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Retirement of General Crosby

THE RETIREMENT of Major General Herbert B. Crosby on March 21, 1930, brought to a close a brilliant army career culminating in his four years' detail as Chief of Cavalry.

Born in Kansas, December 24, 1871, he was appointed to the Military Academy from Illinois, graduating in 1893. He is an honor graduate of the School of the Line, graduate of the General Staff School and of the Army War College. He served in Cuba, campaigned against the Moros in the Philippines and served on the Mexican border. During the World War he had battle service in command of the 351st Infantry and was highly commended for the superior training and discipline of the regiment. For a time he was in command of the 176th Brigade. His post-war service, prior to becoming Chief of Cavalry, included duty as Instructor at the General Service Schools, Director of the War Plans Course at the War College and Assistant Commandant of the War College.

General Crosby took up the duties of Chief of Cavalry at a crucial moment in the post-war development of the arm. The years immediately after the World War necessarily formed a period of close study and evaluation of the lessons of the conflict as applied to the future of Cavalry. On becoming Chief of Cavalry in March, 1926, General Crosby shouldered the responsibility of directing the reorganization and development of the arm in accordance with the results of these studies. To his high professional qualifications, foresight and vision, Cavalry owes in great measure its present highly efficient organization and training for modern combat.

It is with deep regret and with best wishes for his future career that the Cavalry bids farewell to its Chief, General Crosby.

Major General Herbert B. Crosby
Chief of Cavalry, March, 1926 to March, 1930.

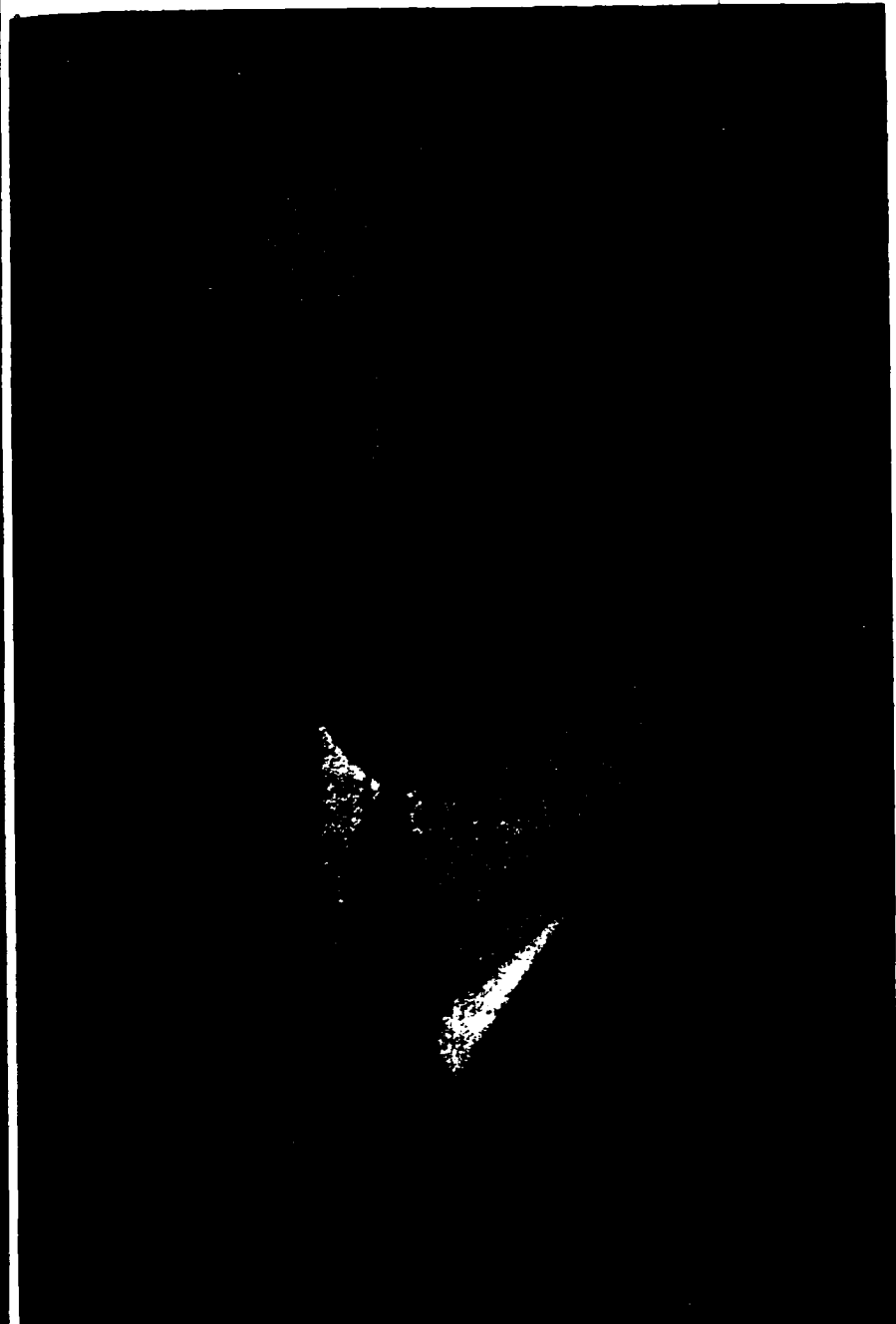
Major General Guy V. Henry

AS the JOURNAL goes to press the announcement is made that the President has nominated Colonel Guy V. Henry, 3d Cavalry, to be Chief of Cavalry to succeed Major General Herbert B. Crosby, whose term of office expires March 21, 1930.

Colonel Henry was born at Fort Robinson, Nebraska, January 28, 1875. Upon graduation from West Point in April, 1895, he was appointed second lieutenant, 4th Infantry, and transferred to the 1st Cavalry on September 26, the same year. He was detailed as aide-de-camp to General Guy V. Henry. He served in Porto Rico until May 19, 1899, when he returned to the United States for duty. July 5, 1899, he was commissioned captain, 26th Infantry, United States Volunteers, and on September 5, the same year, sailed with his regiment for the Philippine Islands. On September 13, 1899, he was promoted to major and placed in command of the 1st Battalion, United States Volunteers. On May 5, 1901, he organized and commanded the battalion of Pansy Scouts. On May 13, he was honorably discharged as major, United States Volunteers, and on July 25, 1901, joined the 4th Cavalry at Manila. Returning to the United States September 9, 1901, he served at Jefferson Barracks and Fort Logan H. Roots, Arkansas, which he commanded until March 10, 1902. Returning to Jefferson Barracks, Missouri, he was on duty with the 4th Cavalry until promoted to captain, 12th Cavalry, May 13, 1904. He remained on duty at Fort Riley as Squadron Adjutant and Adjutant of the Post until June 15, 1904. During this period he commanded the detachment during the flood, June 8-13, 1903, and was recorder of the Cavalry Board from December, 1903, to June, 1904.

Colonel Henry graduated from the School of Application for Cavalry and Field Artillery in the spring of 1904 and in August and September of that year participated in the maneuvers at Manassas Junction.

Returning to the Philippines in October, 1904, he served with his regiment until April 18, the following year, when he was ordered back to the United States for duty at Fort Oglethorpe, Georgia. On November 15, 1905, he was detailed as aide to the President and remained on duty at the White House until August 22, 1906. On August 23d, the same year, he was ordered to France for duty at the French Cavalry School, Saumur. Upon completion of the course in July, 1907, he was attached to the 31st Dragoons, French Army, and remained on this detail until September 15, 1907, when he returned to the United States for duty at Fort Riley, Kansas. He was Senior Instructor in



Colonel Guy V. Henry, 3d Cavalry
Nominated as the next Chief of Cavalry

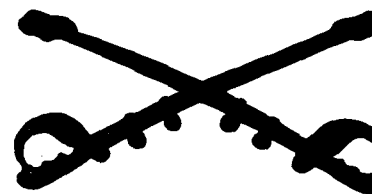
Equitation, Mounted Service School, Fort Riley, Kansas, from October 17, 1907, to August 21, 1908. During the period December 1, 1907, to June 30, 1908, he was a member of the Cavalry Board. August 25, 1908 he transferred to the United States Military Academy as Senior Instructor of Cavalry Tactics, and remained on that duty until September 3, 1911.

Returning to Fort Riley, Kansas, September 8, 1911, he was again detailed as Senior Instructor in Equitation, Mounted Service School, and remained on that duty until December 11, 1913. On January 1, 1914, he transferred to the 7th Cavalry and sailed for the Philippines. He commanded Troop L, 7th Cavalry at Fort William McKinley, Philippines, and at Camp Stotsenburg, Philippine Islands, until transferred to the 9th Cavalry, November 15, 1915. Returning to the United States in May, 1916, he was ordered to the United States Military Academy for duty as Senior Instructor of Cavalry Tactics, which duty he performed until August, 1916, when he was made Commandant of Cadets. He was promoted to major of Cavalry, May 15, 1917, and to lieutenant colonel of Cavalry, temporary, on August 5, the same year. In February, 1918, he was promoted to colonel, temporary, and on the 14th of that month sailed for France on special duty, studying training methods of the American Expeditionary Forces and Allies. He returned to West Point in April, 1918. In August, the same year, he was promoted to brigadier general and ordered to Camp Logan, Texas, where he commanded the 15th Division from September, 1928, to February, 1919. He then commanded Camp Beauregard, Louisiana, until March, the same year, when he reverted to his regular grade of major. Ordered to Port of Embarkation, Hoboken, New Jersey, as Assistant to Port Inspector, he remained on this duty until August, the same year, when he was detailed in the Office of the Adjutant General. In 1920 he was detailed as student officer, Army War College, Washington, D. C., from which he graduated in June, 1921.

In September, 1921, Colonel Henry was ordered to the General Service Schools, Fort Leavenworth, Kansas, as student, School of the Line. Upon graduation in June of 1922, he was detailed as student, General Staff School from which he graduated in June, 1923. July 1st, the same year, he was ordered to the Cavalry School, Fort Riley, Kansas, as Assistant Commandant and remained on that duty until July, 1924, when he was detailed in the General Staff Corps and ordered to the Philippine Department as Chief of Staff. He remained on duty as Chief of Staff, Philippine Department, until July, 1927, when he returned to the United States for duty as Commanding Officer, 3d Cavalry, Fort Myer, Virginia, which duty he performed until selected Chief of Cavalry.

Long identified with the school at Fort Riley, Colonel Henry has perhaps contributed more to raising the standard of horsemanship in the army than any officer in the service. He captained the first team of American officers to participate in an international horse show at the Olympia in London in 1911. The following year he captained and was a winning rider on the 1912 Olympic Equestrian Team at Stockholm. This was our initial appearance in the Olympic Games and Colonel Henry's team set a high standard for future teams, so high in fact that their record remains unexcelled to this date.

The Cavalry welcomes Colonel Henry as its new Chief. His broad practical experience with troops, as well as with the school and other special activities of the arm, peculiarly fit him to guide the development of the Cavalry during the coming four years.



The Military and Sporting Seats

Following are the proceedings of the board appointed to revise certain portions of the *Manual of Equitation* having to do with the military seat and variations thereof for sporting purposes. The board was composed of: Brig. Gen. W. C. Short, Lieut. Col. John A. Barry, Lieut. Col. B. T. Merchant, Lieut. Col. W. W. West, Major H. D. Chamberlin and Captain W. B. Bradford, Colonel Guy V. Henry and Lieut. Col. Ben Lear were called into conference by the board on outstanding questions under discussion. The text as it appears below was unanimously concurred in by the leading authorities of the Cavalry Service composing the board and conferring with it. It is expected to fix a doctrine as to the riding seat which will be standard henceforth.

An extract from the indorsement of the Adjutant General approving the proceedings is as follows: "The attached manuscript, 'The Military Seat,' is returned approved in principle for publication by the Chief of Cavalry as a tentative training memorandum for trial by the Cavalry School and Cavalry troops with a view to determining necessary modifications, prior to including it in a training manual on equitation."—EDITOR.

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SECTION A THE MILITARY SEAT

I. *Introduction.*

A seat for military purposes must provide security combined with ease and comfort for both rider and mount. The seat is principally dependent upon *balance*, supplemented by suppleness of body and muscular control.

Balance requires that the *center of gravity* of the rider's upper body remain as nearly as possible over the center of its *base of support*. The *base of support* in the seat described below is formed by those parts of the rider's body in contact with the saddle and horse, from a point directly under the buttocks, down along the inside of the thighs, to and including the knees and stirrups. The more the center of gravity departs from the center of its base of support, the more unstable becomes the rider's equilibrium. When the center of gravity passes outside the limits of its base of support, the rider's balance is lost and he regains it by gripping with his legs, or in dire necessity, also with his knees and thighs. A poor rider makes the grave mistake of pulling on the reins as an additional means of regaining balance. The seat must be entirely independent of the hands. Such a seat, obligatory for military purposes, is also admirably adapted to all kinds of riding, requiring only the necessary readjustment of stirrups.

II. *Position mounted, at the halt.*

(a) The rider sits squarely in the middle of the saddle, his weight distributed on his buttocks,* thighs and stirrups.

The positions of buttocks and upper body are interdependent. For the buttocks to bear their proper proportion of weight, the upper body must be erect; its center of gravity is slightly in front of the points of the buttocks facilitating the correct placing of the thighs, and the proper distribution of weight. Inclining the upper body to the rear or convexing the loins to the rear places the center of gravity of the upper body in rear of its base of support and causes the rider to sit on the fleshy parts of his buttocks, or upon the end of his

* In the following discussion the word "buttocks" signifies that portion of the rider's anatomy upon which he rests when sitting naturally erect: It extends no farther to the rear than the points of the pelvic bone, and merges forward into the thighs. "Leg" is that part of the limb between the knee and ankle.

spine. This faulty position raises the thighs and knees, weakens the seat, concentrates the weight toward the cantle, is unmilitary in appearance, injurious to the horse's back and places the rider *behind* his horse.

(b) *The thighs extend downward and forward, resting without constraint with their inner sides on the saddle.*

With the buttocks and upper body placed as in (a) the thighs are naturally forced down, and the throat of the saddle is brought well up into the rider's crotch; the troublesome fleshy muscles of the inner thighs are thus forced to the rear, and the flat of the thigh is permitted, without muscular contraction, to envelop the horse. Thus seated the proper proportion of the rider's weight is distributed along his thighs, and the tendency to grip with them is avoided.

If the rider resorts to knee-gripping the thighs are turned inward too much, heels are forced out, legs assume an incorrect position and lose their proper contact.

