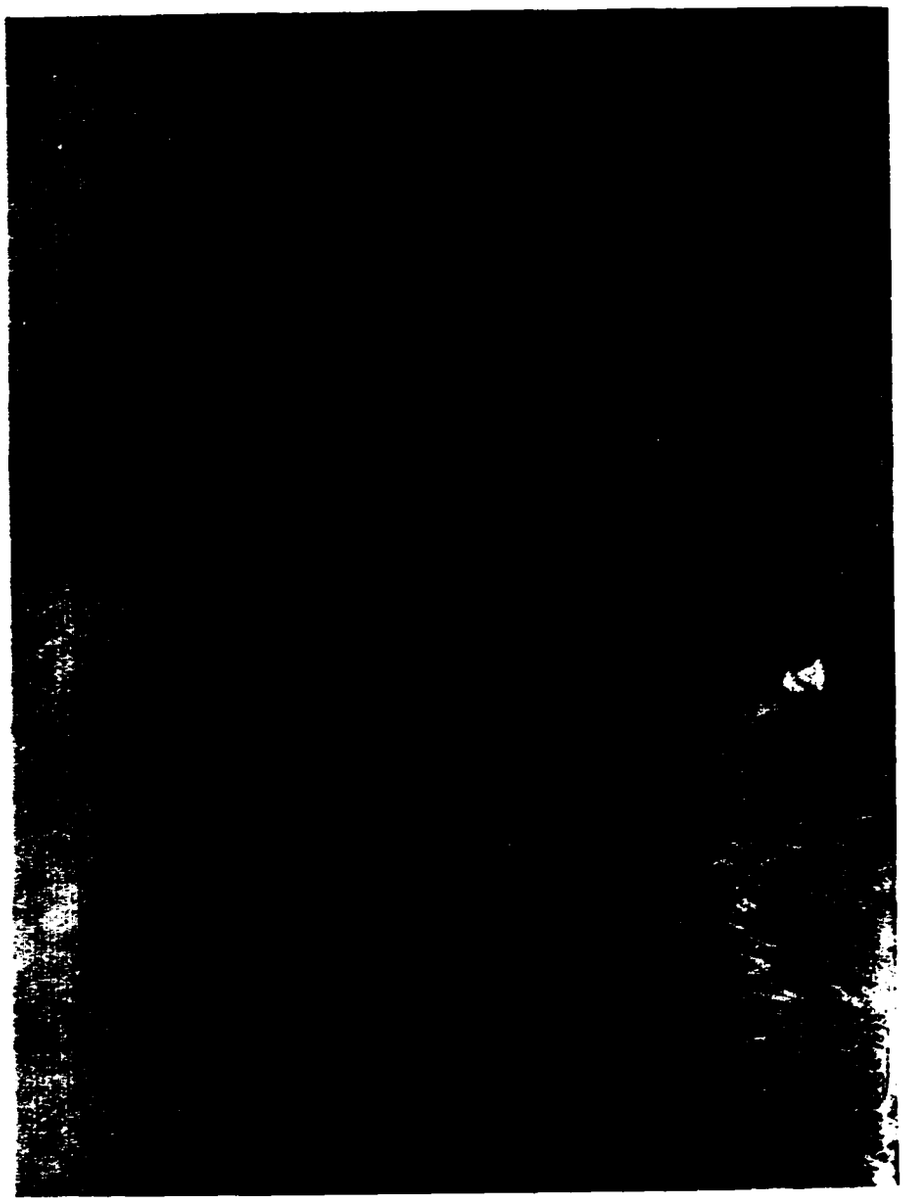

Charge of the 8th Cavalry at Gaines Mills, 1862

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Some Reminiscences, Including the Washita Battle, November 27, 1868

By Brigadier General E. S. Godfrey

(The following narrative continues the "Reminiscences" of General Godfrey published in the July, 1927, Journal.—Ed.)

DURING our return march to Fort Dodge from General Sully's first expedition, September, 1868, the General would at times relieve his mind by talking of his problems at the headquarters mess and campfires. One of the problems was a commander of his cavalry. For some reason he had come to the conclusion that Major Elliott, then in command of the troops of the 7th Cavalry, had not had sufficient experience to trust him with an independent command.[1] He mentioned the various field officers of cavalry within his jurisdiction as district commander and finally eliminated all of them. He, several times, mentioned the "Triumvirate of S's"—Sherman, Division Commander; Sheridan, Department Commander; and Sully, District Commander[2]—and seemed perfectly satisfied with the results of the expedition. For future operations he intended to ask for a larger force, operate against the Indians till he chastised them, and then return to winter quarters.

On arrival at Fort Dodge, he asked for recruits and horses and equipments for the troops of the 7th Cavalry to the maximum (then one hundred) and for Lieutenant Colonel Custer to command the regiment.

Plan of Campaign and Preparations

A few days later General Sheridan arrived at the post. The plan of campaign was changed to establish a supply camp of a more permanent nature and to make a winter campaign. The supply cantonment was to be at the junction

[1]Major Joel Elliott was younger than all the captains, most of whom had been field officers during the Civil War; some had commanded regiments and brigades. He was younger even than most of his lieutenants. In the Civil War, the highest rank held by him was that of captain and his highest command had been a squadron (two troops) in his volunteer regiment of cavalry. After the war he taught school and at the time he went before the Casey Board of Examiners for a commission, he was superintendent of the public schools of the City of Toledo, Ohio, intending eventually to study and practice law. He passed such a perfect mental examination that the board recommended his appointment as major of cavalry. He had anticipated an appointment as first lieutenant, or, at most, as captain.

[2]Division, department and district denote geographic jurisdiction of military commands.

of the Beaver, or North Fork of the Canadian, and Wolf Creek, where General Sully had abandoned pursuit of the hostiles.

Major Alfred Gibbs with the headquarters and band from Fort Leavenworth joined the 7th Cavalry, and, later, the two troops stationed at Fort Harker arrived—eleven troops present. The regiment was sent out to Bluff Creek, about thirty miles southeast of Fort Dodge. General Custer joined the regiment early in October and at once began aggressive operations against the hostiles who had repeatedly attacked the camp.

The troops of the 10th Cavalry were sent north to protect the frontier settlements on the Saline, Solomon and Republican Rivers which the Indians had been raiding since the tenth of August.

General Sheridan established his field headquarters at Fort Hays where he could be in closer touch with communications and energize the forwarding of supplies for the coming campaign. Finding difficulty in getting transportation to forward supplies from Hays City to Fort Dodge, he ordered Number One Depot Train from Fort Leavenworth. This train was the pride of the Quartermaster's Department. It was composed of selected mules, as for many years the best mules sent to the department had been assigned to this train. That woke up the Quartermaster Department!

While at Fort Dodge, he learned that the commissary of the post had asked the families and officers' messes to estimate the amount of officers' stores they wanted for the coming year. These were tabulated and sent to the Chief Commissary, Department Headquarters, as his annual requisition. When the supplies arrived, these canned goods were apportioned according to estimates, or if the garrison had been increased, according to the number of persons in the several messes. General Sheridan found some of the delicacies quite toothsome and drew on the stores until he was informed that he *had* his quota. He was surprised that there was a limit and that special requisitions were taboo. He ordered and approved a special requisition, and further ordered that in the future special requisitions be honored. That woke up the Commissary Department!

In the meantime, General Sully was busy with his requisitions for the new cantonment, or Camp Supply. Finding that mules were scarce, he estimated for a number of yokes of oxen, intending to use them to haul the supplies for the buildings at the supply camp, etc., on the army wagons with trailers to the new post; then use them to "snake" the logs for stockades; and subsequently kill them for beef. That horrified both departments! But he got his oxen, or "bulls," as they were called in the parlance of the West.

The outrages on the Kansas frontier settlers and the capture of women aroused the people of that state to appeal for protection. The Congress authorized the organization of the 18th and 19th Kansas Volunteer Cavalry. The Governor, Honorable S. J. Crawford, resigned to accept the colonelcy of the 19th which rendezvoused at Topeka.

General Sheridan's plan for the winter campaign involved the operations of three columns:

Colonel A. W. Evans with six troops of the 3rd Cavalry and two companies of infantry was to march from a base at Fort Bascom, New Mexico, establish a supply depot at Monument Creek, then scout the Canadian and the North Fork of the Red River Valleys as far as the Red River, the boundary of the Department of Missouri.

A column of seven troops of the 5th Cavalry under the command of Lieutenant Colonel E. A. Carr was to march southeast from Fort Lyon, Colorado, unite with Captain Penrose with five troops of cavalry, then on the north fork of the Canadian, and operate toward Antelope Hills on the Canadian.

The third column, at Fort Dodge under General Sully, was to move southward and establish the cantonment at the fork of Beaver Creek and Wolf Creek. This column consisted of eleven troops of the 7th Cavalry and five companies of the 3rd Infantry. The 19th Kansas Volunteer Cavalry was organized at Topeka, Kansas, and was ordered to join this column at Camp Supply.

All these columns were to march November 1st, but owing to the delays of supplies, the time was changed to November 12.

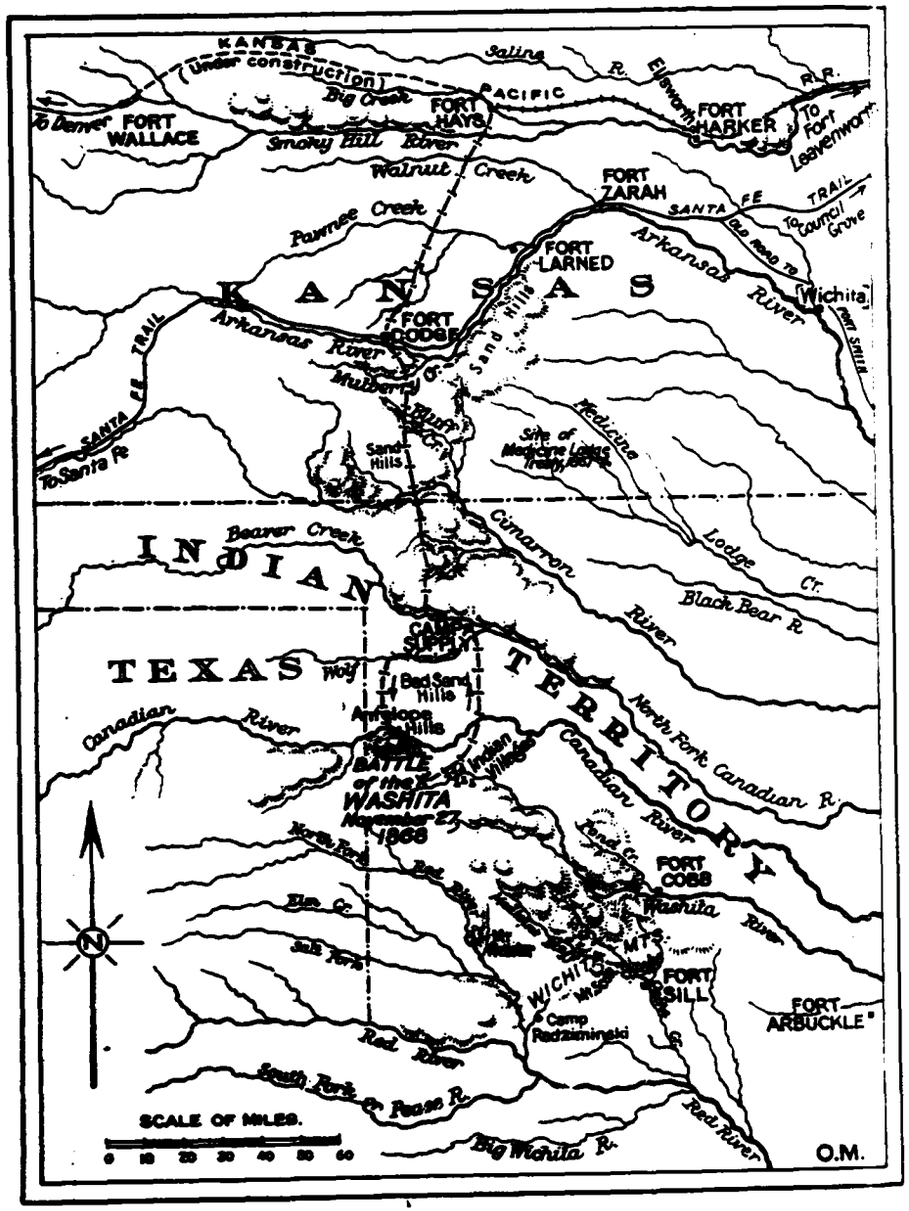
On the 28th of October, the 7th Cavalry went into camp a short distance below Fort Dodge and named the camp "Camp Sandy Forsyth" in honor of Colonel George A. Forsyth, who, with fifty volunteer scouts, had withstood the attack of about seven hundred hostiles on the Arickaree Fork of the Republican. The arrival of about five hundred recruits and the same number of horses filled the organizations to the maximum. All the horses of the regiment were then arranged according to color on one long picket line and each troop commander, according to rank, was given choice of color for his troop. According to color there were: Four troops of bay horses, three sorrel, one each black, brown and gray, the band and trumpeters gray, and the eleventh troop the odds and ends of all colors, including roans, piebalds, etc. For several years after this, before requisitions for colors were given consideration in purchases, I observed that these ratios obtained.

Drills and target practice were pushed to the limit. Forty of the best shots were selected for a separate organization under the command of Lieutenant Cooke. We youngsters named it the "Corps d'elite" and the name stuck throughout the campaign.

On November 12th the Fort Dodge column assembled on Mulberry Creek, the 7th Cavalry from Camp Sandy Forsyth on the Arkansas River, and the supply train of nearly four hundred army wagons with its infantry escort from Fort Dodge.

Establishing the Base

The next morning we had one of those tedious jobs of crossing a prairie creek: steep, deep banks, doubling of teams, breaking of coupling poles, amid the shouting and cursing of wagon masters and teamsters. The wagon train



Portions of Kansas, Indian Territory and Texas in 1868
Showing principal topography, forts, site of the Medicine Lodge Treaty of 1867, and the route of the forces taking part in the Battle of the Washita.

as assembled in columns of fours—two troops of cavalry as advance guard, three troops with flankers on each flank, and two as rear guard. The infantry companies were distributed along the train, and the beef herd along the train inside the flanking troops. The leading troop on the flanks would march to the head of the train, halt and graze until the rear of the train had passed it, thus alternating so as to save dismounting and yet cover the flanks of the train. The advance guard of one day would be rear guard the next day. The details were by roster so as to equalize the functions. The slow travel of the "bull" train was a handicap to travel and to arrival in camp on a full day's march. The ensemble made an imposing cavalcade.

The march was without special incident till the last day's march down Beaver Creek, when our Osage Indian trailers discovered the trail of a war party of a hundred or more on their way north to raid the frontier. On arrival in camp, General Custer requested permission to take the cavalry on the back trail of this war party and attack the village whence they came. General Sully disapproved the proposal on the ground that since it was absurd to suppose the hostiles were unaware of our presence in the country, the village could not be surprised but would be on the alert. He was obsessed with the idea that all our operations were under the constant surveillance of hostile scouts who kept the tribes fully informed.

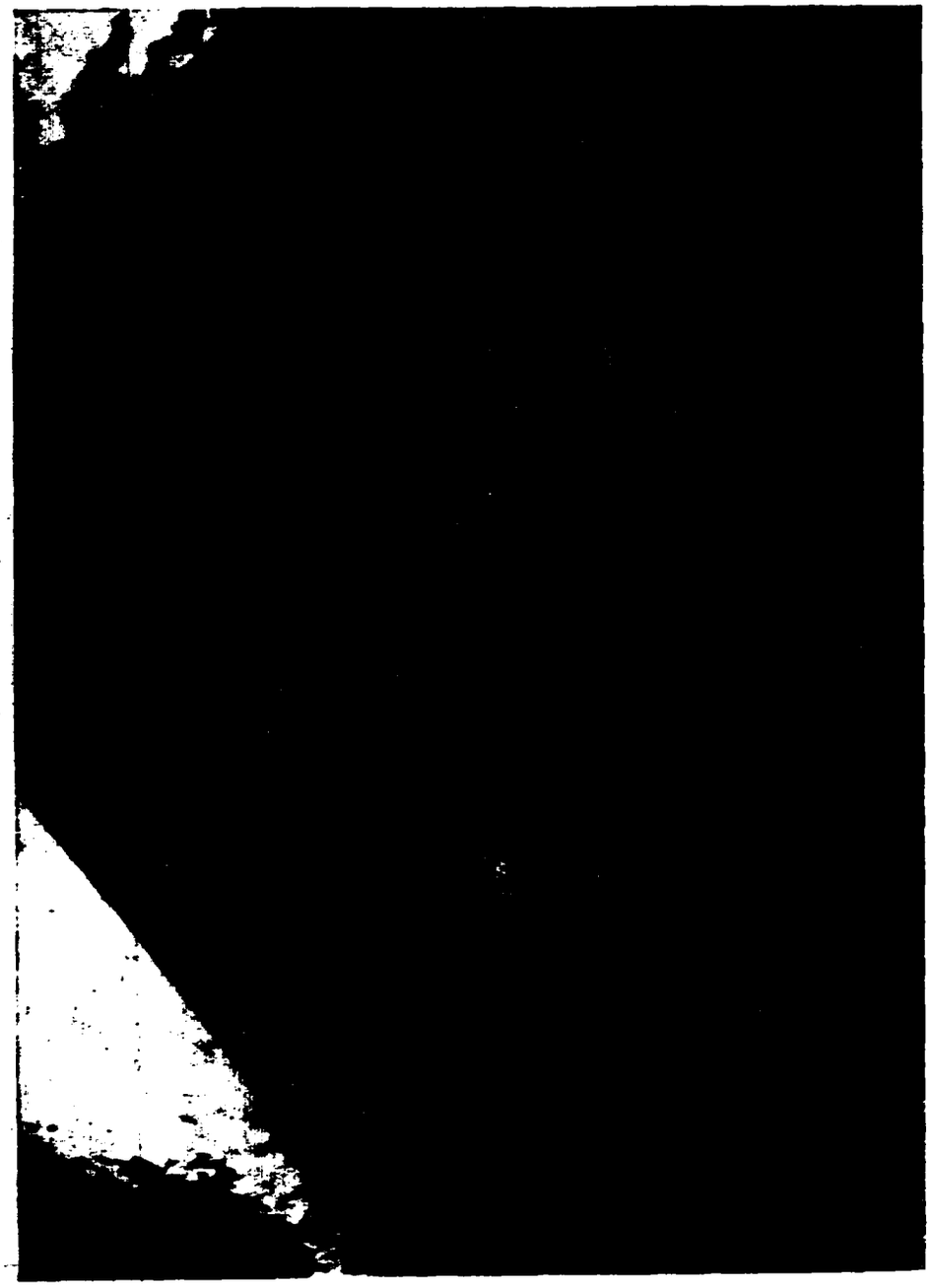
On the sixth day of our march we arrived at the fork of Beaver and Wolf Creeks. At once preparations began for the building of the cantonment on which was bestowed the name of Camp Supply. This isolated post became the abode of many "Winners of the West." It was at this place that General Sully had abandoned the pursuit of the hostiles about two months before.

The next day activities began in locating and laying out the cantonment: digging trenches for the stockade and for the quarters and barracks to house the personnel, and digging wells for water supply. Outside parties, guarded by mounted troops, were sent to gather supplies and material for the post. The hum of the mowing machines was accompanied by the ring of the axe, punctuated by the crash of the falling timber. With axes and saws these trees were made into usable parts which the bull teams "snaked" to convenient sites to load in wagons. The mule-whackers hauled them to the cantonment where they were sorted for various uses, as palisades, upright walls for buildings, rafters, etc., etc. What a contrast these pioneer activities were to the centuries of quiet, wild life, yet to the participants it was all in the day's work.

The 19th Kansas Volunteer Cavalry had been ordered to proceed from its rendezvous at Topeka on November 5th. Two troops had gone to Fort Dodge to escort General Sheridan and it was expected that the other eight troops would meet us at the fork of the Beaver and Wolf Creeks. Their absence created much concern.

On the 15th of November, General Sheridan left Fort Hays to join the Fort Dodge column. He relates:

"The first night out a blizzard struck us and carried away our tents; and, as the gale was so violent that they could not be put up again, the rain and



General Philip Henry Sheridan
Commanding the Department of the Missouri in 1868

now drenched us to the skin. Shivering from the wet and cold, I took refuge under a wagon, and there spent such a miserable night that, when at last morning came, the gloomy predictions of Old Man Bridger and others rose up before me with greatly increased force." (Bridger had endeavored to dissuade him from making a winter campaign.) "As we took the road the sleet and snow were still falling, but we labored on to Dodge that day in spite of the fact that many mules played out on the way. We stayed only one night at Dodge, and then on the 17th, escorted by a troop of cavalry and Forsyth's scouts, now under the command of Lieutenant Pepoon (10th Cavalry), crossed the Arkansas and camped the night of the 18th at Bluff Creek, where the two troops of the 19th Kansas, previously detailed as my escort were awaiting our coming. As we were approaching this camp some suspicious looking objects were seen moving off at a long distance to the east of us, but as the scouts confidently pronounced them buffalo, we were unaware of their true character till next morning, when we became satisfied what we had seen were Indians, for immediately after crossing Beaver Creek, we struck a trail leading to the northeast of a war party that evidently came up from the headwaters of the Washita River. The evening of November 21st we arrived at the Camp Supply depot, having traveled all day in another snow storm that did not end till twenty-four hours later."

Hearing of the near approach of General Sheridan, General Custer mounted his horse and rode out to meet him.

The arrival of General Sheridan with two troops of the 19th Kansas Volunteers gave rise to an occurrence not mentioned by either General Sheridan or General Custer in their published writings of this campaign. At that time the Rules and Articles of War provided that when troops of the regular army and volunteers came together, brevet rank took effect. Both Sully and Custer were lieutenant colonels. Colonel Crawford of the 19th Kansas was the senior in rank. General Sully issued an order assuming command of the troops by virtue of his brevet rank of brigadier general, U. S. A. When this order reached General Custer, he issued an order assuming command by virtue of his brevet rank of major general, U. S. A. Sully contended that as between officers of the regular army this should not obtain. General Sheridan decided in favor of General Custer. General Sully was relieved from duty with the expedition and ordered to Fort Harker to command the District of the Upper Arkansas. I heard General Custer say that had the question not been raised he would not have taken his stand and would have been perfectly satisfied to have served under Colonel Crawford. During the balance of the campaign General Custer exercised the immediate control of the troops.

"November 22nd, 1868—The morning is cold: it snowed all night and is still snowing. Cleared up at noon and got warmer. We took our horses out to graze at noon and let them pick all they can this Sunday . . . . Still it snows . . . . . ." (From the diary of Blacksmith W. S. Harvey, Troop K, 7th Cavalry, now living at Belle Vernon, Pennsylvania.)

We were grazing the horses in the sand hills on that day when, in the afternoon, orders came to return to camp at once and prepare for thirty days' campaign. It is my recollection that three wagons were assigned to each

troop, this for convenience for picket line—one for troop mess, etc., one for officers' mess, extra ammunition, etc., and one for forage. Baggage was limited to necessities.

Finding the Trail

November 23rd—Reveille at 3 o'clock. Snowed all night and still snowing very heavily. The darkness and heavy snowfall made the packing of the wagons very difficult, but at dawn the wagons were assembled in the train and daylight found us on the march, the band playing, "The Girl I Left Behind Me," but there was no woman there to interpret its significance. The snow was falling so heavily that vision was limited to a few rods. All landmarks were invisible and the trails were lost. "We didn't know where we were going, but we were on the way." Then General Custer, with compass in hand, took the lead and became our guide.

As the day wore on the weather became warmer and I have never seen the snowflakes as large or fall so lazily as those that fell that day. Fortunately there was no wind to drift the snow to add to our discomfort. They melted on the clothing so that every living thing was wet to the skin. The snow balled on the feet of our shod animals causing much floundering and adding to the fatigue of travel. About two o'clock we came to Wolf Creek, crossed to the right side of the valley, and continued to march till we came to a clump of fallen timbers and there went into camp with our wagon train far behind. As soon as the horses were unsaddled everyone except the horse holders was gathering fuel for fires. The valley was alive with rabbits and all messes were supplied with rabbit stew. Our rawhide covered saddles were soaked. The unequal drying warped the saddle trees which subsequently caused that bane of cavalry—many sore backs. Snow, eighteen inches "on the level"; distance marched, about fifteen miles.

The snowfall ceased during the night. The sun rose on the 24th with clear skies and with warmer weather. The snow melted rapidly. The glare of the bright sunshine caused much discomfort and a number of cases of snowblindness. Some buffalo were killed and many rabbits. Some deer were seen. We camped on Wolf Creek. Distance marched, about 18 miles.

November 25th we marched some distance up Wolf Creek and then turned in a southerly direction toward the Canadian. As we approached the summit of the divide, the peaks of the Antelope Hills loomed up and became our marker for the rest of the day. We made camp late that evening on a small stream about a mile from the Canadian. The day's march had been tedious. The melting snows balled on our shod animals during the long pull to the divide. A number of horses and mules gave out, but were brought in late that night. Wood was very scarce, but usually the quartermaster sergeants would load some wood in the cook wagon when packing and they usually were on the lookout for fuel on the march.

At daybreak, November 26th, Major Elliott, with troops G, H, and M, some white scouts and Osage trailers, started up the north side of the Canadian

to scout for a possible trail of war parties. The remainder of the command and the wagon train marched to the Canadian to cross to the south side. To "California Joe" had been given the task of finding a ford. The river was high and rising, current swift and full of floating snow and slush ice. After much floundering he found a practical ford. The cavalry crossed first and assembled on the plain. Owing to the quicksand bottom, each wagon was double teamed and rushed through without halting. A mounted man preceded each team and other mounted men were alongside to "whoop 'em up."

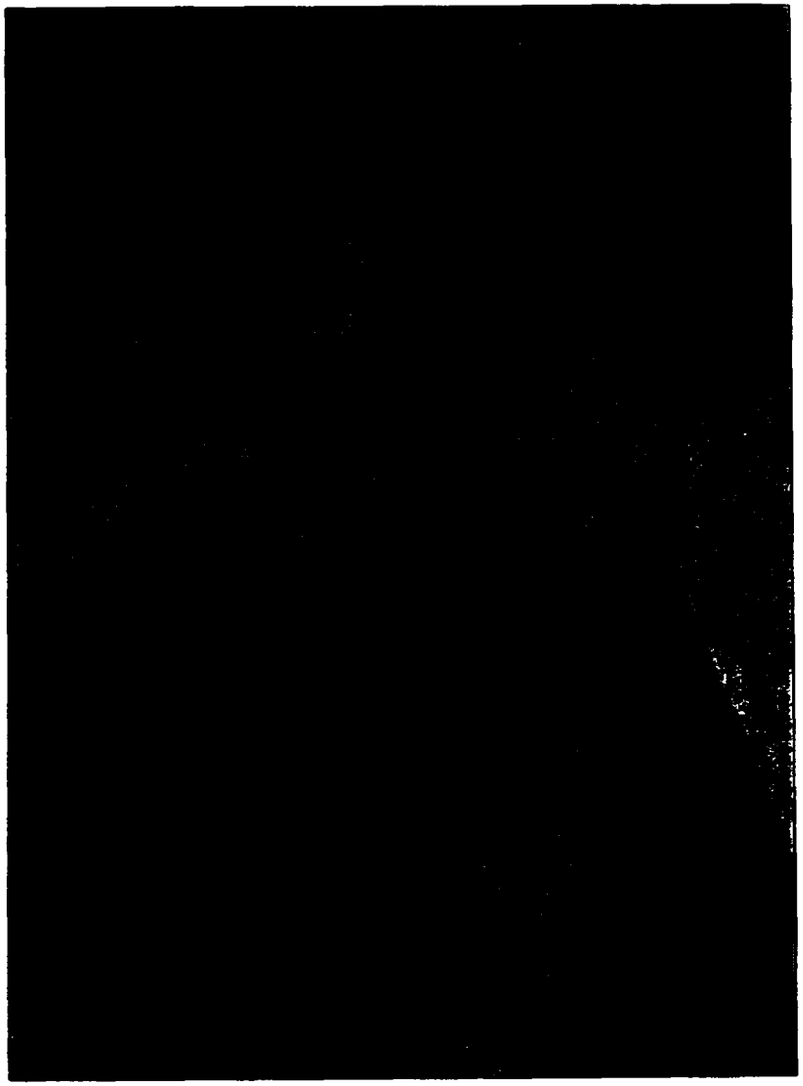
While this tedious crossing and parking was going on, General Custer and a number of officers went to the tops of the hills to view the country. The highest peak was about three hundred feet above the plain. Suddenly we were enveloped in a cloud of frozen mist. Looking at the sun we were astonished to see it surrounded by three ellipses with rainbow tints, the axes marked by sundogs, except the lower part of the third or outer ellipse which seemingly was below the horizon, eleven sundogs. This phenomenon was not visible to those on the plain below.

As the last of the wagons had crossed and the rear guard was floundering in crossing, someone of our group on the hills called out, "Hello, here comes somebody." But General Custer had already seen him and had focused his field glasses on the galloping scout, but he said nothing. It was a tense moment when Jack Corbin rode up and began his report.

Major Elliott had marched up the Canadian about twelve miles when he came to the abandoned camp of a war party of about one hundred and fifty; he had crossed the river and was following the trail which was not over twenty-four hours old, and asked for instructions. Corbin was given a fresh horse to return to Major Elliott with instructions to follow the trail till dark, then halt till the command joined him.

Officers' call was sounded and when assembled we were told the news and ordered to be prepared to move as soon as possible. One wagon was assigned to each squadron (two troops), one to Troop G and the teamsters, and one to headquarters; seven in all, and one ambulance under the quartermaster, Lieutenant James M. Bell. These were to carry light supplies and extra ammunition. I cannot recall of just what the limited supplies consisted. Each trooper was ordered to carry one hundred rounds of ammunition on his person. (They were armed with the Spencer magazine carbine and Colt revolver, paper cartridges and caps.) The main train guarded by about eighty men under the command of the officer of the day was to follow as rapidly as possible. For this guard men with weak horses were selected. Captain Louis M. Hamilton, a grandson of Alexander Hamilton, was officer of the day. He was greatly distressed because this duty fell to him and begged to go along to command his squadron, but was refused unless he could get some officer to exchange with him. Lieutenant E. G. Mathey, who was snowblind, agreed to take his place.

Soon the regiment was ready to move and we struck in a direction to intercept the trail of Elliott's advance. We pushed along almost without rest till



General George A. Custer
Commanding the 7th Cavalry, 1868

about 9 P. M. before we came to Elliott's halting place. There we had coffee made, care being taken to conceal the fires as much as possible. Horses were unsaddled and fed. At 10 P. M. we were again in the saddle with instructions to make as little noise as possible.—no loud talking, no matches were to be lighted. Tobacco users were obliged to console themselves with the quid. Little Beaver, Osage Chief, with one of his warriors, had the lead dismounted as trailers; then followed the other Indian and white scouts with whom General Custer rode to be near the advance. The cavalry followed at a distance of about a half mile. The snow had melted during the day but at night the weather had turned cold and the crunching noise could be heard for a considerable distance.

After a couple of hours' march, the trailers hurried back for the command to halt. General Custer rode up to investigate when Little Beaver informed him that he "smelled smoke." Cautious investigation disclosed the embers of a fire which the guides decided from conditions had been made by the boy herders while grazing the pony herds and from this deduced that the village could not be far distant. The moon had risen and there was little difficulty in following the trail and General Custer rode behind the trailers to watch the developments. On nearing the crest of any rise, the trailer would crawl to the crest to reconnoiter, but seeing Little Beaver exercise greater caution than usual and then shading his eyes from the moon, the General felt there was something unusual. On his return the General asked, "What is it?" and Little Beaver replied, "Heap Injuns down there." Dismounting and advancing with the same caution as the guide, he made his personal investigation, but could only see what appeared to be a herd of animals. Asking why he thought there were Indians down there, Little Beaver replied, "Me heard dog bark." Listening intently they not only heard the bark of a dog, but the tinkling of a bell, indicating a pony herd, and then the cry of an infant.

The Plan of Battle

Satisfied that a village had been located, the General returned to the command, assembled the officers, and, after removing sabres, took us all to the crest where the situation was explained or rather conjectured. The barking of the dogs and the occasional cry of infants located the direction of the village and the tinkling of the bells gave the direction of the herds. Returning and resuming our sabres, the General explained his plans and assigned squadron commanders their duties and places. Major Elliott, with Troops G, H and M, was to march well to our left and approach the village from the northeast or easterly direction as determined by the ground, etc. Captain Thompson, with B and F, was to march well to our right so as to approach from the southeast, connecting with Elliott. Captain Myers, with E and I, was to move by the right so as to approach from a southerly direction. The wagons under Lieutenant Bell and Captain Benteen's squadron—H and M—had been halted about two or three miles on the trail to await the outcome of the investigations.

Just after dismissing the officers and as we were separating, General Custer

called my name. On reporting, he directed me to take a detail, go back on the trail to where Captain Benteen and the wagons were, give his compliments to Captain Benteen and instruct him to rejoin the command, and Lieutenant Be to hold the wagons where they were till he heard the attack which would be about daybreak. "Tell the Adjutant the number of men you want and he will make the detail. How many do you want?" I replied, "One orderly." He then said, "Why do you say that? You can have all you want." I replied that one was all I wanted—"to take more would increase the chances of accident and delay."

I delivered my messages and returned with Captain Benteen's squadron. The camp guard remained with the wagons.

Upon the arrival of Captain Benteen's squadron, Major Elliott proceeded to take position, also Captain Thompson and later Captain Myers.

Before the first streak of dawn, General Custer's immediate command as quietly as possible moved into place facing nearly east, Lieutenant Cooke's sharpshooters in advance of the left dismounted. General Custer and staff were followed by the band mounted. Captain West's squadron was on the right and Captain Hamilton's on the left, the standard and guard in the center. Troop K (West's) was on the right flank and I had command of the first platoon.

With the dawn we were ordered to remove overcoats and haversacks, leaving one man of each organization in charge with orders to load them in the wagons when Lieutenant Bell came up. Following the General, the command marched over the crest of the ridge and advanced some distance to another lower ridge. Waiting till sunrise we began to feel that the village had been abandoned although the dogs continued their furious barkings. Then "little by little" we advanced. Captain West came to me with orders to charge through the village but not to stop, to continue through and round up the pony herds.

The Battle

With all quiet in the early dawn, Major Elliott's command had reached a concealed position close to the village, but was waiting for the signal from headquarters. The furious barking of the dogs aroused an Indian who came from his lodge, ran to the bank of the Washita, looked about and fired his rifle. I was told that a trooper had raised his head to take aim and was seen by this Indian. With the alarm thus given, the command opened fire. The trumpeters sounded the charge and the band began to play "Garry Owen," but by the time they had played one strain their instruments froze up.

My platoon advanced as rapidly as the brush and fallen timbers would permit until we reached the Washita which I found with steep, high banks. I marched the platoon by the right flank a short distance, found a "pony crossing," reformed on the right bank, galloped through the right of the village without contact with a warrior, and then proceeded to round up the pony herds.

As I passed out of the village, Captain Thompson's and Captain Myers' squadrons came over the high ridge on my right. Both had lost their horses during their night marching and failed to make contacts for the opening attack.

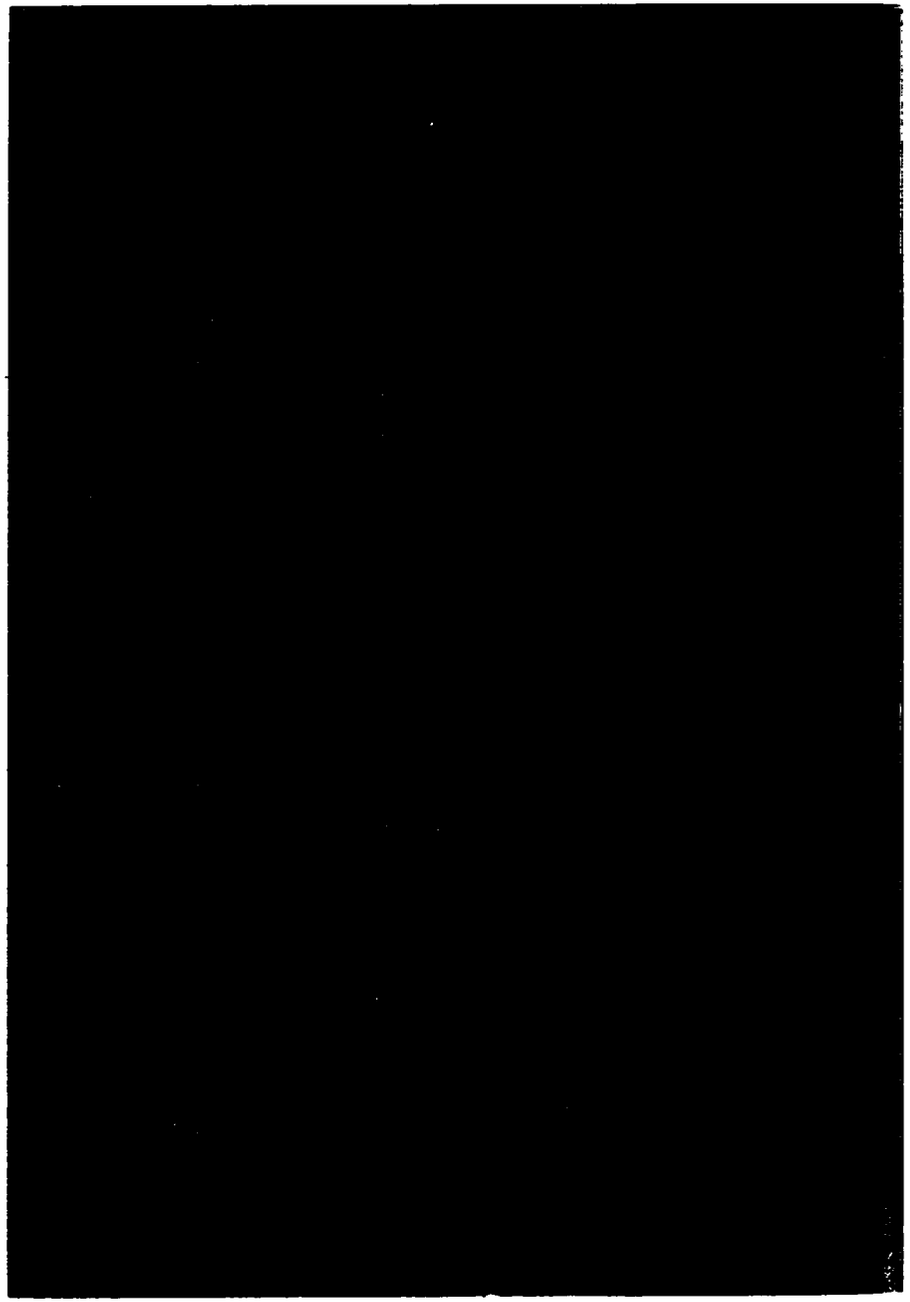
At the opening of the attack, the warriors rushed to the banks of the stream. Those in front of Custer's command were soon forced to retire [illegible] among the tepees, and most of them being closely followed retreated [illegible] ravines and behind trees and logs, and in depressions, where they maintained their positions till the last one was killed. A few escaped down the valley. This desperate fighting was carried on mostly by sharpshooters, waiting for a head to show. Seventeen Indians were killed in one depression.