If thighs are turned outward excessively, contact of knee and lower thigh with saddle is lost; the rider has neither the correct distribution of weight nor the proper base of support; lack of security and instability result.

(c) *The knees, flexed and relaxed, are in continuous light contact with the saddle.*

Properly placed thighs, as in (b) above, naturally and correctly place the knees as low as the adjustment of the stirrups will permit. No muscular effort is required to keep the inner sides of the knees in contact with the saddle. The position of the knees is an index of thigh-position. Knees incorrectly placed—too high, or excessively turned in or out—produce the same faulty results as those mentioned in similar incorrect positions of the thighs.

The knees are always as low as the adjustment of the stirrups permits.

(d) *The legs, ankles, feet and stirrups are disposed as follows: The legs extend downward and backward with the calves in light, elastic contact with the horse.*

Stirrup leathers are always vertical.

The feet turned out naturally, ankles flexed and relaxed, heels well down, rest with their broadest part upon the stirrup treads. When jumping, or riding at fast speeds, the feet are shoved farther home in the stirrups.

The length of stirrup is approximately correct when the tread hangs opposite the lower end of the large bone on the inner side of

the ankle, the rider being seated as described above, his feet out of the stirrups.

(1) *Legs.*—The calves of the legs naturally fall into light, elastic contact with the horse when the knees are flexed and relaxed and the ankles, feet and stirrups are disposed as described above. This contact assists security and is a means of liaison between rider and horse. When the legs are not in contact, liaison is lost and in addition the resultant swinging of the rider's legs confuses a well-trained horse and irritates a nervous one. Correct adjustment of stirrups assists materially in preserving leg contact.

(2) *Stirrups.*—Stirrups for special forms of riding may be longer or shorter than described above. For schooling a longer stirrup may be used; for show jumping, steeplechasing, racing and polo, the stirrups are shortened. Too long a stirrup diminishes the rider's base of support, renders balance difficult, reduces stability and interferes with the proper use of the legs. Too short a stirrup elevates the knee excessively and either places the rider *behind his horse*, with his weight on the cantle, or causes him to stand in his stirrups in order to keep in balance.

The adjustment of stirrups as described in (d) above meets all requirements of military riding.

(3) *Feet and ankles.*—Ankles which are stiff or not relaxed cause the rider to have the heels too high. With the heels high the calf muscles cannot be contracted, ability to grip is lost and security is diminished. When the horse is in motion stiffening the ankles often causes the rider to lose his stirrups and prevents the ankles from absorbing their share of the shock. "Toes turned in" stiffen the ankles, cause loss of contact of proper part of the calf of the leg, and throw the heels out, thus making the proper use of the leg difficult. "Toes excessively turned out," stiffen the ankles, put knees out of contact, place the rider on the back of his thighs and may cause unintentional use of spurs.

(4) *Without stirrups.*—The legs merely hang vertically; knees and ankles are relaxed; feet turn out naturally; toes are lower than heels. When the horse is in motion, the flexion of the knee increases, and the legs come into light, elastic contact with the horse.

(e) *The upper body is naturally erect without stiffness.*

When seated correctly the rider maintains his spine in a position identical with that of the naturally erect dismounted soldier at attention. The hip joints are relaxed to enable the rider to remain in balance. If the upper body is not erect and is inclined too far to the front the proper distribution of weight is deranged. The rider

tends to lose the use of his legs, to ride on his crotch, and presents an unmilitary appearance. On the other hand, the *center of gravity of the upper body is never in rear of the points of the buttocks*. For a further discussion of inclination of upper body to the rear, see paragraph (b). For a discussion of the upper body when horse is in motion see Section A. III.

(f) *The shoulders, relaxed, are carried back evenly, without stiffness, and rest in a plane perpendicular to the median line of the horse.*

With shoulders as described above, *the chest is lifted*, facilitating the maintenance of an erect posture of the upper body. Rounded shoulders cramp the chest, invite a general slumping of the back and loin, and cause the elbows to fly out from the body. Shoulders forcibly carried back result in general contraction.

(g) *The arms and elbows are free and relaxed.*

A natural relaxation of the arms insures freedom and quietness in the use of the hands. Contraction quickly communicates body-movements through the hands to the horse's mouth, resulting in loss of that understanding and tranquility which are so essential.

(h) *The reins are held as prescribed in training regulations in either or both hands, fingers relaxed, knuckles approximately vertical.*

(1) *The reins in both hands.*—The hands, fingers relaxed, are well separated, and held normally above the withers. The forearm, wrist, hand, and rein form one straight line from point of elbow to horse's mouth, the elbow being slightly in advance of the point of the hip. This position will vary from time to time in guiding or controlling the horse, but, with reins properly adjusted, the elbows never pass in rear of the hip. Unsteady hands quickly communicate unintended impressions to the horse's mouth, making him nervous and difficult to control. *Relaxed elbows*, permitting a soft and elastic opening and closing of the elbow angle, enable the rider to follow the movements of the horse's head and neck and are a requisite of good hands.

(2) *If only one hand is used, the free arm hangs naturally.*

(i) *The neck is erect without stiffness, the head and chin high.*

The naturally erect position of body and spine described in (e), is continued in the neck. Contraction of the neck quickly communicates itself to other parts of the body and must be avoided. If the neck is carried forward the resulting tendency is to round the shoulders and convex the spine to the rear, both of which positions are faulty, unsightly and unmilitary. The chin is held high without being thrust out.

(j) *The eyes look to the front.*

This is normal for the soldier at attention, enabling him to occupy himself with the mission of the moment. A horse's movements are sensed by "feel," not sight. Therefore, the rider *does not fasten his eyes on his horse*. This bad habit results in hanging the head and humping the back, thus making balance difficult and often destroying the whole seat.

III. *Position mounted, horse in movement.*

(a) *Balance.*

When a rider so disposes his weight as to require the minimum of muscular effort to remain in his seat, and when the weight distribution interferes least with the horse's movement and balance, the rider is commonly said to be "*with his horse*" or "*in balance*." This condition of being "*with the horse*" is the keynote of riding.

When passing from the halt to motion, and when the horse is moving, the seat undergoes certain modifications. The rider must assume positions which assure his retention of balance and keep him "*with his horse*." The knees, legs and to a great extent, the thighs, remain fixed in position. The upper body, the unstable part of the rider's mass, remains in balance over its base of support by appropriate variations in its degree of inclination, and thus overcomes the disturbing reactions produced by the horse's movements.

Any change in body inclination modifies the distribution of weight among the members of the base of support, and in extreme cases, the base itself. *As inclination increases*, the center of gravity is carried forward and downward; there is a decrease in weight borne by the buttocks and a corresponding increase in that borne by the thighs, knees and stirrups until finally, in racing and high jumping, the knees and stirrups in certain phases support almost the entire load.

(b) *Inclination of the upper body.*

(1) *In forward movement* the degree of forward inclination of the upper body must always be just sufficient to prevent the rider's center of gravity (more accurately, the center of gravity of those parts of the rider above his knees and not in contact with the saddle) from falling behind its base of support. (Section A-I). When his center of gravity falls behind its base of support, the rider is not "*with*" but "*behind*" his horse.

(2) *The upper body is inclined forward as a whole* from the hip joints. *The back does not break to the rear at the loins*, but retains its normal posture. The chin is lifted in order that the back may retain its unbroken line and the field of vision be not reduced. To allow the back to break rearward at the loins, and to permit the shoulders and head to drop forward, usually tends to loss of balance to the rear, and to "*cattle-pounding*."

(3) *Suppleness, muscular control* and the resultant opening and closing of the joint-angles supplement the body inclination and enable the skilled rider "to be and to remain with his horse." In the case of *unexpected movements*, such as shying, which tend to unbalance and unseat the rider, *security is provided by grip of the calves* of the legs and in extreme cases, such as refusing, by grip of the knees also, until balance has been restored.

(c) *The upper body at the various gaits.*

(1) *When passing from the halt to the various gaits, when changing gaits or rates, the degree of inclination of the upper body is dependent upon the suddenness of the change. In increasing gaits, the inclination is sufficient to prevent the center of gravity of the upper body from falling in rear of the points of the buttocks. In decreasing gaits, the body becomes more erect in order that its center of gravity may remain in rear of the knees. In either case, the change in position is reduced to the minimum required for remaining in balance. At the various gaits, the inclination of the upper body increases with the rate until at high speed, the buttocks are frankly out of the saddle. The crotch never excessively leaves the saddle.*

(2) *At the walk the seat is almost as described under Position Mounted at the Halt. The sole difference is a slightly increased forward inclination of the upper body and consequent increase in weight borne upon the thighs and stirrups. Despite the constant tendency to drift to the rear (caused by the horse's forward movement) the rider remains in balance. Thus seated, he neither slouches nor concentrates his weight on the cantle, nor gets "behind his horse." The upper body has the same generally erect appearance as that of the soldier dismounted at attention.*

(3) *At the slow trot, or trot, with or without stirrups (not posting), the body remains erect with just sufficient forward inclination to keep its center of gravity over its base of support. The rider is "with his horse," not "behind him" and pulling on the reins to maintain balance. The forward inclination is slightly greater than when at the walk, but the rider has the appearance of sitting very erect.*

(4) *At the posting trot the rider's center of gravity undergoes more varied displacement than during any other gait. The length of his base of support varies from the maximum (when he is in the saddle) to the minimum (his knees and stirrups, when he is at the top of his ascent). His body moves upward and forward, and downward and backward in synchronization with the beats of the gait. In order to be in line with the thrust received from the horse's hindquarters, a greater inclination of the upper body is required than*

when galloping at a slow rate. The upper body maintains its posture unchanged as the rider comes into the saddle at each alternate beat of the trot; the entire spine retains its natural line at all times without sinking rearward at the loin. The chin is raised so that the plane of the face remains vertical. The rider sinks into the saddle very lightly on the upper thighs and crotch, the points of the buttocks barely touching the saddle at each beat.

(5) *At the canter or slow gallop the body is inclined slightly more forward than at the walk or slow trot. The inclination is not exaggerated; it is merely sufficient to insure balance. At each beat of the gallop that part of the rider's weight coming onto this thighs automatically forces the relaxed knees downward, and they in turn transmit weight through the relaxed ankles onto the stirrups; the heels are low; the legs maintain their prescribed position without muscular effort; the rider makes no attempt to keep the end of his spine or the fleshy part of his buttocks in constant unyielding contact with the saddle. Constant contact can only be maintained by breaking to the rear at the loin or leaning backward, thus concentrating weight on the cantle; the rider is then behind his horse and rides "heavy" instead of "light."*

(6) *At the fast gallop as in charging, maneuvering, saber work, etc., the body is inclined further forward with the buttocks out of the saddle. Consequently the weight is on the thighs, knees and stirrups, eliminating "pounding" the saddle, and giving ease and freedom to both horse and rider. Rounding the back and loin entails loss of muscular control of the upper body and results in loss of balance.*

If balance is lost to the rear, the rider is "behind his horse" and sits heavily on his horse's loins; if lost to the front, he is inclined to stand in his stirrups and maintain himself by placing his hands on his horse's neck. Being "behind the horse" makes his galloping laborious and painful and places the military rider in an unfavorable position for employing his weapons. When riding entirely "in his stirrups" the seat is insecure and the rider has difficulty in using his hands to control his horse or to handle his weapons.

Keeping the head, chin and chest up aids materially in maintaining the correct position of the back and loin. The legs are in close contact with the horse and the knees and heels sink at each stride, absorbing part of the shock and fixing the rider securely in the saddle.

(7) *In decreasing rates and gaits, in halting and in backing, the rider does not lean back. The forward inclination of the upper body decreases with the rate to enable the rider to remain in balance with*

his horse. The upper body is never in rear of the vertical except in an emergency occasioned by unexpected movements of the horse.

IV. Summary.

In the assumption and maintenance of the correct seat, the various parts of the body are interdependent. Stiffness, contraction, or derangement of one part inevitably harmfully reacts on another. The buttocks are the corner-stone of the rider's base of support, and are first placed. When properly placed, the rider has the sensation that their points are almost in contact with the saddle; their fleshy portion is in rear of their points, and is never a part of the seat. The time-worn expression "*Tuck your buttocks under you*" is misleading and causes some riders, in an attempt to obey, to sit, not upon the points of their buttocks, but upon their fleshy portion; such a position is the direct cause of many faults of seat. To sit upon this fleshy portion tends to produce insecurity by causing the rider to "roll" on the saddle, to bow his back to the rear at the loins, to raise his knees, to derange his thighs, and to get "*behind his horse*," all unsightly and insecure. If the rider sits too far forward of the points of his buttocks, he is on his crotch with all of the attendant faults. Sitting on the crotch usually occurs when riding without stirrups or when stirrups are too long. The inclination and posture combined of the upper body largely determine the manner in which a rider sits upon the saddle. With the points of the buttocks resting in the saddle, its throat deep in the rider's crotch, the weight of the naturally erect and correctly inclined upper body tends to force the thighs downward into their proper position. The thighs and length of stirrups fix the position of the knees. If the upper body is not properly placed and inclined, the lower members are not correctly placed, do not bear their proper proportion of weight, and insecurity results. Similarly rounded shoulders, or a hanging head react harmfully on the upper body.

The knees are relaxed, flexed and always as low as the particular length of stirrup will permit. In short, the rider is seated in the saddle, not on it. Due to his relaxed, flexed and low knees, he does not stand in his stirrups or give that impression. His stirrups are neither too short nor too long; and consequently his knees are neither too high and excessively flexed, nor too low and excessively straight and stiff. His upper body is always naturally erect and inclined to the front from the hip joints only so much as the reactions of the moment require. His delicate sense of balance aided by the correct distribution of his weight, his muscular control, his relaxed and supple joints give him the feel that at each grounding of the horse's feet in his stride, he is thrust deeper and more securely into the saddle.

SECTION B

HUNTING, CROSS-COUNTRY RIDING, RACING, STEEPLECHASING

I. Hunting and cross-country riding.

The military seat is well adapted to hunting and cross-country riding. No changes are necessary.

II. Flat racing.

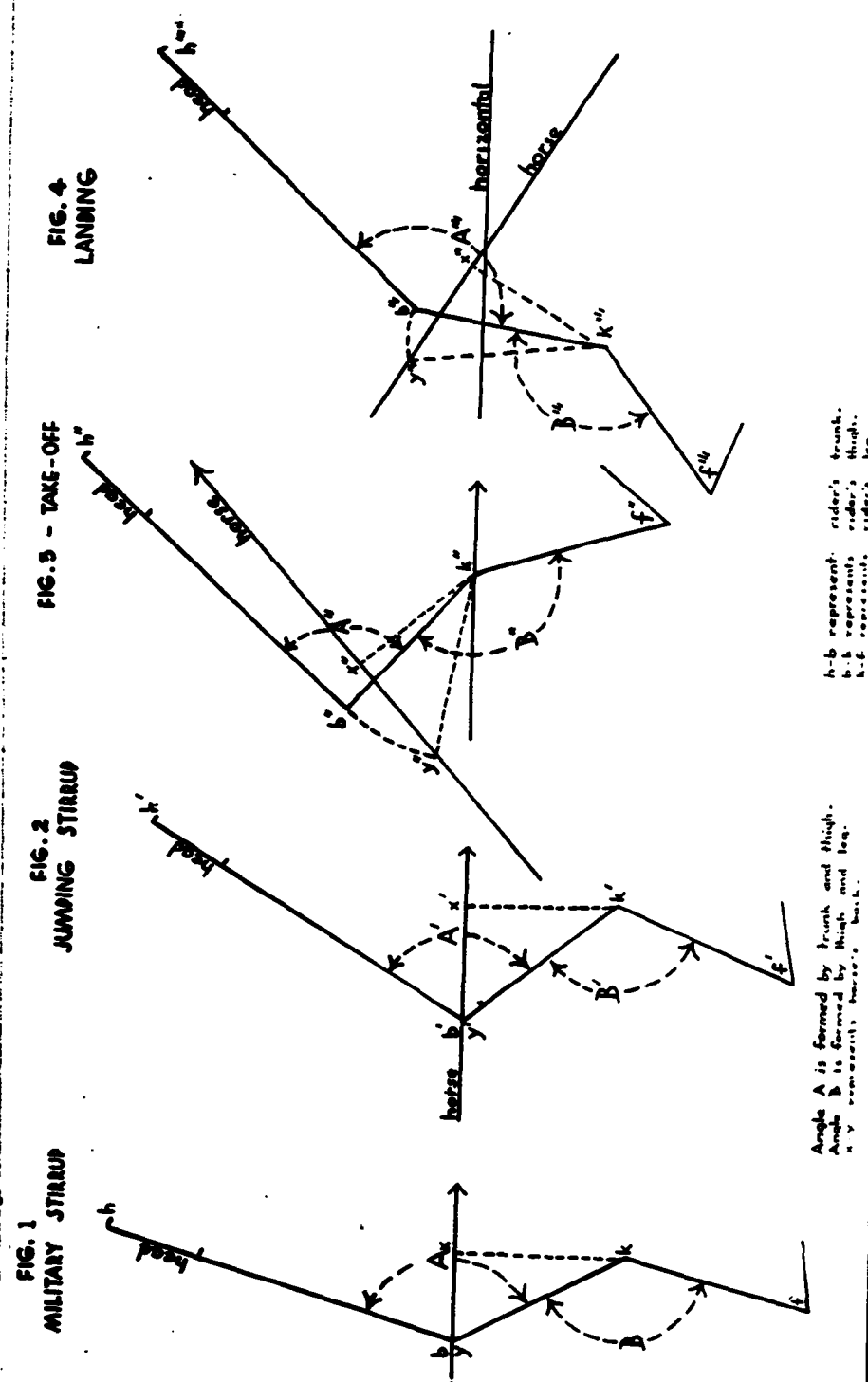
Racing is a special form of riding. The speed element demands that, for maximum result, the horse have great liberty of body movement and an advanced center of gravity. The rider consequently rises out of his saddle and supports himself almost entirely with his stirrups, knees and reins. He advances and lowers his center of gravity over this shortened base of support by an extreme forward inclination of upper body, his back maintaining its normal posture. (See Section A-III and diagram and explanation, Section C). This position over a shortened base of support (due to buttocks being out of the saddle) entails lack of stability and renders maintenance of balance more difficult. But it insures to the horse greater freedom in his gallop and advances and lowers the center of gravity of the rider, bringing it nearer to that of the horse—a condition favoring speed.

III. Steeplechasing.

The position of the rider in steeplechasing is less extreme than in flat racing. It is determined only after much experience and depends upon the individual, the horse and the course to be negotiated. Security over jumps is necessary. Therefore, as compared to the racing seat, speed requirements on position are disregarded just enough to attain this end. (See Section B-II). The rider's base of support is lengthened by closer contact of thighs and at times even of buttocks. Forward inclination of the body consequently is not so extreme. Security is usually provided by slightly longer stirrups than in flat racing, permitting better leg grip, but stirrups are always shorter and the body inclined farther to the front than in the military seat. (See Section A-III and Section C). The rider can rise easily from his saddle and support his weight on stirrups and knees while galloping on the flat, and can also "*sit close*" as an obstacle is approached, to be with his horse, to feel him better, and to have greater security.

IV. Summary.

The demands of balance and security govern any form of riding and the seat is modified as one becomes more important than the other. The military seat requires great security as well as ability to



jump and gallop across country; hence its long base of support to preserve balance, and its moderate stirrup length to give good leg grip and resultant security.

The steeplechase seat subordinates security, to a certain extent, to speed. The stirrup is shorter than in the military seat; the base of support is shortened as the buttocks leave the saddle, and as the body inclines farther to the front to maintain its center of gravity over this shortened base.

In flat racing, the jockey subordinates everything to speed. His stirrup is extremely short; he maintains his seat by knees, stirrups and reins. His body reaches the maximum forward inclination as it seeks to maintain its center of gravity over its shortened base of support.

SECTION C JUMPING

(a) *The seat.*

(1) *Military jumping.*—The military seat, without modification, is admirably suited to such jumping as is normally encountered in military work, hunting and cross-country riding. It is also the seat employed in horse show jumping, except for a shortened stirrup. The principles enumerated below for *horse show jumping* are equally applicable to military jumping.

(2) *In horse show jumping,* when large obstacles are encountered, the *military seat* is so modified as to give greatest mechanical advantage to both horse and rider. *This change consists merely in a shortened stirrup.* Security is thereby lessened, but is no longer paramount, as the horse is presumably well trained and jumps freely. *The rider depends on balance rather than leg grip to maintain his seat.*

(b) *Mechanical principles.*

(1) *Eplanation of diagrams.*—The accompanying diagrams will aid in explaining the advantages derived from shortening the stirrups when jumping difficult obstacles and in such specialized riding as steeplechasing and racing.

For the purpose of discussion, it is assumed that the knee (k) in Fig. 1 is always at a fixed perpendicular distance from the horse's back (x-y) for any given length of stirrup. This is approximately true except for slight movements of the saddle on the horse and insignificant movements of the knee due to sudden reactions. The rider's leg is also considered fixed in its position against the horse's side. This fixity is not absolute, but is the ideal sought.

(2) *Balance and functioning of joints.*—In jumping, as in all riding, *balance*, or as it is frequently expressed, "*being with the horse*" is the *predominating factor*. Maintenance of balance in jumping is largely dependent: first, on an initial proper forward inclination of the upper body which insures being in the expected line of thrust; then, on the proper functioning of the knee and hip joints, resulting from their relaxation; and, finally, on the rider's muscular control of his body which counterbalances the reactions caused by the violent movements of the horse.

In Fig. 2 angles (A') and (B') represent conditions just prior to the take-off. In Fig. 3, which represents the take-off, angle (B') has opened to (B'') and (A') has closed to (A''), as the rider is thrust upward and forward by the horse's effort. In Fig. 4 the horse is descending after clearing the obstacle; angle (A'') is very large and (B'') is closed again.

(3) *Changes in base of support.*—In order to analyze some of the rider's problems in maintaining balance during a jump, the fact must be borne in mind that as his seat leaves the saddle at the take-off, the horizontal length of his base of support is diminished and advanced. This horizontal length varies from a maximum which is the horizontal distance between (b') and (k') Fig. 2, when the rider is fully seated at the take-off, to a minimum which is the horizontal distance between (k'') and (f'') Fig. 3, when the rider is well out of his saddle and supporting practically all his weight on his lower thighs, knees and stirrups. *This latter condition should exist after the take-off, throughout the jump and until the horse has reestablished his normal gallop.*

(4) *The horse's movement.*—In horse show jumping, the horse must often make his maximum effort, and his rider consequently must give him maximum liberty of all his powers while so doing. This is accomplished when there is a minimum of interference on the part of the rider with the loin, mouth and balance of the horse. In other words, he "*allows the horse to do the jumping.*"

The horse aids himself in clearing an obstacle by movements of the head and neck. These movements produce certain interior forces which react on his mass. The initial impulsion of the take-off throws the rider's weight forward on to his lower thighs, knees and stirrups. If his buttocks fall back into the saddle while the horse is striving to clear the obstacle, this added weight tends to nullify the effect of the horse's head and neck movements in lifting his quarters, and he commits faults behind. In this case the rider has lost balance to the rear and has interfered with the horse's effort. In landing, if the rider's seat falls back into the saddle, he disturbs the horse in his

attempt to reestablish his normal gallop, and hurts his loin. This teaches him to fear jumping and to rush wildly away after landing.

(5) *Effects produced by length of stirrups.*—Comparing Figures 1 and 2 it is seen that with the shorter stirrup, as in 2, the knees are higher and farther to the front. Thus the rider's base of support (b' - k' - f') has been lengthened horizontally. The more the stirrups are shortened, the greater this increased length, and the more the upper body must be inclined to the front from the hip joints in order that its center of gravity rest always over the center, *or slightly in advance* of the center of its base of support.

Also, since the knee is farther to the front, the horizontal distance (k' - f') between knee and stirrup has been lengthened, provided the stirrup strap always remains vertical. This horizontal distance between knee and stirrup determines the length of the rider's base of support *when his buttocks are out of the saddle*, as in fast galloping (Section A-III C) and (Section B) and *during a jump*. Thus a shortened stirrup provides a longer base over which muscular control acts in maintaining balance, and the rider finds it easier to keep his equilibrium during the most critical phases of a jump, while his buttocks are out of the saddle. It must be borne in mind that while a short stirrup lengthens the base of support, it diminishes ability to grip with the legs and so lessens security in unanticipated movements of the horse, especially in lateral directions.

A further result of a shortened stirrup is the closing of the knee angle (k), consequently permitting it to open over a larger arc when necessary. This liberty of action afforded the knee joint greatly aids the rider in exerting the muscular control of the upper body necessary to remain in perfect balance over the jump and when landing, and assists him in keeping his weight off his horse's loin. Since the knee is higher with the shortened stirrup, the danger of losing balance to the front by pivoting the upper body over it is greatly diminished. If the stirrup is too long, the rider's leg will rotate backward and upward while jumping, lessening security and irritating the horse.

(6) *Inclination of the upper body.*—The increased forward inclination of the upper body required by short stirrups, paragraph (5) above, is of immense advantage when jumping, allowing the rider readily to change from his maximum base of support when seated (b' - k' - f') to his minimum and most advanced base when out of the saddle and supported mainly by knees and stirrups (k'' - f''). The position entailed by this *most advanced base*, assumed as a result of the take-off, is held until the horse begins his descent. See (c) (14) and (15). The rider approaches the jump *seated*. At the take-off his buttocks are thrown upward and forward by the thrust of the horse's

hindquarters; his upper body during the approach, while still seated in the saddle, Fig. 2, has sufficient forward inclination to insure its center of gravity being in line with the direction of the horse's thrust and slightly in advance of the center of its base of support ($k' - b'$). If the forward inclination is not sufficient, or if the back is humped, not straight, the line of thrust passes beneath the center of gravity of the rider's upper body, and he rocks to the rear, or breaks badly at the loins, and is "behind his horse," or as frequently said, "his horse jumps from under him."

(c) *Essential points in jumping.*

The following essential points should be borne in mind when jumping:

(1) *The military jumping seat* is the military seat as prescribed with the horse in motion (Section A-III). The *horse show jumping seat* is the same seat with shortened stirrups and the resulting greater forward inclination of the upper body to keep in balance.

(2) *Short stirrups are a positive disadvantage if the correct seat is not taken.*

(3) *Stirrup straps are always vertical.*

(4) *Saddle is deep in the rider's crotch, fleshy part of the buttocks to the rear of, and not under the rider.*

(5) *Thighs, knees and heels are forced down to the limit allowed by the length of the stirrup straps.*

(6) *The calves of the legs are always against the horse.*

(7) *The upper body is inclined forward from the hips. The spine retains its natural line at all times, without sinking rearward at the loins. The loins remain under muscular control. They are not limp. The chest is lifted and well to the front.*

(8) *Head, chin and eyes are up.* The rider's horizon remains practically unchanged. Holding the chin up assists greatly in maintaining correct spinal posture and muscular control of upper body.

(9) *Arms, shoulders and fingers are quiet and entirely relaxed a few strides before the take-off and remain so until the horse has reestablished his galloping stride on the far side of the obstacle.*

(10) *As the horse starts his approach, often somewhat abruptly, the rider's body is inclined forward sufficiently to keep in balance. It is disastrous to fall behind him. Being in balance, the rider remains absolutely quiet and his position unchanged during the final strides of the approach and at the moment of take-off. Only the legs work as required, and as stated above are never entirely passive. Thrusting the body forward or sinking backward at the loin at the moment of take-off must be avoided.*

(11) *During the last few strides of the approach and during the*

process of the take-off, the hands are absolutely passive and their contact is light. The horse, like the athlete, must concentrate on measuring his stride and clearing the obstacle. Any movement of hands or shifting of rider's weight at this time will distract his attention and upset his balance, thus diminishing greatly his chances for a good performance. This is particularly true when the horse seems to be "in wrong." Then the rider's greatest care must be to "sit quiet" with hands passive, and "let the horse do his jumping."

(12) If the rider's position is correct at the take-off, he is thrown slightly forward and upward without voluntary effort. The knee angles open and the hip angles close.

(13) *Over the jump* buttocks are kept out of the saddle by rider's balancing on his lower thighs, knees and stirrups. *Loin and back must not hump over*, as muscular control of trunk and balance are then lost, causing the rider to fall back into the saddle, or forward on the neck of his horse.

(14) During the descent and in landing, the forward inclination of the upper body is progressively and gradually decreased to avoid losing balance and falling forward on the horse's neck; the hip angles open; the knee angles close; the rider is preparing to resume his seat.