Lieutenant Bell, when he heard the firing, rushed his teams to join the command and while loading the overcoats and haversacks was attacked by a superior force and the greater part of them had to be abandoned. His arrival with the reserve ammunition was a welcome reinforcement.

While the fighting was going on, Major Elliott seeing a group of dismounted Indians escaping down the valley called for volunteers to make pursuit. Nineteen men, including Regimental Sergeant Major Kennedy responded. As his detachment moved away, he turned to Lieutenant Hale waved his hand and said: "Here goes for a brevet or a coffin."

After passing through the village, I went in pursuit of pony herds and found them scattered in groups about a mile below the village. I deployed my platoon to make the roundup and took a position for observation. While the roundup was progressing, I observed a group of dismounted Indians escaping down the opposite side of the valley. Completing the roundup, and starting them toward the village, I turned the herd over to Lieutenant Law who had come with the second platoon of the troop and told him to take them to the village, saying that I would take my platoon and go in pursuit of the group I had seen escaping down the valley.

Crossing the stream and striking the trail, I followed it till it came to a wooded draw where there was a large pony herd. Here I found the group had mounted. Taking the trail which was well up on the hillside of the valley, and following it about a couple of miles, I discovered a lone tepee, and soon after two Indians circling their ponies. A high promontory and ridge projected into the valley and shut off the view of the valley below the lone tepee. I knew the circling of the warriors meant an alarm and rally, but I wanted to see what was in the valley beyond them. Just then Sergeant Conrad, who had been a captain of Ohio volunteers, and Sergeant Hughes, who had served in the 4th U. S. Cavalry in that country before the Civil War, came to me and warned me of the danger of going ahead. I ordered them to halt the platoon and wait till I could go to the ridge to see what was beyond. Arriving at and peering over the ridge, I was amazed to find that as far as I could see down the well wooded, tortuous valley there were tepees—tepees. Not only could I see tepees, but mounted warriors scurrying in our direction. I hurried back to the platoon and returned at the trot till attacked by the hostiles, when I halted, opened fire, drove the hostiles to cover, and then deployed the platoon as skirmishers.



Brigadier General E. S. Godfrey

The hillsides were cut by rather deep ravines and I planned to retreat from ridge to ridge. Under the cavalry tactics of 1841, the retreat of skirmishers was by the odd and even numbers, alternating in lines to the rear. I instructed the line in retreat to halt on the next ridge and cover the retreat of the advance line. This was successful for the first and second ridges, but at the third I found men had apparently forgotten their numbers and there was some confusion, so I divided the skirmishers into two groups, each under a sergeant, and thereafter had no trouble.[3]

Finally the hostiles left us and we soon came to the pony herd where the group we had started to pursue had mounted. I had not had a single casualty. During this retreat we heard heavy firing on the opposite side of the valley, but being well up on the side hills we could not see through the trees what was going on. There was a short lull when the firing again became heavy and continued till long after we reached the village, in fact, nearly all day.

In rounding up the pony herd, I found Captain Barnitz' horse, *General*, saddled but no bridle. On reaching the village I turned over the pony herd and at once reported to General Custer what I had done and seen. When I mentioned the "big village," he exclaimed, "What's that?" and put me through a lot of rapid fire questions. At the conclusion I told him about finding Captain Barnitz' horse and asked what had happened. He told me that Captain Barnitz had been severely and probably mortally wounded.

Leaving the General in a "brown study" I went to see my friend and former Captain, Barnitz. I found him under a pile of blankets and buffalo robes, suffering and very quiet. I hunted up Captain Lippincott, Assistant Surgeon, and found him with his hands over his eyes suffering intense pain from snowblindness. He was very pessimistic as to Barnitz' recovery and insisted that I tell him that there was no hope unless he could be kept perfectly quiet for several days as he feared the bullet had passed through the bowels. I went back to Captain Barnitz and approached the momentous opinion of the surgeon as bravely as I could and then blurted it out, when he exclaimed, "Oh hell! they think because my extremities are cold I am going to die, but if I could get warm I'm sure I'll be all right. These blankets and robes are so heavy I can hardly breathe." I informed the first sergeant and the men were soon busy gathering fuel and building fires.

In the midst of this, the General sent for me and again questioned me about the big village. At that time many warriors were assembling on the high hills north of the valley overlooking the village and the General kept looking in that direction. At the conclusion of his inquiry, I told him that I had heard that Major Elliott had not returned and suggested that possibly the heavy firing I had heard on the opposite side of the valley might have been an

[3]When on the Tactical Board to devise new Drill Regulations (1881-90) this experience was instrumental in adopting the retreat and advance by alternating groups or units instead of by odd and even numbers.

attack on Elliott's party. He pondered this a bit and said slowly, "I hardly think so, as Captain Myers has been fighting down there all morning and probably would have reported it."

Mopping Up

I left him and a while later he sent for me again, and, on reporting, told me that he had Romeo, the interpreter, make inquiries of the squaw prisoners and they confirmed my report of the lower village. He then ordered me to take Troop K and destroy all property and not allow any looting—but destroy everything.

I allowed the prisoners to get what they wanted. As I watched them, they only went to their own tepees. I began the destruction at the upper end of the village, tearing down tepees and piling several together on the tepee poles, set fire to them. (All tepees were made of tanned buffalo hides.) As the fires made headway, all articles of personal property—buffalo robes, blankets, food, rifles, pistols, bows and arrows, lead and caps, bullet molds, etc.—were thrown in the fires and destroyed. I doubt but that many small curios went into the pockets of men engaged in this work. One man brought to me that which I learned was a bridal gown, a "one piece dress," adorned all over with bead work and elks' teeth on antelope skins as soft as the finest broadcloth. I started to show it to the General and ask to keep it, but as I passed a big fire, I thought, "What's the use, 'orders is orders'" and threw it in the blaze. I have never ceased to regret that destruction. All of the powder found I spilled on the ground and "flashed."

I was present in August, 1868, at Fort Larned, Kansas, when the annuities were issued, promised by the Medicine Lodge Peace Treaties of 1867, and saw the issue of rifles, pistols, powder, caps, lead and bullet molds to these same Cheyennes.

While this destruction was going on, warriors began to assemble on the hill slopes on the left side of the valley facing the village, as if to make an attack. Two squadrons formed near the left bank of the stream and started on the "Charge" when the warriors scattered and fled. Later, a few groups were seen on the hill tops but they made no hostile demonstrations.

As the last of the tepees and property was on fire, the General ordered me to kill all the ponies except those authorized to be used by the prisoners and given to scouts. We tried to rope them and cut their throats, but the ponies were frantic at the approach of a white man and fought viciously. My men were getting very tired so I called for reinforcements and details from other organizations were sent to complete the destruction of about eight hundred ponies. As the last of the ponies were being shot nearly all the hostiles left. This was probably because they could see our prisoners and realized that any shooting they did might endanger them.

Searching parties were sent to look for dead and wounded of both our own and hostiles. A scout having reported that he had seen Major Elliott and

party in pursuit of some escapes down the right side of the valley, Captain Myers went down the valley about two miles but found no trace.[4]

The Return March

A while before sunset, as the command was forming to march down the valley, the General sent for me to ride with him to show him the place from which we could see the village below. There was no attempt to conceal our formation or the direction of our march. The command in column of fours, covered by skirmishers, the prisoners in the rear of the advance troops, standard and guidons "to the breeze," the chief trumpeter sounded the advance and we were "on our way," the band playing, "Ain't I Glad to Get Out of the Wilderness." The observing warriors followed our movement till twilight, but made no hostile demonstration. Then as if they had divined our purpose there was a commotion and they departed down the valley.

When we came in sight of the promontory and ridge from which I had discovered the lower villages, I pointed them out to the General. With the departure of the hostiles our march was slowed down till after dark, when the command was halted, the skirmishers were quietly withdrawn to rejoin their troops, the advance counter-marched, joined successively by the organizations in the rear, and we were on our way on our back trail. We marched briskly till long after midnight when we bivouacked till daylight with the exception

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[4]Headquarters Military Division of the Missouri, Chicago, Illinois, April 28, 1870.
Mr. De B. Randolph Keim.

Dear Sir: I have carefully read the proof-sheets sent me of your forthcoming book, (Sheridan's Troopers on the Borders), and think well of it.*****

Very truly yours,
P. H. SHERIDAN,
Lieutenant General.

From "Sheridan's Troopers on the Borders." (Pages 149 and 150)

**"Although the fate of Elliott's party would appear as a gross abandonment by Custer, particularly for not even recovering the bodies, or making some effort to learn what had become of them, when found missing, after the fight, the circumstances of the event were of such a character, that while no attempt was made with that view, the conduct of Custer in ordering a withdrawal was justifiable according to the laws of war. He struck the upper flank of a long range of villages, numbering several thousand warriors. His own force was small, and without supplies. In going into the fight the troopers had divested themselves of overcoats and all unnecessary trappings, leaving them near the field. These fell into the hands of the savage allies. The men, consequently, were without the proper protection, while the weather was cold and wintry. The wagon-train containing the subsistence stores and tents of the entire column, which had been left miles away, had not yet come up. The guard consisted of but eighty men. Custer, after the fight commenced, seeing such an extraordinary display of force, felt a natural anxiety to look after his wagons, for their destruction would involve the loss of the entire command, and probably defeat the whole campaign. He therefore set out for the train, and was hastened by experiencing greater opposition than was anticipated.

"It will be seen that there were reasons, the second, particularly, which would warrant the abandonment of the field, and there being hardly a doubt of the fate of Elliott, when found missing, the safety of the command was certainly more to be considered than the loss of a small fraction of it. The pursuit of the fugitives, by Elliott, was entirely exceptional, as he had his own squadron of attack to look after, this fact has led to the opinion that his horse ran away with him, and seeing him pass, a number of troopers not actually engaged in the fight, joined him and were the companions of his sad end. Major Elliott was an efficient and much esteemed officer, and his loss was deeply deplored by his associates."

of one squadron which was detached to hurry on to our supply train, the safety of which caused great anxiety. I was detailed to command the prisoners and special guard.[5]

Aftermath

At daylight the next morning, we were on the march to meet our supply train and encountered it some time that forenoon. We were glad that it was safe, but disappointed that Major Elliott and party had not come in. After supper in the evening, the officers were called together and each one questioned as to the casualties of enemy warriors, locations, etc. Every effort was made to avoid duplications. The total was found to be one hundred and three. General Custer then informed us that he was going to write his report and that couriers would leave that night for Camp Supply and would take mail. I visited Captain Barnitz and wrote a letter and telegram to Mrs. Barnitz that he had been seriously wounded but was improving. California Joe and Jack Corbin started with dispatches and mail after dark.

On November 30th, California Joe, Jack Corbin and another scout, rejoined the command with mail and dispatches including General Sheridan's General Field Order No. 6, which embodies the purport of General Custer's official report. The command was formed as it reached camp on Wolf Creek and this order was read:

"Headquarters, Department of the Missouri, in the Field, Depot on the North Canadian, at the Junction of Beaver Creek, Indian Territory, November 29, 1868.

General Field Orders No. 6.

"The Major General commanding, announces to this command the defeat, by the Seventh regiment of Cavalry, of a large force of Cheyenne Indians, under the celebrated chief, Black Kettle, reenforced by the Arapahoes under Little Raven, and the Kiowas under Satanta, on the morning of the 27th instant, on the Washita River, near the Antelope Hills, Indian Territory, resulting in a loss to the savages of one hundred and three warriors killed, including Black Kettle; the capture of fifty-three squaws and children; eight hundred and seventy-five ponies; eleven hundred and twenty-three buffalo robes and skins; five hundred and thirty-five pounds of powder; one thousand and fifty pounds of lead; four thousand arrows; seven hundred pounds of tobacco; besides rifles, pistols, saddles, bows, lariats, and immense quantities of dried and other winter provisions; the complete destruction of their village, and almost total annihilation of this Indian band.

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[5]One day on the march through a mesquite forest, Mahwissa, who was my "go-between" for the prisoners, came to me for permission for a squaw to fall out. This I granted and detailed a guard to remain with her. To this she objected and Mahwissa strenuously sustained the objection and assured me it would be all right to let the woman go alone. With great reluctance I consented. At our next halt I was pacing back and forth with anxious looks on the back trail. I was perturbed not only with the prospective loss of a prisoner, but official action in consequence. Mahwissa came to me as if to reassure me, but receiving scant attention, she turned away with a look of disappointment. Soon there was a shout from the prisoners and looking at the back trail to my great relief I saw my prisoner galloping toward us. Her countenance was beaming and as she passed me I saw the black head of a pappoose in the folds of a blanket at her back swaying with the actions of the galloping pony. The prisoners gave her a demonstrative welcome.

"The loss to the Seventh Cavalry was two officers killed, Major Joel H. Elliott and Captain Louis McL. Hamilton, and nineteen enlisted men; three officers wounded, Brevet Lieutenant Colonel Albert Barnitz (badly), Brevet Lieutenant Colonel T. W. Custer, and Second Lieutenant T. J. March (slightly) and eleven enlisted men.

The energy and rapidity shown during one of the heaviest snow storms that has visited this section of the country, with the temperature below freezing point, and the gallantry and bravery displayed, resulting in such signal success, reflects the highest credit upon both the officers and enlisted men of the Seventh Cavalry; and the Major General commanding, while regretting the loss of such gallant officers as Major Elliott and Captain Hamilton, who fell while gallantly leading their men, desires to express his thanks to the officers and men engaged in the battle of the Washita and his special congratulations to their distinguished commander, Brevet Major General George A. Custer, for the efficient and gallant services rendered, which have characterized the opening of the campaign against hostile Indians south of the Arkansas.

"By command of
"Major General P. H. Sheridan.
"(Signed)
"J. Schuyler Crosby,
"Brevet Lieutenant Colonel,
"A. D. C. A. A. A. General."

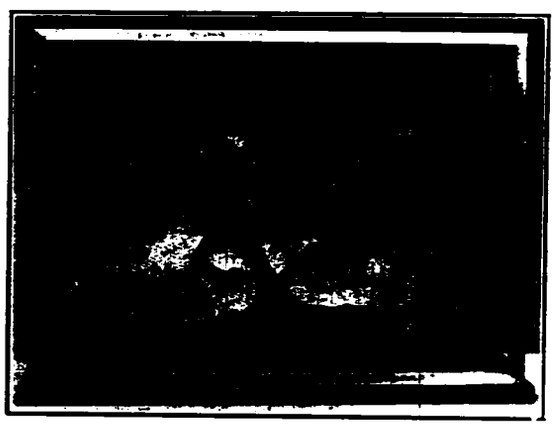
General Sheridan was informed as to the probable time of our arrival at Camp Supply and received us in review. Before we came in sight of the cantonment, the command was formed for the review of triumph. The Osage trailers, painted and in picturesque tribal garb, were at the head of the column, followed by the white scouts in motley frontier dress; then my prisoners blanketed or in buffalo robes. At a distance in the rear came the band, followed by Lieutenant Cooke's sharpshooters, and the regiment in column of platoons, the wagon train in the rear. As we came in sight of the cantonment, the Osages began chanting their war songs and at intervals firing their guns and uttering war whoops with some exhibitions of horsemanship. California Joe and scouts emulated the Osages' exuberance in Western frontier style. The prisoners were awed and silent till the band bgan playing "Garry Owen" for the review of the regiment when they awakened to conversation.

This pageant and review rivaled and no doubt was the prototype of the modern Wild West Shows. It was the real thing. We camped on the Beaver and that evening buried Captain Hamilton near the camp with all the formalities and solemnity of the military funeral, the Seventh Cavalry and the Third Infantry present in formation. Hamilton had been an officer in the Third Infantry prior to promotion to the Seventh Cavalry and had been its regimental quartermaster. General Sheridan, General Custer, Colonel Crosby, Captain Beebe, and Lieutenant Cooke, Custer and Joseph Hale (3d Infantry) were the pall bearers.

We soon learned that the campaign was to be extended through the winter and began our preparations. I turned my prisoners over to the garrison. Later they were transferred to Fort Hays where they were held for

some months as hostages for the safety of white captives known to be in the villages of some of the tribes and to compel the tribes to go to their agencies.

We had the satisfaction that we had punished Black Kettle's band, whose warriors were the confessed perpetrators of the attacks and outrages on the Kansas frontier settlements of August 10th—the originators of the Indian War of 1868.



Ante-Bellum Horses and Sports of the American Cavalryman

By A. J. O. Culbertson

THE development of American cavalry following the Revolutionary War had an excellent background of horsedom upon which to build the formidable mounted forces whose operations are chronicled in the most glorious pages of army history.

Plantation owners and country gentlemen of Colonial days were keen devotees of equestrian sports. Many of the Cavalier stock in Virginia and Maryland had imported thoroughbred horses from Europe early in the eighteenth century. The geneology of their horse was, perhaps, more important to the forefathers of our country than any personal desire to leave enviable family trees of themselves for posterity. These were the men who balked at oppression, rose up and led the young groping colonies to independence.

The American cousin was following closely on the heels of his hard-riding English relative. Hugo Meynell developed his science of training hounds for the chase nearly fifty years before the War for Independence. American lovers of horses were soon in the field close behind their packs. The young colonies, while barely able to totter on their new found legs, were bidding fair to earn themselves a niche for their mounts many years before Paul Revere appropriately enough saddled up an available nag and galloped Concordward with the news that the British were coming.

It is fitting that Colonel George Washington, who was to become the first leader of the armed forces and father of the young nation, was one of the most persistent riders among the early American army officers.

From 1759 up to the Revolution, Colonel Washington devoted most of his leisure time to the chase. Nothing is known of his shooting or fishing ability, but he had a critically drafted pack and was always superbly mounted, requiring, as he said, his horses "to go along." The pleasant pursuit of the hunt fell into decline during the war, but after 1783 Washington's hunt establishment was renewed with the arrival of a pack of French hounds from the Marquis de Lafayette.

With the formation of the Constitution in 1787, Washington, now become a general, bid adieu to the chase and the colorful sport continued in the hands of the newly free spirited cavalier countrymen, recently back from officering a successful campaign for independence.

Those post-bellum days saw many a blue and scarlet coated hunter echoing through the woodland, massing before the mansion house, discussing over a "cheerful glass, the feats of the leading hound, most gallant horse and boldest rider."

During the war, General H. Lee of the cavalry had reports of a remarkably well blooded horse in the Southeast and sent one of his officers to investigate. The horse proved to have been the gift of the Emperor of Morocco to a sea captain and by various means had reached the colonies. In Virginia the horse was called "*Lindsey's Arabian*," after the cavalry captain of that name. He was subsequently obtained by the army and sired a long line of fine horses known widely for their fine conformation. While there was an untold number of thoroughbred horses in the country long before, *Lindsey's Arabian* was probably the first unimpeachable strain that coursed through the youthful American army's horse blood.

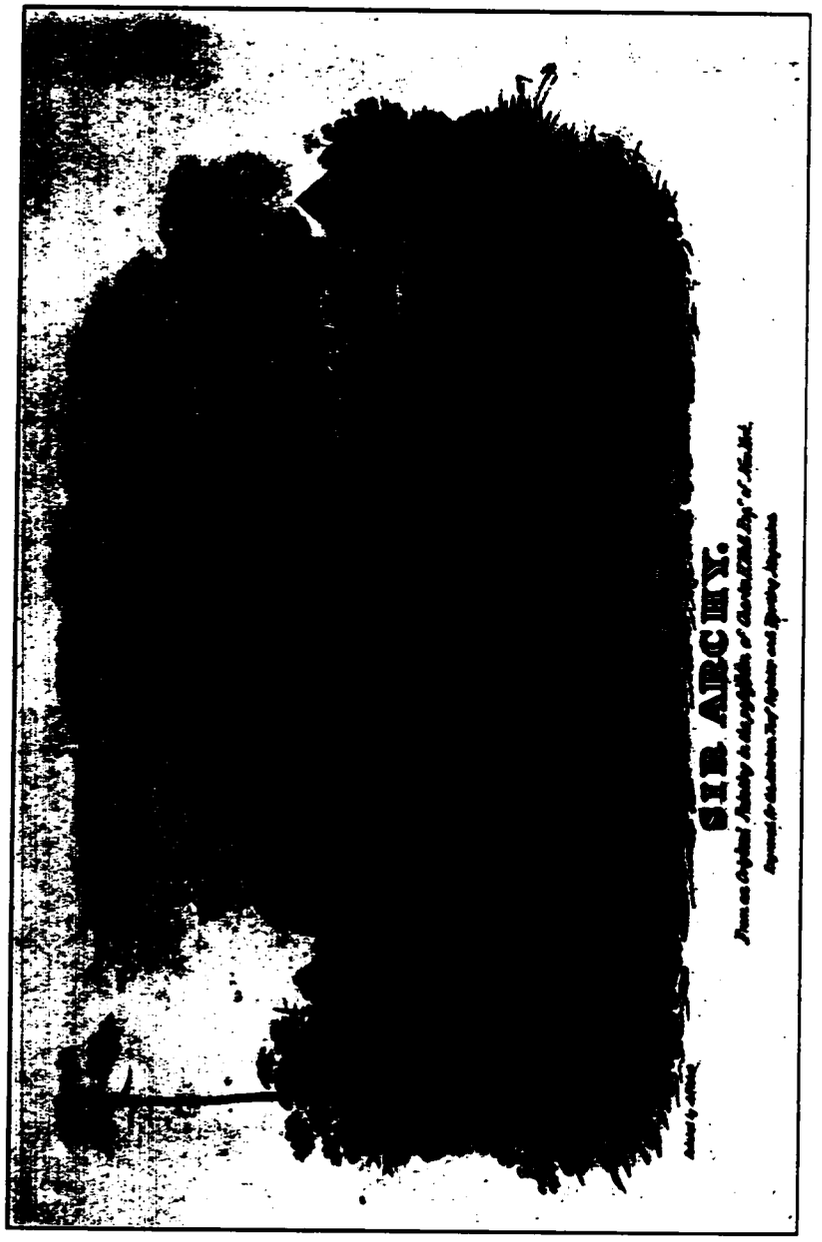
Practically all of the fine horses owned by the landed gentry in the states after the war were in the hands of men who had participated in the revolution. These men, with the coming of peace, turned their swords into ploughshares once more, and again fell into the leisurely sporting ways they had known prior to the strife. All manner of sports took place. Quoit, cricket and archery clubs were formed. Fishing, walking, hunting and cock-fighting, which had been in vogue since 1749, were once again resumed. Deer, stag, fox hunting and steeple chasing were picked up zealously, and to manifest a sincere desire to get on, by-laws were passed in several of the early American organizations to prevent their followings from ending up in "drinking bouts."

So numerous were the importations of horses from Europe and the breeding of horses already in the country, that The American Turf Register was started in 1829 for the useful purpose of detecting and exposing fraudulent practices of issuing spurious pedigrees. The register, which had been a serious need for many years, was immediately popular. Many mercenary persons owning stallions, were often wont to sell horses of whose performances they had themselves written bogus accounts.

So great had become sport activity in America, a little more than a quarter of a century after electing herself to self-government, that it was necessary to regulate her turf by rigidly checking up on the entire horse world within the colonies. Mr. Weatherby, the editor of the Stud Book and Racing Calender in England, wrote to Colonel John Tayloe years before saying that the opinion generally entertained in Great Britain about horses exported to America, was that the colonies had horses equal to most of theirs.

The racing calendars during the first half of the nineteenth century contain many entries owned by officers in the army.

The sure footed, sturdy chargers and mounts of the war, used for parade and cavalry, were the progeny of blooded horses crossed with common stock. The mounts of Colonel Lee and Colonel Washington were famed for their speed and wind and gave these commanders a decided superiority over the enemy in the particular warfare that was waged. The pick of the cavalry were from the best racing blood of Maryland and Virginia. The value of the blooded southern horses, in their ability to stand up under tremendous weight, was attributed to an ancient and sturdy ancestry, when forces rode to war in full armor.



Sir Archy

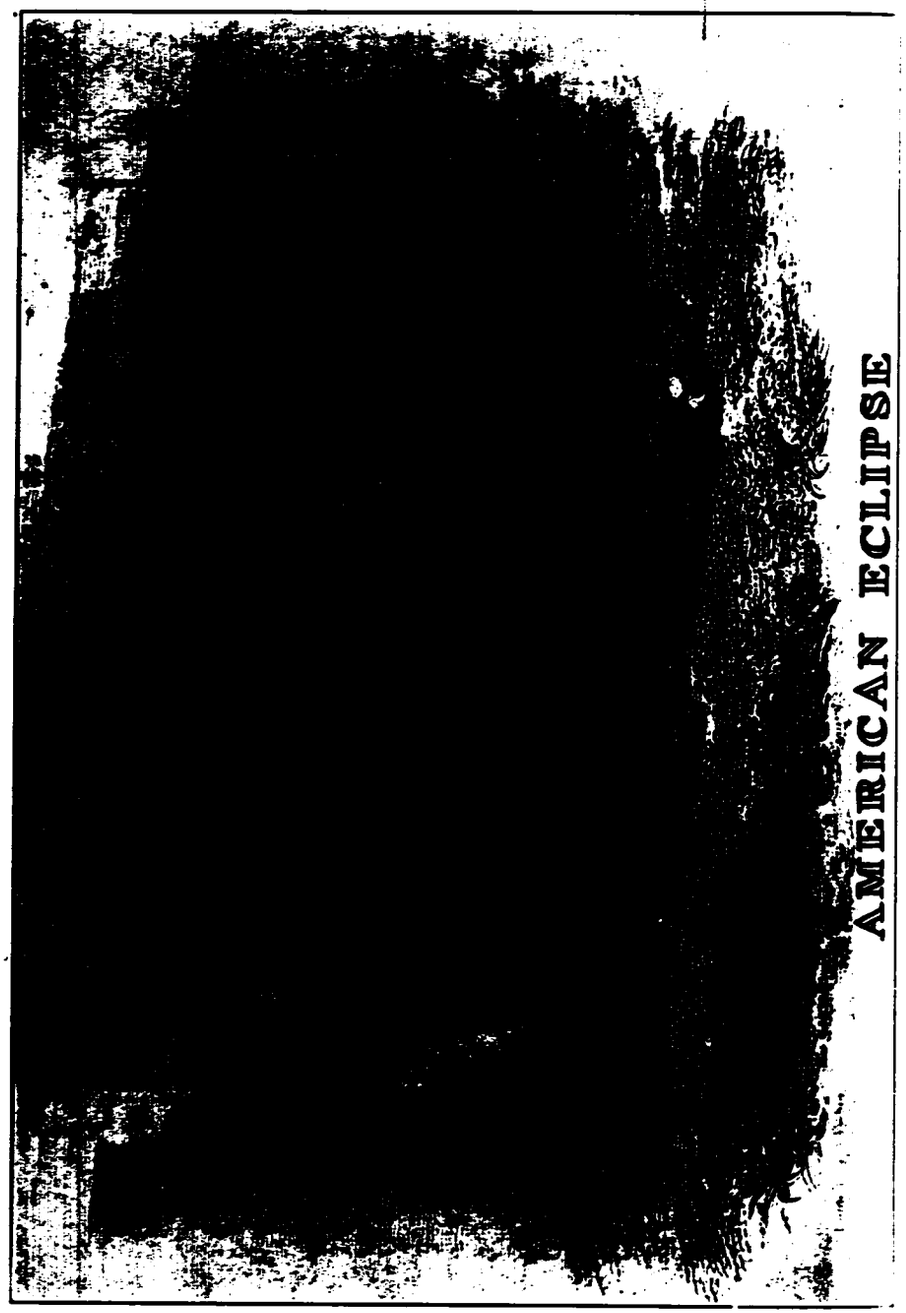
While there had been hundreds of thoroughbred horses in the Southern states long before and during the Revolution, the writer in making a brief description of horses and horse-sports in the annals of the early American cavalry has chosen *Sir Archy*, since he is the first horse pictured and listed in old records as having been used as a sire by American officers. *Sir Archy* was foaled in the spring of 1805 on the James River in Virginia by Colonel Archibald Randolph and Colonel John Tayloe. Colonel Tayloe played a significant part in the breeding of fine horses after the Revolution. *Sir Archy* was of a rich bay color and of imposing appearance, standing sixteen hands high. He had great power and substance. Many of the finest horses of the day—*Wrangler*, *Tom Tough*, *Palafox*, *Minerva*, *Ratray*, *Gallatin* and General Carney's celebrated *Blank*—all had to take the dust at the heels of *Sir Archy*. The turf of the time could present no equal to him and he was one of the finest stallions bred in this country. He was sired by the famous *Diomed*, and *Sir Archy* did for the turf stock in America what the magnificent *Godolphin Arabian* and *King Herod* did for Great Britain.

Cavalry officers during the first generation of independence were performing all sorts of remarkable feats of sportsmanship. The hardihood, daring and outdoor life of the period developed a specimen of manhood unrivaled to this day. A captain of the army at the turn of the century is recorded as having shot at a fox while running from him, and with a single rifle ball broke the fox's four legs. The same officer is credited with having accomplished with small coins, shoes, bric-a-brac and what not, every feat that gained undying fame for the wonder-woman shot, Annie Oakley, a hundred years later. Cavalry officers and men in the line of duty or training early in the beginning of our armed forces performed many feats of skill that generations to follow have not surpassed. A young lieutenant, while hunting in the Missouri prairies in 1826, ran on to a huge buck elk and gave chase. He fired his single shot, and the elk ran on. The officer pulled alongside and tomahawked the animal in the back and rump, and only after slashing away for three miles succeeded in bringing the stout fellow down.

Colonel R. B. Mason, stationed in the West in 1831, told of an unusual sport he concocted out on the upper Mississippi during the winter. The river froze over and he had his horse shod with special sharp-pointed shoes and had great riding over the ice chasing wolves. His dogs were often balked by slippery crevices, but he had straightaways and runs for miles and brought down many a wolf who had been unwillingly improvised into a simulated foxhunt by this imaginative cavalryman.

The American Eclipse

General Nathan Coles, widely known for his hospitality, reared a celebrated racer, *American Eclipse*, at Dosoris, Queens County, Long Island. The American counterpart of the famous *English Eclipse* was foaled on May 25, 1814.



Sired by the famous *Duroc*, the *Eclipse* grew to be fifteen hands one inch high. He is listed in most of the important race meetings of the time and won many purses for his owner. Like *Sir Archy*, the *American Eclipse* left a distinguished progeny. The fee a hundred years ago for the best stallions ranged from twelve and a half dollars to seventy-five dollars. This seems ridiculous considering the fee of several thousands of dollars paid today for stallions retired from racing after Derby and other turf successes.

A famous cavalryman in the United States in 1803 received a letter from a friend visiting in England, who wrote that there was "little prospect of purchasing horses to advantage here. So many Americans from Boston to Charleston are here looking for fine stock that many owners and dealers are boosting their prices from eight hundred to two thousand guineas." That Americans were intent upon getting fine strains for their horses is clearly indicated by the efforts of many horse enthusiasts traveling abroad a few years after the Revolution.

A humorous anecdote remains from the period about the origin of a famous running horse, *"Walk-in-the-water."* The negro groom of the favorite *Sir Archy* had gotten himself into debt for twenty-five dollars to another darky. The creditor pressed the obligation and the insolvent groom, with resourceful desperation, offered to wipe out the loan by giving his friend's mare a foal by *Sir Archy*. A remarkable first-rate four-mile horse resulted from this conniving.

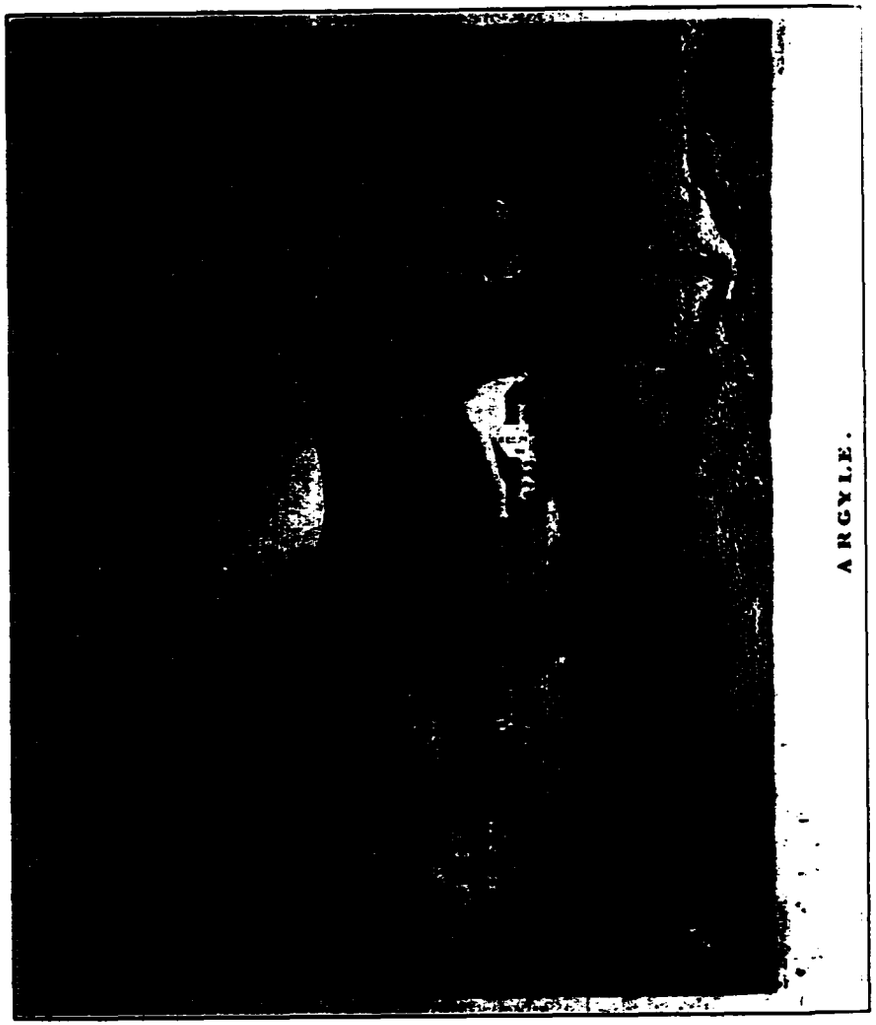
Argyle

One of the most beautiful and later to become celebrated horses raised in the country during this period was *Argyle*, bred by Colonel Edmund B. Duvall of Marietta, Prince Georges County, Maryland, in April of 1830. *Argyle* stood fifteen hands three inches. His loins were splendidly arched and well braced: few horses of the time could compare in depth of girth.

Argyle was sold to Major Pierce M. Butler of Columbia, South Carolina, in 1831, for five hundred dollars. Before five years he had refused an offer of fifteen thousand dollars. *Argyle* was a descendant of the world-famous *English Eclipse* and also of *Lindsey's Arabian*.

After coming into the hands of Major Butler, the number of victories of *Argyle* covered many pages of turf history. He was raced on nearly every track in the East. Tracks popularly identified with the racing world today were about this time swinging into full blast: New Orleans, Savannah, Havre de Grace, and scores of others in Virginia, Kentucky and in the North.

Great efforts were being made in the New World to put the turf on a footing with that of the Mother Country. Virginia at the end of the Revolutionary War had some of the stoutest and best stock of England. There had been races run for more than a half century with clean-bred horses of blood traceable to champions in the old country. Racing continued until shortly before our last war with England (1812); for a decade afterwards there was no racing



ARGYLE.

n the country. Breeding for the turf was practically suspended. A great confusion took place in the horse world and many valuable pedigrees were lost.

Due to the commendable work done by several army officers who had more than passing concern for horses, authentic records of horses with descent from thoroughbreds were preserved and dug up by Colonels Hoomes, Hoskins and Fitzhugh of Virginia, and Colonel McPherson of South Carolina.

Grey Eagle

Ninety years ago, *Grey Eagle* was the handsomest and most conspicuous performer on the American turf. His career was as brief as it was brilliant. It was this horse who decided the first race of national importance in the new country. Every state had its best champion, and *Grey Eagle* is reported as having "flown home" to victory.