(15) In landing the shock is progressively received on thighs, knees and stirrups—on the last through the ankles, necessitating low heels. The upper body must neither fall forward nor crumple backward. It is prevented from falling forward by the correct amount of inclination, assisted by muscular efforts of the back, lower thighs, knees and legs; it is prevented from falling backward by correct inclination, and by keeping the posture of the loin and back unchanged. Head and chin are kept high. For a few strides, the rider continues to support himself on lower thighs, knees and stirrups; then he relaxes the knees and settles gently into the saddle.

(16) *Chest up and body forward! Hands soft and elastic! Legs always active! Balance!*

The Swedish Cavalry School

By LIEUTENANT MILES FLACH, *Swedish Cavalry*

THE ART of riding is one that cannot come to a high standard within a short period of time: it needs many years and a developed tradition, to reach perfection. In England hunting and racing have been going on for centuries, and I dare say there is no other country where such horsemanship is to be seen. In other European countries the cavalry has been the carrier of the traditions of horsemanship. The method of training a horse has changed in the same degree as the cavalry has changed its mode of fighting; thus the system of training in our day strives to produce a horse that is entirely obedient and able to carry the weight of saddle and rider at a swift pace for long distances and over every sort of country.

The Swedish cavalry is of very old origin. In 1925, three of the then existing regiments were over 400 years old and the rest from 300 to 150 years. Our traditions of horse-breeding, riding and horsemanship have thus been preserved in the cavalry for 400 years or more.

Since the reduction of the army in 1925 four cavalry regiments remain, with a total of seventeen squadrons.

The Cavalry Riding School is at Strömsholm, a royal castle ninety miles from Stockholm. Here cavalry officers in the second year of their service, together with a certain number of officers of the artillery, train and engineers, are sent to receive their training as riders and as instructors. Since 1868 cavalry officers have received their instruction at this school. The course begins the first of September and continues until the middle of July the following year.

The mission of the school is to produce good riders and instructors, combining bold and fearless riding with a thorough knowledge of the care, conservation, capabilities and limitations of the horse. The student is further trained in the tactics and technique of the cavalry branch, in troop-leading, in the management of training, and in the use of cavalry weapons.

Each officer ordered to the school brings two service horses, one of which is intended to be trained as a good troop horse and for taking part in jumping and military competitions, the other one for steeple-chasing. At the school each officer receives two remounts and two horses for the dressage. Of the two remounts, one has come



Part of the Field During a Hunt

The officer on the right, just behind the leader, is the author, Lt. Miles Flach

directly from the depot, while the other has just completed one year's instruction and training. The other two horses, called school-horses, are well trained older horses, which in fact serve as instructors for the riders. Thus each officer rides six horses of different quality, from the young raw horse up to the very best ready trained school horse.

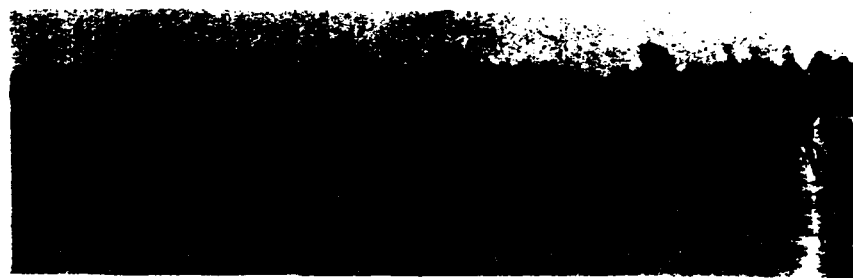
The day's work at the school will generally be about as follows from six o'clock A. M.:

- $\frac{3}{4}$ hour gymnastics: fencing, boxing;
- 4 hours riding from 7 until 11 o'clock;
- 3 hours riding from 1 until 4 o'clock;
- $1\frac{1}{2}$ hour tactics, veterinary or other theoretical instruction.

By this it is plainly seen that the young officer is kept hard at work, and is made fit—sometimes almost too fit. Strömsholm is a place of hard work, but at the same time the year there is the most amusing and the gayest of a young officer's career, and there is no prohibition.

From September until the first days of November is the hunting season. The hunts are drag-hunts, and generally take place twice a week without regard to the weather. For hunting one of the two service horses and the school horses are used.

Unfortunately it is impossible to have real fox hunting in Sweden. There are not enough foxes, and the country is not suited



A Canter on the Ice

to it. Cultivation prevents riding on most of the fields all the year except one month or two in the Autumn, and also between the fields there often are stony and wood-covered hills and marshes that make it very difficult for the riders to follow the hounds. With drag-hunts it is possible to lead the field over the best ground, and the master can regulate the degree of difficulty of the hunt in proportion to the quality and training of the horses and riders, which is a great advantage at a riding-school. The hunting season ends every year on the day of St. Hubertus, the third of November. On that day there is a grand meet at Strömsholm with excellent hunting. At the end of the day everybody gets together and the evening is spent with much gaiety at the castle.

After the St. Hubertus day, during the winter, occasional hunts take place on the ice and in the snow.

At New Year the training of the race horses begins.

A most excellent place for cantering is found on the frozen lakes



Steeple-chasing in Snow



Finish of St. Hubertus Day Hunt, November 3, 1929

where the ice gives a smooth and elastic floor to ride upon, and in addition, there is usually a foot of snow. This winter training period terminates toward the end of February with steeple-chasing and jumping competitions in the snow. The steeple-chases are ridden on the ice, and the fences are usually hurdles and packed snow walls of a height of three feet and dressed with small branches of fir, making the whole height of the fence about four feet.

Among other competitions during the Winter period worth mentioning is a reconnoitering ride by night, the length of which generally is about twenty miles. As the Winter nights are very long and dark, and as the snow fills up all ditches, this competition is a very adventurous one. But thanks to the snow and the frozen lakes the risk of damage to horses or riders is very small. The riders start with an interval of ten minutes, and have to find four or five controls. The one that passes the controls quickest and reaches the goal is the winner.

The next and last period is the training and *concours* period. In the beginning of April the training for steeplechasing and jumping competitions begins, and during May, June and July the officers of the school are allowed to take part in the *concours* and steeple-chases in different parts of the country—always on their own service-horses. As before mentioned, one of these was intended for racing, the other for jumping and military use.

During all this time the training of the two young remounts has been going on. All cavalry horses are bred in the country and are

bought at the age of three years. The first year these young horses are put together at different depôts and are distributed to the regiments at the age of four. In the Autumn of his fourth year the training begins and continues on for two years, so that he becomes a trained troop-horse at the age of nearly seven. In that way the training is divided into two periods, each period one year, and the remounts are for that reason divided into first and second year remounts.

After a year at the Riding School a student has trained one horse of each category, and in order to keep up the ability to train young horses, each subaltern of a regiment has to train a remount of his squadron each year.

The school horses are intended to teach the pupils the dressage—*haute école*. These horses are all trained to change of lead, piaffer and some of them to the passage. All of them are at the same time excellent hunters.

This system of instructing the cavalry officers on horses of different categories, from the raw youngster to the trained troop horse, from the steepler to the school horse, has always given excellent results: all around riders and good horsemen. For such officers as show a special interest in riding, there is an instructor's course going on during the same time as the normal course, and in order to become a teacher at the school, there is a third year's course.

During the last twenty years most of the teachers have also re-



Instruction Method to Test the "Feel" of the Reins

ceived instruction at and studied the principles of the foreign riding schools at Hanover, Vienna, Saumur and Pinerolo, and the best of these principles have been incorporated in the Swedish system of riding and training.

The results of the system have been tested several times at international competitions and generally with success, considering the comparatively small number of riders, and that all horses always have been ridden and trained by their owners. For economic reasons participation in international competitions has been limited to the



There is Much of This Sort of Training at Stromsholm

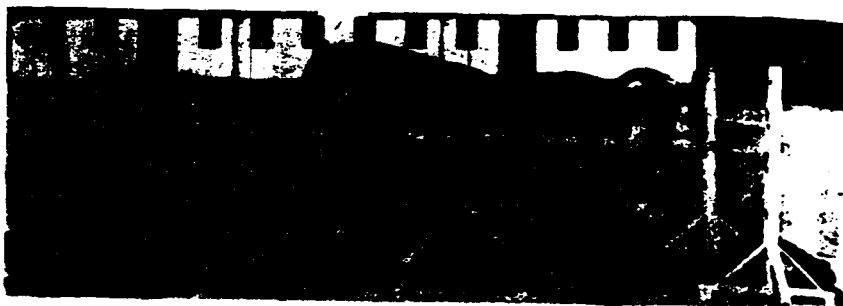
Olympic Games and to occasional shows in other places, as The Olympia Horse Show in London, the more important meets in Germany and the Scandinavian countries and once at Nice in 1923.

In 1920 at the Olympic Games in Antwerp the Swedish team won the first prize in the military and the jumping competitions. Individual Swedish officers won first and second prizes in the military, third prize in the jumping competition and first, second and third in the dressage.* All horses, except one, were homebred horses, most of them service horses of their riders. The same year the Prince of Wales' Cup was won in London.

At Paris in 1924 the teams won the first prize in the military and the jumping competitions. Individually the first, second, fourth and fifth prizes in the dressage were won. All horses, except the winners of the first and the fourth prizes in the dressage, were home-bred.

At the last Olympic Games in Amsterdam the teams won second

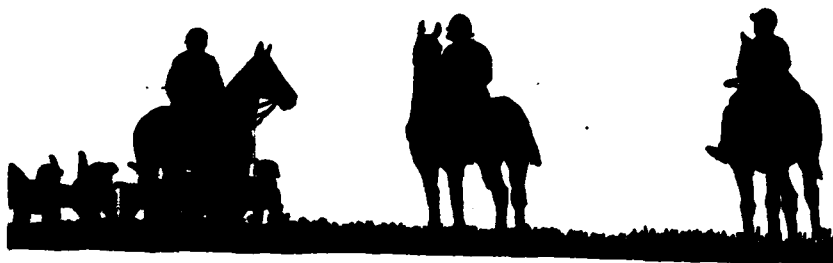
*Excellent pictures of Swedish officers schooling and training a dressage prospect for the 1932 Olympic Games are used as illustrations in the article on "Schooling Events of the 1932 Olympic Games" by Major W. M. Grimes in this issue.—EDITOR.



The "Cavalletti"—an Italian Method of Training Found Valuable by the Swedish Army

prize in the dressage and third prize in the jumping competition behind Spain and Poland. This year all horses were home-bred.

Considering that the home bred Swedish service horse is not to be compared in class and quality to the Continental and English hunters and thoroughbreds, the results of these international competitions tend to demonstrate the competence of the Swedish system and of the principles of the instruction at the Cavalry Riding School at Strömsholm.



Schooling Events of the 1932 Olympic Games

By MAJOR W. M. GRIMES, *Cavalry*

THESE are two schooling competitions scheduled for the equestrian events of the 1932 Olympic Games. Before discussing these two competitions, it might be well to describe briefly the equestrian events, in which the art of schooling is required. These events are as follows:

1. The *Equestrian Championship*, commonly known in the service as the "Three-Day" event. This competition consists of three distinct contests, held on three consecutive days:

1st Day—Schooling competition, consisting of various prescribed school movements held in an outdoor schooling ring.

2nd Day—Endurance test, consisting of work partly on roads, pathways, cross country, and over a steeplechase course.

3rd Day—Jumping: this is not an ordinary horse show event or a contest of skill or power; rather it is intended to demonstrate that on the day after the severe effort the horses that have been entered still retain a degree of energy and suppleness.

2. The *Individual Training Competition*, commonly referred to as the "Dressage" or "Schooling" event. This competition consists of various prescribed school movements held in an outdoor schooling ring; if circumstances require, this event may be held in the riding hall.

The Art of Schooling

The art of schooling is fast disappearing in our service; schooling a horse has fallen into the discard and is confined to a comparatively few individuals. As proof of this statement it is believed that on the fingers of one hand, exclusive of the thumb, can be counted the names of our officers who are qualified to school and exhibit a Dressage prospect. As additional proof of the lack of knowledge and interest in schooling it is doubtful if many readers of this article know the meaning, except in a very general way, of such terms as the "Passage," the "Piaffer," and the "Pirouette." On the other hand the value of schooling has always been recognized in Europe; it still plays an important part in all Continental equestrian schools.

Past Olympics

In past Olympics our entries have been confined almost exclusively to the Prix des Nations (Jumping Competition) and the Equestrian Championship.

Only twice have we entered the Dressage or schooling competition. In 1912, at Stockholm, Colonel Guy V. Henry, Cavalry (then Captain) and Colonel J. C. Montgomery (then First Lieutenant, 7th Cavalry) entered and rode *Chiswell* and *Deceive* in the Prize Riding Competition of those games. *Chiswell* put up a remarkable performance of schooling. However, *Chiswell* as a horse did not rank with the magnificent animals exhibited by the European competitors. In 1920, at Antwerp, we again entered a Dressage team, consisting of Majors Barry, Doak and Chamberlin, riding *Sin Glén*, *Chiswell* and *Harebell* respectively.

We did not enter the Dressage events in the 1924 or 1928 Olympic Games. In the 1932 Games at Los Angeles the American Army will enter the Dressage competition.

The International Equestrian Federation

It may be of interest to know that the rules and regulations governing the conditions of the equestrian events at the Olympic Games are drawn up by what is known as the "International Equestrian Federation." This is an organization composed of the representatives of various affiliated National Equestrian Federations. The United States has a representative, appointed by the Chief of Cavalry, who attends the meetings of the federation. In April of the past year the federation met in Paris and drew up new general regulations for the International Equestrian Federation. It is expected that these new regulations will be issued in January, 1930; they will set forth in detail the conditions for the equestrian events of the 1932 games.

European Interests in Schooling Competitions

In order to create and continue interest in the Individual Training Competition (Dressage), and to give the various nations a chance to meet oftener than every four years, the International Equestrian Federation has decided to hold a concours of Individual Dressage for 1930. This competition will take place at Lucerne under the auspices of the Swiss Federation, July 5-13. This will be of tremendous interest to all foreign nations who contemplate entering a team in the Dressage event at Los Angeles in 1932. The Lucerne competition will furnish excellent training for Dressage teams and, likewise, will enable each team to obtain first-hand knowledge of competitors. The movements

to be held at Lucerne were drawn up by the Equestrian Federation. These movements, by the way, are practically identical with the movements prescribed for this same competition in the Olympic Games. About the only difference is that the scoring standard for Lucerne has been lowered, so as not to discourage contestants who have only a few months in which to perfect the training of their horses.

Changes in the Schooling Phase, Three-Day Event

The individual schooling of many of the competitors in the Equestrian Championship at Amsterdam in 1928 was not of a high order. In fact, it was so low that the International Equestrian Federation stated that "the poor performance in certain training competitions at the last Olympic Games brought forth the suggestion to eliminate every rider who does not total in this first test one-half plus one of the total number of points." This was not agreed upon but it was decided that the coefficient for the schooling test would be increased so as to penalize more severely the lack of preparation.

This suggestion has been carried out and the new regulations for this event will assign the *schooling phase* of the Equestrian Championship 400 points out of a total of 2,000, i.e., 20% is allotted to the schooling phase. The *Endurance Phase* (cross country, steeplechase and road work) is allotted 1,300, and the jumping phase 300 points. In so far as *schooling* is concerned this is an increase of 100 points over the allotted value in the 1928 games. This should prove a boomerang to those nations who decry and neglect schooling and rely on good performances in the endurance and jumping phases to bring up their average.

Changes in the 1932 Dressage

The movements prescribed for the Dressage in the 1932 Games are more difficult than those of 1928. The 1932 requirements include the *Passage*, the *Piaffer*, and the *Pirouette*.

Horses

The question of obtaining suitable types of horses for the Olympic equestrian events has always been a most difficult problem. Practically every account and report on each Olympic that the Army has participated in, decries the lack of suitable horseflesh.

The type of horse required and desired is fully appreciated. Every competing nation faces the same problem. We have not been entirely successful in the solution, namely, acquiring the suitable type in sufficient numbers and in sufficient time properly to train them.

In 1928, the American Army team for the Three-Day event was

unquestionably the best mounted Three-Day team ever entered by our Army, in so far as breeding type and condition were concerned. However, our horses lacked a most essential characteristic: *experience*. Experience is one of the greatest factors in any competition, especially in international equestrian events. The horses of foreign nations gain their showing experience over a comparatively long period of years.

With the possible exception of our jumpers (Prix des Nations string), we will again face Olympic competition with horses having little or no previous experience.

For the Three-Day event we are confronted with the development of an entire new string of horses. In this connection, three of the four horses nominated for this event in the 1928 Olympics were privately-owned officers' mounts; the other was a public mount. It is interesting to note that the three private mounts have all been sold to civilians, and the public mount to a general officer.

As far as the Dressage is concerned, we have no outstanding prospects. Dressage horses require the most exacting training. Schooled horses are not developed overnight. They result from long, painstaking effort in the riding hall—over a period of years. The school movements executed in the Dressage represent the acme of equestrian art. Horse and rider must have reached the height of perfection in skill and training.

The general characteristics of the several types of horses required follow:

Equestrian Championship: calls for a thoroughbred possessing much experience, quality, absolute soundness, demonstrated endurance, staying ability, heart, great courage, flair for jumping and schooling and dependability. One or more of the above characteristics are demanded for each of the schooling, endurance and jumping phases.

Individual Training Competition: calls for a thoroughbred, a model of manners, gaits and appearance; a level-headed disposition and dependable. At least two years' schooling experience; preferably a gelding.

Past Experience

The American Army has entered equestrian teams in four Olympic Games. Certainly we can and should profit by the experience gained in preparation for, and the participation in, these events. If one outstanding lesson can be deduced from our experience, it is our lack of timely preparation and training.

To date, in preparation for the 1932 Olympics, we have been successful in developing a nucleus of riders and horses having consider-

able training and experience in horse show jumping. We have met with considerable success, as witnessed by our performance in Europe last year and at various horse shows in this country, culminating with the wonderful showing made at the National Horse Show at New York City. Unfortunately, however, Olympic equestrian competition is not confined solely to horse show jumping.

We must go farther: we must develop riders and horses for the Dressage and the Three-Day event. Our experience and training for rider and horse is woefully lacking in the Dressage; likewise is partly true for the schooling phase of the Equestrian Championship.

A Study of our equestrian efforts in past Olympics discloses the fact that in practically every one of the games the scores of our schooling phases have not kept abreast with the scores in our jumping and endurance phases. In other words, there has been a tendency to concentrate more on the jumping and cross country features of training and a consequent lack of proper emphasis being placed on schooling.

Present Task

The present task confronting those charged with the development of a victorious 1932 Olympic Equestrian Team is not an easy one. The problem involves the training of rider and mount in three separate and distinct forms of mounted endeavor, namely, jumping, cross country endurance, and schooling. Of the three, schooling is believed to be the most difficult and the one on which the greatest effort must be made. Of the three principal competitions that make the equestrian events, schooling is the foundation of one event and constitutes a vital factor in another.

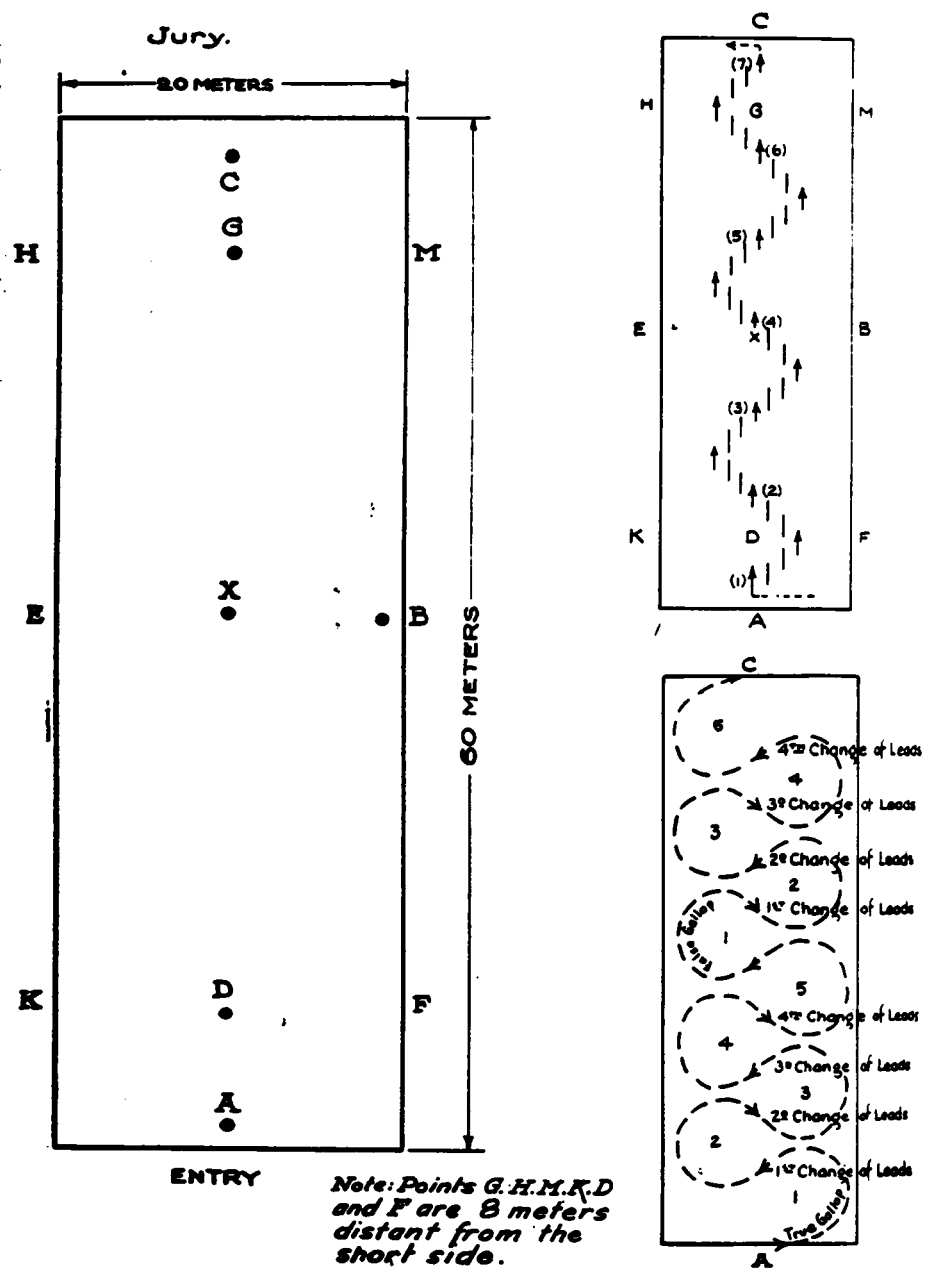
Dressage Movements

In order to give the reader a general idea of the schooling movements required in the Dressage events of the Olympic Games the following is submitted:*

I

Enter at the gallop. Halt at center. Horse immobile. Salute.
Move forward at the collected trot. Take the track to the right hand.

*This is a translation of the International competition in Individual Schooling prescribed by the International Equestrian Federation for the International Horse Show to be held this summer in Lucerne. This translation was made by Major Harold M. Rayner, Cavalry, Instructor in Horsemastership, The Cavalry School.



Left: Plan of Schooling Track. Upper Right: Movements Prescribed in VII and XVIII. Lower Right: Movements Prescribed in XV

II

From M to K—change hands at ordinary posting trot.
 From K to F—Reins in one hand.
 From F to H—Change hands at the extended trot (sit the trot, with reins separated).
 From H to G—Ordinary posting trot..... 15

III

At G—Take up the gallop (normal gallop).
 At M—Change hands, changing leads at center of hall.
 From K to F—Collected gallop.
 From F to H—Change hands, at the normal gallop, reins in one hand, changing leads at center of hall
 At C—Collected gallop, reins separated..... 15

IV

At B—Column right. At the center line column right facing the Jury.
 At G—Halt. Horse immobile 8 seconds..... 10

V

Move forward at the collected trot, track to the right hand.
 After passing M, half turn on the haunches at the walk.
 Collected trot.
 After passing H, half turn on the haunches at the walk.
 Collecting trot 10

VI

From M, X to F—Counterchange of hands two tracking..... 10
 At A—Column right.

VII

Two track seven times to a distance 2 meters each side of the center line, terminating the movement so as to take the track to the left hand at C.. 30

VIII

At E—Column left.
 At X—Halt. Back 3 steps, move forward 6 steps, back 6 steps.
 Move forward at the collected trot.
 (All these movements are made without allowing the horse to come to the halt) 20

IX

At B—Take the track to the left hand.
 From M to H—Executive the 'passage'. (1).
 At H—Change hands at the extended trot.
 At F—Execute the 'passage'. (1).
 At A—Execute the 'piaffer' from 10 to 20 steps (2).
 From A to E—Execute the 'passage' (1)..... 5(1)
 At E—Execute the 'piaffer' from 10 to 20 steps (2)..... 5(2)
 From E to H—Collected trot..... 5

X

At H—Free walk on the right hand as far as B..... 15
 At B—Column right, collecting horse.

At X—Collecting walk.....	15
At E—Track to the left hand.....	
At K—Half turn (3 meters radius) two tracking on the diagonal.....	10
At E—Column right.....	

XI

At X—Right gallop depart, horse at the collecting gallop.....	5
At A—Column right.....	
At G—Half circle to the right (Demi-Pirouette).....	5
At X—Change leads.....	
At D—Half circle to the left (Demi-Pirouette).....	5
At X—Change leads.....	

XII

At G—Halt, back 6 steps.....	
Left gallop depart, horse at collected gallop.....	5
At E—Collected trot.....	
At A—Collected gallop.....	

XIII

From F, X to M—Counterchange of hands in two tracking, halting with horse immobile at X.....	10
At C—Change leads.....	

XIV

From H to K—Extended gallop (1).....	
At K—Collected gallop (2).....	5

XV

At A—Serpentine, five loops at the true gallop, changing leads at the middle line of hall; five loops at the false gallop, changing leads at the middle line of the hall. Diameter of loops 8 meters. Terminate the movement so as to take track to the right hand.....	20
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XVI

At M—Extended gallop (1).....	
At F—Collected gallop (2).....	5(2)

XVII

At A—Column right. Counterchange of hand two tracking to each side of middle line of hall, changing leads at each change of direction: the first and last two track to be 3 strides, the five others to be 6 strides.....	30
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XVIII

At C—Take the track to the left hand.....	
From H to K—Extended gallop (1).....	5(1)
At K—Collected gallop.....	

XIX

At A—Column left.....	
Between D and X—Circle (pirouette) to the left.....	5
At X—Change leads.....	
Between X and G—Circle (pirouette) to the right.....	5
At C—Change leads—Track to the left.....	

XX

From H to K—Four changes of lead at each 4 strides.....	5
From F to M—Six changes of lead at each 3 strides.....	5
From H to F—Nine changes of lead at each 2 strides.....	10
From K to M—Fifteen changes of lead at each stride.....	20

XXI

From M to K—Normal gallop on left hand.....	
At K—Free walk.....	

XXII

At A—Column left.....	
At X—Halt facing the Jury. Salute.....	5
Position, seat, control of horse.....	10

General Rules for Schooling

I. GENERAL PRINCIPLES

1. The purpose of schooling is to make the horse agreeable to ride, that is to say, alert and submissive.

These qualities are manifested in the freedom of his gaits, the harmony, lightness and ease of movement, and the straight position maintained at all times when mounted.

2. The horse thus gives the impression of controlling himself. Confident and attentive, he yields himself freely to the demands of his rider. His walk is regular, free and extended. His trot is natural, free and rhythmical. His gallop is smooth, light and cadenced.

3. His haunches are never inert and hard to move. They respond to the rider's demands, and animate all the other parts of the horse.

Due to his impulsion, and the elasticity of his points, he obeys the various demands of the aids willingly, calmly and precisely.



Abdullah in Training at The Swedish Cavalry School
Instruction in The Piaffe.

II. SPECIAL RULES

1. At the halt and throughout his work, the horse should be in hand.

This is the case when, the hocks being in place under the mass, the neck more or less supported according to the rapidity of the gait, the head properly set and the mouth supple, he offers no resistance to his rider.

2. At the halt the horse, standing squarely on his four legs and motionless, should be ready to move forward at the slightest pressure of the rider's legs.

3. The free walk is a free striding and relaxed walk. The rider allows the horse great liberty of head and neck without losing contact with his mouth. The horse moves freely and calmly with an equal and deliberate stride.

4. At the collected walk, the horse's neck is raised and curved, with his head approaching the vertical and his hind quarters engaged. His gait is slower but is quicker and higher.

5. The ordinary, natural trot is an intermediate gait between the extended and the collected trot. The horse advances freely and straight, in a balanced and relaxed attitude, stretching the reins lightly. The strides should be as nearly equal as possible with the hind feet following exactly the front feet.

6. At the extended trot, the horse extends his stride. The neck stretches out, and the shoulders, driven energetically by the haunches, gain ground to the front without any appreciable increase in elevation.