He was bred by Major H. T. Duncan near Lexington, Kentucky, having been foaled April of 1835. He is the first Kentucky horse to ever run a four-mile heat west of the Alleghenies "in the forties." He ran the last mile of a four-mile race during his career in 1:48.

Grey Eagle saw but three campaigns during his short public life, but he earned four thousand six hundred dollars for his owner. Then his service was offered as a stallion in 1840 at one hundred dollars. His stock still remains in Kentucky and is of unusual promise.

An old tale still lives of an anged officer who, after a life spent almost entirely devoted to equestrian sport, while at the point of death requested a few legacies, including the use of an epitaph he had written:

"Here lies Captain Timothy Fox
who was unkenneled
at seven o'clock, November 5, 1768, and having
availed himself of many shifts through the chase
But at last not being able to get into any hole or crevice,
was run down
By Major Death's bloodhounds,
Gout, Rheumatism, Dropsy, Catarrh, Asthma and Consumption."

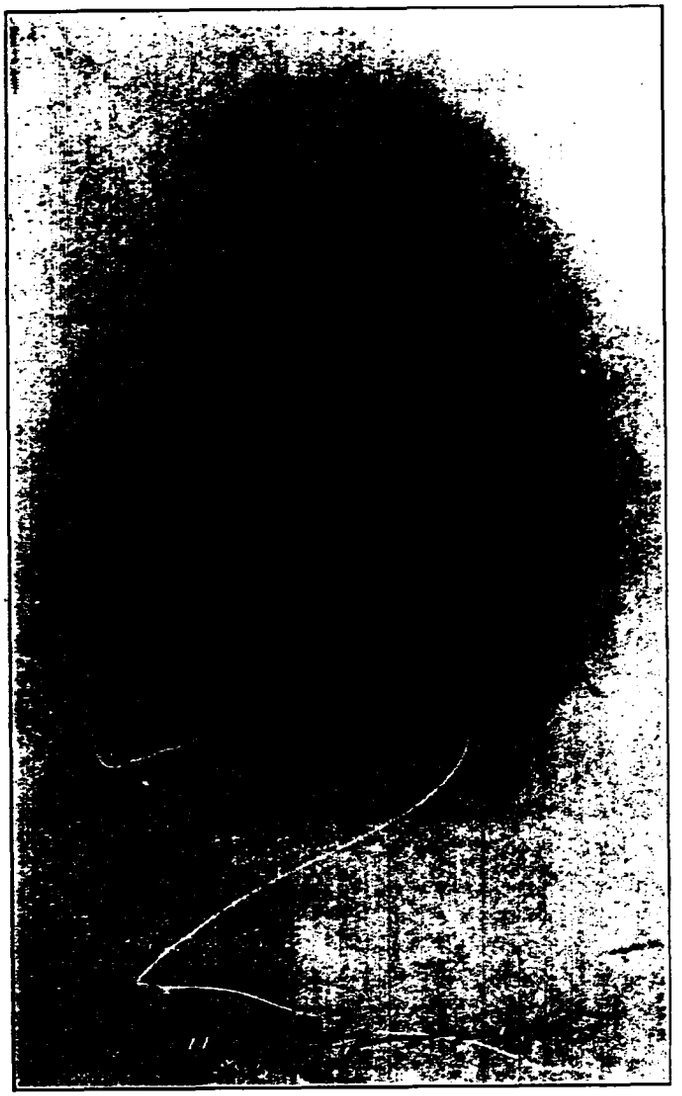
In August of 1842 several American cavalry officers, including General Patterson of Philadelphia, in company with visiting officers from England, set out to hunt buffalo in the far West. On the banks of the Missouri they had more or less success, as well, in the chase of elk, antelope, wolves, deer, and in wild fowl shooting. Many herds of buffaloes were encountered, and only after days of training their horses to approach the wild animals were they enabled to come close enough to shoot the hundreds they succeeded in bringing down.

On their return East they narrowly escaped losing their lives in a tremendous prairie fire caused by the Shawnee Indians, who had fired up to drive game to the narrow creeks. This blaze occupied an area of nearly a hundred square miles. Tales of the vastness of our undeveloped country at that time were carried back by the surcharged and impressed English military guests.

GREY EAGLE.

From 1845 up until the time of the Civil War all the races in the United States and Canada were recorded. The four horses chosen in this article, while not actively engaged in army pursuits, were yet raised by representative men closely affiliated with cavalry life who did much to increase the thoroughbred stock of the country. The first half of the nineteenth century gave America a running start in the place she now holds in the world of turfdom.

American army officers from the Colonial days prior to the Revolution through the Indian wars in the late sixties, with no other incentive than the sheer love of equestrian sportsmanship, are largely responsible for laying the foundation of what is now ranked among the finest horse nations in the world.



The Invincible Raider

By Lieutenant Colonel William Waller Edwards, *4th Cavalry*

INTO the council of war, which had decided upon the surrender of Fort Donelson, stalked, uninvited, a stalwart well-proportioned man about forty years of age, six feet in height, straight as an Indian and with a bearing which bespoke confidence in his own strength. Under his shaggy eyebrows glistened a pair of remarkable steel grey eyes whose fire seemed to burn into the minds of his listeners as he announced "that the army was not penned up, surrounded or whipped," adding to this statement his downright refusal to surrender his part of the garrison.—the cavalry regiment which he had raised, armed and equipped from his own purse, at the beginning of the war.

The speaker was Colonel Nathan Bedford Forrest. The council refused to reconsider its decision to surrender, but finally gave Forrest permission to withdraw his command. Selecting several of his most reliable scouts, he forthwith found a line of retreat over a slough next to the river where the only traces of the enemy were some abandoned camp fires. Though the night was dark and the ford uncertain, the water at times reaching his horses' flanks, he promptly took a risk no greater than those he met hundreds of times later and, before the flag of truce was sent from Fort Donelson, he had led his men safely through the enemy lines and escaped.

If the rest of the command had profited by his advice and inspiring example it is probable that at least two-thirds of the ten thousand Confederates, who were surrendered unconditionally to General Grant on February 16, 1862, at Fort Donelson, could have been saved to the south to fight at Shiloh.

Forrest at Shiloh

Sherman's acquaintance with Forrest began at Shiloh for, after the second day's fighting, it was Forrest who, by one of the bold and desperate attacks for which he was afterwards so famous, completely checked the vigorous pursuit by which Sherman had expected to annihilate the Confederate army fleeing toward Corinth. In his report to Grant, Sherman says: "I ordered cavalry to examine both roads leading toward Corinth and found the enemy on both. * * * I ordered General Wood to advance the head of his column cautiously on the left hand road, while I conducted the head of the Third Brigade of my Division up the right hand road. The enemy's cavalry came down boldly at the charge, led by General Forrest in person, breaking through our line of skirmishers, when the regiment of infantry without cause, broke, threw away their muskets and fled. The ground was admirably adapted for a defense of infantry against cavalry, being miry and covered with fallen timber. * * * The check sustained by us at the fallen timber delayed our advance so that night came upon us before the wounded were provided for

and the dead buried and our troops, being fagged out by three days' hard fighting, exposure and privation, I ordered them back to their camps where they now are."

Forrest's simple tactics on this occasion were these: Finding what he considered a favorable opportunity for the aggressive action, in which he gloried, he made a stand until he had rallied around him a force of some eight hundred horsemen. Counting these as sufficient for his needs, he attacked Sherman's Brigade just after it had crossed a stream. A small part of his men, having formed dismounted behind a ridge, waited until the federal line had arrived at twenty paces and then threw them into disorder by a quick unexpected volley from their shotguns, while Forrest himself led the bulk of his force mounted to dash in among the disordered blue lines, completing their discomfiture with sabres and revolvers.

The spectacle of the giant leader himself must have been very vividly impressed upon Sherman's men that day, for Forrest's horse became unmanageable from excitement and charged wildly through the enemy's main line and into his reserves, where Forrest suddenly found himself a conspicuous target surrounded by a bristling hedge of bayonets. By sheer iron will he turned his horse, now covered with the blood of several wounds one of which afterwards proved mortal, and though carrying in his thigh a musket ball received at point blank range, he plied his sabre and pistol alternately with either hand (being ambidextrous) and cleared an avenue of safety through the mêlée back to his own lines. The battle of Shiloh took place on April 6 and 7, 1862, and the severe wound which he received there incapacitated Forrest for many weeks.

The Murfreesboro Raid

Summer had begun when he came back to Chattanooga to find that his old regiment—the regiment that he had organized and equipped—had been taken away from him and he was ordered to raise a new cavalry brigade. Undaunted by this disappointment, he set so energetically to work, that within a little over a month he had organized this brigade and was moving on a raid against a detached Union force at Murfreesboro, placed there to guard the Chattanooga railroad just completed

"To reach this place," says Wyeth, "he marched one hundred miles, crossing the Tennessee River and three formidable mountains"—a long forced march with green troops! So guarded and rapid was his approach that at daylight on July 13, before his presence was suspected by the enemy, he was riding into their camps. Discovering the Federals in three separate positions, he quickly interposed a sufficient number of his troops between their central column and the two outlying bodies to hold these at bay. With the remainder of his force he assulted and carried the central position, capturing the Commanding General as well as the Union troops engaged at this point. He then turned his entire attention to their right wing which he also overwhelmed and caused to surrender.

The other detachment with a battery of artillery he captured by sheer bluff to which he always resorted in the interest of economy of force whenever it would work. After the war when a less famous raider, Morgan, asked Forrest how he had captured Murfreesboro, the latter made the famous remark which incorrectly quoted is better known perhaps than anything else he ever said: "Oh I just took the short cut and got there first with the most men."

The Raid into West Tennessee

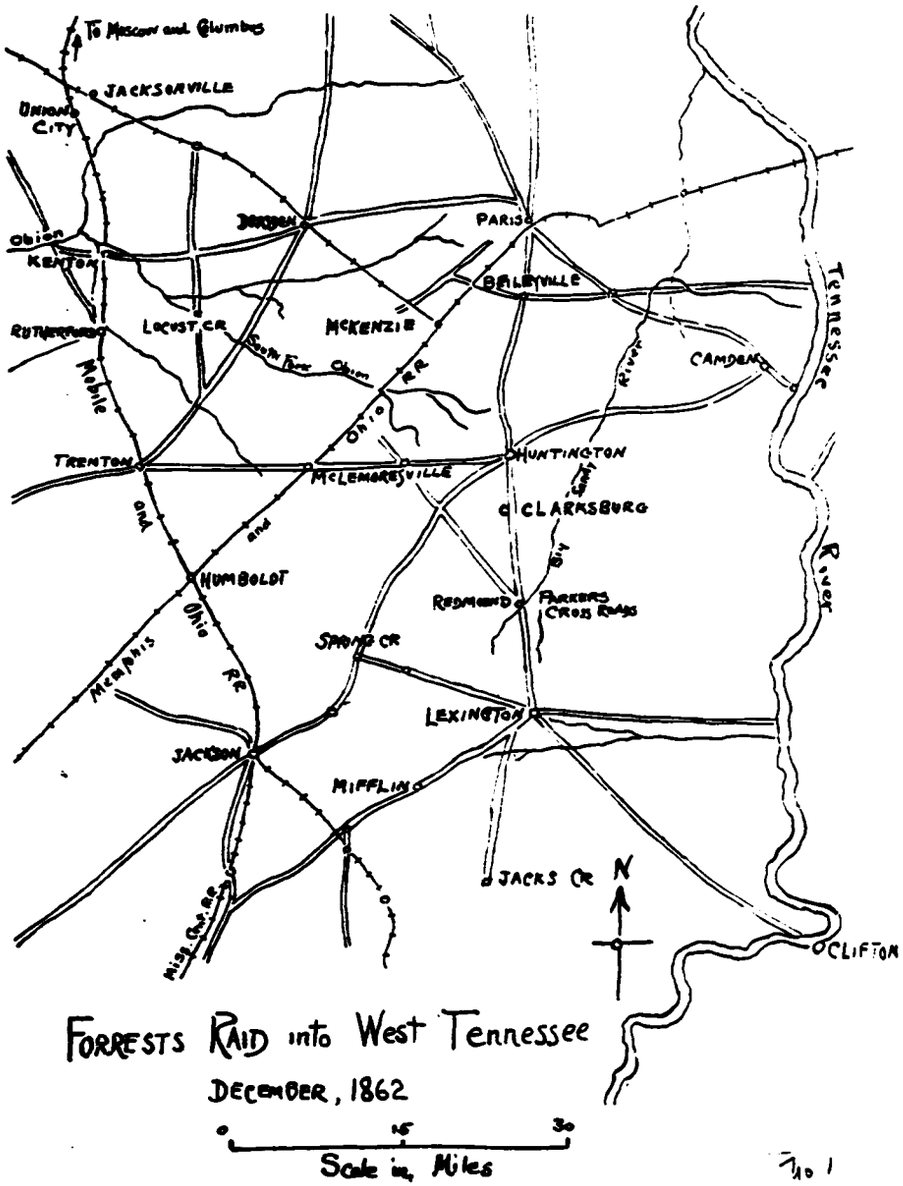
In December, 1862, Forrest found himself a Brigadier General without a brigade. He received orders from General Bragg, to whom he had been directed to report in person, to turn over the brigade he had organized and equipped at Chattanooga to some one else and to establish headquarters at Murfreesboro, there to organize another brigade. Before this—his third new command—was either organized or equipped, he was ordered to cross the Tennessee River and make a raid into West Tennessee. A man of less earnestness, resolution and devotion to a cause, would have been completely discouraged. As it was he never forgave General Bragg for taking away his command and imposing upon him this unreasonable hardship.

Rosecrans had then relieved Buell and was opposed to Bragg in the vicinity of Murfreesboro. Grant had launched his campaign against Vicksburg, the only point on the Mississippi River held by the Confederates. Grant's first plan was, in conjunction with Sherman's movement by transport down the Mississippi River from Memphis, to march overland against Vicksburg, depending for his supplies on his advance base at Holly Springs, Mississippi, and his line of communications, the Mobile and Ohio Railroad. It was against this railroad that Forrest launched his raid. (See Sketch No. 1.)

The Tennessee River, the first obstacle which he had to overcome, was in this portion of its tortuous course a navigable stream about three-quarters of a mile wide and was patroled by Grant's gunboat sent there to nip in the bud just such incursions as that of Forrest.

The territory which the Confederate raider was about to enter was isolated, lying between two Union armies, and was filled with Union sympathizers and guarded by Union troops. On the other hand a successful outcome of Forrest's enterprise would mean many needed recruits and captured supplies. The country was intimately known to Forrest and many of his men, and if there were Union sympathizers in it, there were also Confederate sympathizers, for West Tennessee comprised, from a military standpoint, a sort of borderland between the North and the South.

The recently organized "Forrest Brigade" consisted of these organizations: Starnes' Fourth Tennessee, Dibrell's Eighth Tennessee, Biffle's Ninth Tennessee, Russell's Fourth Alabama regiments, Cox's Tennessee Battalion, Woodward's two Kentucky Companies, Captain "Bill" Forrest's Scouts and General Forrest's own escort, on which he greatly relied as a last reserve in an emergency. To this must he added a famous battery of seven pieces,



nder Captain Morton, a total of twenty-one hundred men. Napiers' Battalion, hich afterwards joined him at Union City, increased the number by four undred. This command, comparatively small when we consider the mission hich lay before it, concentrated at Columbia, Tennessee, the first week in ecember, 1862.

Winter had already set in and with it bad roads and uncertain weather. he men were very poorly armed. Forrest's own purse was empty and the onfederate government had not the means to properly equip them. About ne-half of the command had the squirrel rifles and shotguns they had brought rom home. Dibrell's regiment alone had four hundred flintlock muskets, any of them flintless and it is probable the ordnance pertaining to the other rganizations was not better. In fact, as has already been intimated, one immediate and important reason for the expedition was to force the enemy to provide the stock of arms and equipment they were unable otherwise to obtain.

Near Clifton in a narrow slough on the east side of an island which sheltered it from the main current of the Tennessee were concealed two small flatboats, which Forrest had caused to be constructed and placed there by a party of pioneers sent forward with some selected troops. About the middle of December, he set forth with the rest of his command and after an expeditious march arrived at the river in the vicinity of the flatboats. A line of sentries was placed along the river bank for miles sufficiently close together to give quick relayed signals of an approaching Yankee gunboat. The troops were kept well back from the river and only brought up in small numbers as it came their turn to enter the flatboats. In case of danger the island acted as a screen, the flatboats being run into the slough as soon as a warning was given. Each boat held twenty-five men and horses. Taking advantage of the cover of darkness, the brigade crossed safely in two nights.

General Forrest, with such a large command could not keep his movement a secret very long, nor was it a part of his plan, after crossing the river, to attempt to do so. On the contrary, he soon put into effect his favorite stratagem of spreading the information abroad that he had arrived with a very greatly exaggerated force. He did this very craftily in various ways, such as causing kettledrums to be sounded along his march to indicate that he had with him a large force of infantry. Having captured a number of Union sympathizers he placed them under guard within the limits of his camp and had his troops march by several times, first as infantry, then as cavalry in a continuous column and, when he thought the prisoners were properly impressed, he saw to it that they found no difficulty in escaping to spread the news. Whether his primary object was to intimidate in advance the Union garrisons along his line of march or to detach an many men as possible from the Union front, especially Grant's army at Vicksburg, is not quite clear, but he accomplished both. Union dispatches reported Forrest's cavalry as several times larger than it was and also reported, as Forrest had hoped, the presence with it of a whole division of infantry.

General Forrest, having defeated a small force of Union cavalry stationed

at Lexington and captured its commander, Colonel Robert G. Ingersoll, moved at once to attack the Mobile & Ohio Railroad, Grant's line of supply, before the latter could hear of his arrival and concentrate troops for its defense, which he would undoubtedly do. Keeping a force always in reserve, Forrest managed to attack simultaneously several places which were easily captured, as they were garrisoned by small detached forces. The way was then clear for the capture of supplies and the destruction of the railroad, which he speedily accomplished. By these leap frog tactics each regiment conducted its own little separate foray, the brigade afterwards reassembling at a rendezvous previously agreed upon. To prevent Federal reenforcements during these operations, the reserve either attacked vigorously where reenforcements were expected to be or it was kept in a position of readiness to guard the rear.

By December 23, Forrest had crossed the Kentucky border and was continuing his advance north, various detachments being sent out destroying railroad bridges and tearing up track. On December 24, he made the following report by courier to General Bragg. "We have made a clean sweep of the Federals and the roads north of Jackson. Reliable reports show that they are rapidly sending up troops from Memphis." "The clean sweep," says Wyeth, "meant the destruction of the Mobile & Ohio Railroad from Jackson, Tennessee, as for north as Mason, Kentucky. With one exception, there was not a bridge left on this line, not a yard of trestle work was standing, not a culvert left undestroyed and the rails over much of this distance had been completely ruined by building fires along the track."

Crossing the Obion

When the news that Forrest had crossed the river and was menacing the Union line of communications reached Grant, he instantly sent a large force out to capture him. Forrest had successfully accomplished his raid and was retracing his route along the railroad from Union City to Dresden and McKenzie, when he had his first intimation of this force, in the report that a heavy column of infantry was moving in pursuit from Trenton towards Dresden. He at once detached Biffle's regiment to prevent surprise from that source, but continued his march to Dresden where, nothing daunted, he destroyed more government stores and railroads, encamping there on the night of December 26. On the 27th he moved on as far as McKenzie, where he received the intelligence from his scouts that two brigades of infantry were moving in that direction, the inference being that they intended to intercept him if he attempted to return to his original crossing of the Tennessee at Clifton.

The Obion flowed as a barrier athwart his front, the fords being guarded by Union troops and every bridge except one destroyed. That one, overlooked or neglected, was by an old abandoned country road half-way between McKenzie and McLemoresville and was considered so unsafe as to be impassable.

If Forrest had not been upon his native heath he might never have known of this bridge on which he decided to stake his fate.

He arrived there through a long miry "bottom," shortly after dark, December 27, 1862. By the light of fat pine torches the whole command, from private to general, forgetting their previous sleepless nights, labored incessantly with saw, axe and shovel, but it was not until the sun was well up in the heavens the next morning that they succeeded in repairing the treacherous road and rotten bridge.

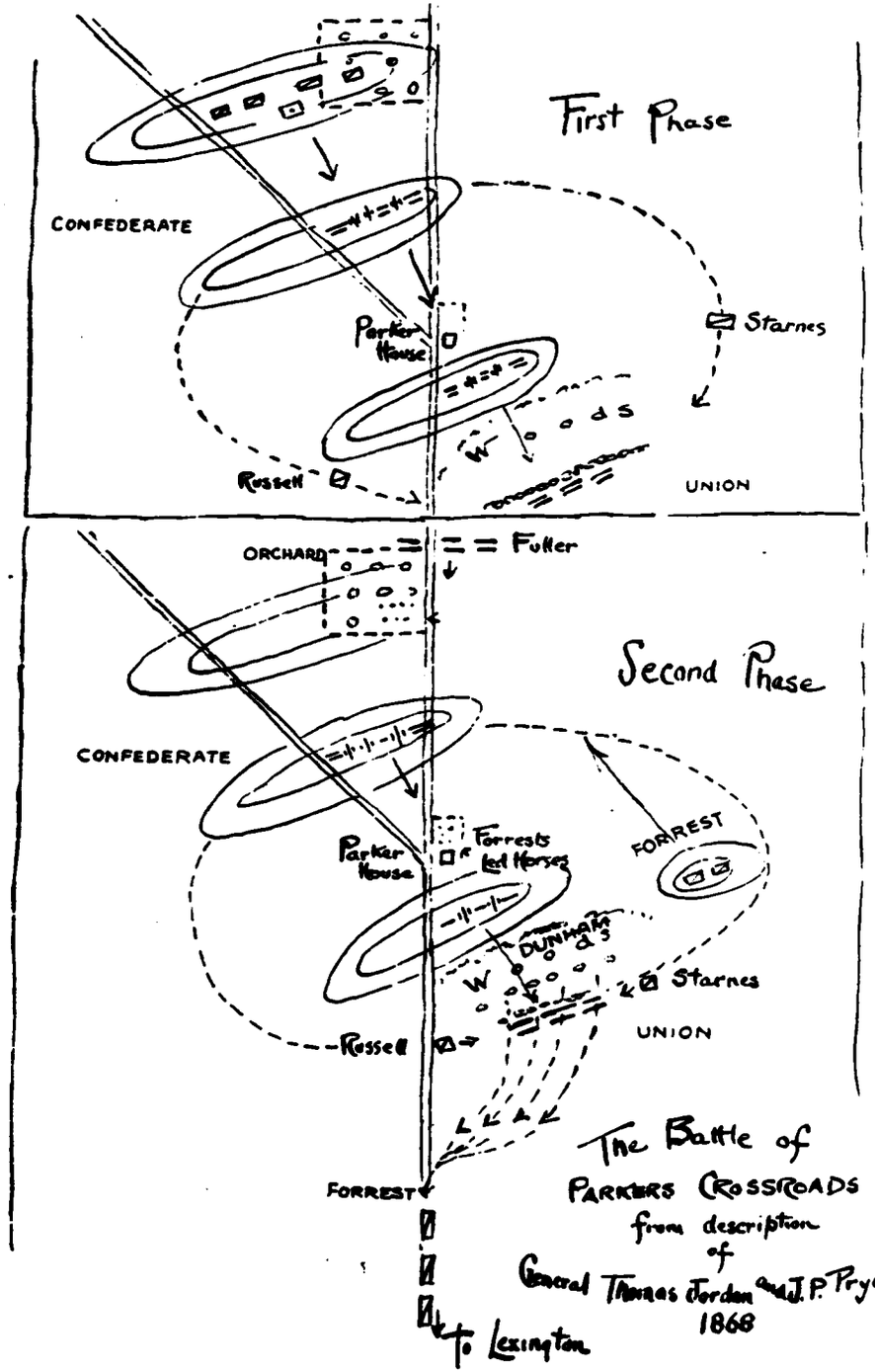
It is startling to consider that, during all of the long hours while Forrest was laboring to extricate his troops from the deadly trap in which they seemed to be caught, a whole Union bridage under General Dunham, lay just five miles south of him at the sleepy little village of McLemoresville and that a few miles west was another Union brigade under General Fuller, both there with the single object of capturing the wily Forrest. But blissfully ignorant of Forrest's proximity, an ignorance due to the darkness of night in the Obion bottoms and the lack of cavalry and apparently any sort of reconnaissance, these two brigades were planning to unite at Huntington, in his pursuit.

In building the bridge across the Obion, Forrest had worked as hard as any of his men; his physical endurance was unbounded and he inspired every soul under him on this occasion as he did on many another with his indomitable zeal, energy and determination, which rose higher as hazards increased. He himself actually drove the first wagon over the completed structure. He then took the road to McLemoresville, pausing awhile in the friendly shelter of the Obion bottoms until the unsuspecting Dunham passed through the town on his way to Huntington.

The problem now before him was to get back across the Tennessee. His choice lay between two alternatives; the first was to make a dash for a crossing. He had left his flatboats concealed in the slough at Clifton, now forty miles distant. All other means of crossing had in all probability been destroyed by the enemy.

The other alternative was to give battle to Dunham's and Fuller's brigades separately and to cut each to pieces before they had a chance to unite, crippling them beyond all chance of pursuit. He knew the country around him was rapidly filling up with Union troops and that every hour's delay increased the probability of his being caught in a trap. He must have realized also the exhausted condition of his men and horses from long forced marches, many skirmishes and insufficient rest and sleep. But this consideration was one which he apparently never allowed to hamper him throughout his entire military career. For his purposes, his men were not common clay, but were cast in iron mould, and in his hands iron men they became.

He unhesitatingly chose the second alternative. Biffle's regiment was still absent but even with this numerical handicap he was almost equal in strength to either of the two Union brigades and had beside a preponderance of artillery. The Union General Dunham was so impatient to catch Forrest that, instead of waiting at Huntington for a junction with Fuller's brigade as he was expected to do, he continued south towards Lexington to cut Forrest



ff before he reached the river. Forrest set out from McLemoresville on the road oward Lexington determined to attack Dunham.

The disposition of the Union forces at this time was as follows. Dunam's brigade was marching south from Huntington towards Lexington. Fuller's brigade was marching towards Huntington from the west and still nother brigade under General Sullivan was marching from Trenton, the last wo with the intention of joining Dunham. Early on the 29th, General Sullivan wired General Grant from Huntington: "I have Forrest in a tight place: he gunboats are up the river as far as Clifton and have destroyed all the oats and ferries, my troops are moving on him in three directions and I hope with success."

The Battle of Parker's Crossroads

Forrest's plan was to allow Dunham's brigade to slip by him and then attack it upon open ground favorable to his own artillery, making Dunham face northward and thus driving in a wedge which would force him farther away from the other Union brigades converging on Huntington. A company of scouts commanded by "Captain Bill" Forrest, one of the General's brothers and known to their comrades because of their foraging talents as "the forty thieves" had obtained contact with Dunham the previous night and Forrest, as soon as he had received information from this source that Dunham had turned south, sent another detachment of four companies to take the road to Clarksburg, get in Dunham's rear, look for and retard the advance of Fuller's brigade and give notification of his approach. General Forrest, continuing his march from McLemoresville, soon came in contact with Dunham's brigade, as he had anticipated, in the vicinity of Parker's Crossroads. (See Sketch No. 2.)

His first move was to place his artillery. As he expected to use his riflemen later in the day on Fuller, he wanted to save them as much as he could. His idea of artillery tactics was to use it as his men did their shot-guns. He personally saw to the posting of the guns ahead of the dismounted line and with but scant support, about four hundred yards from the enemy. He himself supervised their action throughout the day. The Confederate line extended partly through an open undulating field and partly through a peach orchard on the Huntington road. Forrest, as was his custom, kept two regiments mounted for instant readiness, one on each flank.

An artillery duel ensued which Forrest watched with keen interest. His battery of eight guns supported by the dismounted cavalry—reversing ordinary tactics—opened up a scorching fire on the Union line, which fell back in confusion. The Confederate aim was so accurate and well timed that one of the Union guns was quickly dismounted, much to Forrest's satisfaction, as this gave him a greater preponderence of artillery. The Union line made ineffectual efforts to regain their lost position but again fell back, this time to a stone fence in a heavy grove of timber south of the crossroads.

At this auspicious moment, Biffle arrived and Forrest launched his final attack. Starnes and Russell, whose regiments had remained mounted, one on each flank, now made a double envelopment in gallant style, capturing the remaining Federal guns and the entire wagon and ammunition train. The Federal ranks crumpled and white flags were springing up in token of surrender all along the line when a thin scattering fire succeeded by the roar of artillery burst forth from the peach orchard, where the Confederates had taken their first position early in the morning. It was the appalling truth that the four companies, which Forrest had sent to look for Fuller, had taken the wrong road and lost their way and it was Fuller's guns which had opened upon the Confederate rear. Forrest, who was himself such an adept at surprise now suffered one as complete as any which he had ever planned.

He was first apprised of his dilemma by a staff officer who dashed up and reported in an excited tone, "General, a heavy line of infantry is right in our rear. We are between two lines of battle. What shall we do?" The instant answer was, "We'll charge them both ways." Forrest rode forward, grasped the situation at a glance and plunged into whirlwind action. Those of his dismounted men who could reach their horses he order to mount, gallop through Dunham's disordered ranks and take the road to Lexington. At the head of his escort and what men he could quickly gather near him he threw himself between Fuller's brigade and his own departing troops. Rallying his handful at a nearby hill he swooped down in repeated charges upon the oncoming Fuller, until his advance was effectually checked.

Starnes and Russell, in the meantime, continued their hammering at the flanks of Dunham's demoralized lines until they had destroyed every vestige of danger from that quarter. By this time Forrest's main forces had cut their way through and were well on their way to Lexington nor did they neglect to carry with them their captured wagon, artillery and prisoners. Starnes and Russell followed. Forrest with the escort and the stragglers he had picked up formed a rear guard. As soon as his column was fairly under way in its orderly though impetuous retreat, he detached a small force to make a feint attack on Colonel Fuller's left flank which, entirely unexpected, caused that harassed and bewildered commander to remain in line of battle until the next morning.

By daylight Forrest was twenty-two miles nearer the river where he paused long enough to parole his prisoners, this being his practise rather than to carry them with him for any considerable time and have them impede his progress. He now sent forward another brother, Major Jeffrey Forrest, with an advanced detachment to Clifton to raise and drain the flatboats he had sunk there for concealment, he and his troops following as soon afterwards as the condition of his jaded horses would permit. Enroute he encountered, charged and dispersed a Federal cavalry regiment under Lieutenant Colonel Breckenridge, which had come from the direction of Corinth and Purdy to prevent his reaching the river.

Recrossing the Tennessee

On reaching the river he gave rear guard instructions to one of his regiments, reenforced by a section of artillery, to fortify a defensive position with rails and logs and hold it to the last, and at noon commenced crossing on the two boggy flatboats. He sent over the artillery first; he then not only placed batteries on the farther bank of the river in such a way as to protect the crossing, but he sent one gun up and another down stream as a precautionary measure against inquisitive and belligerent gunboats. The flatboats were utilized for arms, equipment and supplies and for carrying as many men as they would hold in addition thereto. Other men braved the icy waves on fence rails and logs ingeniously constructed into rude rafts, on which, although not particularly seaworthy in a treacherous current, they made their way across as best they could without waiting for the crowded boats. The horses were taken to a steep bank where they were turned loose and pushed into the river, being piloted across by one of their number led by a rope from an improvised raft.

It must have been an enlivening spectacle and one engrossing to any cavalryman. As many as one thousand animals were in the water at one time, and the safe crossing of two thousand men and horses, six pieces of artillery and a train of captured stores was accomplished in about six hours. Forrest's campaigns are replete with river crossings and this one may be taken as a typical illustration of his amazing methods.

Though he afterwards made half a dozen different successful raids into Western Tennessee against heavy odds, none ever eclipsed this. He brought out more men and horses than he took in and they were now fully armed and equipped by an unwilling enemy, but the greatest gain was in morale, the ripening of the raw native courage of his men by hardship, battle and victory until it was invincible.

This raid had the effect of paralyzing Grant's line of communications for several weeks and, in conjunction with a raid made about the same time by Van Dorn on Grant's advance base of supplies at Holly Springs, Mississippi, caused the temporary abandonment of the campaign against Vicksburg. It demonstrated to General Grant the impossibility of maintaining so long a line of road over which to draw supplies in an enemy country. "I determined therefore," Grant says in his Memoirs, "to abandon my campaign into the interior with Columbus as a base * * * making the Mississippi River the line over which to draw supplies."

The records of the Confederency show that the following August (1863) General Forrest forwarded directly to President Davis an original scheme for interrupting the navigation of the Mississippi.—a scheme which was lost in the current of other affairs and never put into execution. It was briefly, to recruit a force within the enemy's lines using as a nucleus about four hundred and fifty men of Forrest's own command and his own escort—men who knew the country from long residence and were familiar with the river. These

would be distributed from Vicksburg to Cairo to man long range artillery "with plenty of ammunition and one pack mule to every ten men." "I am confident," he says, "with my knowledge of the river bottoms as well as the knowledge my men have of the country from Vicksburg up, we could so move and harass and destroy boats on the river that only boats heavily protected by gunboats would be able to make the passage." It seems very probable in the light of his later experience with Yankee gunboats on the Tennessee, that this promise could have been carried out and, while this experience does not belong here, chronologically, it may be recounted now as an illustration of his methods.

Cavalry vs. Gunboats

In 1864, when Sherman's base of supplies was moved to Johnsonville, Tennessee, on the Tennessee River, his line of communication at once invited Forrest's vigorous attention. He stationed several batteries of three-inch guns, well masked and supported by troops, at different points along the river where they could observe and command stretches of water from one to two miles in extent. These ambushes being prepared, they waited for unsuspecting gunboats or transports to pass by. When a richly laden prize was sighted she was usually allowed to pass one of the masked batteries and so became the target of two. Then shells burst unexpected upon her from each side while Confederate sharpshooters from another bushy covert made quick work of any blue coats indiscreet enough to show themselves upon the deck.

One transport, the Mazeppa, in this predicament made for the opposite shore where most of the crew with the exception of the captain escaped to the woods. The Confederates saw their quarry effectually checked but apparently hopelessly out of reach as there were no small boats at hand with which to cross over and obtain possession of her. At last a brave Confedrate cavalryman, whose name unfortunately we do not know, strapped a six-shooter to his shoulder to keep the powder dry and, seating himself on a piece of drift wood with a plank for an oar, paddled across and received the surrender of the captain who generously leaned down and helped him over the gunwale. Mindful of the Confederate guns, which were still frowning upon them from the opposite bank, the captain with the few remaining members of his crew directed the boat and the two barges of supplies in tow to the other side where she was received amid wild Confederate yells. By such means as this Forrest contrived to capture a number of Union gunboats and transports, a feat which General Grant pronounced "remarkable for cavalry."

The Defeat of Smith's Cavalry

To return to the course of our narrative, in October, 1863, General Forrest was relieved from duty in the army of General Braxton Bragg and tardily given an independent cavalry command in Tennessee and Mississippi. Turning his attention from Grant, it now became Forrest's predominating ambition to cut Sherman's line of communications. Both General Grant and Sherman

who up to this time had appreciated his genius more than the Confederate War Department, became alarmed and steps were immediately taken to appoint a commander and organize a Union force to oppose him.

Grant, by the capture of Vicksburg having completed the possession of the Mississippi and cut the Confederacy in two, now contemplated dividing the eastern half of the southern part of it by a movement of Sherman's army from Mississippi and West Tennessee into Alabama for the capture of Selma and Mobile. He directed Sherman to concentrate at Vicksburg during January, 1864, with twenty thousand effective men and move at a given time through Jackson directly to Meridian and to have in addition a large cavalry force proceed from Memphis, traversing the state of Mississippi in a southeasterly direction, and unite with him at Meridian. Then the combined army was to move onward, capture Selma and there cripple the south by destroying the arsenals and foundries from which she was drawing her supplies. Sherman was then to march on Mobile, which he would open to the Union navy—a far reaching and carefully laid plan.

General Sherman fulfilled the part of the plan for which he was personally responsible and at once marched on and captured Meridian. Then he sat down and waited long and impatiently for the cavalry, from which he heard no news. "A chief part of the enterprise," states Sherman in his Memoirs, "was to destroy the rebel cavalry commanded by General Forrest, who was a constant threat to our railroad communications in middle Tennessee."

Sherman had given command of his cavalry column to General William Sooy Smith. "I explained to him personally," he says, "the nature of Forrest as a man and of his peculiar force, told him that on his route he was sure to encounter Forrest *who always attacked* with a vehemence for which he must be prepared and after he had repelled the first attack he must in turn assume the most determined offensive, overwhelm him and utterly destroy his whole force. I knew that Forrest could not have more than four thousand cavalry." General Smith proved procrastinating from the start. He moved out ten days later than Sherman's orders had demanded, his excuse being heavy rains and swollen streams.

Forrest, however, pushed through with his main command and, although at this time not ready to fight, he as Sherman predicted actively engaged the Federals, hoping to draw them into a pocket formed by the confluence of the Tombigbee and several smaller streams. Forrest's men and horses were as usual jaded and hungry, a condition to which they had long since grown accustomed but were in lighter marching order than Smith's column which was encumbered by a large pack train.

General Smith says in his report, "My main body moved eastward * * * exaggerated reports of Forrest's strength reached me * * * flank attacks constantly threatened * * * I determined not to move my encumbered command into the trap set for me by the rebels." Forrest's same old tactics! Forgetting that his mission was an aggressive one, an oversight for which

General Sherman never forgave him, General Smith (again quoting his own words) "determined to move back and draw the enemy after him that he might select his own position and fight with advantages in his favor." This retreat continued until the command had reached Okolona where the campaign abruptly culminated in a battle, a brief affair, fought in an open prairie in which every man on each side, according to one account, was in plain view.