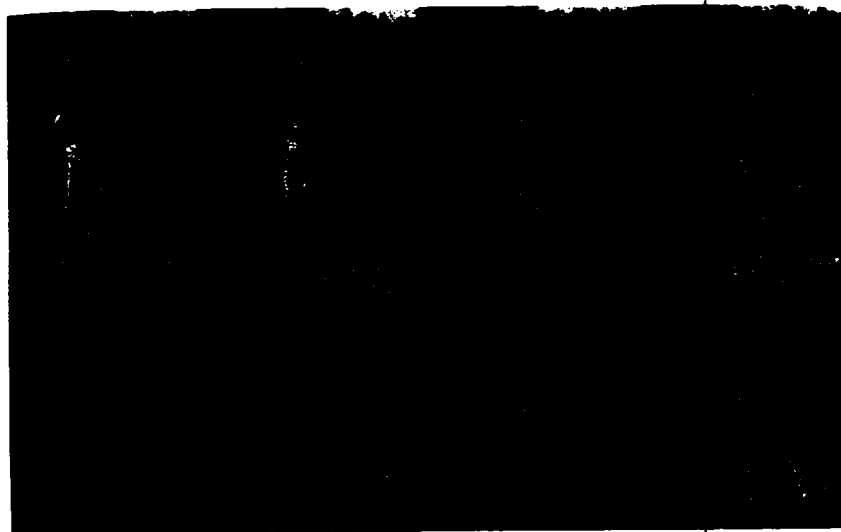
7. At the collected trot, the neck, in raising, allows the shoulders greater liberty of action in all directions; the hocks reaching forward under the mass, maintain the energy of impulsion in spite of a reduced speed. The horse takes shorter steps, but he is more mobile and lighter.

At the ordinary and the extended trot the rider posts, while at the collected trot he sits down in the saddle.

8. The ordinary gallop is an intermediate gait between the extended and the collected gallop. The horse, in his natural equilibrium, advances perfectly straight from head to tail.

9. At the extended gallop, the neck is extended, the end of the nose moves more or less forward and the horse increases the length of his strides without any loss of calmness or lightness.

10. At the collected gallop, the horse's shoulders, well disengaged, are free and mobile; the haunches are active and alive; the instability of the horse increases without however any loss of impulsion.



Abdullah at the Two Track. Captain Sandstrom Up

This will appear as a cut in the new Swedish Regulations to be published in 1930.

At all gaits, a slight mobility of the jaw, without nervousness, is a guarantee of the horse's submission and of the harmonious distribution of his forces.

11. Changes of gait and of speed should always be short, rapid and yet smoothly executed. The original cadence is maintained up to the moment that the horse takes up the new gait—or halts.

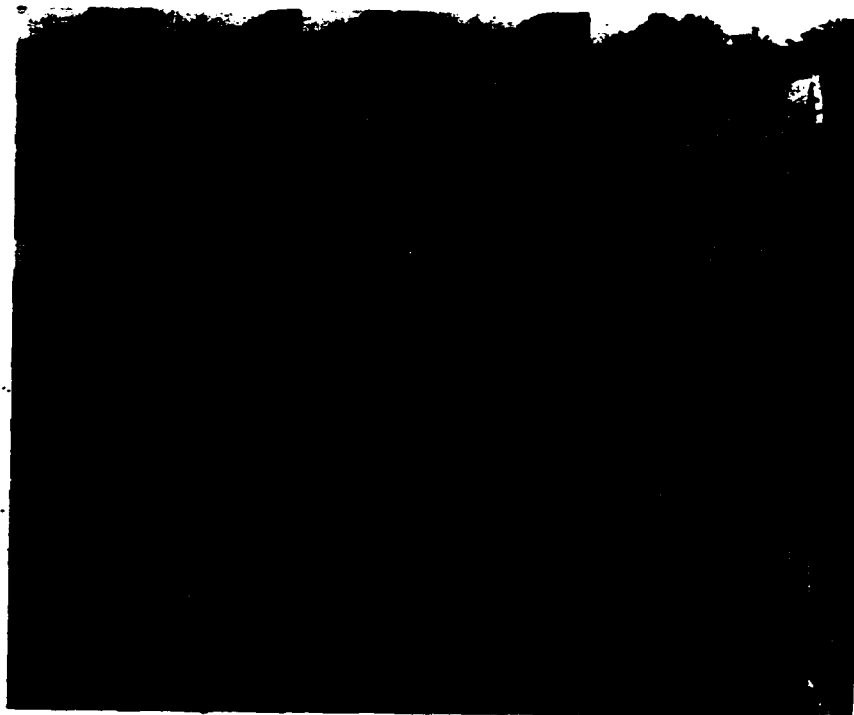
12. In moving forward from backing, the horse should not be brought first to the halt.

13. In changes of direction, the horse may, according to the various Schools of Equitation, remain straight or inclined slightly on the arc of the circle he is describing.

14. In the work on two tracks, the head, neck and shoulders should always precede the haunches. There should be no slackening in the speed. A very slight turning of the head, allowing the horse to see in the direction in which he is moving, increases his grace and assists in freeing the outside shoulder.

In the short counterchanges of hand (zig-zag), the attention of the judges will be directed to the attitude of the horse, the manner in which he crosses his legs, and the precision, suppleness and regularity of his movements. In addition, count is kept of the number of strides executed when at the gallop.

15. In the half turns on the haunches at the walk and in the half



Abdullah at the Change of Lead

This will appear as a cut in the new Swedish Regulations to be published in 1930.

circles (demi-Pirouettes) at the gallop, the shoulders describe a semi-circle around the haunches. They start their movement, without halting, at the moment the hind legs cease to advance, and move forward, without halting, as soon as the movement terminates.

16. At the gallop, the horse changes lead "in the air" in a single stride while advancing. This change of lead is said to take place "in the air" when it is executed during the brief period of suspension which follows each stride at the gallop. The horse should remain straight, calm and light throughout this movement.

17. In order to execute the Serpentine, the rider starts his first loop by gradually leaving the short side. He terminates his last loop by gradually approaching the opposite short side.

18. The Passage is a shortened, very highly collected and cadenced trot, characterized by the very marked flexion of the knees and hocks, and by the gracious elasticity of the movements. Each diagonal, closely united, rises and falls alternately in the same cadence, gaining but little ground to the front and prolonging the period of support.

In principle, the toe of the forefoot and the toe of the hindfoot of the diagonal which is off the ground should rise respectively to a point as high as the middle of the cannon of the other foreleg, and slightly above the fetlock of the other hind leg, of the diagonal which is supporting the horse.

The same Passage can not be demanded of all horses. Some, according to their conformation and temperament, and also to the energy of their impulsion, execute the movement with a wider and rounder action, while others execute it with a quicker and shorter action—but unequal action of the haunches is considered a fault.

19. The Piaffer is the Passage in place, with slightly higher action, of the members of the diagonal off the ground, than in the Passage.

20. The Pirouette (circle) at the gallop is a circle made on the haunches, with a radius equal to the length of the horse. The shoulders describe a circle about the haunches, which remain at the center of the circle and serve as the pivot. The hind legs mark the gallop in place, rising and returning to the ground almost in place, while pivoting in order to follow the movement of the shoulders.

The horse should turn smoothly while maintaining the same cadence and the same impulsion.

The horse should not support himself continuously on one of the hind legs, for in such a case he would cease to be at the gallop.

21. All movements should be executed without any apparent action on the part of the rider. The latter should be seated squarely in the saddle with his loins and hips supple, his thighs and legs fixed, and with the upper part of his body easy, free and erect.

With the Horse Marines in Nicaragua

CAPTAIN MAURICE G. HOLMES, U. S. Marines

"NOW MAURICE, I'll have the *muleros* make up your cargoes and sling all the packs in my corral. When the train is entirely ready, we'll herd it into the street—then it's yours."

Such was the plan of Captain Kieren, commanding the Marine Detachment, Esteli, Nicaragua, for my initial start after bandits in the hills of that country with the 52d Company, 11th Regiment, partly on mules, partly afoot, on January 30, 1928. I'll never forget that start and I believe the officers with me then, Captain George Hall and Lieutenants Skidmore and Zuber, will remember it a long time also.

Grief in the Form of Mules

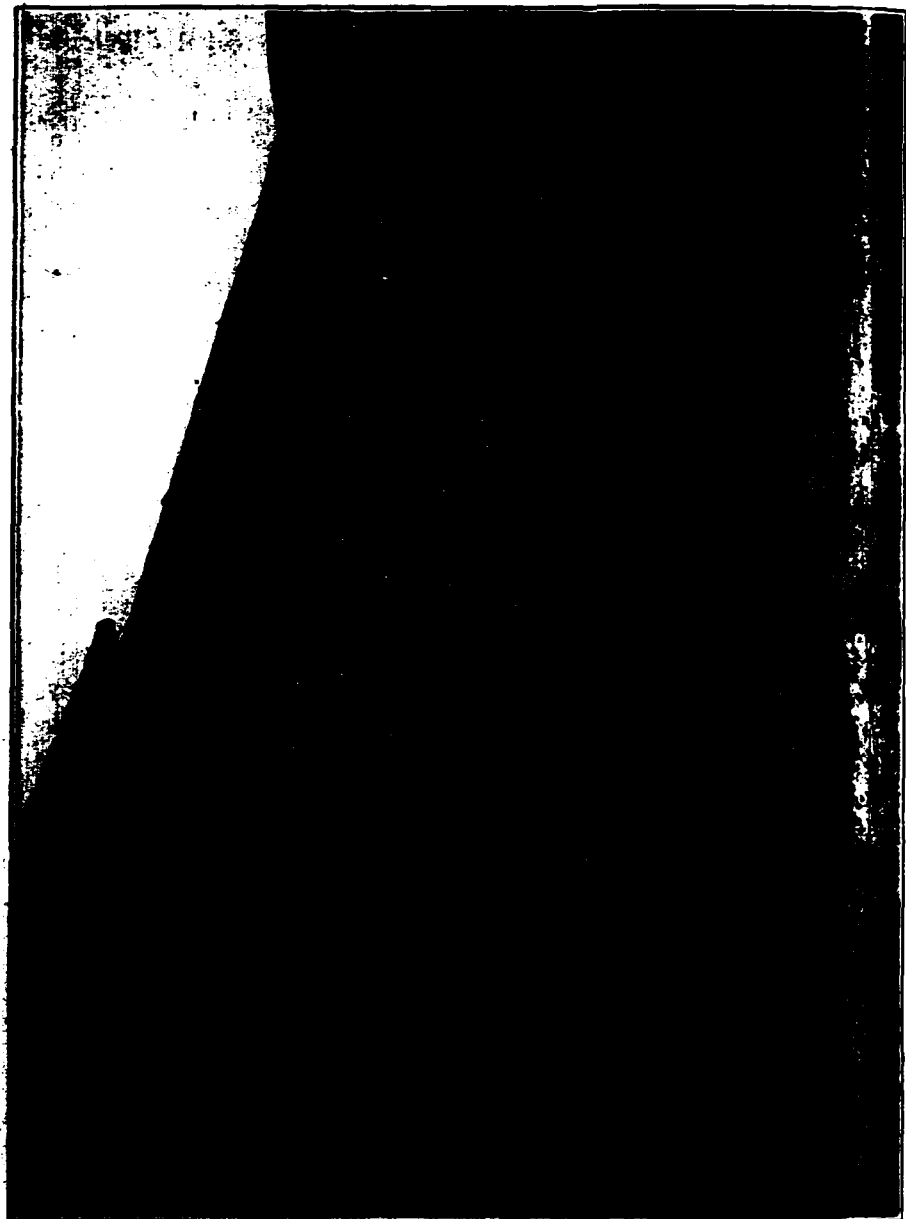
Most of those pack mules were *muy mansa* according to the native agents who had sold them to us during the preceding three days. "*Mansa como un tigre*," I heard an old *jefe mulero* named Santiago mutter while herding them up for me and Kieren to inspect.

We had orders to clear Esteli in the forenoon of that date and I know we did because the corral gates were opened at 11:30 A. M. There were six mules who cleared going east who are yet AWOL as far as I know. Some of them upon leaving Kieren's corral simply "took off;" some rolled; the majority scraped packs off against posts, adobe walls, and one another.

Our point had cleared the river a few hundred yards to the west; the main body was in place; and a squad and a half of Marines were spread where we intended the pack train to go. The rear point went into action at once trying to herd mules back where mules didn't want to be. Lots of men believe to this day, however, that soon we would have straightened out fine except for the air service. Two of those replacements for the old DH planes zoomed just over our heads as the pack train was approaching the river; by the time we had recovered enough mules to supply a good share of the ten days' rations we had planned for four officers, ninety-three enlisted, and seventeen *muleros* and guides, it was almost 4:00 P. M. I can see yet one man, after sprinting downstream to head off his roll, caught at a bend in a tangle of thorn growth watching his clothes float away on the brook's bosom.

We had covered all of five miles from Esteli by night-fall, when

Marine Patrol with Pack Train Herding an Extended Patrol into the Nicaraguan Hills



we bivouacked in a stone-walled *potrero* full of lush grass with a stream down one side. All were most gratified to find forty-four mules on hand out of about sixty packed for us and fatuously believed these wouldn't make very much trouble since the ones who got away must have been the worst of the lot. So, in spite of the day's grief, the men after getting their fourths and fifths in the chow line pushed off to their bunks in the grass, allowing that we'd get off to a good start the next day. Well, we had reveille at 4:00 but didn't clear until 10:04 A. M.

And from sleeping in the grass in Nicaragua, may the good Lord deliver us. I had always picked as much of a grass mattress for my shake down as might be available even in the Dominican Republic, but that country lacked one of Nicaragua's curses, the wood tick. During that first night I was tired enough to have slept on a volcano, yet awoke many times feeling crawling things and faint prickings. When morning came, I pulled thirty-six ticks of various sizes from their burrows which ran from my eyelids to my toes. To pull them off is a boner, as I judged from a *mozo's* cynical remark on the ignorance of Marines who jerked out the tick instead of raising his rear with the tip of a finger nail, then gradually withdrawing him by repeated light scratchings. I'll grant that we were unlearned in the fine art of removing ticks at the start, but we learned to pierce the tenacious tick between the shoulder blades with a fine pointed needle and leave him to drop off at sundown when he finally died and gave up the grip. Of course, the error is to pull on him, for he merely concedes you the body while his proboscis hangs on to fester, be scratched, and give you a fine tropical ulcer, proof against iodine, mercurochrome, and family.