Forrest came up personally with a small reserve at a critical time, discovered a weak spot in the line held by Grierson's cavalry and, by one of his lightning charges, struck and overthrew his adversary. Speaking of this affair later he made the brief comment, "I saw Grierson make a bad move and then I rode right over him." Grierson's stampede at Okolona precipitated the defeat of Smith's command and resulted in his retreat through a most difficult country.

During the pursuit and while approaching a Federal rear guard position, General Forrest had his horse shot under him. A few moments later, the fight being a sharp one and so close the contact which Forrest kept, his second horse was killed. He then called for his most famous war horse, "*King Philip.*" This horse, as well known to Forrest's command as the General himself, was a superb iron grey. It is said that in battle he would lay back his ears, snap his teeth and with a violent show of temper rush at the enemy, showing, as Forrest's men fondly believed, that he too had caught the spirit of his master.

Sherman, after waiting at Meridian until hope of Smith's arrival was abandoned, perforce relinquished his campaign against Selma and Mobile and ordered his troops back to Vicksburg. Very shortly after Forrest had checkmated Smith he made another bold raid between the Mississippi and Tennessee Rivers as far north as Paducah, Kentucky, where he drove the Federals on their gunboats.

It is to be noted that in all his raids Forrest had with him many raw undisciplined troops, such as followed him into West Tennessee in 1862. In the battle of Okolona a considerable proportion of his troops had never been under fire before; *not five hundred of them* had ever fought a battle under their present leader; about three thousand, the vast majority, had been brought out of West Tennessee, his favorite recruiting ground, only about six weeks before. Surely no greater test could be applied to leadership.

Forrest and Sherman

Sherman was now ordered to Nashville and thence to Chattanooga to take command of the army of Tennessee to continue operations southwards towards Atlanta. But Forrest, whose whereabouts and intentions were always problematical, continued to be a thorn in his flesh.

Forrest had at this time thoroughly established his reputation as an invincible raider and had given both Grant and Sherman many anxious moments. Sherman was in constant fear lest he would collect a heavy cavalry command, cross the Tennessee River as he had done before and break up the railroad below Nashville. It is a matter of profitable speculation what might have been the fate of Sherman if the Confederate government could have placed at this time at Forrest's disposal a cavalry force commensurate with his ability and adequate to fulfill his cherished plans of irreparably severing the Union line of communications. Sherman would have found himself without supplies with an unbeaten army in his front and the march to the sea might never have been accomplished.

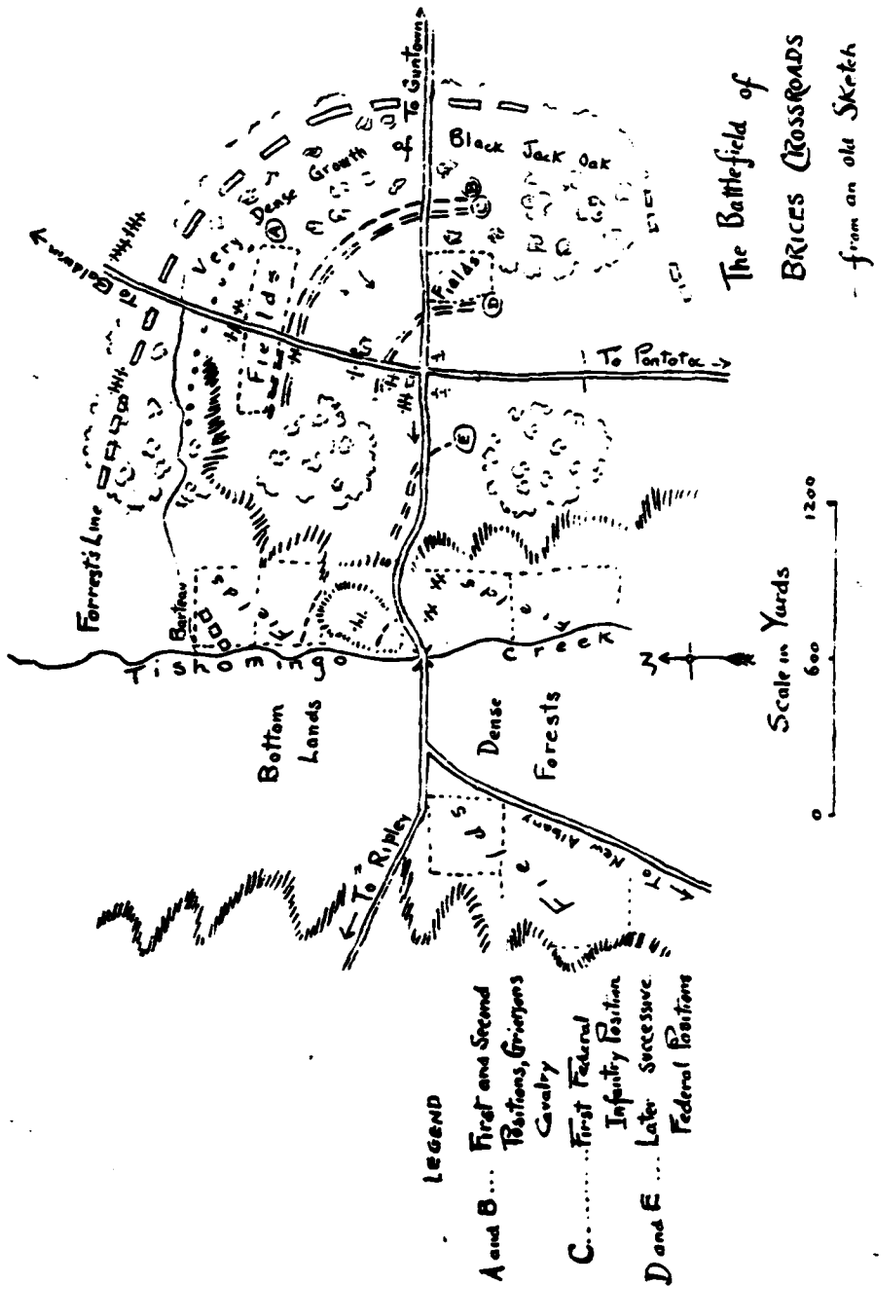
Forrest was ever on the move; he seemed to have an uncanny ability for missing out weak stragetic points of the enemy and to be ever on hand to swoop down upon them like a bolt from the blue before even his proximity was suspected. This was of course due to rapidity of his marches and the perfection of his reconnaissance. But if we analyze further we find that a complete and seemingly intuitive knowledge of the capabilities of his men and horses and strangely enough of the principles of war which he had never studied, his tremendous physical endurance, exhaustless energy and indomitable will are factors which cannot be denied. There can be no wonder, therefore, that the official records of the Civil War bear repeated evidence that Sherman gave much of his personal attention to the capture of Forrest and his command.

The intensity of Sherman's desire to do this and the importance which he attached to it may be clearly appreciated from the following message: On the 14th of June, 1864, General Sherman telegraphed to Secretary of War Stanton: "I will order a force made up to go out and follow Forrest to the death if it cost ten thousand lives and breaks the treasury. There will never be peace in Tennessee until Forrest is dead."

On June 24, 1864, General Sherman sent a message to President Lincoln as follows: "Sir:—I have ordered General A. J. Smith and General Mower from Memphis to pursue and kill Forrest, promising the latter in case of success my influence to promote him a Major General * * * should accident befall me. I ask you to favor Mower, if he succeeds in disposing of Forrest." It may be here stated that this campaign like the others against Forrest met with no success. But we have again looked ahead of our narrative and must go back.

Battle of Brice's Crossroads

On June 1, 1864, General Samuel D. Sturgis, who burned to redeem himself because of a previous and fruitless attempt to catch Forrest, left Memphis by Sherman's orders with eight thousand of the best troops that could be selected. Not only was the force composed of picked men, but they were armed with repeating rifles and breech loading carbines, the most modern arms which money and the inventive genius of an extended military experience could produce. It was a combined force of cavalry and infantry. The cavalry, a division of thirty-three hundred men, was commanded by Brigadier General



B H. Grierson, whose recent introduction to Forrest at the battle of Okolona has been narrated, and who, notwithstanding that unfortunate experience, was considered one of the best Union cavalry commanders. The infantry, a division numbering forty-eight hundred, was composed of three brigades. Each brigade had from two to six pieces of artillery.

General Sturgis' orders were to strike the Mobile and Ohio Railroad at or near Corinth, Mississippi, capturing any force which might be there, thence to proceed south, destroying other railroads and supplies in this section known as the "granary of the South" and before returning to Memphis to *disperse and destroy Forrest's cavalry*.

Coincident with Sturgis' departure from Memphis was that of Forrest from Tupelo, Mississippi. The latter was starting on another raid into Tennessee directed against the Nashville and Chattanooga railroad in Sherman's rear. He even had Memphis itself in mind. Notwithstanding the Union concentration there, he had reported, "a few hours' work would enable me to fight all the so-called gunboats they have." The sanguine view of this redoubtable chieftain in regard to Memphis does not appear to have been shared by those higher up, for this part of his plan was disapproved. He had actually advanced toward Nashville, however, when he was intercepted by a dispatch ordering him to retrace his steps to meet Sturgis' invasion, so he promptly turned back.

As Forest depended upon the surrounding country for the forage of his horses and the subsistance of his men, we find at the end of his retrograde movement, his troops separated by about twenty miles in the following manner; Bell's brigade, numbering two thousand, seven hundred and eighty-seven was at Rienzi. Rucker's brigade, seven hundred men with Forrest's escort and two batteries of artillery under Captain Morton, was at Booneville. Johnson's and Lyon's brigades, five hundred and seven hundred respectively, were at Baldwin.

Sturgis' column had at this time reached Stubbs' farm. General Forrest had received orders to retreat before the vastly superior numbers of his adversary, in order to weaken Sturgis' connection with his base of supplies and also to permit the junction of other Confederate forces (those of General Stephen Lee of Okolona and others which were expected from Alabama and even as far away as Mobile) before giving battle. Notwithstanding these orders it was evident to his subordinate commanders when he convened a council of war that his mind was fully made up and that he had no intention of postponing an immediate engagement.

The road by which Forrest prepared to move and that which formed Sturgis' line of march, crossed nearly at right angles at Brice's Crossroads. (See Sketch No. 3.) Here were a little country store and a few houses. The Brice house stood in the midst of forty or fifty acres of cleared land which was surrounded by a wood thick with scrub growth and underbrush. Tishomingo Creek about half a mile west ran from north to south.

Forrest's instructions that night were brief; he ordered three days' rations and a concentration at Brice's Crossroads. A summer rainstorm having commenced the day previous came down in torrents during the night of June 9-10, and Forrest, who moved as soon as it was light the next morning, found the road muddy and difficult. As he rode with Colonel Rucker at the head of his brigade he announced for the first time that he proposed *to attack Sturgis* at Brice's Crossroads. He reckoned that, although the Federal troops greatly outnumbered him as he knew from the information of his ever vigilant scouts and the friendly country folk, the road along which they marched was strange, narrow and muddy and they must make slow progress.

The Federal cavalry would move ahead of the infantry and should reach the crossroads three hours in advance. He must whip their cavalry in that time for, as soon as the fight opened, Grierson would send back to have the infantry hurried up. Owing to the densely wooded nature of the country which would cloak his movements and hide from the enemy the paucity of his men he believed he could do it. "It is going to be as hot as hell," he continued in outlining his plan to Colonel Rucker as they rode along, "and coming on a run for five or six miles over such roads, their infantry will be so tired that (using again his old familiar expression) we will ride right over them." His orders were, "I want everything to go as fast as possible. I will go ahead with Lyon and open the fight." Never once, so far as I am able to judge, did he ever consider that his own troops might be tired from covering distances varying from ten to twenty-five miles (on top of other recent forced marches) in concentrating upon the crossroads.

The Federals were still in camp when Forrest moved out at 4:00 A. M. Grierson's cavalry moved forward from Stubbs' farm, where they passed the night, at 5:30 A. M. Their advance encountered Confederate outposts at Tishomingo Creek bridge and drove them in, coming to the edge of a field, through which the road runs, and encountering Lyon's Confederate brigade at the opposite side of the clearing.

Forrest opened the battle with a mounted charge of two Kentucky companies across the clearing and so developed the Union line. The boldness of the charge and the thickness of the dark heavy timber, black jack and scrub oak in full leaf, from which it burst, caused Grierson to dismount his foremost brigade and also the other brigade which soon came up to its support. With thirty-two hundred men and four pieces of artillery he was held at a distance of not more than four hundred yards by eight hundred Confederates, plus Forrest's escort (about one hundred and forty strong) and no artillery within eight miles.

Forrest's game at this time was to make a show of force to keep Grierson from attacking and in this he succeeded most admirably. So successful indeed were his tactics that when Lyon came up, although he had him take position behind a worm fence which was strengthened by brush and logs, instead of remaining on the defensive, the fence was thrown down by alternate panels

that he could actually advance into the open field against the enemy. He kept up this feigned attack for about an hour thus allowing time for General Rucker's brigade, seven hundred strong, to come in from Booneville. Most of this brigade Forrest dismounted and threw into the line, but one regiment, the Eighth Mississippi, was ordered to remain mounted and was thrown over to the left toward the Guntown road to prevent this flank from being turned. Again Forrest ordered his line forward in a feigned attack and again after some sharp fighting it retired to receive further reenforcements.

About eleven o'clock in the morning, although more than half of his force—Bell's brigade and Morton's artillery—had not yet come up, he concluded that the Federal infantry must be getting uncomfortably close and decided upon a *real attack*. Strengthening his center, he passed the word down the line that this was not a feint, but desperate work at close quarters. According to the evidence of a member of the Seventh Tennessee Cavalry which fought with Forrest that day, the Federal fire was terrific. The Confederate line staggered for a moment and fell flat upon the earth for protection. Their first assault was repulsed. A second time Forrest hurled them at the enemy and after a hand-to-hand fight—in some instances the brush had to be pulled away for the troopers in grey to close with those in blue—the Union line, weakened by repeated frontal attacks, gave way and Forrest burst through their center, forcing back the two wings in a broken and demoralized condition to a second defensive position in rear.

As Forrest had anticipated, Grierson, as soon the Confederates appeared, dispatched a message to Sturgis, asking for reenforcements. This he soon followed by another of still greater urgency. Sturgis hurried forward as fast as he could move his column through the pitiless heat and over the boggy road; his tired men took the last three-quarters of a mile at the double quick, but they came upon the scene of battle only in time to see Grierson's disordered cavalry falling back in confusion, and as they reenforced his shattered lines many of the troopers mounted their horses and fled without orders, while the rest were only too anxious to fall in exhausted behind the bulwark afforded by these fresh troops. The infantry line now extended in double formation like a crescent, three-quarters of a mile long, from about two hundred yards east of the Ripley-Guntown Road to a point well north of the road to Baldwin.

The Confederates had again taken position on the edge of a thick wood which shrouded their movements. Forrest early in the day had sent back this laconic and characteristic message by one of his staff, "Tell Bell to move up fast and fetch all he's got." He particularly specified that when Colonel Barteau's Second Tennessee Regiment (two hundred and fifty men) of Bell's brigade should have arrived within five miles of the battle field, it was to slip around by an out-of-the-way route and wait for the opportune moment to attack the Federal's flank and rear.

He also sent word to his reliable young artillerist, Captain Morton, a

lad barely out his teens, to bring up his batteries at a gallop. The arrival of these batteries and of Bell's brigade were coincident with that of Sturgis' infantry. Morton's batteries were first brought into action to the right of the Baldwin Road, "every shell," according to General Sturgis' own report, "bursting over and in the immediate vicinity of the Union guns."

Bell's fresh troops were put on the Confederate left, extending and strengthening the line westward to the road leading from Brice's Crossroads to Guntown. On the exreme left were two mounted companies of Kentucky cavalry ready to swoop around on the Federal flank and rear and complete the discomfiture already started there by Barteau.

Each side now forced the other, keyed for the supreme effort. About eight thousand men with twenty-two pieces of artillery confronted Forrest who had, deducting horse-holders, scarcely over thirty-three hundred troops with twelve pieces of artillery, or well less than half the strength of his adversary. Though some of his horses had given out on their forced march to the battlefield, all having been pushed to the limit of speed and endurance, his men were fresher than their infantry opponents and they were exhilarated by their morning victory—an asset greater than that of numbers.

Bell's fresh troops had been put on the Confederate left, as Forrest now considered the Union right the vulnerable part of their line. He had induced them by the morning's tactics to weaken it in order to strengthen their center. When the Confederate line, as it advanced though the heavy underbrush started to give way beneath the withering fire of the then modern breech loaders, it was prevented from doing so by Forrest himself who, with his two escort companies, tied his horses to bushes, and rushed dismounted into the thickest of the fray. He frequently dispensed thus with horse-holders, giving as a reason that "his men ought to be able to defend their horses from the enemy; if they couldn't then they wouldn't need them."

It was presently the turn of the Federal line to surge forward, but it was met by determined Confederates who stood their ground on foot armed with sixshooters against which infantry bayonets proved of no avail. At this juncture, a sudden movement of the Union cavalry was observed to the rear. Just as the firing was heaviest in front, Barteau with his two hundred and fifty Tennesseans had commenced hammering at Sturgis' rear. He deployed his two hundred and fifty men in a long line to deceive the enemy as to their numbers and had his bugler ride up and down sounding the charge.

Forrest himself, when he was assured of Barteau's attack, hastened to the position of Morton's artillery, which he ordered—double-shotted with canister—to take its place *in the line* for one more vigorous charge. It galloped unhesitatingly without support along a narrow country road as close as possible to the enemy, moved into position by hand and opened at point blank range, firing as it advanced. Forrest's line, shortened and consequently strengthened, converged upon the crossroads.

A rapid, incessant and desolating fire of small arms and artillery, accom-

panied by wild rebel yells, drove back the Federals at all points into a broad ravine west of Brice's house leading to Tishomingo Creek, where infantry, artillery and wagon train huddled in an inextricable mass upon which Morton's battery continued to play with telling effect. Barteau's regiment had taken the attention of a large part of the Federal cavalry. Captured Union artillery was turned upon its own side.

The infantry, the last contingent of Sturgis' army, was now at Forrest's mercy. They crowded back along the Ripley road toward Tishomingo Creek but, finding the bridge over it blocked with wagons, floundered across the muddy stream as best they could. Order had given away to confusion and confusion to panic which no power could check.

The Confederate leader, who throughout the sultry day had been ardently hoping for this movement, lost no time in mounting and reorganizing for the pursuit. His own escort mounted their horses and effected a crossing over the Tishomingo a quarter of a mile below the bridge, charging boldly among the panic stricken and fleeing mass.

Though the sun was just below the western horizon and it might appear that a full day's work had been done, Forrest had no idea of calling off the chase. This was begun by those who had been horse-holders during the first period of the battle. All through the night the victors pursued the vanquished. Forrest personally as ever in the forefront. "Come on men," he shouted, "in a rout like this ten men are equal to a thousand."

At 1:00 A. M. the next morning, June 11, Forrest's command being again reassembled and the darkness having somewhat diminished, one jaded brigade relieved another and the pursuit was resumed. At daylight the Union rear was struck at Stubbs' farm where the remainder of its wagon train was abandoned. The records contained in the captured headquarters wagon of General Sturgis furnished the first positive proof to the victorious Confederates of just how much they had been outnumbered. At Ripley, twenty-two miles from the battlefield, another Union attempt at reorganization was foiled by Forrest whose forces broke upon them like a clap of thunder and whose onslaught could not be checked until the retreat was resumed.

This battle and pursuit was remarkable among its other features in the distance covered by the Confederate horsemen. Forrest's men it will be remembered had come up the night before and the morning of the battle, June 9 and 10, over distances varying from ten to twenty-five miles. The enemy began his retreat about 4:00 P. M. on the 10th and by 5:00 P. M. on the 11th he had been driven with heavy loss and frequent collision with the Confederates fully fifty-eight miles. Seldom has an army been more completely dispersed than that of General Sturgis. It would probably have been followed even farther except that Forrest himself, several miles before reaching Salem and within sight of the home of his youth, fell from his horse from sheer exhaustion and for more than an hour lay unconscious by the roadside.

From a military standpoint, the battle of Brice's Crossroads was prob-

ably Forrest's greatest achievement and it proved to be the climax of his military career, for the star of the Confederacy, already declining, was soon to set.

An Estimate of Forrest

It is the opinion of many leaders upon both sides that, as an independent cavalry commander, Forrest had few equals. He was as great a military genius as Lord Clive, but without Lord Clive's advantages or opportunities.

He was born in poverty, the son of a blacksmith, meagerly educated in a little log school house on the southern frontier, which he could only attend at intervals on account of being the sole support of his family. Yet at the height of his military fame his reports and letters, which may be read in the Official Records of the Civil War, as dictated to his faithful adjutant, Major Strange, and others of his staff, are models of forceful English. In his speech he frequently relapsed into the localisms which were peculiar to people of his class in his own part of the country.

Of theoretical military knowledge he had none, but this was made up for by an "extraordinary military instinct and a sound common sense." His busy military career seldom left him time for drill ground tactics. He is reported to have said, "Whenever I met one of those fellers that fit by note, I generally whipped hell out of him before he got his tune pitched."

He was a born scout. On the eve of the battle of Shiloh his tall form emerged from the darkness and approached the campfire of his commanding officer, to whom he reported in this wise, "I have been way down along the river bank close to the enemy. I could see the lights of the steamboats and hear distinctly the orders given in the disembarkation of the troops. They are receiving reenforcements by the thousands and if this army does not move and attack them between this and daylight and before other reenforcements arrive, it will be licked like hell before ten o'clock tomorrow." After the battle of Chickamauga and while engaged in the pursuit of the enemy, he captured a tree on Missionary Ridge from four Federal scouts and climbing to the top, dictated a terse dispatch from his novel headquarters which probably changed Bragg's whole plan of campaign. The night before the battle of Harrisburg, for which he was in nowise responsible, he obtained what information he desired of the enemy by riding unarmed through their camps. Being such a scout himself he had no difficulty in drawing scouts to his banner and he never lacked any accurate information he wanted at the time he needed it.

As a record of physical courage, he had twenty-nine personal encounters during the war and as many horses shot under him. A Damascus blade captured during his raid in West Tennessee in 1862 was his favorite weapon and with this and two Navy revolvers worn at his belt "his strength was as the strength of ten."

His staff he required to wield the sword as well as the pen and he often personally led them in battle. His men believed him capable of anything and were ready to follow him anywhere. With restricted numbers he accomplished the apparently impossible. Like Lord Nelson, when it was a choice between fighting and not fighting, he always fought. He met and overcame cavalry, infantry, artillery and gunboats. As General Wolseley said of him, "By sheer force of character alone he became the great fighting leader of fighting men. Panic found no resting place in that calm brain of his and no danger, no risk appalled that dauntless spirit."

"In war," Napoleon said, "men are nothing, a man is everything." It would be difficult to find a stronger corroboration of this maxim than the history of General Forrest's operations.

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The Argentine Creole Horse Buenos Aires-New York

By A. F. Tschiffely

THE Creole (Native Argentine) horses are the direct descendants of a few animals brought to the River Plate in 1535 by the first founder of Buenos Aires, Don Pedro de Mendoza. For three hundred years the breed ran wild and consequently obeyed the natural law of the survival of the fittest. For the last twenty-five years or so the Argentine horse-breeders have been devoting themselves to the systematic development of the strain, and it has long been held by many who are entitled to know, that this type of horse is second to none in those qualities necessary for war-service or other forms of continuous hard work. It was to give proof of this to the world in general that Mr. A. F. Tschiffely undertook to travel by road with horses of this breed from Buenos Aires to New York, a distance of, roughly, eleven thousand miles. To any who know the nature of the route by which he had to travel, the extremes of heat and cold to be encountered, the lofty mountains without sign of road, waterless tracts of desert, rivers without bridges and often swarming with alligators, and, above all, the pestilential and insect-ridden jungle districts of Central America, the task may well have appeared impossible.

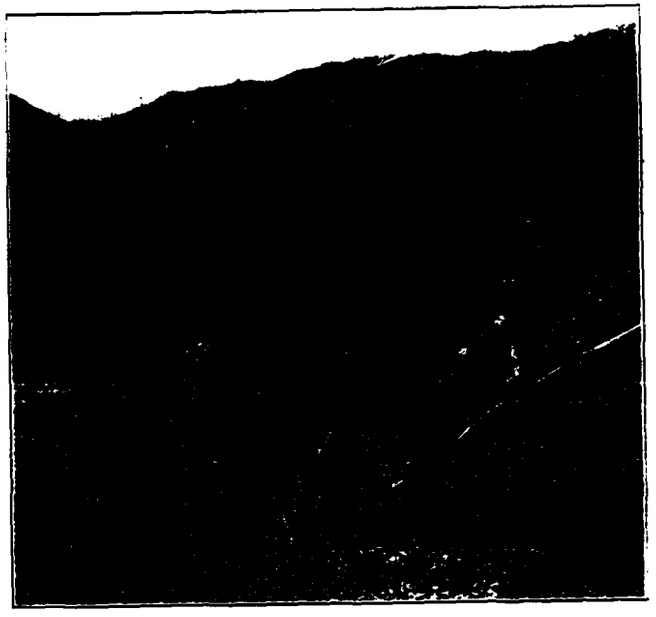
The idea, however, was eagerly taken up by the breeders of the Creole horse. The Argentine Rural Society and other corporations gave every assistance in their power, and one of the best known breeders, Señor Emilio Solanet, supplied two horses for the journey. It is a fact worthy of mention that these animals, fifteen and sixteen years old, respectively, at the time of starting, had a short time previously come up by road from Chubut in Patagonia, a distance of about nine hundred miles as the crow flies, probably in actual travelling over a thousand miles.

The Route to Lima

It would be beyond the scope of this article to give a detailed account of the whole trip, even if full particulars were available, and as many may have read the interesting article which appeared in the *British Cavalry Journal* of October, 1927, which covered the ground as far as Panama, a brief resumé of that part of the journey will suffice.

On April 22nd, 1925, Mr. Tschiffely left Buenos Aires and after thirty-nine days travelling reached Perico del Carmen on the Bolivian border. Here he was compelled to rest for five weeks to recover from an attack of blood-poisoning contracted while exploring some old Indian graves. From here he struck into the Andes where occasionally he had to ascend to altitudes of as much as eighteen thousand feet, often sleeping in the open amid blizzards

of ice and snow, with the thermometer well below zero. At the lower levels vampire bats were a constant plague to the horses; from Potosi onwards the regular tracks were impassable and he was lucky to get directions from the Indians. And yet, despite of all these hardships, the horses arrived at La Paz in excellent condition, one of them giving practical demonstration of the fact by kicking his box to pieces as soon as he had been placed in it. On



Mancha and Gato at the Frontier of Bolivia

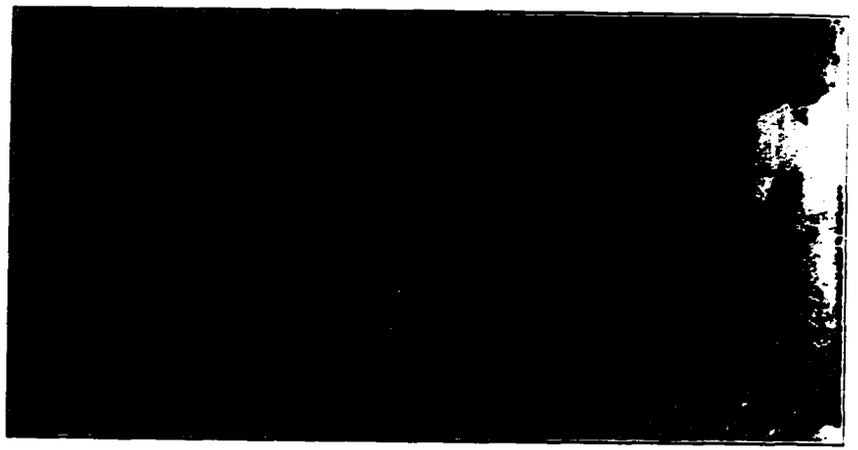
November 29th he arrived at Ayacucho having covered thirty-five hundred miles in two hundred and thirty days.

The mountain region between Ayacucho and Lima proved worse than the Southern Andes. Altitudes of twelve to fourteen thousand feet, where the cold was intense, alternated with deep valleys where stifling heat, mosquitos and vampire bats made life a misery for man and beast. One of the horses actually slipped over the edge of a precipice, but its fall was providentially arrested, a short distance from the edge, by one of the very few trees in the neighbourhood. With some difficulty it was rescued unhurt. Mr. Tschiffely was deserted by his guide while a heavy blizzard was raging, and for four days he wandered with no idea of his whereabouts and practically no food for himself or his horses. He suffered various attacks of "puna" an affection of heart, lungs, and brain caused by the rarefaction of the atmosphere; one

attack almost proved fatal. However, Lima was eventually reached on January 5th, 1926, and rider and horses enjoyed a well-earned rest.

Arrival in Panama

The next stage of the journey lay across the vast sandy desert which borders the Pacific Coast up to the frontier of Ecuador. Throughout its whole length the trail was marked by the skeletons of animals that had perishd from lack of water, the watering places often being from eighty to a hundred miles apart. The rivers, of which twenty-one had to be crossed, were a great source of danger; some were fordable, but the majority had to be crossed by



Gato Crossing an Indian Bridge in the Peruvian Andes

swimming and on one occasion Mr. Tschiffely and the horses were within an ace of being swept to destruction. In due time, however, the party arrived safe and sound at Quito, the capital of Ecuador. From Quito they made their way, following mostly the valley of the river Cauca, to Medellin, Colombia.

Here Mr. Tschiffely met with what was, from his own point of view, the greatest misfortune yet encountered. He was informed that it was absolutely impossible to continue the journey to Panama by land owing to the great swamps in the valley of the Atrato and along the coast. In defiance of the advice of the local authorities he made several attempts, but was forced to bow to the inevitable. Accordingly, acting on telegraphic instructions from Buenos Aires, he and his horses were sent by boat to Colon (Panama), which was reached on November 24th, 1926. More than six thousand miles had been covered in nineteen months and it was galling in the extreme to the determined traveller that he should have been obliged to take to the water for even that short distance.

At Colon Mr. Tschiffely was the guest of the United States Army. His stay, which was to have lasted fifteen days at the most, was unfortunately extended to nearly three months. The reason for this delay was that both horses were attacked by a skin disease, which is very troublesome, often fatal. The skill of the Army Veterinary Department, however, prevailed in the long run and on February 19th, 1927, he was able to resume his journey.

Misfortunes never come singly. On the very next day one of the horses cut himself on a wire, sufficiently badly to compel Mr. Tschiffely to make for Camp Gaillard where he was forced to remain for a few days until the wound was sufficiently healed to allow the horse to proceed.

On to Costa Rica

The journey through Panama and Costa Rica was difficult to the last degree. The heat was terrific, but the greatest worry of all was caused by the garrapata (tick), both rider and horses being constantly covered with the pests, while any space unoccupied by these was filled up with mosquitoes or garrapatillas (a smaller tick). Constant bathing and fomentation was necessary to protect the horses from tick-fever, an attack of which is almost invariably fatal. Forage and food were scarce; the only signs of human life were a few miserable, scattered settlements.

As far as Santiago the roads were good, but from there to David they were terrible. Broken by streams, slippery from subterranean springs, and in many places almost blocked by giant roots and intertwined boughs of the rank vegetation, they could not be called roads in any sense of the word. At times troops of monkeys welcomed the visitor by showering sticks and every variety of missile on his head. On one occasion, while Mr. Tschiffely's attention was momentarily occupied by these animals, his horse tripped over a root and he and his mount went head over heels down a steep bank, landing in a dry river-bed, horse on top. Fortunately the ground was soft and nothing was broken, but Mr. Tschiffely was very badly bruised and suffered great pain for several days. Eventually, on March the 17th, he reached David where he and his horses enjoyed a well deserved rest for a week.

From David to San José de Costa Rica it was necessary to employ two guides. Mr. Tschiffely describes this stage of his journey as about the worst of all. For the greater part of the time they travelled in semi-darkness, due to the thickness of the jungle, the paths (sic) being so blocked by intertwining branches and enormous roots, that at times an advance of a hundred yards or so in an hour was considered good going. The mountains Platanillo and Sabanillo were crossed in heavy rain accompanied by an icy cold wind. For several days the horses subsisted on a diet of leaves, while the rider was little better off. The last stage of this section of the trip involved the ascent of the highest point of the Cerro de la Muerte (nine thousand, eight hundred feet). The ascent was bad enough, but the descent on the other side was far worse and innumerable falls were experienced. At last, on April 15, Mr.

Tschiffely reached San José, worn out, his clothing in rags, but his wonderful animals in quite good condition. Here a three weeks' rest was taken.

Nicaragua Avoided

And now a fresh disappointment awaited the traveller. Nicaragua was in the throes of revolution, and the only possible trail lay right through the center of disturbance. The authorities, both in Costa Rica and Buenos Aires, judged rightly that Mr. Tschiffely would not have the slightest chance of getting his horses through the area of revolution, and would in all probability lose his life as well if he attempted the passage. Accordingly he and his mounts made the trip to La Union (Salvador) by steamer, thereby avoiding Nicaraguan territory. He rested a few days at San Salvador and continued his journey without (recorded) incident to Guatemala.

Mexico

After a short rest in Guatemala City the journey was resumed towards the Mexican frontier where another misfortune cropped up. One of the horses, *El Gato*, fell lame in the off hind leg, due to a badly placed nail in the shoe. A veterinary examination in Tuxtla Chico—the first Mexican town reached—revealed the fact that the injury was serious enough to demand an operation, inflammation having set in, and the horse was accordingly transported to Tapachula and left there for the treatment: arrangements being made that he should be sent on to Mexico City for final cure. This was a great blow to the traveller, but he purchased a baggage animal and continued the journey on his remaining horse.

The first part of the trip through Mexican territory was arduous in the extreme. "In the old days there was a road," he says in one of his letters to *La Nación* (the leading newspaper in Buenos Aires), but the journey from Tapachula, on the Guatemala-Mexico border, to Tonala (one hundred and eighty miles) was a veritable disaster. Round about twenty rivers had to be crossed by swimming, and the track was a long mud hole.

At Jalisco a military escort was provided, since Mr. Tschiffely refused to listen to those who advised him to abandon his journey, and for the greater part of the trip through Mexico he was protected in this manner, a necessary precaution against the brigands who infested the country. San Jerónimo was reached at the end of September.

Available records of the journey from San Jerónimo are brief, but they show clearly enough that difficulties were by no means over. For the first part of the journey the marching was done by night to avoid the terrible heat of the day. As the party approached Oaxaca the roads and weather became worse and worse, the ones who felt it most being the soldiers of the escort: indeed when Mr. Tschiffely reached Oaxaca there was no more escort; they had one by one dropped out through weariness or sore feet. In every township through which he passed tremendous "fiestas" were held in honour of the "Phenomenon of the Pampas." A fresh escort was provided at Oaxaca, which

was twice changed in the course of the thirty-five mile journey to Salomé, the soldiers' horses being in such poor condition. Between Salomé and Puebla bad roads, constant rain and a sharp attack of malaria were all experienced and overcome, and Mexico City reached on November 2nd, 1927.

Ovation in Mexico

A description of the reception afforded to Mr. Tschiffely and his horses in Mexico City would not only be outside the scope of this article, but would require an entire volume to itself. What especially delighted him was the appearance of his second horse, *El Gato*, being led out from the city to meet him,

Mr. Tschiffley and Gato after the reception at Mexico City. Mr. Tschiffley is wearing the traditional Argentine Gaucho dress.

with a garland of flowers round his neck, perfectly sound once more, and ready to continue the journey. The horses were public idols, and the rider no less so, and all, from the President of the Republic down to the humblest newsboy, united in giving proofs of their admiration.

Mr. Tschiffely's account of his journey from Mexico City to the United States border does not afford much detail concerning the actual travelling.

Progress was necessarily slow, due to bad roads, in many cases to scarcity of fodder and to salty water, but above all to the fact that the inhabitants of every town or village through which he passed insisted on celebrating his arrival and would not be denied. Frequently he received warning that brigands were in the neighbourhood, but saw none. The journey from Mexico City to Laredo (Texas)—about seven hundred and fifty miles—occupied him from the 27th of November, 1927, to the 26th of January, 1928. His entry into United States territory marked, to all intents and purposes, the end of his hardships. He and his horses were given a magnificent reception, the condition of the animals after three years of hard work being, as usual, a source of amazement to those who saw them.

The Last Lap

From Laredo, after being a guest of Colonel Foy of the 3d Field Artillery for some two weeks, he proceeded to San Antonio, where he was again entertained by the Army, spending some three weeks at Fort Sam Houston, this time as guest of the 12th Field Artillery. Mr. Tschiffely expresses himself in the warmest terms of appreciation for the courtesies extended to him by the United States Army officials wherever he came in contact with them.

By request of the mayor of San Antonio, the Argentinian rider accepted the task of taking a letter to the commander of the American Legion in Indianapolis, involving a considerable detour. The route he followed was San Antonio, Austin, Muskogee (Oklahoma), Terre Haute, St. Louis, Indianapolis, Columbus, Wheeling, Cumberland, and from there via Frederick to Washington, D. C. Owing to the dense traffic, he decided it would be safer to travel with one horse alone, and as he had no further use for a pack horse, he left *Gato* in St. Louis. The other, *Mancha*, arrived in Wahington in amazing condition, without a blemish, full of life and, to all appearances, in condition to repeat this almost incredible test of horse resistance of endurance.

According to Mr. Tschiffely, he will ride from here to New York and later take ship back to Buenos Aires, taking his equine companions with him, in order to give them a well-earned rest for the remainder of their years which, it is hoped, may be many.

In this article the writer has endeavoured to show, by a statement of plain facts, that the opinions concerning the Creole horse, which were defined at the commencement, were well founded. *Mancha* and *Gato*, the two heroes of the Odyssey, have shown powers of resistance to heat, cold, hunger, thirst and every variety of hardship, imaginable and unimaginable, that have astonished even the most sanguine admirers.

And the rider. . . . ?

A History of Cavalry Horses

By Captain George L. Caldwell, *Veterinary Corps*

FROM the dawn of history and probably in prehistoric ages, the horse, the noblest of all creatures that man has subdued to his will, has played a leading role in the spread of civilization and has ever been, in peace and in war, a chief factor in the rise and supremacy of the great nations of the ancient, medieval, and modern world. Conversely, man in his migrations has had a profound influence on the world-wide dissemination of the horse and in the intermingling of races and types of horses. From the standpoint of the historian, the antiquity of the horse is considerable. Early in history, we find him put to war uses and to almost that use alone. One of the reasons for his early selection as man's ally in war may be found in the 39th chapter of Job:

"He paweth in the valley and rejoiceth in his strength; he goeth on to meet the armed men. He mocketh at fear and is not affrighted; neither turneth he back from the sword. He saith among the trumpets, Ha! Ha! He smelleth the battle afar off, the thunder of the captains and the shouting."

Many a hesitant, weak-hearted cavalier has been carried into the heart of the mêlée on the back of a horse that turned not back from the sword and went on to meet the armed men. Some of the early Roman cavalry charged without reins, and General Hood of the Confederate Army always maintained that could he but cut the reins of his cavalry at the moment of the charge every cavalry charge would be successful.

While history makes frequent mention of the horse in war, most of the interesting details are lacking. Where he came from, what he cost, what he looked like, how he was cared for, and what his infirmities were, seem seldom to have been made a matter of record. The military historian is content to mention his horses in numbers only, while wearisome pages are devoted to the tactics and valorous conduct of the rider. Art, through sculpture, tapestry, and paintings, has preserved for us some more or less accurate pictures of the horse's antiquity, and from these, together with a few descriptions of the famous chargers of important generals, we must conjure our pictures of the war horses of the past. Horses in war have been more extensively used for cavalry than for animals of pack or transport, and the history of this type of horse is more easily followed than any other. Beginning with the horses of prehistoric ages, we will now follow, we hope not to its end, the slender thread of history and art that portrays the cavalry horse from that time.

Early History

From the investigations of geologists, we learn that the horse is descended from ancestors that existed in the long-past ages of the world's history, but in the eyes of the paleontologist he is one of the most recent of animals and is generally accepted by the evolutionist as illustrating better than any

other the doctrine of evolution. The horse or his immediate ancestors have at some time inhabited all the continents of the world, but in the form we know him did not exist in the New World after the Glacial Age. From fossil remains of the late Pleistocene, it appears that the horses of that period were kept, by prehistoric man, in enclosures and used for food. If such be true, is it not possible that some of the more adventurous youth of that day mounted

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How the Horse has Grown in Six Million Years

Exhibit (Amherst College) showing development of the horse through the various geologic ages. The Eohippus, eleven inches high had four toes (front). The second horse, the size of a collie dog, has three toes touching the ground. The third has toes but the side ones shortened so as not to touch the ground. The fourth has only a splint left to represent the instep portion of the side toes. The fifth is the horse of today.

them, or that the father mounted, seized his stone hammer, and rode forth to slay his enemy in numbers?

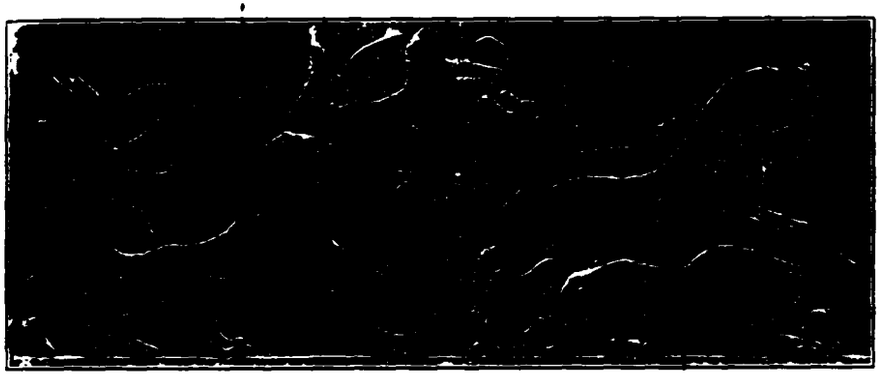
When the historic curtain first rises about 5000 B. C., we find in the valleys of the Nile and Euphrates nations venerable with age, but we do not yet find mention of a domesticated horse. Going to Chinese legend of the reign of Hwang-te, we find that the ancient Chinese work, "The Shoo-King," speaks of Yaou, 2348 B. C., as riding in a chariot drawn by white horses; however, Chinese legend can hardly be accepted as an authentic record of the past.

About 2217 B. C., Nimrod is supposed to have formed the Babylonian Empire; and Assur the Assyrian Empire. During this period it is said that horses were yoked to chariots, and chargers were trained to undergo the fatigue of battle. The first direct Biblical mention of the horse for cavalry is found in the 50th chapter of Genesis, where it is related that chariots and

horsemen of Pharaoh's army accompanied Joseph when he took the body of his father back to Canaan, this about 1690 B. C. Pharaoh's cavalry appears again in 1491 B. C. in the pursuit of the Israelites into the Red Sea, where the horses of an entire army were drowned. Little is known of the horses of this time except what can be determined by study of bas-relief. The horses seem to be small and rather coarse, usually dark in color, probably of Libyan or Barb origin.

Greek and Persian Horses

We now come to the early Grecian period and from these peoples, particularly from the pen of Xenophon, we get a more completed picture of the



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King Assurbanipal (668 B.C.) Hunting

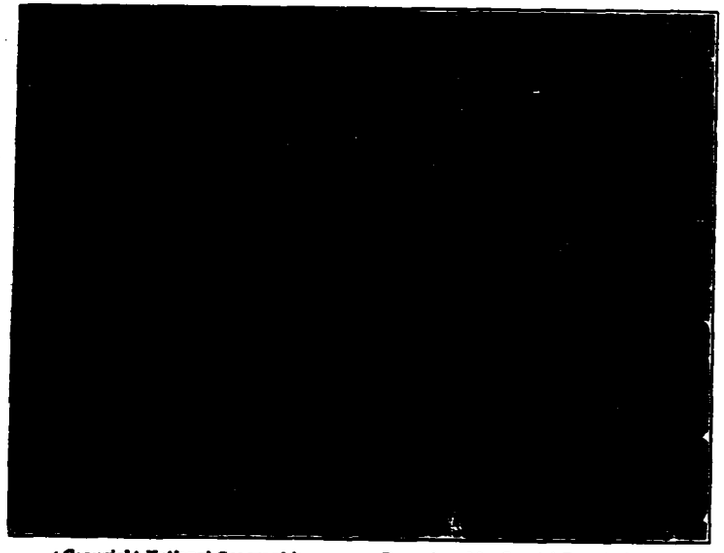
An ancient Assyrian's conception of the horse at the gallop

horses of that period than of any other period up to modern times. It is quite probable that much of this horse lore was given the Greeks by the Egyptians. The Greeks first used horses to draw their chariots, and later the Thessalians began the use of cavalry. Cavalry was used in 743 B. C. in the first Messenian war, but the Greeks did not have cavalry at the battle of Marathon in 490 B. C. nor at Thermopylae in 480 B. C., yet the Persians are said to have had eighty thousand horsemen under Xerxes.

During the Peloponnesian war in 430 B. C., the use of horses for cavalry became more extensive, and horses were raised throughout Greece; but the larger and better horses came from the plains of Thessaly. The greater part of Greece is mountainous and the soil rocky and not generally suitable for cavalry. Cavalry did not appear to be successful in the Pelopponnesian wars for the majority of horses went lame because the rocky soil had worn the horses' hoofs thin; of course the art of shoeing was unknown at that time. Xenophon, in his remarkable treatise on horsemanship, recommended that the

horses be stood continually on dry stone floors for the purpose of hardening their feet; a very effective method indeed.

Fossil remains of horses have never been found in Greece, and it is probable that the first horses of Greece came from the north and were of European and Asiatic origin, as most of them were white or dun colored. Later, North African or barb stock made its appearance and grays, bays and browns ap-



Type of Greek Horse, Fifth Century, B.C. (From Frieze of the Parthenon)

pear. The Greek cavalry horse of this age when trained for war cost $225 and upward. The Greeks, like most all ancients, used practically nothing but stallions for war horses, which accounts for the belief that all of the war horses, except the Libyans, were more fierce than those of today. Aristotle states that the average span of life of the cavalry horse of his time was from eighteen to twenty years, and that barley was the usual food. No mention is made in history of the Greeks having used saddles either in peace or war.

Let us go back for a moment and consider the horses of the Persians, the natural enemies of the Greeks. The Persians were great horse lovers and rode habitually. The Persian cavalry reached its highest development under Xerxes, the son of Darius. Xerxes, in the spring of 480 B. C., crossed the Hellespont with the greatest cavalry force the world had ever known, eighty thousand horsemen,—Persians, Medes, Scythians, Indians, and Libyans, mounted on the best horses of Asia and Africa. The best of these horses were those of

the Nicaeans, the largest and best horses then known; these horses were not indigenous but came from Media or Armenia. Had Thermopylae been a plain rather than a well-nigh impassable mountain pass, the Persian horses would have materially altered the world's history. No doubt many of the horses of the invading Persians remained in Greece and intermingled with the native stock.

Racing and equestrian events reached a high degree of popularity with the Greeks after 400 B. C. and horsemanship received an added impetus under Phillip of Macedon, who fostered the breeding of horses for war and sport, and who organized the first efficient Greek cavalry force. Following Phillip, Alexander the Great organized an excellent cavalry service and crossed the Hellespont into Persia with a force including seven thousand cavalry. His horses were the best of Macedonia and Thessaly. His conquest of the decaying Persian Empire placed in his hands the best horses of Asia; and with his march into Egypt and the establishment of Alexandria, Barb blood of North Africa was introduced. Alexander's famous charger, *Bucephalus*, was bred in Thessaly. The Grecian Empire, now at the height of its military power, possessed cavalry horses superior even to those of their late foes, the Persians. The successors of Alexander were equipped with wonderful horses for cavalry use, and their superiority in horses was one of the greatest obstacles that the now rising power of Rome had to overcome before the final fall of Greece in 146 B. C.

Roman Horses

When Rome was founded by Romulus about 750 B. C., infantry formed the bulwark of their military force; however, they had a small body of cavalry. Whether the horses were indigenous or brought from Sicily or North Africa is not clear, but it is quite probable that, after the conquest of southern Italy, Libyan horses were introduced. The cavalry horses of Rome were superior to those of the Gauls of northern Italy. At the outset of the Second Punic War, 218 B. C., Rome had some cavalry, but it was of poor quality and could not compare with the matchless cavalry of Hannibal, which, by way of Spain, had crossed the Alps and invaded northern Italy. Rome had less than three thousand horsemen, while Hannibal had not less than ten thousand. The horses of Hannibal's force were, of course, all North African or Barbs. The Numidians rode small thin horses that were very swift and sure-footed and were ridden without bridle or reins, the horses being directed by the use of short whips. Hannibal had left in Spain with his brother, Hasdrubal, over two thousand Libyan horses of the best Barb strains, mostly stallions. These remaining permanently in Spain were crossed with the native stock, and this accounts for the superior qualities of Spanish horses in later years and even until today. Roman cavalry reached its highest development under Scipio at the defeat of Carthage. The excellent horses of Numidia and Spain were now available to the Romans. More cavalry horses were used, and we find extensive cavalry forces in the Mithridatic wars.

When Caesar began his war of conquest in 58 B. C., he found that the

main strength of the Gauls lay in their cavalry, which had excellent horses derived from southern lands at great cost. These excellent horses were added to the resources of the ever widening empire. During the Gallic wars, much of Caesar's ten thousand cavalry were German, Spanish, and Numidian mercenaries. The Germans in Caesar's army were mounted on their own native horses, which were of poor quality. In the East, the cavalry of Crassus was no match for the enormous cavalry force of the Parthians, which was said to contain nearly forty thousand horses. The horses of the Parthians were very fleet and active, and must have been well trained for they were ridden with a nose band and a single rein. The Parthian horses were both dun and gray and were descendants of the Nicaean horses, which were considered the best of the Army of Xerxes five centuries earlier. It is interesting to note that the Parthian cavalry horse was fully armoured with metal. At this time, the Romans were using a saddle cloth held by a form of surcingle but without stirrups. This period seems to mark the beginning of use of body armour of metal for the cavalry, but the effect of this on the type of cavalry horse will not be noticed until a later date.

Under the reign of the Emperors, the Roman cavalry became very decadent, and the Empire depended upon mercenaries. From this, we must not conclude that the Roman horse was in decline, for racing and other equestrian events were very popular; yet, of course, this type of horse was not suitable for cavalry use. In the early part of the 4th century, Roman cavalry became more popular, and the horses were fully armoured. In the latter part of the same century, the true saddle with a tree makes its appearance. Rome next finds use for her cavalry horse in 402-410 A. D., when the forces of Alaric, the Goth, with his thousands of cavalry, swept on and sacked Rome. But a few years later Atilla's Huns entered Italy with a large army of cavalry mounted on their native horse of the Steppes, which, improved by breeds from the south, was now a medium sized horse, Roman-nosed, heavy-bodied, angular, long-haired, and ugly, but withal possessed of a remarkable hardiness, which caused him to be highly prized as a war horse.

The Romans, and possibly the Greeks, early recognized the necessity for some form of artificial protection for the hoofs of beasts of burden for sometimes a leathern or wooden shoe (sodea) was bound to the hoof with thongs of leather crossed over the outer surface of the hoof. Suetonius says that Nero used shoes of silver on his mules, and that Poppoea, the wife of Nero, shod the mules of her baggage train with shoes of gold. There is nothing to show that cavalry horses were shod until a much later date; however, it is quite probable that they were. The skeleton of a horse with shoes of metal nailed to the hoof was found in the tomb of Childeric I, whose reign ended 481 A. D., so the date of horseshoes is prior to that time.

We have now followed the cavalry horse until the fall of the Western Roman Empire and have shown how races and breeds of horses of the entire Old World have been widely disseminated and intermingled. From the shattered ruins of the Empire, many nations arose, each with its particular war horse, but from this time the horse can not readily be followed with the history of peoples but better by a consideration of epochs.

The Horse in the Middle Ages

The Dark Ages from the fall of the Western Roman Empire to the 11th century, witnessed the fall of the Roman civilization under the inrush of barbarism. During this period, but little is known of the history of the horse. The first important event in the history of the military horse of this period is the coming of Mahomet in 610 A. D. This great prophet of the Arabs was a great lover of horses and instilled into his people that same love. Under these people the Arab horse was developed. In a century, the great Saracen Empire had formed the crescent from the Hellespont through Africa to Gibraltar, and the invasion of Spain brought with it the horses of Asia and the Barbs of North Africa. The success of this great expansion can be attributed very largely to the excellence of their cavalry horses. The advance of the Saracens was stopped on the plains of Poitiers in 732 by the mail-clad warriors of Charles Martel. The cavalry horse of the Franks was much heavier than that of the Saracens, but, had the battle of Tours been decided by the superiority of horseflesh rather than by armament and tactics, the cause of Christianity would have been lost possibly forever. It is interesting to note that stirrups were first used regularly in the Saracen cavalry.

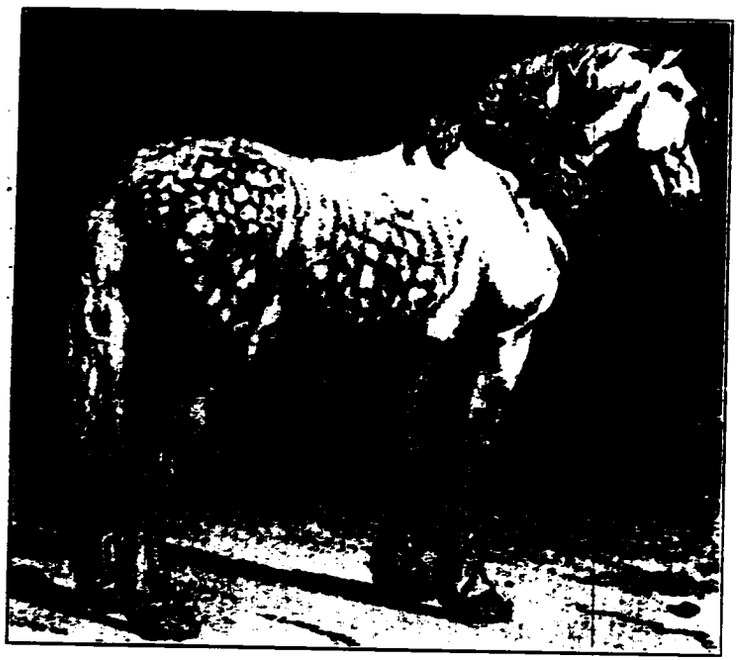
About the middle of the tenth century the order of chivalry arose in Europe. As the armour of the knights became heavier and tournaments became an established institution, the cavalry horse was, of necessity, a much larger horse in order that he might carry the rider with his two hundred to four hundred pounds of armour. From pictures of the cavalry horse of this period it would appear that he was not unlike our Percheron horse of today. This introduces what is known as the "great horse," which held his place in the cavalry of all nations of Europe until some considerable time after the invention of firearms. Our present idea of an officer's first and second mount no doubt arose during this age when the knight on the march rode without armour a small, active, easy-going horse until on the approach of danger he donned his armour and mounted his "great horse" to do battle.

The Norman invasion of England under William the Conqueror in 1066 is of especial interest since it brings out the fact that the English had no cavalry in the Battle of Hastings while William's warriors were practically all mounted. The success of the Norman invasion was due to the simple fact that they had horses and knew how to manage them. The horses of the Normans were tall and heavily built animals, for the armoured men they carried were of very great weight. Following the Norman conquest, chivalry quickly established itself in England.

The Crusades next draw our attention, when for over two centuries the knighthood of Europe under the banner of the Cross attempted to free the Holy City. The heavy cavalry of Europe mounted on the type of horse de-

scribed above was in conflict with the light cavalry of the Saracens. There were one hundred thousand cavalry horses in the First Crusade, and these were opposed by over two hundred thousand Saracen horsemen. The horses of the infidels were the same type as those used in the Saracen invasion of Spain. The returning Crusaders brought back many Arab horses.

In the early part of the thirteenth century, the Mongolians had developed the largest cavalry force in all history. It is said that Octai Khan had an army of nearly one and one-half millions of cavalry. This force swept the greater part of Asia, and a cavalry force of a half million horses devastated



A Great Horse of the Seventeenth Century
From the painting by Paul Potter (1652)

Russia and a part of Poland. This force was never defeated, but the invasion was turned back by the stubborn resistance of the heavy armoured Polish cavalry. The Tartars were mounted on the native dun colored or white Mongolian pony very similar to the Mongolian ponies seen in China today. He was from twelve to thirteen hands in height, strong, sure-footed, reasonably active, and extremely hardly. In the charge, he was no match for the "great horse" of the Poles. This invasion of small horses had a decided influence on the horses of Russia for centuries to follow.

Until the use of fire-arms in war, about the fourteenth century, the cavalry

horse of Europe changed but little. Armour was increasing in weight, and of necessity horses for cavalry increased in size. The increasing stability or unity of individual nations resulted in the development of breeds and types of horses peculiar to that nation. After the invention of fire-arms, armour further increased in weight and had the effect of causing larger horses to be used until, in the middle of the sixteenth century, the cavalry horse was such a horse as is the Shire of today. This is not surprising when we realize that the horse carried a weight of not less than four hundred and fifty pounds. As the armour-piercing power of bullets increased, the complete armour disappeared, and only heavy breast plates and helmets were used. By thus decreasing the weight of equipment, lighter and more active horses came into use. The success of Cromwell's armourless cavalry in the middle of the seventeenth century sounded the death-knell of the "great horse," and the lighter horse has been in almost general use by the cavalry since that time.

Later History

We have now reached the point in history where the horse returns to America for the first time since the Glacial Age. In 1519, Cortes had in his force of six hundred that began the conquest of Mexico sixteen horses; later this number was increased to eighty-five. A few years later, Pisarro took horses into Peru. In 1543, a few horses of the De Soto expedition were abandoned west of the Mississippi. The horses noted above all came from Spain and were of all colors and breeds, the fine-bred Jennets being of Barb blood and the coarse ones of native and cross-bred European stock. It is certain that from these Spanish horses came the great bands of wild horses that covered our western plains and the Pampas of South America. It is evident from the preponderance of dark colors among the wild horses of South America that they have a greater amount of Barb blood than have our western mustang, which are very frequently dun colored. It is interesting to note that four centuries later the descendants of these Spanish horses returned to the Old World as cavalry horses in the Boer and World Wars and have always been extensively used in the United States cavalry.

During the reign of Charles II (1660-1685) the English thoroughbred was developed. This breeding development has furnished the fine qualities necessary for crossing with colder blood to produce a better horse for modern cavalry. The clean thoroughbred never has proved a satisfactory cavalry horse for general use, but a goodly infusion of this blood produces an ideal cavalry horse. The development of the thoroughbred did not have its favorable influence on the cavalry of England alone, but on all the cavalry of Europe and later that of the Western World. From the first of the eighteenth century to the middle of the nineteenth century, many English thoroughbreds were sent to Prussia, and in 1750 Frederick the Great had a large and effective cavalry force mounted on Hanoverian horses developed from the imported thoroughbreds.

No mention has been made of the horses of Russia, but after the Tartar

invasion Russia began a development of cavalry, and in the first of the fifteenth century the Cossacks appear mounted on their half-wild horses of the Russian steppes. Under Peter the Great in the early eighteenth century, the cavalry was built to a force of eighty-four thousand. The horses of Russia were considerably influenced in type by the Mongolian ponies of the Tartar invasion and by some Arab and Barb blood from the South. In modern times, the Russian cavalry is remounted from breeding farms in the steppes of the Don and Volga. These horses have a good proportion of Arab and thoroughbred blood and are extremely hardy.

The early colonists of Virginia brought horses with them, and, other than the Spanish horses of the West, all horses brought to America prior to the Revolution came from England. The early importations were small horses, few being over thirteen and a half hands. The first English thoroughbreds were brought to America about 1750; these, too, were small, being about fifteen hands. The southern colonies, where the horse was much used by the aristocracy for hunting and racing, became important horse breeding centers. George Washington was an ardent horseman and breeder of horses and owned several thoroughbred stallions. Cavalry was used but little in the Revolution, and we assume that such cavalry as was used was remounted from the hacks and hunters of that time.

After the Saracen invasion in the eighth century, the most popular horse of France was the Limousin, a horse of fair size having many of the characteristics of the Barb. After the middle of the seventeenth century, the thoroughbred found its way into France and was crossed with the Limousin, and the latter by the middle of the eighteenth century was almost extinct.

Many cavalry horses were used in the French Revolution, for the French at the beginning of the war had about twenty-five thousand cavalry mounted on horses, such as are noted above. By 1793, the cavalry had increased to forty thousand. Under Napoleon the cavalry, at first rather scanty, was soon organized to a force of considerable size. Murat, one of Napoleon's cavalry commanders, had a cavalry force of over twelve thousand horses. From the histories of the wars of Napoleon, we first get authentic records of the losses in horses sustained by cavalry forces, and we learn of the difficulties of supply of a large force of horses. During Napoleon's Russian campaign, he crossed the Neiman with over sixty thousand cavalry horses and in his terrible retreat after the burning of Moscow lost practically all of his horses due to starvation, cold, and the constant pursuit of the Cossack cavalry. He recrossed the Neiman with but sixteen hundred horses. Napoleon's downfall might well be attributed to lack of forage for his horses, for his disastrous Russian campaign was the beginning of the end. The allied armies of England, Prussia, and Russia all had excellent cavalry, and the Russian Cossacks were especially well mounted, apparently better than the French cavalry.

The Crimean War tells us little about cavalry horses, unless it be to impress upon our minds the great numbers of Russian cavalry and to show how

the improved fire-arm and increased fire-power did, for the first time, cause enormous horse losses in the ranks of charging cavalry. The charge of the Light Brigade, immortalized by Tennyson's poem, illustrates this point admirably.

The Horse in the Civil and Boer Wars

We have seen that in the United States the foundation stock of the west was of Spanish origin while that of the east was of English importation and contained much thoroughbred blood. From a thoroughbred base, three distinct American breeds developed,—standardbred, Morgan, and American saddle horse. In our Civil War, some animals of these improved breeds were used. In fact, the Confederate horsemen of Stuart, Forrest, Wheeler, and Morgan are credited with ability to raid around the Union armies on account of their superior horses. Confederate cavalrymen were required to furnish their own horses; very few thoroughbreds were used, the majority being gaited saddlers or hunters. Private ownership, which no doubt resulted in the horses receiving the best possible care, may account for the fact that horse wastage was much less in the Confederate than in the Union cavalry. Early in the War, the horses purchased by the Union army were of inferior quality. Better horses were available but were not purchased. Because of poor quality, shortage of forage, overwork, and inexperienced cavalrymen, the losses were enormous. Sheridan while in the Shenandoah required one hundred and fifty remounts per day.

The Union forces were generally short of horses. Whether this was due to horses not being available or to a shortage of purchasing funds and transportation is not clear; probably the latter. In February, 1865, the Union cavalry force consisted of one hundred and five thousand men for duty and about seventy-eight thousand serviceable horses. In the preceding year, one hundred and fifty-four thousand cavalry horses had been purchased and over one hundred and eighty thousand expended. This is an abnormally high wastage, and the cause can almost be stated in the one word—starvation. Until near the end of the war, no organization existed for the rehabilitation or salvage of horses temporarily or permanently disabled.

One of the most remarkable cavalry marches of the Civil War was one made by General Morgan in July, 1862, when with about thirty-nine hundred horses, he covered one thousand miles in twenty-four days. His troopers were mounted on horses of Kentucky, which were gaited saddle horses. On another raid, Morgan covered ninety-four miles in thirty-five hours.

In the Boer War, the English used over one hundred and seventy-five thousand horses in the Transvaal. These came from the United States, Argentina, Australia, and Hungary. Over one hundred thousand were purchased in the United States from the states of Wyoming, Montana, Idaho, Oregon, and Texas, and were range horses, strong in the blood of the Mustang, the descendants of the Spanish horse first introduced in America. Of all remounts used by the British, these range horses were the most favorably reported.

The Crillo, or Spanish horse of the Argentine Pampas, did not prove ... suitable. Losses among the cavalry horses in the Boer War were very gre... due to long shipment, hard work before being conditioned, lack of forag... change of climate, and diseases peculiar to Africa. Losses were nearly fif... per cent. These losses brought forcibly to the attention of the British ... necessity for an adequate and well organized veterinary corps, and the Wor... War found them with the best veterinary service of any nation.

The Horse in the World War

A few years before the opening of the World War, the horse populati... of the world was estimated at eighty millions, distributed as follows: Euro... 40,000,000; Asia, 11,000,000; Africa, 1,250,000; United States, Canada an... Mexico, 19,000,000; Central and South America, 6,000,000, and Australi... 2,000,000. European distribution in part is as follows: Russia, 22,000,00... Germany, 4,000,000; Austria-Hungary, 4,000,000; France, 2,900,000; Italy, 742,000; Belgium, 241,000; Spain, 397,000; Turkey, 300,000; Roumania, 864,000, and United Kingdom, 3,600,000.

This tabulation is given to show that the Allies had the command of the majority of the horses of the world, and that the Central Powers might soon expect a shortage of horses; however, it is doubtful if they ever experienced a shortage of cavalry type horses. Germany, at the opening of the War, had eleven cavalry divisions, ten of these being on the western front where cavalry was used only during the first few weeks of the War. The horse strength of the German cavalry was approximately eighty-five thousand. From what we have been able to learn, the German cavalry was well mounted and during the advance through Belgium and on Paris followed by the retreat from the Marne, made many long and trying marches. That their horses suffered from overwork and wastage was due more to this than battle casualties. However, in the very early stages in Belgium, when they employed mounted cavalry as shock troops against infantry in position, the number of horses killed ... wounded was great. After the stabilization of the Western Front and the capitulation of Russia in the east, the German cavalry was reduced to four divisions and the horses of the disbanded cavalry divisions were put in artillery and transport, where they were sorely needed. Ludendorf said, "The losses were high and the import hardly worth mentioning. The finer breeds had proved their worth. The heavier breeds turned out to be unequal to the stress of war. The horses suffered from glanders and mange. We mastered the glanders but not the mange, and this latter did extensive mischief. The supplies were not always what they should have been." The end of the war found Germany distressingly short of horses. There were enough cavalry horses, but these had to be taken from the cavalry for other uses, where they were more urgently needed.

French cavalry, at the beginning of the war, consisted of ten divisions. The three divisions forming Sordet's 1st Cavalry Corps suffered especially heavy losses in horse flesh due largely to long marches and poor animal management. Between the 5th of August to the 4th of September, 1914, Sordet's corps marched one thousand kilometers. By the end of October, the command had lost two-thirds of its horses due to over-riding and poor care. By 1918, the French cavalry had been reduced to six cavalry divisions and was to a considerable extent employed dismounted. French horses, like all horses of the War, were extensively infested with mange. France purchased many thousands of her cavalry horses in the United States and from Spain. Many of our American horses with part standardbred blood were used by the French for riding purposes.

The British had three cavalry divisions on the Western Front in the first part of the War. Their wastage was considerably less than those of any other nation. Their horses were practically all from the British Isles. On the Western Front, the British used in all classes of animals during the four and one-half years' war about three-fourths of a million animals. The total wastage for the same period was about one-fourth million. Figures covering cavalry alone are not available.

In his Palestine campaign from July, 1917, Allenby had a cavalry force of between three and four divisions and had an average horse strength of twenty-seven thousand. The following percentage of wastage covers the entire force and not the cavalry alone:

Period	*Per cent wastage (died, destroyed, sold)*
July to December, 1917	7.99
January to June, 1918	6.19
July to December, 1918	10.69

From one-third to one-half of the losses were due to wounds and injuries; the remainder to disease.

In the later stages of the campaign, the cavalry played its most prominent part, and of the twenty-seven thousand horses, the cavalry lost nearly ten thousand in the period from July to December, 1918, in which a rapid advance of nearly four hundred miles was made. Lack of water and shortage of forage was an indirect cause of much of the horse wastage throughout the campaign, but considering the terrible conditions encountered, the loss is not excessive. In one instance, two divisions of the Desert Mounted Corps, while at continuous work, went for seventy-two hours without water; and in all units, periods of over thirty-six hours without water for the horses were not uncommon. In twelve days, three divisions of Allenby's cavalry marched over two hundred miles, fought a few minor actions, captured sixty thousand prisoners and much material. In 1917, the Anzac Mounted Division marched sixty-five miles in twenty hours and fought a determined action. Horses were saddled for twenty hours, and many went without water for thirty-four hours. These are but a few of many instances that might be given to show the hardships that Allenby's horses were daily subject to, and yet held a remarkable efficiency.

It is interesting to learn that seventy-five per cent of Allenby's troop horses were mares, and that the horse which contained up to fifty per cent of thoroughbred blood proved the best. The small compact horse of fifteen to fifteen two seemed to be the best for size. Old horses in good physical condition proved equal to the younger horses. A large part of Allenby's cavalry was mounted on Australian "country breds" by thoroughbred and Arab sires on country stock. The Australian "Bounder" without any special breeding was well represented, as were also the Indian half-breds and horses from the British Isles.

The British bought over seven hundred thousand horses in Canada and the United States, but not over twenty thousand of these were classed by the English as of the riding type. During the World War over a million horses were exported from the United States for war needs. Our own government purchased over sixty-one thousand riding horses in the United States and some twenty-five thousand in Spain, in France, and from the British.

Russia had the largest cavalry force in the World War: fifty divisions, with over two hundred thousand cavalry horses. Australia had some ten divisions of cavalry, Roumania two, Bulgaria two, Belgium one, and Turkey some forty regiments and thousands of irregular Kurd and Arab horsemen. It is difficult to find any definite information concerning the horses of the cavalry forces listed above, but a mere recital of the number of organizations serves to show us the enormous number of horses that were employed.

Wastage of cavalry horses in war may be classified as preventable and unpreventable. Preventable losses in the World War were great, but lower than any other war ever waged. Much of this reduction may be attributed to the fact that all of the armies, for the first time in history, were equipped with organized veterinary services. Debility is the prime cause of wastage, and this is almost always due to shortage of food. This may be classed as a preventable cause, but at times the military necessity, the extreme difficulty of supply due to transport conditions, or actual shortage may make it an unpreventable cause. There is no gainsaying the fact that the bulk and weight of food necessary to sustain properly the horse offers, in our modern intensive form of warfare, a serious problem of transportation: but it is doubtful if there ever will be produced any form of mechanical device as generally efficient as the horse and requiring less supply. Wastage due to poor animal management is always preventable, but in large and quickly trained armies it becomes almost unpreventable. Disregard of the capabilities of the horse such as seen in some cavalry early in the War, without the full justification of military necessity, is of course senseless. If one analyzes the cause of wastage, it is not infrequently found that ignorance of officers ordering on the cavalry has more to do with it than bad horsemanship in the cavalry. The unpreventable wastage is due largely to death and wounds caused by the activity of the enemy. With the wonderfully improved armament of the World War, we might reasonably have expected large battle losses of horses, but the

were surprisingly low, particularly when the ends attained were considered. In Allenby's force far more horses died from disease and other injury than were killed in action or died from wounds received in battle.

We have now followed, in a rather superficial way and omitting many countries and many wars, the history of the cavalry horse from antiquity to the present time, and at this point we can only conjecture on the use of the cavalry horse in the war to come, or the part that cavalry will play in that war. The horse was first an animal of war, and it is inconceivable that war will ever be waged without him. War is a conflict between elements of flesh and blood and inanimate armament is but a means by which it may be more successfully waged. The flesh and soul of man cleaves to things animate and from them draws courage and inspiration such as can never be supplied by things mechanical.

The First Regiment of Spahis

By Leonard H. Nason
Lieutenant, 158th M. G. Squadron

IT might be well to explain, as Cicero did defending Roscius, what a young man, a last year's recruit, so to speak, and one who might still be said to have his hand in the air taking the oath of office, has to do writing articles in this august publication and undertaking sometimes to say that such and such a thing has an unmilitary appearance, and that such another thing is better done by some foreign army than by ours. We are not, alas, a professional soldier. But we know one when we see one. We were trained, in the good old days, by men who *were* professional soldiers, in all that the word implies. We can remember, before the war, that a squad room in the Regular Army had a certain appearance, the room itself and the men therein. We can remember the time when a man was a recruit for the first year of his enlistment, and that he ranked with, but after, the troop mascot. This was the Old Army. It seems to have disappeared. Where could it have gone? These men were not all killed in the war. Personally, I think that they are still there, or their second generation, but the officers who instructed them and were responsible for their morale are no more. A few of them, perhaps, are still in the army, but in the upper ranks, where they no longer come in direct contact with the men. Why is it that the officers who have come after have not that iron in their soul, that whip-crack in their voices, that lightning in their glance that the Old Army officers had? Because the Old Army officers, retired now, or brigade and division commanders, had their training on the Frontier. They are the last of the lot. When the Frontier ceased to be, the best training school in the world for the junior officer also went out of existence. It does not seem at first glance that the extinction of the buffalo was a heavy blow to our National Defense, but so it was. When the buffalo disappeared, the Indian who depended upon him for his commissary arrangements, disappeared likewise. With the pacification of the Indians went the necessity for frontier forts, for columns that supported themselves, for all manner of "alarums and excursions." With all these went something more. The opportunity for a junior officer to make a decision on which his life and his men's lives depended, and to know that if he guessed wrong he'd never make another mistake.

All this by way of introduction. Now then, we are a wanderer on the face of the earth, but wherever we wander, if there is a ruined fort, if there is a garrison, if there is a drill or a maneuver or even an empty barracks, we go to see it, as other people go to see churches or paintings or Roman ruins. Last winter we were in North Africa, two hundred or so miles from the railroad, and we came upon a regiment that merits attention. It was the First Regiment of Spahis, native cavalry, with a mixture of French and native N. C. O.s and French and native officers.

The First Regiment of Spahis was formed some time before the Franco-Prussian War. When, I don't know. I had no letters of introduction to the commanding officer, and what I found out about this regiment I discovered on my own initiative. I saw them first on the edge of the tourist belt, at Bou-Saada. The Spahis are fine, tall men, straight as an arrow. They wear a khaki uniform that has long trousers similar to golf knickers, only longer. The recruits wear a short black leather leggin, but as soon as they get money enough they buy red boots made of sheep-skin embroidered across the instep with silver wire. Over this uniform they wear a beautiful red burnoose, or

Left: A Trouper of the 1st Spahis. Right: Desert nomads; this type of man, in bands of fifty or a hundred, keep the Spahis amused.

cape. This serves them as overcoat and blanket. When they are in the field they carry it under their saddle, folded like a saddle blanket. Their headdress is a sort of turban, made of several felt caps, one over the other, with a white veil wound around it and brought down about the neck, and over that a close wrapped binding of fine camel's hair rope. This arrangement is called a "gnour," at least that is the way it sounds. They are armed with the curved sabre, like our old model, the French cavalry carbine, and a machine rifle to each rifle platoon. I did not see any machine guns, nor any indications that this regiment has them. Their saddle is surprisingly similar to our McClellan, a hardwood tree covered with rawhide, and having a detachable sheep-skin cover. The pommel and cantle are very high; coming up to the rider's stomach in front, and half way up his back behind. The stirrups are made of iron, heavy, shaped somewhat like the scoops on a conveyor. They are hung from the center of the saddle, which means that a man had to learn to ride all over again in order to use this saddle. I tried one several times, but found it ex-

tremely uncomfortable. The spahis stand in their stirrups, but this must become fatiguing after a long march. A French spahi—French boys are allowed to volunteer for the spahi regiments where they serve on the same footing as the natives—told me that they never had sore backs. I reserve comment on this. I noted during the late war that sometimes officers of other armies disagreed with ours as to what constituted a sore back.