So, there we were on the way to Terreno Grande, alleged bandit stronghold marked on the map in red, some sixty miles away. My plans for fully mounting the company in Esteli had been abruptly checked by military necessity. The 52d was a company of recruits who came almost entirely from the Southwest and the Pacific Coast, a rangy set of men who included a number of ex-ranchers and farmers. Thirty-two of the entire company had claimed some acquaintanceship with riding animals and had volunteered to break and ride the mules purchased during the three days before our departure from Esteli.

The mule market was poor, due to previous revolutionary activities, and rendered the accumulation of a mount difficult. I rejected many mules offered showing ten square inches or more of white hair on the back. I wanted particularly to begin with the soundest founda-



—Photo by Sgt. Maj. C. B. Proctor

Captain Maurice G. Holmes (left front), Commanding
52d Company, Mounted Marines

tion possible, even at the risk of accepting some under-age and wild applicants. We had too often seen in Santo Domingo an island of scar tissue marked by those white hairs break loose from its borders of live skin. Since any animal a native has used very long is bound to have suffered from sore back, it follows that I gathered quite an unused lot.

Somehow those men rode the wild brutes—little? they averaged about 12.2 in height and less than 400 pounds weight. Even so, the riding animals furnished only a small part of the grief in general, for the pack train remained our heaviest drag. The end of our second day out found us about eighteen miles to the north and I wonder how we got that far.

Difficulties of Marching in Bandit Country

"*Alto, Alto. Una carga discompuesta,*" came up from the rear every two hundred yards, it seemed to me, leaving nothing to do but halt until they repacked the mule. Previous experience in that country indicated that small units of a column could not drift very far in safety, so it had become the practice to regulate on the rear-most man. More was involved than merely using security measures for specific danger spots; the problem was to clear with the tail of the column a likely ambush position about every hundred yards of the way. I would have enjoyed detailing an escort to that pack train and letting it catch up at the bivouac if I could have squared the step with my conscience. But with the exception of a few non-coms, all were recruits who had to be trained as we went, while neither maps

nor guides were available to lead a detached unit to the site picked for the night's halt. In fact, no one has yet found such procedure expedient while operating in bandit areas down there, especially when numbers of bandits reported run from three or five to one against you. Later we did divide into many small groups to beat certain areas but we had much more information than could be gathered in the early days. It never became possible to march steadily with patrols out, whatever the size of the column, for the trails and the bush made it physically impossible. Therefore, the requirements were to provide security although restricted to the dispositions of the main column; to get somewhere keeping under close control a mixture of mule, foot, and pack train; and, withal, continually to form new estimates, decisions, and appropriate orders for an endless chain of unfavorable situations.

Characteristics of Bandit Warfare

On the transport en route to Corinto, General Dunlap, then our Colonel, had given us the benefit of his experience in practically all the numerous expeditions of the Marine Corps from the Spanish-American War onward and also that of the officers who had been afield in Nicaragua in 1927. All proved invaluable in the field, especially that principle of the leader keeping his plans corrected to the instant and orders to execute those plans so committed to memory that he would give them automatically.

Many bandit attacks had first struck the point, many were an enfilade of the main body and some were initiated against the rear point. I am sure, however, that their plans habitually embody letting the security unit penetrate their position before they strike. The natives, willingly or otherwise, provide the bandits minute information of our strength and movements and tell us nothing of the bandits. To give us useful information means that the native has to remove to safety of one of our garrisons or have his house burned and his throat cut sooner or later. Thus, we could hardly ever get a fight on our terms and perforce had to fight the bandit on his.

Nature, moreover, has fitted the bandit to live off his country whereas that means intense hardship for the American, who requires at least the greater part of the ration to which he is accustomed and some changes of clothes. This requires pack trains of considerable size for all but the most brief patrol periods and naturally hampers the movements to some degree.

Delayed by Crude Equipment and Green Animals

Constantly delayed by our raw train, we took four days to Terreno Grande where two days were normally required. While the riding mules easily kept ahead by bounds, they also contributed to delays as they were most susceptible to shoulder lameness and cincha galls. Bunches welled up in their grass flesh like self-rising bread. Due, I suppose, to their lifelong grass diet, their bodies were cones with the points between their shoulders. Although we had a small cincha, hair, pony, for which Gunnery Sergeant Brockmeier and I had worked up the design in 1919, we couldn't keep it off those little runts' elbows. The natives down there place their cinchas about half way back to the flank and use a crupper also as a rule. But we had trouble despite both breast strap and crupper. These difficulties applied to the horses I acquired later although these had enough wither to prevent the shoulder damage the mules suffered.*

As for that stern anchor of ours, the pack train, I thought I was prepared for the crudity of native aparejos and pack methods but the actual thing was astounding. Their aparejo consists of two half-ellipse yokes held together on either side by two or three wooden slats which are set to bear somewhere on the beast's rib arch. It is generally constructed with a machete and a nail or two although some superior types are bound all around with raw hide. It is often hard to tell which end goes in front unless the rope crupper happens to be attached for there isn't always extra flare to the rear yoke of the thing. In saddling, the *mulero* piles old coffee sacks and pads of banana leaves several inches deep on the animal's back, then leaves it up to the load to embed the aparejo into some sort of working position on top of the mess. The entire mass is secured to the mule by a single grass cincha, since the pack proper is invariably fixed to the aparejo alone. It is needless to add that this cincha, holding by itself a load carried inches above the animal's back, works like the bootblack's shining rag and may stop cutting when it reaches bone.

Naturally, we couldn't stand this sort of thing very long. Our first departure rose from the suggestion of our 1st Class Cook, Private Lund, whose father had packed ore from some mine down in Arizona using bags which he hooked to crosstree saddles. I gave Lund a

*There is quite a problem yet to devise a saddle or to alter the present McClellan type to get a seat long enough for the average American soldier combined with panels short enough properly to fit those little beasts' backs. I had the side bars of an 11-inch McClellan saddle shortened an inch in front and three-fourths of an inch behind and attempted to fair the curved parts to correspond with the original mold, but the saddle rocked excessively in use. The arrival of a leave period and a change of duty thereafter checked my further experiments, but I believe it's possible to get worthwhile results along that line.—AUTHOR.



Home-Made Pack Saddle Used by Marine Pack Trains

hide of fair leather and twenty coffee sacks, whereupon we got the start to the scheme which later became almost general. That is, we finally devised an adaptation of the Moore cross-tree saddle, using breast strap, breeching, and two cinchas. For this, with the help of Gunnery Sergeants Williams and Nowack, I worked up a canvas pannier reinforced with leather. Each pannier of a pair was caught to the saddle by two U-shaped metal beackets which were dropped over the prongs of the tree. On the outside lip of each pannier we placed a metal ring strap through which we reeved a single line for setting the load. Then with a canvas cargo cincha carrying by either ring a short scope of line, we worked a modified form of single-diamond hitch which any recruit could sling after one or two demonstrations. That scheme lacked a lot, yet it was very light and secure, we could get the complete equipment made cheaply in Nicaragua and, above all, it worked in the hands of men who had no previous knowledge of packing.

Terrain of the Bandit Country

It is certain that few lands can present the soldier with the contrarieties he must face in the northern parts of Nicaragua. There are two forms of terrain, up and down; two seasons of the year, rainy and dry; two sorts of natives, apathetic and bandit. The native has two items of diet, tortillas and frijoles; the riding animal, corn and

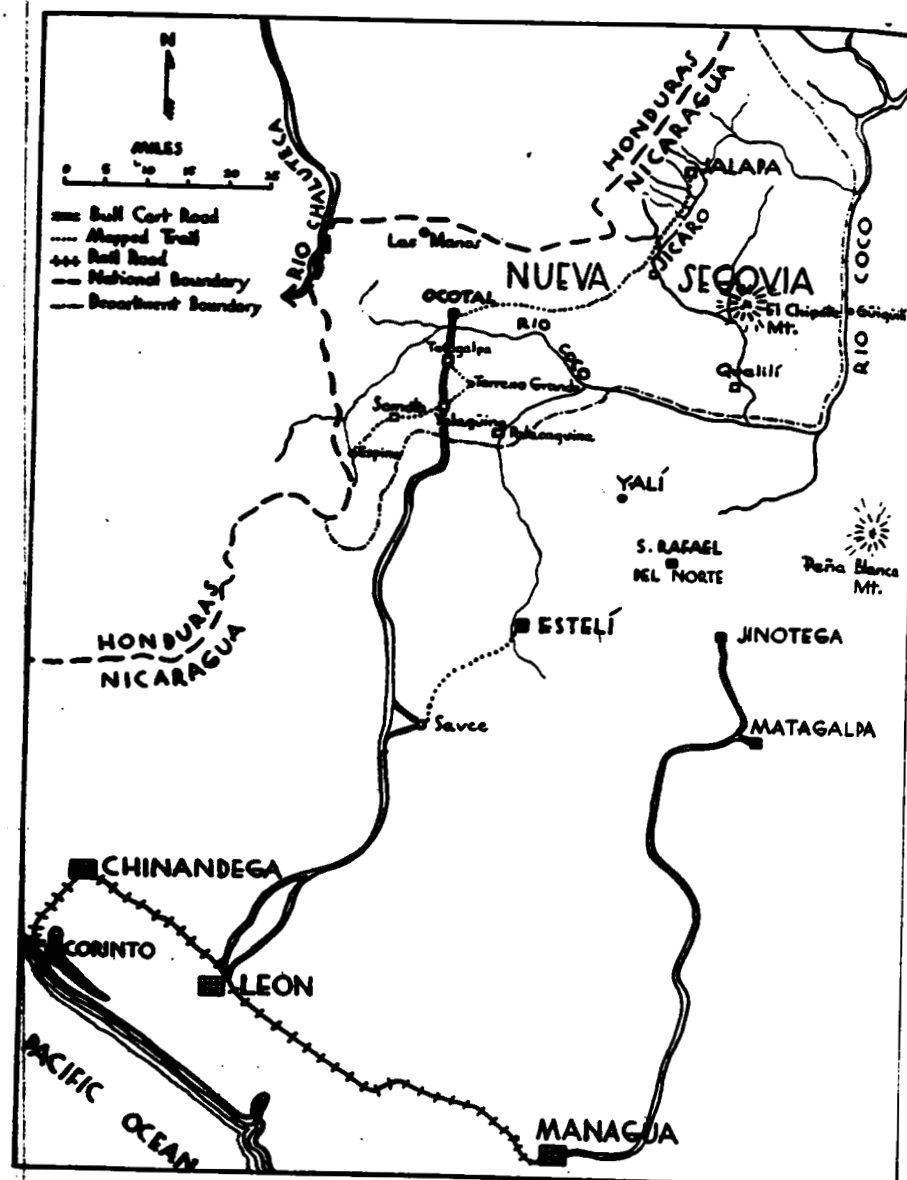
grass, and in April, May, and June, the grass is sparse or entirely gone. The thoroughfares are the *camino real* and the *picada*. The *camino real* may have the bush cleared as far as fifteen feet on either side in places, while the *picada* will probably show only enough machete slashings to indicate the course it follows. There is an occasional stretch of *caretera* or bull cart road but these end long before the soldier reaches bandit territory. Moreover, mud will lie hock deep between rocks near the hill tops in the dry season; there will be miles of deep forest with no grass; pine and bamboo will be found growing alongside each other where the stream lines have long been dry and the undergrowth burned off by the natives to encourage a new grass crop.

"The region of La Bufona (Nueva Segovia) is characterized by knife-like ridges separated by abysmal gorges," wrote 1st Lieut. Everett H. Clark, U. S. Marines, on his sketch of that area which Sandino had boasted he'd make impregnable. It is La Septentrion, the fabled northland, to the lyrically-bent Nicaraguan; remotely the scene of incursions by Aztecs from the south, Mayas from the north: Sir Henry Morgan with his buccaneers up the Coco River from the Caribbean; and, in the late 50's William Walker, the American filibuster from Managua the seat of his government. It stretches along practically all the western third of the Honduranian frontier and, with the Honduranian land adjacent to it, embraces the only part of the common border from the Pacific to the Atlantic which bears any appreciable evidence of civilization.

Its capital, Ocotal, well over in its western and more accessible portion, can be reached from Leon, largest and nearest city on the lone railroad which parallels the Pacific Coast, by a bull cart road about 205 miles long. In the dry season, the best bull cart time from the railroad to Ocotal is about twelve days. Quilali, erstwhile the most important settlement in the far eastern part of Nueva Segovia, lies just a little less distant from Managua but the bull cart trail thence ends about seventy miles away. The districts south of Nueva Segovia were entered by our trucks in the dry season but there is not even a bull cart trail from their termini over the seventy or eighty miles thence to Nueva Segovia.

Planes As Liaison Agents

About the only contacts to break otherwise complete isolation from the world without on the trail to Terreno Grande were connections with the patrols of two planes each which came over us almost daily. Stark necessity helped us become dexterous with the panel



Sketch of Western Nicaragua, Showing Bandit Territory in Which the "Horse Marines" Operated

code and the pick-up for we could not but feel that those planes represented the vital link in the general scheme and that we could not afford to increase the difficulties under which they had always to labor. As liaison agents, their value cannot be exaggerated. My outfit missed connection with Major Reno's detachment which we were to meet in Terreno Grande whereupon the planes, knowing where each was, gave both new courses for meeting in Totogalpa, a few miles northwest of Terreno Grande.

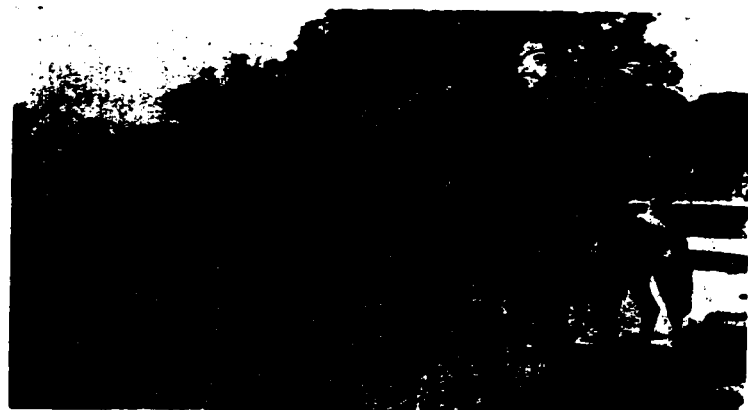
It was decided there that night that Sidmore would run into Ocotal to get more rations for that hungry gang of ours, while Major Reno and I with my mounted element and about the same numbers in foot patrols would cruise down through Yalagüina, then beat the Terreno Grande section afresh. There is a bull cart trail from Totogalpa to Yalagüina on which, in column of twos, we trotted the greater part of the way.