We continued our journey into the desert, and a hundred miles or so farther south we struck the main body of the First Spahis. In this town there was also a garrison of Tirailleurs, or native rifle regiment, very picturesque in light blue and yellow, with a short cape, fez, and exaggerated plus-fours. There is a heartfelt sympathy between tirailleur and spahi like that between cat and dog. They fight with each other with as little concern as they smoke a cigarette. It was in this town, Laghouat by name, that I discovered a thing that astonished me. The officers of these native regiments have no drunkenness to contend with among their men, because the Mohammedan religion forbids alcohol as a beverage, and the Mohammedans respect the commandement. In addition to that, once a year, at Ramahdan, or Lent, they fast for six weeks, eating only once a day. The soldiers fast too, although they go to drill and on guard just the same. This must make the mess sergeant cheerful, unless the hard hearted French do not allow full ration allowance during the Fast. From what I know of them I don't think they do.

Now here in Laghouat we became really acquainted with the First Spahis. We met the commanding officer, Colonel Meygret. His is the type of soldier one reads about in books, or sees in the better class of moving picture. Tall, smooth shaven, calm eyed. He was on a visit of inspection and this visit he made on horseback, or in a spring wagon, sleeping in the *bled* with the shieks, talking with this or that *bash-agha* or native prefect, eating sheep roasted whole, and seeing every night, against the sunset sky, the signal fires that announced his coming with his red caped escort. He has spent most of his service with this regiment. He was brought up with it, for his father commanded it before him. It did not take us very long to become acquainted. Those who belong to the great Brotherhood of Arms have certain universal signs and passwords that make them open their hearts to each other on even the shortest acquaintance.

"I remember when I joined this regiment," said the colonel. "It was here in Laghouat. I was a captain then. Joffre, de Langle de Cary, Foch, Lyautey, Gallieni, Petain, were all here then, in Morroco or Algeria. We were all learning. You tell me the name of a successful commander in the war, and I'll tell you the name of his colonial regiment. It teaches them to think, the service out here. Then there's no society life out here either. Don't need any. We're too tired. When I was a captain I used to be up at daybreak, out in the *bled* schooling a horse. After breakfast I'd come down to the office, and every morning I'd have ten or fifteen men wanting to enlist. Maybe I'd pick out one, maybe not any. These troops here are all volunteers, and we have to keep the

regiment at war strength. I've got more men under me than a division commander in France. There are eighteen hundred men in my regiment. Well by the time I'd chosen my recruit for the day, and signed my letters, and put a few men in cells for fighting with the tirailleurs it was time to drill. After that, hunt. Nothing like a hunting to train a soldier. It's good for these boys of mine, too. They like to burn powder. If we don't take 'em out every so often to pacify some *djich* or *razzia* they begin to get restless and cause trouble." He grinned. "That's why we let these *razzias* form, so we can chase 'em."

A *razzia*, or a *djich*, it appears, is formed by a few nomads who have taken to stealing sheep. They meet up with another band doing the same thing, and being stronger, can raid bigger sheep-herds. Two or three of these enlarged bands combine, and there is a *razzia* of sixty to three hundred rifles. Since the war in Morocco, the rifles are liable to be of the latest pattern, too. There is, also, a well arranged trade in arms across the Tripolitan frontier. All this, according to the colonel, made life interesting. He did not talk with his hands, but kept them behind his back all the time. His sentences were short, and only at rare intervals would he remove the huge pipe from his firm teeth and make a waving gesture with it.

"Problems are all right," he said, "but they don't teach a man war. Did you ever hear of a problem where an officer had to keep an outfit fed, supplied with water and ammunition, and arrange to get his wounded out, and if he didn't get the right solution he and his men would have to go hungry? No. That's the trouble with problems. At a certain hour the war stops and the men have dinner. Then when they get into action they forget men have to eat."

This I felt was true, and explained much that had seemed to me incomprehensible in the late war. Our problems never allowed for the fact that men must eat, or that the average or garden variety of soldier can very easily shoot off all the ammunition he carries on him, or has in a combat cart or escort wagon. I am a subaltern officer of the reserve and not a very good one either, but I cannot help but feel that the project for arming every soldier with semi-automatic weapons is a mistake. Where will the ammunition come from? I was in action with the 30th Infantry at the crossings of the Marne, and the men there shot off all they had and all they could get from the dead, and all that frantic supply officers could get up to them. How could they have been kept supplied with ammunition had each one had a rifle that fired four or five times as fast? There were good hard surfaced roads behind us, too, that weren't shelled so badly that an energetic officer couldn't drive trucks over them.

"The Frontier," said the colonel, "is the place to train officers. They're alone here, out on outpost or on patrol. None to advise, no one to pass the buck to. They must decide, and if they decide wrong they suffer. You can't tell a rebellious shiek you made a mistake, and want to try again. He'll gobble your command. The desert sun, and the sandstorm and thirst and hunger, don't care whose responsibility it was that brought a troop there with no provisions. They kill you just the same. An officer learns to depend on no one but

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Fearful Horsewomen or The Achievement of Nonchalance

(Being Confidential Notes on the Cult)

By [illegible]

I [illegible]

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But having no more frontier, what can we do?

Reconnoitering Party of Spahis in the Mists of the Oise, 1918

Fearful Horsewomen or The Achievement of Nonchalance

(Being Confidential Notes on the Cult)

By Helen Fiske

IN almost every cavalry post throughout the country and in certain others imbued with a sporting spirit—and the requisite horseflesh—there is now at least one "Ladies' Riding Class." And in several of the larger posts there are as many as four or five of these classes, the ladies grouped (inevitably) according to their form and willingness. The cult of riding, with its glamour, romance and sartorial effectiveness, draws its recruits with fatal allure from the more prosaic satisfactions of the matutinal couch, the bridge table, golf links and nursery. For these are the consolations of the aged and infirm and riding the badge of youth (at least deferred). Some women of all sizes and ages, garbed in a colorful assortment of sweaters, rolled puttees, high-heeled shoes, jockey caps and husbands' breeches flock to the riding hall for court adventure in that magic spot.

But alas, something is wrong. After a few weeks the ranks begin to thin. Each day sees a name dropped from the roll and a pair of new boots for sale, cheap, at the Post Exchange. The shades are now drawn for the unfinished nap; the four-spade bid is doubled and set; the thirteenth hole is made in par (if you don't count the stroke out of bounds), and the lowly darning ball returns to its holey mission.

Something is wrong when so much ardent enthusiasm is thwarted at the outset. The time has come when the rights of this great neglected group of aspirant riders should be recognized and dealt with. The doctrine of modern education "the greatest good for the greatest number" should be applied in the riding hall. Our motto should be "put a horse in every home." Instruction methods must be popularized for only genius can be offered learning; it must be sold to the man in the street—I mean the woman in the home, and in decidedly attractive and homeopathic doses. It is in this democratic spirit of "Everything for Everybody" this article is written. And it is believed that with the information and advice herein given Fearful Horsewomen throughout the Army may not only come to enjoy the degree of riding to which they are emotionally inclined but may also partake of those coveted benefits of the Inner Circle; horse-talk, comraderie, and the prized agnomen "horsewoman."

Having in mind the psychological fact that respect is the parent of fear it shall be shown that the horse should not be respected. Furthermore, the necessity of accepting the irrelevancies of form and of acquiring the externals

of poise and restraint will be noted and explained. Included will be a list of mistakes fatal to *entrée* to the green pastures of the truly horsey: and finally, a selected group of words and phrases will be added that have been approved by the High Committee on Horse-Talk.

The Cult Must Be Accepted

Riding, as the neophyte correctly supposes, is a sport. But where she falls down is in persisting to drag this heretical fact into the riding hall, for there, riding is taught as a Cult and as such it must be accepted. If one cannot constitutionally accept cults there is no use trying to be original and create inharmony. Neither is it worth while to admit defeat and flounce out to the inward glee of the survivors. Better a careful tact together with an appreciation of appearances; they will do just as well for all practical purposes as martyrdom in the cause.

Riding, like all other cults, has, as its essence, a central Mystery (the horse). Surrounding this are the Sacred Rites (form) and Traditional Taboos (don'ts of dress and behavior). We now harden our hearts and enter the Temple.

The Central Mystery—What and Why is a Horse?

The horse is a quadruped of great stupidity and emotional unbalance. He is a survival of the beasts of the Miocene Age, in which palmy day he doubtlessly loomed up as an intellectual giant beside the lazy sloth or the bulbous dinosaur. But, in fact, he is more stupid than the lowly mule, condemned to ridicule and sterility, and he interpolates his dumbness, not with the humanly understandable quality of stubbornness as does his hybrid offspring, but with insane and unpredictable antics that freeze the blood and dry out the mouth.

The horse, like the camel and ox, has been abnormally protracted far beyond his proper racial span by means of domestication and for purposes of utility. But the camel and ox have given way to the tractor and railroad and now find their proper milieu in the zoo. Not so the horse. He is still used by the poor, who of necessity are reactionary, and by the rich, who require diversity of emotional stimulus, and by the cavalry for—because—well, that's what it is. His physical attributes have been putty in the hands of skillful breeders. His neck has been stretched, his legs lengthened and his barrel slenderized; and he has been trained and selected to perform stunts far more suited to the agile cat, the fleet rabbit or the sturdy mountain goat. But such is his pathetic acceptance of human reasonableness that only exceptionally does he demur at cutting such capers.

All this physiological tampering accounts, no doubt, for his great emotional unbalance, which, added to his Gargantuan strength, would make him a dangerous animal indeed were it not for his blessed stupidity. Actually then it may be asserted that, in general, man's wit is equal to a horse's didoes.

We often hear of the horse spoken of as "noble," "faithful," "affectionate," "brave." Perhaps. But watch out for his hind legs, nobility or no nobility. He may be faithful but a bucketfull of oats can prove a powerful aid to heresy. He may be brave, but spurs and whip will prevent a relapse. He loves his master—but don't forget to close the gate.

Then there is the romantic phase of the horse. This questionable reputation was foisted on the guileless animal due to his participation in Mediaeval histrionics, for it was he who carried the pompous knight to noble murder or poetic abduction:

> "The knight goes forth to meet his foe
> All dressed in cast-iron domino;
> His trusty steed with plunging gait
> With waving mane and tail aflate,
> With drafty neck and fiery eye
> Will rout for him the other guy."

and all that sort of thing.

Happily for old Dobbin he remains blissfully unaware of all these ethical and Quixotic graces, and continues to maintain his conduct on strictly behavioristic lines.

Rites and Taboos—The Fetish of Form and the English Tradition

Credulous fear of the horse having now been supplanted by a blithe irreverence, we mount up to investigate the vagaries of form.

Form is the correct manner of cavorting along on the horse's back. We have acquired it *in toto* from the English, those great codifiers of "what's what" for the upper classes. It was they who took over the horse after his rather vulgar participation in the serio-comics of the Middle Ages and made him a respectable member of the landed gentry. They formalized the rites of clothing and conduct and, nothwithstanding the American innovation of breeches for women (used too by some of the more daring members of the younger English smart set), they still remain the arbiters in these matters. Do not be annoyed if these rites seem unreasonable and difficult, for form, like the idiom of a language, is just that. It has been given us by a people who have a positive genius for being naturally unnatural, for enjoying discomfort with charming ease. Remember, if it were not for the intricacies of form there could be no distinction made between good and bad riding, for by your form are ye known.

Therefore, spurn the common ways of the cowpuncher with his legs stretched out to the horse's ears and practice with assiduity the genteel contortion of legs back, heels down, toes out, and knees pressed tightly against the saddle.

Do not be guilty of the obvious and use the stirrups for support. Like

the buttons on a man's coat sleeve they are merely the vestiges of a time when such crude precautions were deemed necessary.

Do not yearn to rest easy against the molded curve of the back of the saddle but rather hold the body well forward on the sharpest and most uncomfortable point of the pommel, for such is the approved seat.

Don't squat, flop or stiffen at the canter; and don't bend forward to mitigate vibration at the trot. Learn to carry yourself at a well-relaxed tension, if you know what I mean.

Don't chew gum as a nerve pacifier—that comfort must be dispensed with at once. And don't be ingenuous and ask what the horse means when he puts his ears back. No one has ever been able to answer that question and it simply betrays your amateur standing.

If your horse uses tactics calculated to make you dismount with sudden informality maintain an expression of total unawareness. Above all don't "grab leather." Even your own friends couldn't enjoy your funeral under such circumstances.

Should your mount in his playfulness* succeed in giving you a round trip from the birds' nests to the tanbark, let your feeling out *soto voce*, for any display of emotion is in frightfully poor taste. In riding it is solely the prerogative of the horse; the temperament of the rider must remain to all appearances as stoically tailored as her clothes.

After the achievement of a fall be modest; don't brag about how serious it was, nor use the details for subsequent hospital conversation. And don't make any vulgar display of hoof prints on your anatomy.

Don't overlook the importance of the gallery for it is the non-riders who know most about the game. Look well to your nonchalance, therefore, and your form, as you pass them by.

Don't fail to appear at the hunt breakfasts in riding clothes and be "seen" at all horse shows and exhibitions, however trivial.

In the class select your horse, if possible, according to your mood, but do not quibble over riding one assigned you. It might give the impression you are afraid.

Consider in this connection the value of sublimation. The human bosom can contain but one emotion at a time. A stronger emotion will drive out the weaker. So, on the day your striker spades up all your new plants thinking them weeds, or when the cook has prepared a nice little fricassee out of the squabs you scrimped to buy, or when the husband has done any one of the many fool things he's capable of doing, conserve that exhilaration of feeling. Stoke it as you wend your way to the riding hall, and select in full view of all the horse with the most notorious reputation, for fear has been sublimated and you will ride with a noteworthy abandon.

*See glossary of Terms.

The sublimation of fear can be sustained over a longer period if the particular motive which originally caused you to risk all this wear and tear and breakage can be enlivened into a potent force. This inner and private conviction that you must ride might have arisen from any one of the following necessities:

1. For exercise. This emotion can be stimulated in proportion to actual poundage and vanity.
2. To focus on self the straying interest of the husband. (Knowing that recklessness has a special appeal to the unimaginative male.) The vigor of this motive will depend upon the domestic necessities involved.
3. To prove to a doubting world that you are still young and romantic. This requires a vanity tortured by the realization of a losing foothold in the coquetry lists. It is one of the most usual motives and explains why we see so many gray hairs on horseback while the lazy youngsters sip cocktails at the Golf Club.
4. For romance. Escaping from domestic banalities. Here the instructor plays an important part. You can try drawing his attention from the others by staying after class to ask his advice. Give him a lift in your new car, and take advantage of any other expedients that opportunity offers. Cultivate your interest in him with ardor until you find yourself doing the most reckless things for his impressment.

Whichever of these may be your motive, keep it always in mind. Stimulate it, dwell upon it; be heartless in its application. Make it, in fact, an integral part of your horse equipment; for by it you may achieve horsiness and by horsiness achieve your motive.

The subject of clothes is of extreme importance to the F. H. for no phase of form nets as much for your riding reputation with so little expenditure of nerve. There is only one sort of thing to wear—the correct thing, of course. Originality is déclassé and taboo. The most perfect outfit can be totally ruined by a rakish tilt to the hat, a fringe of maudlin curls showing under it, or by boots that halt at the calf. Observe that impeccable riding clothes mean impeccable riding to the general public and you would almost have to go out of your way to make them believe otherwise.

Horse-Talk

This is something to be carefully avoided by the amateur. It is one of the sacred prerogatives of the initiates and its loose use by proselytes is either frowned upon or totally ignored. The F. H. should preserve during her probational stage an air of modest and respectful attention, meanwhile laying up a store of authentic vocabulary and rendition. Concerning her own experiences she should be brief to the point of taciturnity. The old dogs she rides cannot possibly be of interest and her boring diagnoses of their idiosyn-

tenant E. Y. Argo, F. A.; and Captain P. T. Carpenter, Veterinary Corps. The enlisted personnel of the team consisted of: Sergeant Linton Young, Private Charles King, Private Irwin Steele, Jr., Private Willie Johnson, Private Abraham Lacour, Private Leonard Young, Private George Boatzer, all 9th Cavalry; Private Theodore Wise, F. A. S. Det. (Col.), and Sergeant Frederick Gormley, Cav. Sch. Det.

The horses arrived at Rye in excellent condition. Mr. Bowman made available to the team all necessary facilities for training, including excellent stables, construction of all desired jumps and the use of the grounds at Bowman Park. The enlisted men were comfortably quartered near the horses, while the officers were most pleasantly cared for at the Westchester-Biltmore Country Club. Training was carried to its completion by July 10, when the fifteen horses to go were vanned from Rye to Hoboken and loaded on the S. S. President Roosevelt without mishap.

While at Rye, arrangements were made for the purchase of the highest quality of oats and timothy hay for use not only at Rye but for the entire time until our return to New York, thus making unnecessary any change in forage. Also, there were obtained and installed on the ship two treadmills upon which our horses were worked daily at the walk and trot, to preserve their condition. This feature was most successful and enabled us to land our horses in Holland in as good condition as when they went aboard.

On board ship our horses were in box stalls about 9 feet square, each provided with a pinch bar to closely enclose the horse in case of rough sea. The bedding was of peat moss. Here, as in all other place, each horse was provided with individual feed box, hay net, water bucket and salt box. We were fortunate in having a smooth passage over, landing in Amsterdam July 20.

Upon docking at Amsterdam at about 3:00 P. M. we found that General Short, who had preceeded us by three weeks, had waiting on tracks on the dock, a special train which carried officers, horses, equipment and forage to Hilversum, about twenty miles from Amsterdam. At Hilversum we were most cordially and hospitably received by all officials. Every possible courtesy and assistance was rendered us by those with whom we were thrown in contact. Ample training grounds were provided to us by a private citizen.

During the eighteen days between landing and the opening of the equestrian events the training and conditioning of the horses of each competition were advanced as far as possible. In view of the amount of rain prevalent in Holland at this time and the probable heavy going that would be encountered during competition, our horses were galloped and jumped in the mud. As many different kinds of jumps as possible were utilized as appropriate heights for the three day horses and for the jumpers. One stiff work-out was given our three day horses eight days after their arrival, and their condition was shown to be excellent.

After close observation of the condition of the horses, the record of their daily performances and bearing in mind the experiences of 1920 and 1924, the

following team for the Equestrian Championship was selected and as required was submitted forty-eight hours before the competition:

1. *Misty Morn*.....Ridden by Major Doak
2. *Benny Grimmes*.....Ridden by Major Chamberlain
3. *Verdun Belle*.....Ridden by Major George

Reserve. *Ozella*.....Ridden by Captain Carr

The reserve horse or rider could replace any other horse or rider up to one hour before the beginning of the competition. Contestant were shown over the steeplechase and cross country course after the designation of the team and reserve. *Ozella*, who was considered the surest entry, was placed in reserve especially so that after our looking over the course she could replace what was thought to be the weakest horse of the other three.

The requirements of the Horse Championship were as follows: First day: Schooling of known prescribed movements, value three hundred points: Second day: Endurance, value fourteen hundred points: Third day: Jumping in stadium over an unknown course of twelve jumps at rate of fourteen miles per hour, three hundred points.

The second day in detail consisted of:

A.—Road march of 4⅜ miles at rate of 9 miles per hour.
B.—2½ miles steeplechase at rate of 22½ miles per hour over 13 jumps.
C.—9 miles road march at the rate of 9 miles per hour.
D.—Cross country 5 miles at the rate of 16.7 miles per hours.
E.—1¼ miles gallop at 12½ miles per hour to finish.

Horses carried one hundred and sixty-five pounds and were penalized very heavily for any overtime. For example: the allotted time in the cross country was seventeen minutes and forty-six seconds. If he were one minute late his time penalty would be two hundred and ten points or over two-thirds of the maximum score, for schooling or jumping. In "A" most of the distance was in soft going. In "B" the footing was good though quite uneven, and some of the jumps were stiff. In "C" about three miles was in very heavy sand, over sand dunes, and about one mile was on brick pavement. In "D" there were more than forty obstacles, which included wide and deep irrigation ditches, most of which had seepy banks for about two feet on each side; solid natural rail fences three feet ten inches high, in some places in front of wide ditches, sometimes as "in and out," sometimes in or beyond ditches, sometimes following a sharp change of direction, and many of them in the latter part of the "cross country" when the horse was most fatigued (these latter caused several falls); five road crossings with ditches on each side of the road, these ditches had vertical banks and some of them with water four feet below surface of ground. The ground was comparatively level, but the course was full of sharp turns which made it impossible to gallop at much speed for any considerable distance. "E" was in sandy going.

After being shown the above course, and from experience in 1920 and 1924 Olympic Games, weighing the relative value of the endurance phase with that of the school or stadium jumping, there was no doubt but that the horses should be chosen for absolute soundness, galloping and staying ability, courage and broad jumping, so long as they could show creditably in the schooling and stadium jumping phases. Bearing the above in mind, *Bennie Grimes* was considered the weakest of the horses originally nominated, and *Ozella*, ridden by Major George, was substituted for him. This gave us a team of three horses, one of which, *Misty Morn*, was 15/16 thoroughbred, and the other two were registered thoroughbreds.

In the schooling phase of the three day test our team was placed tenth out of fifteen nations; two hundred and fifty-six points behind Holland, the leading nation. We had no expectation of standing high in the schooling phase because of the fact that our horses had been in training for such a short time. In contrast, one horse shown by the Holland team was known to have been in training for six years, and competed in the 1924 Olympic Games. The other two horses had been in training for a long period and were thoroughly schooled.

In the endurance phase our team finished first, placing us in second place for the first two days, until we were eliminated as a team by the judges' decision to eliminate *Ozella* because of failure to take one obstacle on the cross country course. Other than the above failure to take one jump, none of our horses were penalized for any cause, and each horse received a bonus for undertime on the "Steeplechase" and "Cross Country," which were the only phases on which a bonus was allowed. The official veterinarian stationed at the finished of the ride, stated that our horses were in better condition than those of any other nation.

In the stadium jumping, the two horses remaining completed the course, one with two faults, the other with six faults. Had *Ozella* not been eliminated any reasonable jumping score that she might have made would have been sufficient to have placed our team second by a wide margin.

The results were as follows:

A—Teams
1. Holland
2. Norway
3. Poland

B—Individual
1. Holland
2. Holland
3. Germany

At the end of the endurance phase after being notified officially that *Ozella* had been eliminated, Captain Carr and I went back to the obstacle in question and checked carefully the markers indicating the course preceding the obstacle. The obstacle itself was a two bar post and rail fence in a depression about

seventy-five yards beyond a right angle turn. We found that the marking was sufficiently faulty at the turn to justify a claim for reinstatement. It was also found, upon investigation of the official records, that eight riders had gone off the course at this point, six of whom regained the course without elimination, the other two being eliminated. The data obtained was submitted with the claim to the Jury of Appeals. Before this claim was submitted, the Secretary of the Dutch Olympic Equestrian Committee stated that he considered our claim a just one, and that he thought undoubtedly the claim would be allowed. However, after much discussion by the Jury of Appeals, the claim was disallowed.

I am sure that our methods of conditioning and training for the three day event were thoroughly correct in every way and second to none, with the one exception that our horses needed more time for training in schooling and should be more highly collected generally when being shown in schooling. The fact that our team, which stood tenth out of fifteen at the end of the schooling phase the first day, was first on the endurance ride on second day, and stood second for the two days (until one of our horses was declared eliminated), and the two remaining horses jumped well in the Stadium—so that our team, without the elimination, would surely have placed us second to Holland—bears out this view. To show the severity of the endurance test, eighteen horses were eliminated and others suffered loss of points by refusals, falls and overtime.

Considering the past performances of the horses for the Jumping Competition, their selection was self-evident. The following team was entered:

1. *Nigra*.....Ridden by Major Chamberlain
2. *Fairfax*.....Ridden by Major Roffe
3. *Miss America*.....Ridden by Captain Carr

Reserve. *Jack Snipe*.....Ridden by Major Doak

The first three horses actually competed.

The course consisted of sixteen obstacles from four feet four inches to four feet eight inches high with most of them spread between five and six feet and including two "in and outs," double oxer, triple bar, bank and fence, water, fence and bank and fence, gate, stone wall, double bars over water, etc. The course was very reasonable, though a thorough test, and I know that any or all of our horses entered were capable of negotiating the course without fault. However, it was reasonable to assume that any good jumper over such a difficult course, making fifteen miles an hour, with many turns, might make an error at one or more obstacles. None of our horses jumped without fault but each made a very creditable performance. The scores were as follows:

1. *Nigra*—One front knock down—four faults.
2. *Fairfax*—One front and one hind knock down; one run out—totaling eight faults and four faults for overtime.
3. *Miss America*—One hind knock down and front foot in water—totaling six faults.

This gave the team twenty-two faults placing the team eighth out of sixteen entries. The winning team had one horse to go without fault and each one of the other two horses had one hind knock down. Two teams were eliminated and the others had faults ranging from four to sixty-two. Results were as follows:

A—Teams

1. Spain
2. Poland
3. Sweden

B—Individual

1. Czechoslovakia
2. France
3. Switzerland

Upon completion of the contests all horses were in excellent condition. On the morning of August 13th all horses, attendants, equipment, forage and baggage were transported by rail from Hilversum to the dock and loaded on the boat which sailed that afternoon. Though the return trip has not been as smooth as in going over, all horses seem to be standing the trip well.

A great deal of credit should be given General Short for his part in the undertaking. Besides the innumerable requests made upon him, or tasks he assigned himself, he made all arrangements for the grounds for training, construction of obstacles and preparation of courses at Fort Riley, Rye and at Hilversum. At Hilversum and during the contests he planned and carried out without flaw the transportation of horses, and all personnel to and from the several control stations, as well as the functioning of those stations. His preceding the team abroad relieved it, upon its arrival, of all cares concerning getting settled in its temporary foreign quarters.

As always heretofore, Colonel Pierre Lorillard, Jr., rendered immeasurable assistance to the team. In fact it was he who, by taking care of all the finances, made it possible for our country to be represented in the Equestrian events. Besides this great responsibility he accompanied the team to Holland and was always willing to give his services wherever needed. During the intensive training period abroad, he shared with the other members of the team their burdens and attended to the many tasks that could be performed by a non-riding member.

Always during the training for, and actual engagement in, any competition, especially an international one, there are much hard work, trials of patience, perseverance, tension, and sometimes disappointments. Whatever of these that have been experienced by the members of the teams have been cheerfully met and accepted without complaint. I want to take this opportunity to express my appreciation to the members of the team for the loyalty and support they have given me and for their faithful effort to make my task as light as possible.

None has put forth more untiring effort than the enlisted men with the team. Their hours have been long, their duties varied, their work critically observed, and no matter how great the demand made upon each man, he has cheerfully and in a trustworthy manner more than fulfilled that demand.

During the course of the competition, and in considering the same since its completion, I have come to the following conclusions:

A. Our horses in the three day event were potentially the equal of any team, and superior to all except possibly Holland and Germany. They needed at least one more year to perfect them in the schooling movements. They needed experience in competition over jumps in a stadium. For the endurance phase of the test they were thoroughly fit and had the soundness and courage to finish in excellent time and condition.

B. Our jumping horses were all experienced jumpers, and fully capable of jumping every obstacle on the course. Until the past few months their training has been primarily for showing in American horse shows. This training tends to develop a horse to jump vertical jumps. In the contest at Amsterdam there were twelve spreading jumps and four vertical jumps. Our horses would have been better prepared for such a course if they had been trained over spreading jumps for a long period of time, instead of for the few months that were available. I feel, however, that the horses performed creditably. It is worth noting that the six horses representing the United States, three in the Equestrian Championship and three in the Jumping Competition, four were horses owned by officers, one was purchased privately and presented to the Government for use of the 1924 Olympic Team, and one was purchased during the War under abnormal conditions. Of the three day horses, *Misty Morn* is owned by Major Doak; *Ozella* is owned by Lieutenant J. M. Callicut, F. A.; and *Verdun Belle* is owned by Captain Carr. Of the jumping competition horses, *Fairfax* is owned by Major J. R. Underwood, V. C.; *Miss America* was purchased and presented to the Government; and *Nigra* was purchased by the Government during the War. It is probable that the horses competing in 1932 will be largely privately owned, either by officers or civilians.

As to our riders, their pure riding ability does not suffer by comparison with that of the riders of other nations, and in some cases is far superior. However, some advantage accrues to the foreign riders in that, as a whole, they are more accustomed to competitive riding than are some of our riders. It will be a distinct advance for us when we shall reach that point where the members of our teams are experienced competitive riders.

In closing my report, I would like to make certain recommendations for preparation of a team for 1932.

a. That a definite policy be announced within the near future. This to give individuals a knowledge of what to expect in order that they may work intelligently on such horses as may be available.

b. That not later than January 1, 1930, an officer be designated as Director, Olympic Equestrian Team, with instructions to submit plans for assembling

a team in May, 1930. This director is to correspond to the present team captain and to be a non-participating member of the team. The team to be composed of eight riding members, four for the three-day event and four for the jumping team. One of the four members of each team to be team captain, responsible under the supervision of the director for the training of his team. The director should have absolute charge of the selection of riders, of horses, of assignment of horses to riders, and of training of both horses and riders.

I have been a member of the Olympic Equestrian Teams of 1920, 1924 and 1928. Each time it has become apparent to me that the head of the team, while he should be an active rider and thoroughly familiar with training and international competition, should not be a competitor. I have observed that the better European teams have different riders for the different events. This but carries out the idea of specialization. I believe that only by specialization can we hope to win.

SLOAN DOAK.
Major, Cavalry.
Team Captain.

The Army Horse Show Team at the New York State Fair

UPON arrival in New York on the return from the Olympic Games, several team members left immediately for their new stations. The remainder, under the direction of Major Harry D. Chamberlain, Cavalry, the new Team Captain, shipped at once to Syracuse, to participate in the annual horse show held there in connection with the New York Fair.

Several changes among the horses were made enroute *Fairfax*. *Misty Morn*, *Benny Grimes* and *Verdun Belle* were shipped directly to the destinations specified by their owners. Two horses were added to the string. One was *Buckaroo*, owned by Colonel Pierre Lorillard, Jr., and loaned to the team for the coming year. The other was *The Flirt*, an experienced jumper, loaned by Mr. C. V. B. Cushman, and received at Syracuse.

For the duration of the show, horses and riders were assigned as follows:

Major H. D. Chamberlin—*Nigra*, *George Williams* and *The Flirt*.

Major C. P. George—*Jack Snipe* and *Ozella*.

Major A. W. Roffe—*Buckaroo* and *Star Shooter*.

Captain W. B. Bradford—*Proctor*, *Joe Aleshire* and *Dick Waring*.

Lieutenant E. Y. Argo—*Miss America* and *Shorty Kromer*.

The record of the team winnings during the week of the show was as follows, the numbers in each case indicating the place won by the respective horses:

Class 59, Novice Hunters: 1. *George Williams*; 3. *Ozella*; 4. *Star Shooter*.

Class 60, Green Hunters, Middle and Heavy: 1. *George Williams*.

Class 61, Green Hunters, Light: 2. *Ozela*; 3. *Star Shooter*.

Cass 73, Jumpers, Regular Course. Limit Class (i.e., limited to privately owned horses): 2. *Buckaroo*.

Class 37, Saddle Horses, Thoroughbred Type: 1. *George Williams;* 3. *Ozella;* 4. *Star Shooter.*

Class 64, Green or Qualified Hunters, other than Thoroughbred: 1. *George Williams;* 3. *Dick Waring.*

Class 62, Qualified or Green Hunters, Middle and Heavy: 1. *George Williams.*

Class 75, Jumpers, Amateurs to Ride, Limit Class: 2. *Buckaroo.*

Class 63, Qualified or Green Hunters, Light Weight: 4. *Star Shooter.*

Class 57, Jumping for Officers: 1. *Miss America;* 2. *Nigra;* 3. *Dick Waring;* 4. *Proctor.*

Class 66, Hunters, Regular Course: 2. *George Williams;* 3. *Proctor.*

Class 65, Hunters, ridden by Amateurs: 2. *Proctor.*

Class 79, Jumping, Five Foot Class: 1. *Joe Aleshire;* 2. *Nigra.*

Class 55, Officers' Mounts: 1. *George Williams;* 2. *Star Shooter;* 3. *Shorty Kromer;* 4. *Proctor.*

Class 77, Jumping: 1. *Dick Waring;* 3. *Buckaroo;* 4. *Miss America.*

Class 67, Hunter Hacks: 3. *George Williams.*

Class 81, The Scurry Stake: 1. *Proctor;* 3. *The Flirt;* 4. *Buckaroo.*

Class 76, Syracuse Jumper Stake, Limit Class: 2. *The Flirt.*

Class 58, Jumping for Officers, No Wings: 1. *Dick Waring;* 2. *Miss America;* 3. *Jack Snipe;* 4. *Buckaroo.*

Class 78, Jumpers, Special Course: 1. *Joe Aleshire;* 2. *George Williams*

Class 80, Jumping, Touch and Go: 2. *Buckaroo;* 4. *Dick Waring.*

Class 82, Jumping: 1. *Miss America;* 3. *Nigra.*

Class 83, Jumper Stake: 1. *Nigra,* Champion of Show; 3. *Miss America;* 4. *Dick Waring;* 6. *Joe Aleshire.*

Class 68, Hunter Stake: 1. *Proctor,* Champion of Show.

The Show terminated Friday afternoon. The Army Team carried off a total of fifty-one ribbons, of which fifteen were blues. Among these was the Jumper Stake, won by *Nigra,* and the Hunter Stake and Scurry Stake, both won by *Proctor.* Perhaps the outstanding horse of the show, considering the results in the hunter division, was *George Williams,* a novice hunter, ridden by Major Chamberlin. He is a Remount bred horse, eight years old, sired by *Cock o' the Walk* out of a Remount mare at Front Royal, and is owned by the Cavalry School. He won a total of six blues in the various classes in which entered, and found favor with all as a consequence of his beautiful ring manners, excellent performance and good conformation.

Friday night the team shipped to its home station at Fort Riley. The artillery members continued on to Fort Sill to join the artillery group which is in training there. The cavalry members remain at Fort Riley, together with other officers who have been assigned to the team recently, and will spend the remainder of September and part of October preparing for the international competitions which will take place this fall in New York at the National Horse show.

National Inter-Circuit Polo Championship

POINT Judith won the fourth National Inter-circuit Polo Championship of the United States at Cleveland, Ohio, Sunday, August 26th, when it defeated The Cavalry School team from Fort Riley, Kansas, in the finals by a score of 13 to 8. In the tournament play, which started August 18th, Circuits were represented by the following teams:

Southeastern	Sixth Field Artillery Fort Hoyle, Maryland.
New England	Point Judith, Rhode Island.
Central	Chagrin Valley Hunt Club, Cleveland, Ohio.
Rocky Mountain	The Cavalry School, Fort Riley, Kansas.
Pacific Coast	San Mateo, California.
Southwestern	The First Cavalry Division, Fort Bliss, Texas.

The opening game of the tournament, between The Cavalry School and the Sixth Field Artillery, resulted in a victory for the former by a score of 11 to 8. Overcoming a handicap of four goals in the first two periods, the Fort Riley team, playing the hard-riding, long-shot game of the Western plains, rode on to an impressive victory at Circle-W farm. Led by the onrush of Canon and Morris, who tallied four and three times respectively in the game, the Riley team got away to an early start, scoring six goals in the first three periods. So persistent was their attack that they shot goals in all but the fourth and seventh chukkers. For the artillerymen, McFarland starred at back, making many sensational saves. The line-up was as follows:

Cavalry School 11	Sixth Field Artillery 8 (Earned, 4)
Captain V. M. Cannon	Lieutenant T. F. Keefe
Captain P. H. Morris	Lieutenant E. T. Williams
Captain L. K. Truscott	Lieutenant H. V. Kieffer
Captain J. C. Short	Lieutenant C. N. McFarland

In the second game the driving attack of the First Cavalry Division four swept Chagrin Valley's 1927 Inter-Circuit Championship team from its throne by the decisive score of 9 to 2. This victory was one of sweet revenge for the Border troopers, who lost the 1927 championship at Narragansett Pier to Chagrin Valley in an overtime game 9 to 8. The line-up:

First Cavalry Division 9	Chagrin Valley Hunt Club 2
Major A. H. Wilson	J. A. Wigmore
Major Terry Allen	David S. Ingalls
Captain T. E. Voigt	Major W. J. White
Captain C. L. Stafford	T. H. White

Having drawn a bye in the initial frame, Point Judith and San Mateo lined-up in the third game. When the final whistle blew, the Rhode Island team was in the lead 7 to 5. This victory gave Point Judith the right to meet the winner of the Cavalry School—Cavalry Division match for the national title.

The smart, aggressive team from Port Riley emphatically defeated the Cavalry Division quartette by a score of 14 to 3 in the fourth game, and by so doing became the finalist to oppose Point Judith. Starting in a whirlwind, the Cavalry School gained a five goal lead over the Texans, which was increased as the game progressed. At no time did the Border Patrollers hit their stride which marked their overwhelming victory over Chagrin Valley three days before. The line-up follows:

Cavalry School—14 (Earned, 13)	First Cavalry Division—3
Captain V. M. Cannon	Major A. H. Wilson
Captain P. H. Morris	Major Terry Allen
Captain L. K. Truscott	Captain T. E. Voigt
Captain J. C. Short	Captain C. L. Stafford

The results of these games brought Point Judith and the Cavalry School together in the finals. The latter with victories over the Sixth Field Artillery and the First Cavalry Division to its credit, was unable to overcome the 8 to 1 lead chalked up by Point Judith in the first half of the final game played in Cleveland Sunday. The Easterners did not need the two goals handicap allowed them by Fort Riley as they outscored the Army players in earned goals 11 to 8.

For Point Judith, Bostwick, Post and Gerald Dempsey each scored twice in the first half. In the second half Riley rallied and during the last four chukkers outscored their opponents 7 goals to 5. But it was too late, and the contest ended with the game and the 1928 Inter-Circuit Championship in possession of the youthful Rhode Islanders. The team line-up:

Point Judith—13 (Earned, 11)	Cavalry School—8
G. H. Bostwick	Captain V. M. Cannon
William Post	Captain P. H. Morris
Gerald H. Dempsey	Captain L. K. Truscott
J. C. Rathbone	Captain J. C. Short

Junior Championship Polo Tournament

AFTER defeating the fast Roslyn quartette by a score of 13 to 3, the Army Junior polo team relinquished its claim to the Junior Championship of the United States by losing in the finals to the Old Oaks of Rumson, New Jersey, by a score of 12 to 8.

The 1928 Junior Championship Tournament, which was played at the Philadelphia Country Club, and started Monday, July 16th, drew out five good teams: Old Oaks, Philadelphia, Roslyn, Aiken, and the Army. The withdrawal of Aiken left Old Oaks paired with Philadelphia, and the Army matched against Roslyn in the semi-finals. The first game resulted in an 18 to 4 victory for Old Oaks. The second was won by the Army 13 to 3. This brought Old Oaks and the Army together in a final game marked by what was probably as clever an exhibition of polo as was ever played in a Junior Championship Tournament.

Play started with a rush. Jones took the ball from the first throw-in, galloped down the field with it, but shot wide. For several minutes the Army

continued to threaten. However, Old Oaks four soon hit its stride, and immediately jumped to a 3 to 0 lead, due in part to our weak and costly hitting in defense of goal. Patton started the Army's scoring on a short drive in the second period. Cooley followed with a tally. On the next throw-in Jones picked out the ball, and got away on a brilliant run down the field for a score. In the third period the Army drove its offense into Old Oaks territory time after time, only to miss goal by inches. Balding's long shot from near center field was the only goal.

With the score 6 to 2 against them, Army players staged a sensational rally in the fourth that netted them four goals in rapid succession. Smith and Jones repeatedly got away from the Rumson players and, hitting clear and hard, each scored two goals. Several saves by Huthsteiner successfully blocked the Old Oaks' attempt to score. At the end of the first half the teams were tied 6-6.

Passing up the usual intermission, the two opposing teams opened the fifth period in aggressive play. Borden scored thirty-nine seconds after the throw-in. Jones again evened matters soon after with his fourth tally. Shortly after the bell Patton put the Army into the lead for the first time with a goal from scrimmage. This was the Army's last goal, and constituted the turning point of the game.

From then on the Old Oaks forged ahead, scoring five times before the game ended. Four of these were made by Cooley and one by Borden. In the last three periods the Army could not stem the tide of the Old Oaks advance, and were thrown back on the defensive. The game ended in a 12-8 victory for Old Oaks.

Except for some costly missing which resulted in several goals for Old Oaks in the early periods, and two mounts that were pulling in the later part of the game, the Army team compared very favorably with Old Oaks.

Observers of the tournament have remarked that, in general, the class of mounts used was superior to that of most Junior Championships. A look at the names of the players, some of whose strings are very well known, will indicate the truth of this statement. This is certainly the case with the Army players, whose mounts compared favorably with those of any team in the tournament, not only in handiness and speed, but in condition and stamina as well. In this connection, Army followers will be interested to note that about half of the mounts used by the Army players were privately owned.

The line-ups and score of the three games were as follows:

First Match, July 16

Old Oaks, 14	**All-Philadelphia, 4**
Mr. J. C. Cooley (5)	Mr. Barclay McFadden (4)
Mr. A. B. Borden (4)	Mr. Wister Randolph (4)
Mr. Gerald Balding (5)	Mr. B. K. Gatins (5)
Mr. H. W. Williams (5)	Mr. C. S. Lee (6)
Earned, 14	Earned, 4

Referee: Mr. R. E. Strawbridge, Jr.

Second Match, July 17

U. S. Army, 13		Roslyn, 3
Lieut. M. McD. Jones (4)		Mr. A. Charles Schwartz (3)
Maj. C. C. Smith (4)		Mr. E. A. S. Hopping (6)
Maj. G. S. Patton, Jr. (4)		Mr. H. E. Talbott, Jr. (5)
Capt. G. E. Huthsteiner (5)		Mr. N. S. Talbott (4)
Earned. 12; Hcp.. 1		Earned. 3

Referee: Mr. C. S. Lee

Final Match, July 21

Old Oaks, 12		U. S. Army, 8
Mr. J. C. Cooley (5)		Lieut. M. McD. Jones (4)
Mr. A. B. Borden (4)		Maj. C. C. Smith (4)
Mr. Gerald Balding (5)		Maj. G. S. Patton, Jr. (4)
Mr. H. W. Williams (5)		Capt. G. E. Huthsteiner (5)

Referee: Mr. C. S. Lee

Animal Allowance and Replacement

THE following named officers have been designated as a board to study the allowances of animals in the Army, their distribution, and their replacements required: Major Mathew H. Thomlinson, Infantry; Major James J. O. O'Hara, Cavalry; Major Charles L. Scott, Quartermaster Corps; Major Rene E. de R. Hoyle, General Staff; Major Marion O. French, General Staff; Captain Miles A. Cowles, Field Artillery.

This board will consider the advisability of any further reduction of animals in the Army by reason of possible further motorization. It will also recommend any further increase in motor transportation deemed desirable in lieu of present animal transportation.

Figures furnished by the Remount Service, Quartermaster Corps, indicate that there were approximately forty-thousand animals in use during the Fiscal Year 1927 at the various posts, camps, and stations, in the Regular Army throughout the United States and its insular possessions.

The Retiring Secretary-Treasurer-Editor

MAJOR KENNA G. EASTHAM, Cavalry, who on Major Bradford's departure for the Philippines in February, 1928, became Secretary and Treasurer of the U. S. Cavalry Association and Editor pro tem of the CAVALRY JOURNAL, pending the arrival in Washington of an officer to take over these duties, was relieved August 15 from duty with the Association in order to pursue the 1928-1929 course at the Army War College.

The Saddle Horse as a Jumper

MR. GURNEY GUE, a veteran writer on horse topics in the *New York Herald-Tribune*, took exception to Lt. Col. John A. Barry's article on Jumping Horses in our April number, and the following appeared in the *Herald-Tribune* of May 27:

Lieutenant Colonel John A. Barry, formerly director of horsemanship at The Cavalry School of the United States Army and a judge of jumpers and military horses at several shows in this vicinity last season, is not an ardent admirer of the American saddle-bred horse, as he sees him.

"Why can't they jump?" he asks in a recent issue of THE CAVALRY JOURNAL, and then answers his question by saying: "In my opinion because, first, they have, or make, little or no use of the neck at any gait (the way it is set on prevents full use); second, they are, as a class, stiff in the loins, and, third, they have no withers, and poor shoulders."

Whew! Charles E. Trevatan said nothing quite as sweeping and severe as this when he condemned the American saddle horse as "a discredited and vanishing type" some twenty-odd years ago. It is to be regretted that Charles L. Railey, of Kentucky, is not now living to answer Lieutenant Colonel Barry as he answered Mr. Trevatan. If my memory is not at fault, Mr. Railey then cited the record of awards in championship classes at the National Horse Show to prove that two-thirds of the winners had been saddle horses of this breed, competition being open to all, regardless of breeding.

The record of more recent years tells substantially the same story, not only in the championship classes but in other saddle classes, and at all the important horse shows of the country as well as the National Horse Show. Records of the market confirm those of the show ring. At public and private sale the saddle-bred horse has for fifty years and more met the demands of equestrians in New York and elsewhere far better than any other breed or type, and has commanded the highest prices.

To say that he makes little or no use of his neck, is stiff in the loins and has no withers and poor shoulders is to controvert the established opnion of an overwhelming majority of the buyers, users and judges of saddle horses.

Col. Barry replied as follows:

Newark, N. J., June 19, 1928.

Mr. Gurney Gue,
Herald-Tribune,
New York, N. Y.

Dear Mr. Gue:

If you can spare me the space I'd like to reply to your remarks on a recent article by me appearing in THE CAVALRY JOURNAL.

My article was on *Jumping Horses—Horses That Jump*, and in discussing the breeds that have produced the best jumpers, I stated that saddle-bred horses as a rule were not good jumpers and gave my opinion as to why they were not. You headed your article, "Lt. Col. Barry criticizes *U. S. Saddle Horses.*" I simply stated the well-known fact that as a rule he doesn't jump and gave my opinion as to the reasons. I did not and do not criticize him for his inability to jump. He is neither bred nor intended for jumping. I was at pains to state that "The saddle horse has many useful and ornamental fields but the jumping field is not, I think, for him." I had not and have not the slightest intention or desire to criticize the saddle horse as a saddle horse. Would it have been offensive to their respective breeders or users, if in an article on the saddle horse, I had stated the well known fact that neither hackneys, nor coach horses, nor Percherons, nor Suffolk Punches, as a rule produce good saddle horses? Your article, I think, would lead a reader who had not read mine, to infer that I had launched a diatribe against the saddle horse. I did no such thing. With your arguments for the saddle horse, as such, I take not the slightest exception. You state in effect that "THE SADDLE HORSE HAS FOR 50 YEARS AND MORE MET THE DEMANDS OF EQUESTRIANS IN NEW YORK AND ELSEWHERE FAR BETTER THAN ANY OTHER BREED OR TYPE AND HAS COMMANDED THE HIGHEST PRICES." Of course you do not intend the "ELSEWHERE" to include the HUNTING or SHOW-JUMPING STABLES of the country. If the saddle horse is a jumper why does he not appear in appreciable numbers in those stables? I am sure you will admit that he doesn't.

Also you failed to state WHAT "DEMANDS" the people of New York and elsewhere made upon the saddle horse. Certainly not Jumping nor Cross-country-riding. My remarks were on the horse that JUMPS. I have no quarrel with people who don't like the jumping type of horse and fully realize that the majority of horses now ridden are not of that type. But, it happens that my article, which you criticize, was written for a service paper, 99% of whose readers belong to the cavalry and that these readers do, for the most part, like a jumping horse. Furthermore, it is a fact that their duties in peace and war, when mounted, require that general type of horse. On the contrary, jumping ability is no more a requisite of a park saddle horse than it is of a coal-wagon horse.

I gave my opinion as to the reasons saddle horses did not, as a rule, jump —"Because they make little or no use of the head and neck, because, as a class, they are stiff in the loins and because they have no withers and poor shoulders."—All, of course, in contrast, to the jumping horse.

You state in effect, that "PRESENT AND PAST RECORDS OF THE SHOW RING SHOW THAT TWO-THIRDS OF THE BEST-HORSE-IN THE-SHOW CLASSES HAVE BEEN WON BY SADDLE HORSES." Granting that he win all such classes, what has it to do with his jumping ability?" Nothing! Nor is it a vital argument in favor of his shoulder or wither. Many times in these classes, I've voted for the saddle horse,—which is to say that in my opinion he more nearly approached the ideal of *his* type than did the others theirs. It is not to say that he had withers or sloping shoulders. It is well known that, by and large, the best hunters of the country are not shown,

they are hunted; all, or nearly all of the best saddle horses of the country are shown. As to movement of the head and neck:—A show-ring saddler must carry it steady, it must not move; his neck and head are "Put On" with this idea in view:—A jumper must and does make violent use of his head and neck, and they are "Put On" with this in view. As to the shoulder and wither—a good cross-country horse usually has at least a fairly sloping shoulder and a wither fairly well outlined,—look at him: The average SHOW-SADDLE-HORSE, CONTRASTED IN THESE RESPECTS with the hunter suffers:—Go and look at the champion saddle horses or their pictures. This general lack of shoulder, slope and height of withers apparently is not disqualifying for the saddle horse. The cross-country horse *must* have them.

In conclusion permit me to reiterate that I made no criticism of the saddle horse as such and would be the last to detract from his popularity or decry his prestige in his rightful field. As a cross-country horse or jumper I do not choose him, said so, and gave some of my reasons.

Sincerely,

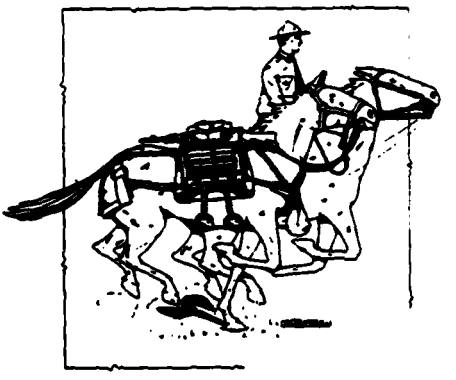
JOHN A. BARRY.

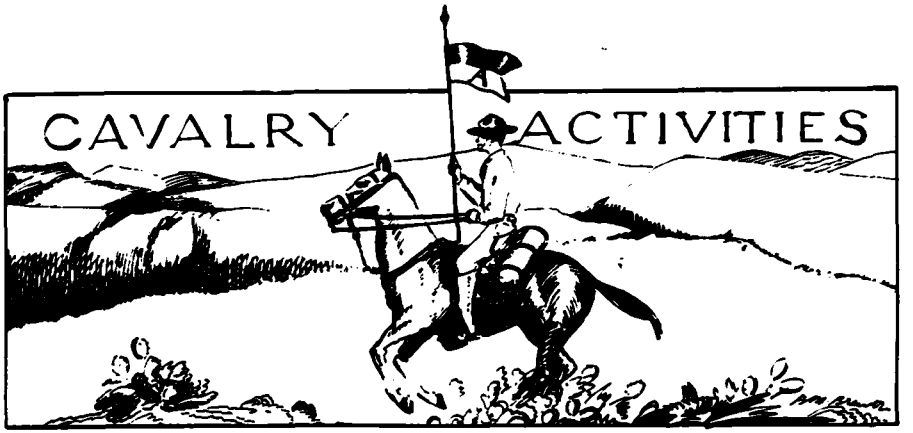
Cuban Cavalry Officers with the United States Army

IN conformity with a request from the Cuban Government, the Secretary of War has authorized that Cuban Cavalry officers be attached to the United States Army as follows:

First Lieutenants Jose Pastor Rodriguez y Sanchez and Juan Estevez y Marsan: Troop Officers' Course, The Cavalry School, Fort Riley, Kansas, commencing September 15, 1928.

First Lieutenant Aurelio Martinez y Villalobos and First Lieutenant of Cavalry Francisco Cocio y Villalta to the Fifth Cavalry, Fort Clark, Texas, for one year.





Progress of the Cavalry Rifle and Pistol Team

WITH the National Matches at the threshold and the nation's rifle and pistol enthusiasts rapidly trekking in to take their places on the firing line in order to display their individual merits with the weapons of their choice: with others arriving in groups with high hopes of placing their state teams on top during the national team matches and the service teams all set and primed, this year's National Rifle and Pistol Matches will bring about many new distinguished marksmen, both as individuals and as teams.

After about three months of intensive, but interesting training, the Cavalry Rifle and Pistol Teams have arrived at the scene of National Match, all in the peak of condition and looking forward to the competition with great hopes this year.

The actual training of the team this year started about June 2, 1928, and was held at Fort Riley, Kansas. The Cavalry School was an ideal spot for the training of a team to participate in the National Matches. Aside from ideal weather conditions, which prevailed throughout the training period, and an excellent national range entirely turned over to the team for practice, the greatest cooperation in every detail was given by everyone concerned at Fort Riley towards turning out a winning cavalry team.

At the beginning of the tryouts at Fort Riley, approximately forty-eight candidates were assembled, representing every cavalry regiment or separate cavalry unit in the United States, thus affording the team captain, Captain A. H. Norton, 8th Cavalry, an excellent cross section of the best shots available from the cavalry arm of the service.

The first two weeks of training consisted of firing over the national rifle course about once a day and firing over the national pistol course daily, thus enabling the candidates to target their rifles and pistols and get themselves accustomed and fit for the rigors of competitive firing. At the completion of this stage of early training the Cavalry Matches were held, they forming an

annual event held in conjunction with the training of the team. These matches always afford plenty of interest and result in keen competition for the various trophies and medals awarded each year. The results of the Cavalry Matches this year were as follows:

Two Hundred Yard Off Hand Match: won by Sergeant Messier, 4th Cavalry.
One Thousand Yard Championship Match: won by First Sergeant Nowell, 11th Cavalry (Fort Bliss Trophy).
Regimental Team Championship: won by 11th Cavalry.
Rapid Fire Championship: won by Sergeant J. H. Swift, 2nd Cavalry.
Individual Championship Match; won by Sergeant Christensen, 2nd Cavalry.
Holbrook Trophy awarded to the highest man during the rifle elimination: Sergeant J. Jensen, 7th Cavalry.
Sergeant Jensen, 7th Cavalry, also won the trophy awarded for the high man in the pistol elimination.

During the pistol eliminations First Sergeant B. H. Harris, 1st Cavalry, made a score of 284, which is believed to be a world's record. Sergeant Harris was National Pistol Champion of the United States as a result of winning the National Individual Pistol Match at Camp Perry in 1927.

After the Cavalry Matches were over, the more serious training period was entered upon, that of the elimination course. During this stage the candidates fire over the National Match course ten times for record, at the end of which the squad was almost cut in half, being reduced to twenty-four members. This stage of the training was completed on or about the 10th of July, 1928. The remaining twenty-four members, for the next two weeks, participated in a series of individual matches similar to those held at Camp Perry each year. As a result of these matches another elimination took place reducing the squad to fourteen members, the final selection to represent the cavalry in the National Matches. Many of the old favorites seen from year to year at the tryouts, including many distinguished marksmen, were outshot by new blood and as a consequence gave way to the new and less experienced shots, all as the result of the keen competition throughout the training period. During the final stages of the training of the members finally selected to constitute the team, the time was devoted to the short ranges and rapid fire training; this with the idea of preventing a possible recurrence of difficulties encountered last year at these particular stages of the National Matches. The results of this training has found the team on a much higher plane than that which existed at the same time one year ago.

The personnel, picked as a result of the tryouts to represent the cavalry at Camp Perry, is as follows: Capt. A. H. Norton, 8th Cavalry (team captain); 1st Lieut. I. P. Swift; 1st Lieut. J. H. Phillips, 2d Cavalry; 1st Lieut. C. A. Burcham, 7th Cavalry; 1st Lieut. C. J. Harrold, Cavalry; 2nd Lieut. Don Carleton, Cavalry; 2nd Lieut. R. Bridgeman, 4th Cavalry; 1st Sgt. B. H. Harris, 1st Cavalry; Sgt. J. Adams, 12th Cavalry; Sgt. J. B. Jensen, 7th Cavalry; Sgt. W. D. Reynolds, 2nd Cavalry; Sgt. E. Yeserski, 8th Cavalry; Sgt. J. Elliot, 7th Cavalry; Sgt. S. Blazejeveski, 3rd Cavalry; Sgt. R. McDaris 8th Cavalry; Sgt. E. Messier, 4th Cavalry; Sgt. Wilzewski, 8th Cavalry.

In addition to the ideal conditions afforded at Fort Riley for actual training of the team in firing both the rifle and the pistol, The Cavalry School is ideally located in the state of Kansas and affords many facilities along recreational lines: plenty of time was devoted by both men and officers on the squad to recreation. Officers had plenty of opportunity to ride, play polo, golf, tennis and swimming while the men enjoyed their spare time in taking long hikes out over the hills, fishing in the Kansas and Republican rivers, horseshoe tournaments, hand ball and swimming. Throughout the entire training of the team, work and play was well balanced and as a result the team arrived at Camp Perry, Ohio, in the peak of condition--physically—and in a high state of morale for the National Matches.

Cavalry School Graduation Events

LIKE the smallest of school boys the students of the Cavalry School welcomed May 30th as it marked the last day of classes and the start of that gala display of equestrian competition which continued up to graduation day on the ninth of June.

The opening event was the final day's races of the Cavalry School Race Meet held on the new Riverside Course. The feature steeplechase races were closely contested, all entries taking the fences well and finishing closely bunched so that every winner was extended on crossing the finish line. The day's racing was marred when *Tantalizer* fell over the Liverpool and the rider, Captain Waters, suffered a few broken bones. Major Franklin, Captain Berg, Captain Carpenter, and Lieutenant Frierson were among the winners.

The Lorillard cup is competed for by members of the Advanced Equitation Class on their Olympic Prospects, Green Jumpers and Green Polo Ponies. The Olympic Prospect phase was a three-day event with a cross country, schooling and jumping phase. The leaders in this event changed often and not until the last class was over were any places assured. The final standings placed Lieutenant Bosserman, Cavalry, first; Lieutenant Kitts, F. A., second; Lieutenant Stewart, F. A., Third.

The Patton Cup event was changed from past years due to the change in the saber course. It consisted of a double run on the new course, each head counting five points. This cup was won in perfect form by an entry from the National Guard Class, Lieutenant J. E. Davisson, Pennsylvania National Guard. Lieutenant G. W. Bailey placed second. This is the first time that this cup has left the hands of the troop officers class.

The Standard Stakes, that lucky or luckless event, was more popular than ever this year with some ninety entries. The conditions were changed slightly, by eliminating the bottle at the rifle range and substituting a target on which

the number of the hits counted. Again the fording of the river had to be eliminated due to the high water. The finish resembled a collecting station for the sick and exhausted. The final results showed that the first two men over the finish line had fallen below on the rifle range and the first money went to Captain G. I. Smith, the third man to finish. Captain Ernest Williams, 13th Cavalry, turned in a record that will be hard to beat by placing second this year after two straight wins in 1926 and 1927.

The Cavalryman's Cup is a new award this year and promises to be one of the finest awards given at the Cavalry School. It is presented for all around excellence in both competitions and academic standings as determined on the terrain exercise. This year it was closely contested by a half a dozen members of the troop officers' class and the last event finally determined that Captain Gyles Merrill, Cavalry, was the winner.

Perhaps the most popular award of any prize was the award of the Booth Bowl for the most outstanding horseman of the year at Fort Riley. Major Elkin L. Franklin, 2nd Cavalry, a winner in most of the race meet events, a keen competitive rider, an excellent polo player and a participant in all mounted sports, was selected by the Committee as our most outstanding horseman.

Captain Ray Maddocks prepared the 1928 Night Ride and turned out one of the finest competitions ever held at the cavalry school. The ride covered 56 miles and was laid over a course covered by maps and aerial photographs. The course lead northwest to Milford, then north and east to points east of Riley Center, then south to Keats, and back to the Post through Ogden. The problem was based on an officers reconnaissance patrol, the information it brought back being of increasing value the earlier it returned after 3:00 A. M. The ride was controlled by situations given at certain points along the route: The solution of these problems counted 50 per cent of the total points allowed. It would have been difficult to have selected a night better suited to the purpose. It was pitch black, and later turned to local thunder and rain storms so that part of the way was made under difficulty. One of our bold riders was so unfortunate as to run into a Kansas cyclone. Having been blown from his horse he was forced to return alone. The winner, Lieutenant Burnside, turned in his mount *Preston Brand*, to cool off at 3:31 A. M., some six hours after his start at 9:00 P. M. Close behind him came Lieutenants Sancombe and Burcham, both of whom were later eliminated due to lame horses. From then on till noon of the following day the weary night riders came straggling into camp half dragging or carrying their mounts. Many of the entries covered from seventy to eighty miles being unable to follow the scent. Major John Bohn pulled in at 9:37½ A. M. proudly sitting on the front seat of a Ford truck with his lame horse nicely bedded down behind. He stated that he was only practicing resourcefulness. After the mornings' judging, Lieutenant Burnside still remained first and Captain J. C. Macdonald was placed second.

The cup awarded for the best average score in all competitions went to Lieutenant Walter Burnside, the winner of the Night Ride.

The 1st Platoon, Captain A. W. Roffe, instructor, won the platoon championship.

The following is a list of winners in other events:

Advance Class Charger Prospect: Captain I. G. Walker, Cav.: Advanced Equitation Class Green Polo Pony Class: Captain Marion Carson, Cav.: Combined Pistol and Saber Competition: Lieutenant I. P. Swift, Cav.: Advanced Equitation Class Olympic Prospects: Lieutenant L. J. Stewart, F. A.: National Guard and Reserve Officers Jumping Indoors: Lieutenant J. B. Cannon, Cav. Res.: Troop Officers' Remount Competition: Lieutenant S. P. Walker, Cav.: Horseshoeing Judging: Captain M. I. Voorhes, Cav.: National Guard and Reserve Officers Point to Point Ride: Lieutenant S. A. Marshall, Cav. Res.: Indoor Jumping, Troop Officers: Captain W. V. D. Ochs, Cav.: Outdoor Jumping Troop Officers: Captain K. B. Wise, Inf.: Green Polo Ponies: Lieutenant R. B. Bosserman: Jumping for Officers on Duty with School Troops: Captain S. H. Griffin, Eng.: Officers Charges: Major W. M. Grimes: Advanced Class Jumping: Captain J. B. Wise, Cav.: National Guard and Reserve Officers Jumping Outdoors: Lieutenant J. F. Reynolds, Cav. Res.: Ladies Jumping: Mrs. P. C. Febiger: Advanced Equitation Class Green Jumpers: Captain V. M. Cannon: Team Jumping: 2nd Platoon Troop Officers' Class.

First Cavalry Notes

SINCE June 1st the regiment has engaged in range practice, firing by squadron. The target season terminates on August 31st, except for the Machine Gun Troop, which has the month of September to complete its thousand inch and long range practice. It is expected that a very satisfactory percentage of qualification will be reached throughout the regiment. The tentative mounted pistol and saber course has met with distinct approval.

Several officers of the regiment have been ordered transferred to Fort Riley, either for the course or to a regiment thereat. Major Harding Polk has left for the Army War College, and Major John P. Wheeler for duty at Texas A. and M. Captain L. L. Gocker goes to Fort Benning for the course. Several other officers are under orders to join.

Summer Activities, Fort Myer, Virginia

THE 3rd Cavalry (less 1st Squadron) has been engaged all summer in training of the civilian components of the army.

The Virginia Military Institute, R. O. T. C., spent a six-week period of training ending the latter part of July.

The C. M. T. C. students, Cavalry section, were in training during July and August, approximately one hundred and seventy-five trainees from the 3rd

Corps Area at large spending four weeks at the post. From reports of parents all had a most enjoyable stay.

During the C. M. T. C. Honorable Doctor William Culbertson, American Ambassador to Chile, addressed all candidates on the subject of citizenship. Doctor Culbertson was so well pleased with his reception that after the conference he stayed for luncheon and later in the afternoon was sworn in to the military service as a Reserve Major in the Military Intelligence Department.

Our distinguished Chief of Staff, Major General Charles P. Summerall, addressed the candidates on the occasion of the oath of allegiance ceremony. We were also honored on that day by the presence of our Chief of Cavalry, Major General Herbert B. Crosby, the Judge Advocate General, Major General John A. Hull, who administered the oath of allegiance, and Brigadier General Herbert O. Williams, commanding the 16th Infantry Brigade.

On Parents' Day, two hundred parents and guests of the candidates attended the field day and dress parade. The field day consisted of dismounted events in the forenoon and mounted events in the afternoon. Medals were awarded all winners and places in individual events. The Commanding General 3rd Corps Area was represented by Colonel Robert S. Knox, C. M. T. C. Officer.

At the graduation ceremony we were most fortunate in having as a guest a distinguished statesman, Secretary of State the Honorable Frank B. Kellogg, who gave a brief address to the candidates. Major General B. H. Wells Acting Chief of Staff presented the awards and medals following the address by the Secretary of State.

Secretary of State Kellogg Inspecting the C. M. T. C., Fort Myer
Dr. E. G. Dexter of the Veterans of Foreign Wars, Secretary Kellogg, General H. O. Williams, Commanding 16th Brigade, General Bryant H. Wells, Deputy Chief of Staff, and Colonel Guy V. Henry, 3d Cavalry, Commanding Fort Myer.

The officers of the 306th and 307th Cavalry concluded a week's tour of active duty with the regiment late in August. All training was practical, the lecture and conference periods having been reduced to two hours. The reserve officers have had command of the regular troops on practice marches, drills and tactical exercises. All tactical exercises have been worked out by the regimental commanders, first as tactical rides and later with the troops.

Troop F left the post to attend the fair at Cumberland, Maryland. They presented some of the events which are to form a part of the winter exhibition rides. Each of the troops of the regiment will attend one fair during September and October.

The regiment (less the 1st Squadron) completed the annual tactical inspection on August 9th. Colonel I. C. Jenks, Chief of Staff 3rd Corps Area, and Colonel Frank L. Case, Assistant Chief of Staff, G-3, conducted the inspection for the Corps Area Commander who was absent with the Olympic Team. At the conclusion Colonel Jenks released to the press a statement complimenting Colonel Henry, the regimental commander, on the tactical ability of the troops, the high state of training and the excellent appearance of men and horses.

In addition to summer training activities the regiment has performed the usual garrison duties and functions in connection with funerals at the Arlington National Cemetery.

Sixth Cavalry Summer Training and Polo

TROOP F of this regiment left Fort Oglethorpe about the first of June for Camp Knox, Kentucky, to remain ninety days. The personnel of Troop F acted as instructors, etc., for the C. M. T. C. and the National Guard organizations that trained at Camp Knox this year. The remainder of the regiment spent the summer doing the same kind of work in Fort Oglethorpe.

The C. M. T. C. was considered quite successful as the work and entertainment was continuous and not a single man requested to return home due to homesickness. As there were more than six hundred students, this record speaks well for the officers in charge. The National Guard organizations training at Fort Oglethorpe included the 109th Cavalry, one squadron of which was from Tennessee, the other from North Carolina, a part of the 23d Cavalry Division, Alabama National Guard, consisting of the Division Headquarters Troop, 55th Machine Gun Squadron, the 127th Engineer Battalion Mounted, and the 1st Squadron of the 108th Cavalry, Georgia National Guard. Two R. O. T. C. units also trained at Fort Oglethorpe: the medical unit of the Vanderbilt University and the cavalry unit from the University of Georgia.

The Sixth Cavalry team, winner of the Southern Circuit Polo Championship last year, and composed of the following: Lieutenants L. K. Ladue, Hugh Culton, T. Q. Donaldson, R. E. Ireland, and Captain M. F. Meador, has been

entirely broken up. The only one remaining is Lieutenant R. E. Ireland, who is captain of the present Sixth Cavalry Team. Due to a very rainy year, the training of ponies and the playing of polo has been handicapped. However, the outlook is becoming much more favorable; many new players have joined the regiment and a number of young officers have taken up polo. With their assistance in work on a number of pony prospects, success is in sight for the fall playing.

The present team is composed of Lieut. A. W. Johnson, one. Lieut. F. deL. Comfort, two, Captain G. X. Cheves, three, and Lieut. R. E. Ireland, back, with Lieut. H. Reed as substitute. This team defeated the Governor's Horse Guards from Atlanta, on August 22, with a score of thirteen to five; a second game will be played on August 25th. The Horse Guards were in summer camp at Fort Oglethorpe, being Troop C of the 108th Cavalry, Georgia National Guard.

During the fall, games are expected with the Fort Benning School Team at Fort Oglethorpe, during the Chattanooga-Fort Oglethorpe Horse Show, and later in the tournament at Atlanta, where the representative teams of the Southern Circuit will compete.

Plans have been completed and prizes published for the Chattanooga-Fort Oglethorpe Annual Horse Show, which takes place at Fort Oglethorpe mornings and afternoons of October the nineteenth and twentieth. There are thirty-four classes, with a total prize list valued over seven hundred dollars. The judges will be non-residents of the vicinity of Chattanooga and Fort Oglethorpe.

On September fourth, Troops A, B, E, and Headquarters will leave for Catoosa Springs Target Range to fire the nineteen twenty-nine season. These organizations will be followed by Troop F and the Machine Gun Troop.

Organization Day, Tenth Cavalry

BY way of remembering the past, the 10th Cavalry celebrated the sixty-second anniversary of its organization on July 28. The regiment assembled at the flagpole at 8:30 o'clock; all enlisted men and officers who had joined since last organization day formed a provisional troop. Lieutenant Colonel Lewis Brown, Jr., administered the oath of allegiance of the 10th Cavalry to the provisional troop, after which it presented the standard and colors to the regiment. Colonel Douglas McCaskey presented the Shipp Cup, which is awarded each year to the most distinguished soldier, to First Sergeant Rosen T. Brown of the Machine Gun Troop. After this, Second Lieutenant R. W. Curtis delivered a brief summary of the history of the 10th Cavalry from its organization to the present day. Colonel McCaskey then made a short talk to the regiment.

At 1:00 o'clock dinner was served by each troop mess to the enlisted

men and their familes, the officers and their families and the friends of the regiment. This was followed by a baseball game between the 10th Cavalry and the 25th Infantry, the 10th being victorious. The celebration ended with a dance for the officers at the Officers' Club and the annual military ball for the enlisted men at the Buffalo Club.

11th Cavalry Notes

SINCE the publication of the last 11th Cavalry notes, this regiment has experienced nearly every phase of cavalry training. We have conducted our combat firing, concluded our field training, undergone the vicissitudes attendant on a Corps Area Commander's tactical inspection, assisted in the organization and conduct of Camp Del Monte, one of the largest C. M. T. C. camps in the country, and now we are concluding a successful summer with the training of a Reserve Cavalry Regiment. We know that our time has been full and that we have been hard pressed to accomplish all that was desired, but from the results obtained we feel that we have successfully delivered the goods—which is a source of general satisfaction to officers and men alike.

Major General John L. Hines, the Corps Area Commander, inspected the garrison late in March, arriving one Sunday afternoon. The next morning a review of the entire command was held for the General on the post parade ground. Following the ceremony all troops marched to Gigling reservation under an assumed situation. A march outpost was established while the troops were making camp. All afternoon and during the night it rained, as only in California it can rain when it sets its mind to it, but the work went on quietly without a hitch. The General expressed great satisfaction with the conduct of the troops under the adverse weather conditions.

During the last week in April the 1st Squadron marched to Gigling to conduct its combat firing. The weather was perfect throughout the week and in addition to being a very successful training period, this time proved to be very enjoyable. At the end of the week the 1st Squadron returned to the post and the 2nd Squadron marched to Gigling for its combat firing.

During the next month each troop went on a practice march of several days while the remainder of the regiment sent large fatigue details to Camp Del Monte to get it in shape for the C. M. T. C. camp held there in July.

From July 1-30 the 2nd Squadron with a few officers and non-commissioned officers from the remainder of the regiment attached was stationed at Camp Del Monte as a training cadre for the C. M. T. C. squadron. The squadron, which was commanded by Major Frank Ringland, maintained the high standard set in previous years by winning the highest awards presented at the camp.

On August 1st a farewell review of the 11th Cavalry (less 2nd Squadron) and the 2nd Battalion, 76th F. A., was held in honor of Colonel Leon B.

Kromer, 11th Cavalry, upon his relief from the command of the regiment and the Presidio of Monterey. During the review all officers, non-commissioned officers and guidons of the command assembled in front of the reviewing stand and the Colonel gave a brief and very moving farewell address. When Colonel Kromer left the next day for Washington he took with him the sincere regrets and best wishes of every member of this garrison.

The Chief of Cavalry visited the post on August 7th and a review of the regiment was held in his honor that morning. Later General Crosby motored to Gigling to see a demonstration staged by the regiment for the benefit of the reserve officers on duty here at the time. The General talked to the officers of the regiment in the afternoon and congratulated them upon the showing made during the day's work.

Organization Day, 12th Cavalry

THE twenty-seventh birthday of the 12th Cavalry was celebrated with a Field Day and Horseshow at Fort Brown, Texas, on June 28th and 29th, 1928, respectively. Also a series of polo games was played with the officers of the 17th Mexican Cavalry, stationed at Matamoros, on the 27th and 29th of June and 1st of July, which were part of the Organization Day exercises.

The Field Day included the usual dismounted races: one hundred yard dash, two hundred and twenty yard dash, four hundred and forty yard dash, eight hundred and eighty yard run; jumping both broad and high: potato, three legged and shoe races, while the mounted events consisted of rescue, Roman, Pony Express, Cossack and one mile relay races, as well as mounted tug-of-war and wrestling. Added interest was given to the events by the entry of enlisted men of the 17th Mexican Cavalry in the Roman and Cossack races and an exhibition of mounted pyramid riding by the latter.

Undaunted by the extremely warm weather, an unusually large number of citizens of the Lower Rio Grande Valley witnessed the Horseshow on June 29th. The classes were as follows: Best Turned Out Officer's and Trooper's Mount; Prize Cavalry Squad; Escort Wagons; Officer's Open Jumping; Enlisted Men's Open Jumping; Officer's Chargers: Ladies Three Gaited Saddle: Touch and Out Jumping; Best Trained Trooper's Mount: Officer's and Enlisted Men's Pair Jumping; Polo Bending Race.

Five officers of the 17th Mexican Cavalry were entered and participated in each of the officer's classes, with most creditable performance—Captain Garza, one of their number, placing third in the Officer's Open Jumping.

The team cup for the troop winning the greatest number of points for places in the combined Field Day and Horseshow was won by Headquarters Troop, with a total of seventy-nine points; Troop A and Machine Gun Troop tied for second place with a score of sixty-two.

Fort Brown won the polo games scheduled with the 17th Mexican Cavalry on the 27th and 29th of June and 1st of July, with a rather wide margin. The latter team played under a decided handicap, however, in as much as this was the first opportunity its members had of playing together in some months, due to two of their players being absent on detached service. In spite of such adverse circumstances the Mexican team put up a very aggressive game throughout and displayed remarkably good sportsmanship. The playing of this series and the participation of the Mexican officers in the Horseshow has accomplished much toward a closer relationship between the 12th U. S. Cavalry and the 17th Mexican Cavalry, garrisoning the sister cities of Brownsville and Matamoros.

Headquarters Troop won the championship of the Fort Brown baseball league in the final series of games with Troop B on August 15, 1928.

A series of six baseball games were played between the Fort Brown and Fort Ringgold teams as follows: At Fort Brown on July 28th, 29th and 30th.—Fort Brown winning each of the games; and at Fort Ringgold on August 4th, 5th and 6th, Fort Brown again successfully carrying off the honors for all three games. As a result of this series of games it is reported that Corporal Wisomirsky, Troop B, 12th Cavalry, pitcher for the Fort Brown team and who made such an excellent showing, has been signed up by the Chicago White Sox.

2d Squadron, 12th Cavalry Notes

THE 2d Squadron, 12th Cavalry, has been doing the usual garrison duties and the quarterly Training Trophy was won by Troop F commanded by Captain Edward M. Fickett. The competition included a troop mounted inspection, equitation, jumping and combat firing.

Troop E marched to McAllen, Texas, and spent a week there assisting with the Fourth of July celebration of the American Legion.

Lieutenant Greenhalgh has been transferred to the 13th Cavalry at Fort Riley, Kansas, and Lieutenants Dugan and Evans have been ordered to Riley to the Troop Officers Course. Captain John P. Scott has been relieved to go to Organized Reserve Duty at Dubois, Pa. Captain Henry M. Shoemaker has reported for duty and has taken command of Troop F.

Thirteenth Cavalry Activities

THE 13th Cavalry was represented at an unusually interesting and historic event on August 1st, when a composite troop made up of one platoon each from Troop "B," "E" and "F," formed the guard of honor at the dedication of the first territorial capitol of Kansas. Ten thousand people gathered in the blazing sun on Pawnee Flats along the Kansas River to witness the ceremonies of dedication.

The 13th Cavalry Troop met the official party composed of General Paulen,

Senator Curtis, Republican Vice Presidential candidate, President Carl Gray of the Union Pacific and other high officials of the railroad company, and escorted it from the west Camp Funston Gate to the Old Capitol Building. Here the animals were unsaddled, watered and fed after which the men were guests of the Union Pacific at an old fashioned barbecue luncheon. They then attended the ceremonies incident to the dedication, and at 4:30 P. M. participated in a review of the Kansas National Guard that was encamped at Camp Whiteside on the reservation, and closed the exercises with a splendid saber charge.

Despite the heat and the absence of many officers from the Regiment, interest and enthusiasm in polo remains constant. During June and July the two Regimental Teams "A" and "B" played teams from the 2nd Cavalry and from the Academic Divisions of the school. These matches continued with the return of the Black and Gold team from Fort Leavenworth. Matches were played between the "A" team and the Black and Gold. At the same time "B" team entered the junior handicap tournament for local teams and went as far as the finals only to be defeated by the 2nd Cavalry team in an extra period.

The Regiment has been engaged in the usual summer duties, devoting a large part of its time to rifle and pistol practice.

In the latter part of July, Troop "A" was ordered to Fort Leavenworth for duty with the C. M. T. C. Advantage was taken of the move to make an experiment of transporting the troop by motor trucks. A simple frame work was built on the ordinary motor truck and six horses with six men and complete equipment were carried on each vehicle. The march of one hundred and twenty miles was effected in two days with great success and the troop arrived in excellent condition ready for immediate service. The details of the movement have been officially reported to the War Department by Colonel Aubrey Lippincott who originated and directed the entire movement.

Fourteenth Cavalry Notes

THE Commanding General, VII Corps Area, Major General Harry A. Smith, and Brigadier General Alfred W. Bjornstad, made their annual tactical inspection of the troops of the 14th Cavalry stationed at this post on May 18. The troops under command of Colonel Lindsey, marched to the vicinity of the target range for the tactical exercise. The Corps Area Commander expressed satisfaction with the state of training of the regiment.

The regimental polo team made up of the following officers: Major John D. Kelly, Captain P. S. Hayden, Lieutenants Charles H. Martin, James W. Walker and George W. Busbey, attended the polo tournament held at Fort Leavenworth in June. Through the efforts of Colonel Lindsey an attractive polo pavillion has been erected on the polo field. This structure adds greatly to the appearance of the field.

Target practice was completed on June 13th, the final average shows a percentage of 81.9 for the Second Squadron and Headquarters Troops.

The Citizens' Military Training Camp opened on August 1st. A troop of one hundred and twenty-five students under command of Captain John H. Maher is making exceptional progress with their training.

Major General Herbert B. Crosby paid the post a visit on August 16th. After an inspection of the troops of the post and the C. M. T. C., General Crosby received the officers on duty at the post and made an interesting address on future plans and organization of the Cavalry. Colonel Lindsey entertained at dinner at the Wakonda Country Club in honor of his distinguished guest.

The members of the garrison are overjoyed at the news of the promotion of Colonel Hamilton S. Hawkins to Brigadier General, and who will take over the command of our brigade on September 1st upon the retirement of Brigadier General Alfred W. Bjornstad.

The 1st Armored Car Troop

By Captain Harold G. Holt, *Cavalry*

GENERAL Orders No. 5, Hq. Third Corps Area, dated February 7, 1928, authorized the organization of the Provisional Platoon 1st Armored Car Troop with a strength of one officer and twenty-three enlisted men. On February 11th Captain Harold G. Holt, 9th Cavalry, was relieved from duty as an instructor in Horsemanship at the Cavalry School and ordered to Fort Myer to organize the platoon. On February 29th, fourteen men were transferred to the platoon from the 3rd Cavalry—five of these were attending The Motor Transport School at Holabird.

On March 27th the platoon with a strength of one officer and eighteen enlisted men moved to Holabird and started to find out what makes an automobile go.

May 25th the platoon—one officer and twenty-one men—left, by truck, for Fort Bragg and Fort Benning to bring eight experimental trucks back to Holabird. The distance of eight hundred and seventy-five miles to Fort Benning was covered in three and a half marching days. The trip back, by way of Fort Bragg, total distance of nine hundred and twenty-five miles, was covered in five days. The convoy consisted of one and a half to five ton trucks.

From the 8th to 30th of June was spent building imitation armored car bodies on experimental trucks, loaned by the Commanding Officer, Holabird Intermediate Depot. On July 2nd we regretfully left our kind friends at Holabird and moved to Fort Leonard Wood to become part of the Experimental Mechanized Force.

General Orders No. 19, Hq. Third Corps Area, dated July 10th, 1928, changed the Provisional Platoon 1st Armored Car Troop to the First Armored Car Troop with an authorized strength of two officers and forty-seven men.

Armored Car, Light T-1

By the 1st of August the troop was at full strength except for Lieutenant P. A. Noel, Cavalry, who joined from duty at Boise High School on September 1st.

On July 20th the non-commissioned officers and drivers went to Harrisburg, Pa., by truck and drove our new equipment—two Light Armored Cars—Pontiac, and four Medium Armored Cars—La Salle, back to Fort Leonard Wood. August 18th we entertained the Chief of Cavalry and his friends at an exhibition in Potomac Park, and were nearly arrested by the Park policeman.

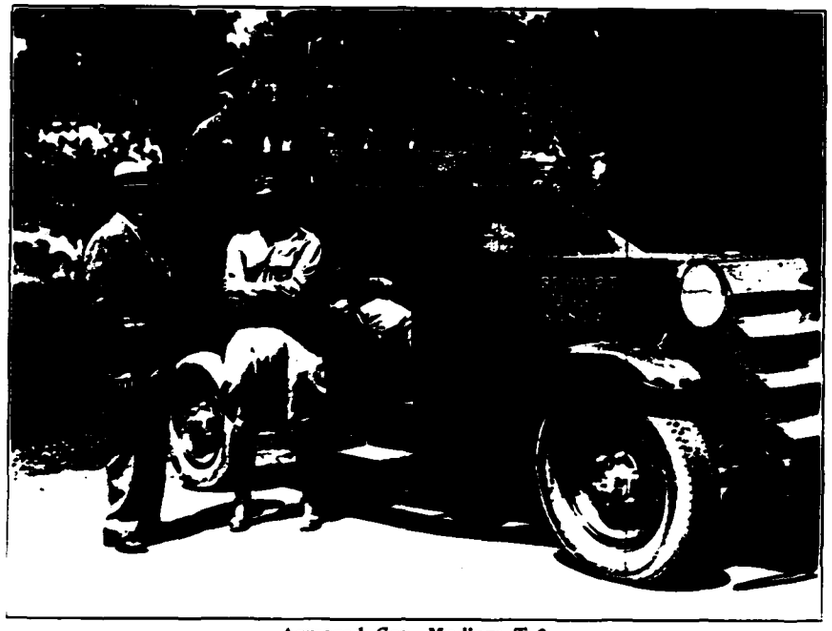
From July 1st to September 20th the troop formed a part of the Experimental Mechanized Force at Fort Leonard Wood. During this time a great deal of valuable experience and training in marching, reconnaissance, scouting, patrolling, combat and maintenance of equipment was secured.

The troop which has men from the Cavalry, Field Artillery, Coast Artillery, Engineers, Quartermaster Corps, Tank Corps and Motor Transport Corps is now looking forward to and preparing for the twenty-four hundred mile march to Fort Bliss by the way of Leavenworth and Fort Riley. We hope to step off on October 11th. Speed the day.

The following is a brief description of the equipment at present issued to the troop:

Armored Car, Light T-1. Weight, 2500 pounds: Engine, Pontiac, 6 cylinder, 40 B. H. P.; Crew, 3 men (1 driver, 2 gunners); Armament, two .30 calibre machine guns, rear gun on antiaircraft mount: Cruising radius, 150 miles.

The car is armored against .30 calibre bullets in front of the driver. It is built on a standard chassis equipped with 32" x 6.20" balloon tires. It has four wheel brakes, and standard equipment. The chassis has a 108 inch wheelbase and is equipped with shock absorbers. The car carries five thousand



Armored Car, Medium T-2
Assistant Secretary of War Davison inspecting the equipment

rounds of .30 calibre ammunition. It resembles very closely the present "cross country car" except for the armor, machine guns and six cylinder engine provided instead of a four cylinder. The windshield has been replaced by one-fourth inch armor of sufficient height to allow the driver to look over the top easily and a belt of armor covers the back of the front seat. A machine gun is mounted over the windshield, served by the gunner seated on the right of the driver. The tonneau is open and has a machine gun mounted on it ready for fire against aerial or ground targets. Two removable seats are provided in the tonneau for use if desired. The speed is that of the ordinary stock car.

Armored Car, Medium T-2. Weight, 5500 pounds: Engine, La Salle, 8 cylinder, 60 B. H. P.; Crew, 4 men; Armament: one .30 calibre machine gun; Cruising radius, 150 miles.

The one-eighth inch armor plate is proof against the service bullet at all ranges above 80 yards and against the armor-piercing bullet at ranges above 780 yards. The car carries 7,200 rounds of .30 caliber machine gun ammunition. A sub-machine gunner is seated next to driver. There are ports in the armor for pistol or rifle fire. The car is built on a 125-inch wheebase 1928 chassis, equipped with disc wheels to mount 32" x 6.75" balloon tires. The machine gun can be elevated above the level of the roof. A sub-machine gun and probably a 37 mm. gun will also form part of the armament. The speed of the car on the road is that of an ordinary seven-passenger, eight-cylinder

touring car. It has a folding armored top which can be close so as to afford overhead protection when needed. Habitually, however, the top will be open and the crew will fire over its sides. The total height of the car is seventy-two inches. The rear springs are reinforced to carry extra weight.

Fort Sheridan Horse Show

THE Fourth Annual Fort Sheridan Horse Show was held July 13 and 14, 1928, in the show ring on the main parade. A record number of entries and a large attendance made the show a success.

The show was given to raise money for the Army Relief Society, the Public School education of post children, and other activities for which no provision is made.

Principal members of the committee conducting this affair were: Major General Paul B. Malone, Honorary President; Colonel Perry L. Miles, Chairman; Captain William C. Chase, Executive Officer; Lieutenant Mark C. Neff, Treasurer, and Lieutenant Wilmer G. Bennett, Secretary.

The usual hunters, jumpers, military, three and five gaited saddle classes were held and all classes were well filled.

The following named gentlemen judged this show: Saddle Horses: Mr. Walter Palmer, Detroit, Michigan, and Mr. A. S. Thompson, Paducah, Kentucky; Hunters and Jumpers: Major Charles L. Scott; Polo and Military Classes: Colonel George T. Langhorne, Lieutenant Colonel Ben Lear, Jr., and Captain Harry H. Baird.

Army competitors received the following awards:

Three-Gaited Saddle Horse:—Fourth, *Lady Annabelle*, Capt. Wm. C. Chase, 14th Cavalry.

Polo Ponies (bending race):—Fourth, *Half Pint*, Capt. Thomas W. Ligon, 14th Cavalry.

Hunters:—Fourth, *Pathfinder*, Lieut. T. J. Randolph, 14th Cavalry.

Novice Hunter:—Won by *Sugar Babe*, Lieut. Col. L. J. Owen, M. C.

Olympia Jump:—Second, *Bootlegger*, Lieut. Wm. M. Burgess, 14th Cavalry.

Touch and Out:—Won by *Hulio*, Lieut. Wm. M. Burgess, 14th Cavalry.

Amateur Owners' Class:—Third, *Black Rock*, Capt. C. A. Shannon, 14th Cavalry.

Jumping Sweepstakes (amateurs only):—Second, *Bootlegger*, Capt. E. M. Barnum, 14th Cavalry.

Officers' Chargers:—Won by *Uncle*, Capt. Thomas W. Ligon, 14th Cavalry; second, *Sugar Babe*, Lieut. Col. L. J. Owen, M. C.; third, *Powerful Katrinka*, Lieut. Col. C. R. Mayo, 14th Cavalry; fourth, *Bootlegger*, Capt. E. M. Barnum, 14th Cavalry.

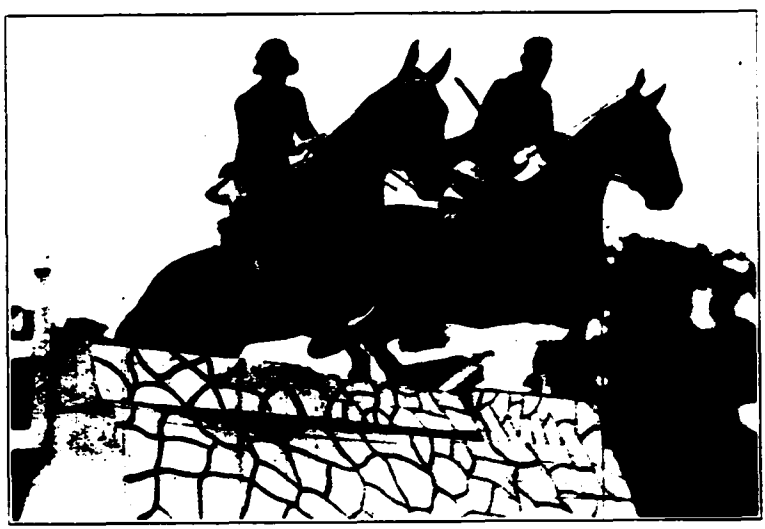
Troopers' Mounts:—Won by *Jerry*, Troop B, 14th Cavalry; second, *John*, Troop B, 14th Cavalry; third, *King*, Troop A, 14th Cavalry; fourth, *Deacon*, Troop A, 14th Cavalry.

Escort Wagon:—Won by Service Company, 2d Infantry; second, 1st Squadron, 14th Cavalry; third, Service Company, 2d Infantry; fourth, Troop B, 14th Cavalry.

Machine Gun, Howitzer or Signal Cart:—Won by Company D, 2d Infantry; second, Headquarters Company, 2d Infantry; third, Company D, 2d Infantry; fourth, Headquarters Company, 2d Infantry.

Prize Cavalry Squad:—Won by Troop A, 1st Squadron, 14th Cavalry; second, Troop B, 1st Squadron, 14th Cavalry.

Reserve Officers' Jumping:—Won by *Cadjo*, Lieut. T. Berlin; second,



Powerful Katrinka, Mrs. C. R. Mayo up, Two Bits, Capt. Ligon up, in pair class at Fort Sheridan Horse Show

Bunk, Capt. H. S. Potter; third, *Eddie*, Lieut. Richard Hemwall; fourth, *Bonehead*, Lieut. Norman Pate.

Officers' Jumping:—Won by *Pathfinder*, Lieut. J. Randolph, 14th Cavalry; second, *Bootlegger*, Capt. Barnum, 14th Cavalry; third, *Abie*, Capt. Shannon, 14th Cavalry; fourth, *Sugar Babe*, Lieut. Col. L. J. Owen, M. C.

Officers' Pair Jumping:—Won by *Bootlegger* and *Hulio*, Capt. J. O. Lawrence, 14th Cavalry, and Lieut. W. M. Burgess, 14th Cavalry; second, *Big Chief* and *Snowball*, Lieuts. W. M. Burness and D. H. Nelson, 14th Cavalry; third, *Caroline* and *Craps*, Capt. Wm. C. Chase, 14th Cavalry, and Capt. Hans Nachtigall, M. C. Reserves; fourth, *Powerful Katrinka* and *Two Bits*, Lieut. Col. C. R. Mayo and Capt. T. W. Ligon, 14th Cavalry.

Enlisted Men's Jumping:—Won by *Bottle*, Cpl. Batten, Troop A, 14th Cavalry; second, *Bootlegger*, Sergt. Wilson, Troop A, 14th Cavalry; third, *Two Bits*, Pvt. Olsen, Troop B, 14th Cavalry; fourth, *Spud*, Cpl. Wierzba, Troop A, 14th Cavalry.

Field Training of the 51st Cavalry Brigade

THE field training period of the 51st Cavalry Brigade under the new tables of organization, and also with all the units stationed within the State, took place this year from June 17th to July 1st, at Pine Camp, New York. The brigade is organized now with its Headquarters Troop on Staten Island and the Commanding General, Brigadier General Mortimer D. Bryant and his headquarters in Brooklyn. The 101st Cavalry, in command of Colonel James R. Howlett, has its home station in New York City, the Second Squadron, formerly Squadron A, being stationed in Manhattan and the balance of the units in Brooklyn. The new 121st Cavalry, commanded by Colonel Kenneth C. Townson, which received its federal recognition shortly before going to camp, is composed of units with home stations in various cities in upstate New York.

The camp was considered the most successful one ever engaged in by the brigade as Pine Camp is excellently situated for mounted work, the large area permitting very satisfactory conduct of maneuvers, as well as allowing for saber courses and for mounted pistol courses.

An interesting feature of the training this year was the test of a combination saber and pistol course. The brigade this year was sadly handicapped by the "pooling" of federalized horses from other States which necessitated leaving at home stations the excellent private mounts which the various units own. Each regiment had its own full strength mounted band which, in addition to their regular duties, provided much enjoyable entertainment.

The Sixth Annual Horse Show was held on Thursday, June 28th, and was considered by all the most successful horse show the brigade has ever held. There were over two hundred entries and several thousand spectators witnessed the various events. The judges were former Senator James W. Wadsworth, Jr., Lieutenant Colonel John A. Barry, Cavalry, DOL., Mr. Norman Van Voorhis and Captain James S. Wadsworth, Cavalry Reserve. Each event was keenly contested with the result that the prizes were very evenly distributed throughout the various units of the brigade. The Platoon Competition was won by Troop E (Squadron A), 101st Cavalry, the Championship Jumping by the bay gelding *Ginger* owned by Troop G, 121st Cavalry, of Geneseo, N. Y. The Point Trophy was won by Troop F (Squadron A), 101st Cavalry. The performances in the jumping classes were most excellent. It required several jump-offs before decisions were made in any of the classes. The Polo Pony Class was considered by the judges as having the best entrants of any show in the country. The jumping course was a replica of the Olympic Course used by the National Horse Show.

The morning of the horse show a review was tendered to former Senator James W. Wadsworth, Jr., who had given so much of his time and effort to get an upstate regiment and who was a former member of the Geneseo Troop. One of the features of this review was the presentation of the Brigade Efficiency Guidon by General Bryant to Troop C, 101st Cavalry.

During the encampment the brigade had the pleasure of visits from The Chief of Cavalry, Major General H. B. Crosby; The Chief of Field Artillery, Major General Frank T. Austin; The Commanding General New York National Guard, Major General William N. Haskell; Brigadier General Booth; Brigadier General Peter E. Traub, commanding Madison Barracks; Colonel Adolphe Huguet, Senior Instructor of Infantry; Lieutenant Colonel George B. Comly, of the Militia Bureau, and several other officers of note.

305th Cavalry Active Duty Training

THE active duty training of the 305th Cavalry from July 7th to 21st was one of the most successful tours in the history of the regiment. Twenty-seven officers of the regiment were ordered to Colebrook, Pennsylvania, attached to the 52nd Cavalry Brigade, Pennsylvania National Guard, under command of Brigadier General Edward C. Shannon.

A complete, comprehensive, and well-balanced schedule was carried on under the most pleasant weather conditions. The officers of the regiment were attached to their corresponding troops in the 104th Cavalry, Pennsylvania National Guard, and every member of this organization did everything possible to make the camp pleasant as well as instructive for the Reserve officers.

In this year's training Colonel W. I. Forbes, commanding the regiment, was called upon to detail officers of the 305th Cavalry as assistant instructors to the Regular Army instructors in charge of the field problems for the squads, platoons, troops, etc., of the National Guard organizations. This was fine experience for the officers of the regiment and in every case the Regular instructors reported the work of the Reserve officers as excellent.

Captain E. E. Young, the regimental supply officer, donated a beautiful silver trophy to be given, in the name of the regiment, to the troop of the 52nd Cavalry Brigade who qualified the greatest number of men in the combined pistol and saber mounted course. This trophy was won by the First City Troop of Philadelphia.

Lieut. H. A. McKinley, 305th Cavalry, in Open Jumping Class, 62nd Cavalry Brigade Field Meet

Retirement of Major Edgar S. Gardner, Finance Reserve

WITH the retirement of Major Edgar S. Gardner, Finance Reserve, to the Auxiliary Reserves on reaching the age limit, the 62nd Cavalry Division has suffered the loss of an active and enthusiastic officer. Prior to accepting a reserve commission, Major Gardner assisted the organization of the 305th Cavalry by donating office rooms for the regiment and gave much time and labor to promoting the C. M. T. C. activities in Philadelphia. On accepting a commission in the Finance Reserve, Major Gardner was assigned as Division Finance Officer, 62nd Cavalry Division.

While, previous to this time, Major Gardner had had no experience in that one most important weapon of the Cavalry, the horse, he at once entered into the spirit of the Cavalry branch by attending the equitation class at that time conducted by Colonel H. R. Smalley and afterward by Major J. M. Thompson, executive officers of the 305th Cavalry.

Major Gardner not only carried on his finance work, but set a great example to the officers of the 305th Cavalry by a record of 100 per cent attendance at all inactive phases of cavalry training for the year.

306th Cavalry in Camp

THE regiment under the command of Colonel John Philip Hill assembled at Fort Myer, Virginia, for its annual period of active duty training on Sunday, August 12th. Twenty-one assigned and four attached cavalry officers attended. Lieut. Daniel C. Fahey, Infantry, Reserve, was also attached with a view to transfer to the cavalry. Eight enlisted recruits attended.

On arrival the officers were assigned tents in the camp established opposite the Officers' Club and were taken into the 3rd Cavalry Officers' Mess. The Enlisted Reservists were attached to the Machine Gun Troop, 3rd Cavalry, where they lived and messed.

An extremely interesting schedule was drawn up for the two weeks' training, the first week being devoted to demonstrations and basic instruction in equitation, technique of arms., etc., the second week calling for a march to the Camp Simms target range in Maryland and mounted instruction with the pistol and saber.

The day's work commenced at 6:00 A. M. with 15 minutes' setting-up exercises. After breakfast officers assembled at 7:30 A. M. at the stables for the morning period of instuction, which lasted until 11:30 A. M. The afternoon period was from 1:00 P. M. to 5:00 P. M., after which every one was free until the following morning.

On Wednesday afternoon of the first week Colonel Hill conducted a tactical ride for the officers, illustrating cavalry operating against a small mechanized force at the outbreak of hostilities. The situations included the

march orders for a regiment establishing an advance guard contact with the enemy and the development of his strength and launching the regiment in attack.

On Friday a tactical problem was held as a continuation of the tactical ride based on the same general situation. All troops of the 3rd Cavalry were

Officer of the 306th Cavalry on the Sabre Course

used for this problem, being officered entirely by the officers of the 306th Cavalry. This problem terminated in a dismounted attack against an enemy position near the southern end of the drill ground.

On the evening of Friday, August 17th, Colonel Guy V. Henry, Commanding Fort Myer, held a delightful reception at his quarters, inviting all of the officers in camp to meet the Chief of Staff of the Army, General Summerall, and the officers and ladies of the garrison.

308th Cavalry Training

THE records for this regiment show that fifty-seven Reserve Officers took part in some phase of the training for the fiscal year ending June 30, 1928. The authorized war strength is fifty-eight Reserve Officers.

Twenty-six hundred and fifteen hours were earned on inactive duty and three thousand and eighty during the fourteen-day active duty period, or an average for our war strength of one hundred hours per officer for the year. The actual strength is seventy-eight Reserve Officers. In addition, there was a great deal of time spent in individual riding and pistol shooting, for which no credit was given. Reserve Officers of other branches earned seven hundred hours of instruction credits participating with the 308th Cavalry. Thirty-six officers of the regiment were enrolled in the correspondence school. In all, eighty-four conferences were held with a total attendance of Reserve Officers, Enlisted Reservists, ROTC and CMTC of two thousand three hundred and twelve.

Thirty-three assigned officers of the 308th Cavalry, with Colonel Josiah L. Reese commanding, attended active duty training from July 8 to July 21, 1928, at Mount Gretna, Pa., with the 52nd Cavalry Brigade, Pennsylvania National Guard. The officers were assigned to their corresponding organization of the 103rd Cavalry, some working with troops and some as assistants to the Regular Army instructors on tactical exercises on the combat ranges.

309th Cavalry on Active Duty

LT. COLONEL WARREN FAIR, commanding the 309th Cavalry, and twenty other officers of the regiment, participated in two weeks' active duty training at Fort Oglethorpe, Ga., during the period July 15 to July 31, inclusive.

The active duty training period affords the only opportunity for the officers of the 309th to get together as a unit, and this gave Captain H. F. Rathjen, Cavalry, the new Regimental executive, an opportunity of meeting a good many of the officers that it would not have been possible for him to meet otherwise, as the members are widely scattered throughout the States of Florida, Tennessee, North Carolina and South Carolina.

The officers of the regiment were very much pleased with the training received and the reception and treatment given them by the 6th Cavalry. They were very enthusiastic and unanimously voiced the sentiment, that they wanted to come back next year and hoped that funds would be available so that the whole regiment could attend.

A new regimental insignia has been adopted and approved by the War Department and the members of the regiment are rapidly being equipped with same.

315th Cavalry Training

THE 315th Cavalry finished a successful year of training and have started their plans for another year. Although the regiment had no regular army executive until spring, monthly tactical problems were carried on in Boston and Providence. The instructor was Captain Galen A. Russell, 315th Cavalry, a graduate of the Reserve Officers' course at Fort Riley.

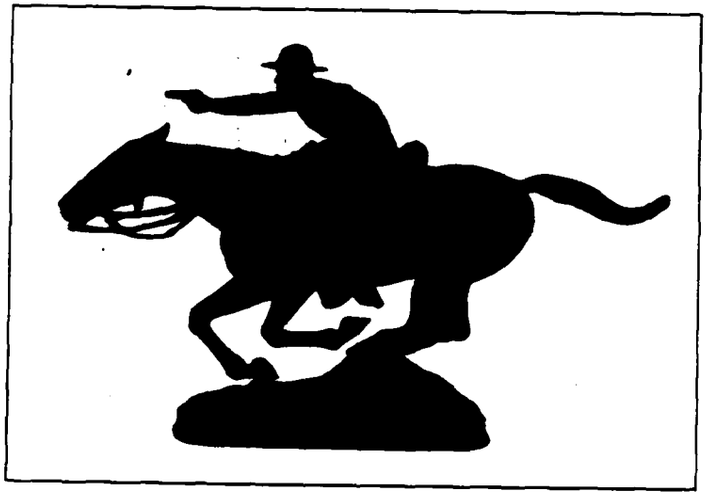
Equitation classes twice a month were conducted in Boston by Captain Russell and in Providence by Captain Harold C. Thomas, 315th Cavalry. The regiment did not go to camp this year but is looking forward to its field training next summer. Captain Vance Batchelor, Cavalry, is now regimental executive officer.

1st Squadron, 103d Cavalry Notes

THIS squadron had a most successful period of field training at Mount Gretna, Pa., from July 7th to July 21st, inclusive. It received the much-coveted streamer, "Best Squadron in 52nd Cavalry Brigade." This was especially significant in view of the high commendation given the brigade by the Chief of Cavalry on the day of the Governor's review.

Much of the training was of a competitive nature; the results of which showed this squadron to have the high average in seven out of nine competitions.

The one regret of the camp was the fact that this was the last year under the supervision of Colonel John S. Fair, as Instructor of Cavalry in the State, due to his transfer to Washington on September 1st. His whole-hearted and unselfish interest in the brigade helped every unit attain a high standard of efficiency. The officers and men of the regiment presented him with a silver platter bearing an inscription and the 103d cross sabres in gold.



From Colonel to Subaltern. By LIEUTENANT COLONEL M. F. MCTAGGERT. 238 pp. Illustrated. Chas. Scribner's Sons. $5.00.

Reviewed by Major B. T. Merchant, Cavalry

From Colonel to Subaltern by the well known British writer on horse training, Lieutenant Col. M. F. McTaggert, published in this country for the price of five dollars per copy, is well worth that amount and more .

All of Col. McTaggert's former books need no introduction to the horse lover or trainer, but as is so often the case with books delineating any one subject, they have been—until this one—perhaps a trifle too technical for the lay mind. *From Colonel to Subaltern*, however, is as readable as the lightest fiction, and while it is a valuable book outlining the care and training of one's horse, it is so interesting and wittily written that even the veriest tyro among horse enthusiasts may read it with profit while chuckling.

It embraces a series of letters from a retired British Cavalry Colonel to his son, the Subaltern, and most amusingly does the former give excellent advice to the latter, which if used by all of us who handle horses would improve the health and happiness of our equine friends and our own satisfaction in their development. The delightful pen and ink sketches which illustrate the book are by an anonymous artist, and they furnish a good half of the entertainment of the volume.

If you want to learn something relative to the care of a "Gee-Gee" in a most diverting way, my advice to you is to pay out the five necessary dollars and take home with you *From Colonel to Subaltern*.

Pistol and Revolver Shooting. By A. L. A. HIMMELWRIGHT. 240 pp., with illustrations. The Macmillan Company, New York. $1.00.

The author states in the introduction: "While numerous standard works have been written on the subject of rifle shooting, there is comparatively little information available on pistol and revolver shooting. The object of this volume is to supply practical information on the subject. The author has attempted to treat the subject in a clear and concise manner, keeping the size of the volume as small as practicable and so as to be conveniently carried in the pocket. Particular pains have been taken to give sound advice and elementary instruction to beginners."

While the text adds little concerning the technique of shooting the hand weapons beyond the standard methods of the service manuals, the volume places in a handy and readable form detailed information on modern pistols and revolvers, ammunition, ballistics and sights. An interesting chapter on position is fully illustrated by cuts of famous shots in action.

Long Lance. By CHIEF BUFFALO CHILD LONG LANCE. 278 pp., with illustrations. Cosmopolitan Book Corporation, New York. $2.50.

Born a member of the Blood band of Northern Blackfeet, the author lived, through his early youth, the nomadic existence of the plains Indian before the coming of the white man. During this period the tribe took part in the ceaseless warfare of the hostile tribes in which the Blackfeet earned the name of "Tigers of the Plains," and the ideal set before the youth was the crafty warrior and the mighty hunter. The life of the author during this era was that of the Indian unaffected by contact with the whites. The later career of the author, after learning the white man's tongue, was one of scholastic and athletic achievement at Carlisle and Manlius. Then having received an appointment to West Point, the descendent of fighting tribesmen sacrificed his dream of becoming an officer in our army and joined the Canadian forces in 1916, where he had a distinguished career from private to captain and returned several times wounded and decorated for gallantry.

With this unique background, Chief Long Lance can describe for the white reader the life of the plains Indians as it was at the time when our early military forces entered the scene and battled for the west. Many as have been the accounts of the early experiences of the whites, this narrative forms one of the few really authentic pictures of the contemporaneous life, customs and traditions of the Indians who opposed them. The Spartan training of the youth, the barbarous tests in making a brave, the daily problems of food and shelter, the family life, the customs of warfare, their tactics, all form fascinating reading. Incidents such as the sacrifice of the tribe's pony herd in the mountain snows, the round up of wild horses and the detailed description of their methods of breaking and training these mounts for immediate use give an intimate and absorbing interest to this unique record of the Indian.

Tamerlane. By HAROLD LAMB. 340 pp. Illustrated. R. M. McBride & Co., New York. $4.00.

The many readers of Lamb's *Genghis Khan* will welcome this life of Timur the Lame. The author, building on a foundation of scholarly study of contemporary records, presents the life of the great Tatar conqueror of the fifteenth century in a fascinating panorama of oriental intrigue, luxury and constant warfare.

Though only the son of a minor chieftain of a Tatar clan, pledged to the support of degenerate descendants of Ghengiz Khan, Timur became lord of eastern Asia and died on the road to conquest of China. Like the Great Khan, he first took advantage of the clan feuds surrounding him and became master of Samarkand. From this city as his base he struck successively to the north against the Golden Horde and to the west into Persia. Reducing the steppes of Russia, the great city of Tabriz and rich Iran to his overlordship, he built his capital, Samarkand, to unheard-of architectural and cultural heights. The loot of treasure, art and impressed scholars from the conquered countries were devoted to heightening the magnificence of the city during the ensuing ten years of peace. The great caravan routes from Cathay and India to Europe passed through his lands and tremendous wealth in customs were collected in return for his organized protection of the commerce. Then Timur's lust for conquest led him on a short campaign into India and reduced that source of wealth to his control.

At the end of the century Timur's Tatar horsemen were again in Asia Minor, answering the challenge of the lords of Egypt and Turkey. Damascus destroyed, the Egyptians pursued through the Holy Land, he turned on Bayazid, the Turkish master of eastern Europe, and crushed him in a great cavalry battle. Now master of the gates of Europe, the Tatar leader apparently scorned the comparatively poor European lands and returned to Samarkand.

Through a series of campaigns in which he had never suffered defeat, Timur had now extended his sway to the north, south and west to the limits of Asia. Insatiable in his

desire for complete mastery, the aged leader turned to the east to win China. On this expedition he died.

The greatest figure of his time, little authentic detail of Timur's life and campaigns has been available to the general reader heretofore. The glamour of the oriental setting and the detailed description of military operations lend exceptional interest and value to this volume.

Revue de Cavalerie (France), March-April, 1928.

Reviewed by Major W. E. Shipp, Cavalry

In this number the important history of *The Operations of the 1st Polish Cavalry Division against the Bolsheviks, July 29-October* 18, 1920, by Captain Moslard, begins. The author covers his subject very fully from every standpoint and writes in a very readable style. This division was organized from very heterogeneous material: ex-officers from the Russian, Austrian and German Armies and practically untrained men. Even the division commander, Colonel Rommel, had had no cavalry training or experience. Fortunately for the Poles, the superior Bolshevik cavalry of Budienny avoided real combat and its units were seldom able to execute a coordinated maneuver under the orders of its chief. The general staff, intelligence, security, marches and camping of the division are also covered in this article.

The present condition of the Polish Cavalry is set forth in an article by an anonymous author. Needless to say, the descendants of the hussars of John Sobieski, the lancers of the Grand Armee, the lancers of 1830, etc., are enthusiastic cavalrymen. Today the Polish cavalry consists of forty regiments, five squadrons of armored cars, ten squadrons of pioneers, and twenty squadrons of frontier guards (under the Ministry of the Interior). As the infantry consists of ninety regiments, the relative importance of the cavalry is apparent. In fire power the Polish cavalry division is equal to the Soviet but inferior to the German. It has many first class mounts and spectators at international horse shows will readily believe that this is true. As the cavalry is popular, a very good class of officers is obtained for it. There is a cavalry school at Grudziadz where a two years' course is given to cadets, and there are other courses for colonels and captains. These latter courses, however, are still somewhat too theoretical. The NCO is usually a good instructor and disciplinarian but often lacks initiative. While, in general, the instruction is good, there still persists too much of a tendency to engage in mounted shock action and liaison with the other arms is still deficient.

Major de Montergon, the well known horseman, begins in this number *The "Dressage" of the Man*—an amusing skit on the equestrian art. The illustrations by Lieutenant de Marcilly are most amusing.

Other articles in this number are: *The Cavalry at the Grand Maneuvers of the Rhine Army in 1927*, Lieutenant Colonel Argueyrolles; a review of the life of a fine cavalryman, Colonel Taylor; and the sporting chronicle.

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