Information of the Enemy

Within an hour after our arrival in Yalagüina, two planes came dropping messages and a bunch of new orders. Sandino was known definitely to have evacuated El Chipote and to be on his way south toward the line, Yali—San Rafael del Norte—Jinotega. I was to take all of the 52nd Company I could immediately lay hands upon; beat it to Yali; and there check Sandino's retreat to the north. Other companies then entering the Jinotega—San Rafael area were to converge on the boy if possible and tag him before he could run back to his base. Two companies were to join me in Yali but they never got there. Major Reno was to return to Totogalpa for further orders while Hall and Skidmore would follow me to Yali without delay.

I got to Yali with thirty-two mule and eight foot in a trifle under forty-eight hours elapsed time, arriving on Monday afternoon, February 6th. There were three native families in the village which normally held thirty from whom I learned that friend Sandino had departed thence the preceding Thursday night, taking with him all the loot he could pack including all the whiskey and beer stocks. We could tell by this that we had to deal with a very selfish man.

Our planes had bombed and strafed El Chipote most thoroughly about the middle of January whereupon Sandino eased off into the thicker country east of that place, then corralled all his available thieves for a looting and recruiting expedition into the rich coffee sections of Jinotega and Matagalpa provinces. Native accounts of his force quite naturally varied from 200 to 800 well-armed and well-equipped men with lots of machine guns and anti-aircraft artillery, for Sandino rarely told his lies twice alike. My exact informa-



—Photo by Sgt. Maj. C. B. Proctor
**Captain Holmes and His Horse Marines After an
 Extended Tour of Patrol Duty**

tion in Yali gave his personal force as 150, intrenching a position on the Volcan de San Rafael some six miles to the southeast, while two of his "Generals," Sanchez and Galeano, were about the same distance off to the northeast with 125 more.

These two groups were to attack me simultaneously between midnight and dawn as they knew all about my approach and arrival there and desired to wipe out such small units of Marines for morale and propaganda purposes. Needless to say, I passed a sleepless night on the heels of such logical information. Lieutenant Zuber, Gunnery Sergeant Cox and I arranged ourselves a watch list but all stayed awake anyway. I got six of my muleros to go out on watch along the three most critical trails supposedly about a half mile from the edge of the town. I don't know how far out they went for there wasn't much point in adding strain upon those recruit sentries of mine by returning to the lines during the night but I'm convinced that my Indian scouts kept awake from the drawn faces they brought into camp well after broad daylight the following day. I set four squads to enfilade the main approaches to the village with the remainder in reserve in a thick-walled adobe house which also abutted a well protected corral for the animals. There was not a shot fired that night.

About 5:00 P. M., the second day, Hall and Skidmore arrived with the rest of the 52d Company, the most welcome arrivals I've ever known. The planes had visited us twice that day, giving the latest information of the bandits and our own troops, and lastly dropped orders which returned Hall and Skidmore to Esteli with the dis-

mounted men to carry on with mounting them, while I took the mule element to Jinotega, about thirty miles to the south.

Sandino had moved ahead of our information, pausing only to snatch morsels of loot and pass out his catchy bits of propaganda. A native named Octavio, whose house in the Chipote area was Sandino's headquarters for several months of 1928, told me later that Sandino upon entering the plaza of San Rafael in that jaunt sang out to the dog-fight gathering, "*Cabrones, Chingajo! Tengo en la mano el triunfo.*" Well, the patriots reckoned he really had triumphed since he was right there telling them so and multitudes decided they would get on his band wagon. It looked better yet when he began commandeering army supplies from some of the juicy foreign-owned coffee plantations near Matagalpa, so they marched in the ranks of the army with stalwart devotion and delirious morale. When the column swung north, however, and whispers from the general staff indicated a return to the fastnesses of Peña Blanca and El Chipote, the increment of patriots decided that they could serve their country better at home.

Ordered to Assemble With Battalion

Now all our regiment was coming into the hills as fast as available means would permit. When I got to Jinotega on February 9th, the 1st Battalion was being assembled in Matagalpa. I got orders there to mount forty-eight more men from the troops in Jinotega and report with them to the 1st Battalion. Native saddle equipment was sent up from Matagalpa, mules had already been purchased, so all I had to do was pick the men, mount up and march. Between 5:00 A. M. and 10:30 A. M. of D day we got the remounts bridled, saddled, and held in column of twos in a street alongside our *cuartel*. Flushed with this success, I proudly gave the order for mounting in unison—and spent an hour and a half by the clock thereafter attempting to mount at will.

Shortly before we finally bolted out of the town, one poor private came up with the usual preliminaries and said: "Captain, Sir, I'd like to volunteer to walk to Matagalpa." I urged upon him that it is cheaper to ride than to walk with no effect.

"That mule never will cooperate with me, Sir; he resents my attitude. Every time I come near him, he wants to fight. He draws in a big breath, then faces around and blows it right at me."

At 9:15 P. M. we arrived in Matagalpa some twenty-one miles away. I attribute our speed to the lucky find of eighty-odd sets of rowel spurs in Noguera Hermanos' store in Jinotega. The regulation spur never bluffed those little mules beyond the first hour on the

trail; as a matter of fact, the rowelled spur meant nothing to any one of them after he decided he had marched enough that day. On this type mule, we tried every artifice we had ever heard about, like biting or twisting an ear or pouring water into it; twisting the tail; passing the bight of a line under the tail and trying to lead by the two ends rove through the rings of the bit; placing the glowing end of a cigarette under the tail—I had already been told that last had no effect. Closing the nostrils for a few minutes gave only a temporary spurt. The really exasperating feature was that those little devils would pull those unauthorized halts while yet with coats dry and ears up and when turned loose would head for the nearest patch of promising grass with the avidity of recruits racing to the head of the chow line.

We got a new slant on this balkiness when we were joined two months later by Gunnery Sergeant Williams in whose memory the new stables at Quantico are to be named. He believed that those mules balked from fatigue, pain of the load carried, or internal disorders instead of mere wilfulness or cussedness and urged that we let the quitters rest, cool them off, or reduce their loads. Once, on an easy first day's march for Ocotal to Las Manos, he had tried all these means on a pack mule who had developed really original ways of sliding or dropping off the trail into such gullies as appeared to fit his load and conformation. After one unusually long delay I wormed my way back through the column to find about eight men on the sides of a little gully holding a mule some three feet off the ground by halter, tail and halter shanks snapped into the rings of the cinchas while Williams, with one hand squeezing the mule's nostrils, was belaboring him on the side of his neck with an artillery whip. When the beast finally scrambled back to the trail, I asked Williams if he hadn't departed rather radically from his teachings.

"Well, Captain," he said, "I've given that mule every break in the world but when we lifted him way up in the air there and he wouldn't put his feet down, it was just too much."

In the morning following our arrival in Matagalpa, we fared north with the 1st Battalion of our regiment, establishing bases for a few days' occupancy as we went and pushing combat patrols ten or twenty miles distance therefrom in all directions. The countryside had to be cleared of bandits to provide safety for the vital coffee industry in those parts, while the battalion must also push on to strike their main body. The conditions of hillsides, shade, and moisture which make that section so appropriate for the superb species of coffee Nicaragua furnishes also provide, I think, the most distasteful terrain through which troops may have to march; black, waxy mud;

endless succession of climbs and descents with always another blue-black hill high against the sky line; steamy middays and biting damp at night when goose flesh from the chill and burning itch from tick bites run relays through your sleep.

Our Battalion Commander, Major Rockey, and his staff had their hands full indeed marching, maneuvering, and supplying that battalion which now included two rifle companies, mounted. The combination of mounted and dismounted elements strikes me as most appropriate to such conditions as those for there is a husky patrol force of creditable mobility to search the innumerable by-ways, while splendid support for the scheme is provided by strong dismounted companies along the line of advance. There was also a close plane cooperation with the column. These performed, it seems to me, almost every mission which could be given air service. They had discovered Sandino's presence in San Rafael del Norte even to the detail of the armed sentinel in the doorway of the house he occupied there. They refrained from attacking Sandino there because of probable injury to the non-combatant population of the town, a consideration for the bandits' fellow citizens which we have yet to hear of the bandits showing.

The natives soon began bringing information of the bandits in voluminous recitals. These accounts invariably commenced with the formula, "a boy coming from over there in search of a cow which had gone astray was told by a little old man that a large enough group of bandits with plenty of rifles and ammunition and camped the night before last on the hill near the house of his *primo hermano*." One zealous patriot came into our base northeast of Jinotega one day informing us that he could lead us to a man who would guide us to the exact spot where three hundred or more well-armed bandits were even yet in camp, "*Alli no más*;" not exactly in our back yard but still, not too far away either. Now it was strange that so many bandits had come in so close to a big outfit like ours, yet in that country the impossible had to be expected. So two officers and a strong patrol went out on foot that night to investigate. The informer led them to the little old man who had told the boy who had come from over there looking for the stray cow about those bandits and the little old man forthwith led them to the bandit camp. To the eyes of the patrol leader, the virgin bush appeared undisturbed at that camp site, however, to which status of the terrain the little old man finally agreed; in fact, he admitted that there were no bandits then present although he maintained they had been there, well-armed and in number, no less than three hundred. Well, how did he know they had been there? Had he seen them?

No, he hadn't seen them but he knew they were there by the barking of his dogs.

How did he know there were three hundred of them?

His dogs would not have barked so furiously at any less number.

How did he know they were well-armed?

Because no number so large would assemble in any camp unless they were well-armed; no Señor.

Well how did he know they were bandits anyway?

Why if they hadn't been bandits, they wouldn't have been there at all!

But a great deal, perhaps the largest part, of our information was quite exact. We found moreover, that the natives had excellent memories to support their willing tongues for they could give the details of a bandit movement from three days to three months after it had happened. Many made forced trips of great length to deliver their information but never started earlier than about three days after the bandits had departed for distant points. In this way, the native demonstrated his cleverness, for he acquired merit with the rather difficult Americanos by giving them useful data while at the same time, the bandits would not begrudge his keeping their history before the public.

Return to Base at Esteli

I returned to Esteli with those of my own company, exactly a month after my departure therefrom, to gather the remainder of the necessary equipment for mounting all my personnel and catch up the other loose ends of that job. Hall and the other part of the outfit working out of Esteli had got themselves a nice brush with an itinerant bandit group in the meantime, bumping off several bandits and capturing a quantity of arms and ammunition. But the rest of us had not heard one shot fired in anger.

I used a two-week break after my arrival in Esteli to purchase fifty-five head of horses for the troop. It had been intended to mount the entire company on horses, but fresh plans for the bandit follow-up required all our strength in the field before I could finish the job. In fact, the job was never finished and we went to the end of our part in the show with company headquarters and one platoon on horses while the other platoon rode mules.

Relative Value of Horses and Mules

Now I greatly prefer the native horse to the native mule for both riding and packing, admitting freely that I am hopelessly in the minority as far as Marine opinions on their relative merits for Nica-



—Photo by Sgt. Maj. C. B. Proctor

Marine Pack Train Fording the Rio Coco

raguan duty have been expressed. I have long since quit arguments on the question for it seemed like arguing religions down there. Suffice it that I was given generous allotments for horse purchases and that I found the average price of horses in the approximate ratio to mule prices of \$60.00 to \$75.00; and, as I had no competition from other Marine units, I found a fairly good market available. The native horse requires more care on the trail and more food than the native mule. He is more susceptible to founder and to vegetable poisoning than is the mule and his feet will require shoes long before the mule's. On the other hand, when he falls out on the trail, you may be assured that he has no vitality left. His gaits are relatively faster than those of the mule, while he can carry more weight with less effort than the mule. Besides, all the horses would respond instantly to calls for sudden bursts of speed while perhaps some of the mules would while others would not. Our horses averaged about 13.1 in height, the mules about 12.2, and I believe the horse was heavier than the mule beyond the proportion of height. It was easier also to fit the issue saddle to him although there was trouble enough in that respect.

Second Expedition

Captain Phipps joined me the day before our departure for the second start afield since Hall had to go into Managua for medical treatment. Phipps and I shoved off with the horses to patrol the general line San Rafael del Norte—Quilali, while Skidmore was to follow with the mule platoon to support us and run rations as required. Phipps and I got into three little bandit brushes on the way

to Quilali which didn't hurt the bandits much but did our men a world of good.

We had left Esteli on St. Patrick's day and marched out of Quilali with the entire troop in time to spend Easter in Güigüili, a district on the Coco River which fringes the southeast corner of Sandino's stamping ground in the area of El Chipote. We found ourselves taking part in a concerted drive of many detachments from the regiment upon this area. The drive pinched Sandino out of his bailiwick and started him prematurely on a long run down the Coco River to loot the mines of La Luz and El Angel in the department of Prinzapolka. Of course, Captain Edson ran him back but that is certainly another story and, I think, an epic in itself. Suffice it at this moment that Marines here used the water to supplement foot, horse, artillery, and air.

But our mission in the Chipote area was to make that part of Nicaragua untenable for the bandits. We did not make their subsistence there impossible but most assuredly we made it uncomfortable for them when finally they limped back into it. The joy of finding their caches of corn and beans, of arms, powder, dynamite, fuse, detonators, lead and mercury, machetes, clothing, jerked meat, and medicines was spiced daily with shots at their wandering patrols or foraging units. It did the heart good to note the alacrity with which the men dashed to surround a suspicious-looking shanty tucked away in the bush or chase a fugitive armed group or split off into half squads to flank a suspicious ambush position after they had seen for themselves that really there was a wily enemy to handle. They would talk about their exploits deep into the night instead of "belly-aching" because they hadn't been allowed to drink unchlorinated water when dying of thirst or to eat the queer looking mixtures they had found in native shacks.

We were well along in April when we got the recall from this effort and old man Summer had pushed home his drought with a vengeance. Corn from bandit stocks had been plentiful, but the roughage which the country should supply was burned up. Corn alone in hot weather we found a poor ration for animals. We cut banana, plaintain and bamboo leaves and green leaves from the bush for the poor beasts but had to watch the ribs grow more distinct each day in spite of all we could do. The men did their utmost, leading most of the time and carrying on the sturdier animals the spare parts of the packs of those which had weakened. Some of the horses went down on occasion a few hundred yards from the place we had picked for the night's bivouac with every sign of remaining where they lay

for good. Nearly always, by morning they would be pulling up the roots of the dead stubble near the picket line or standing alongside with heads drooping on their emaciated necks.

When this show was over, I went into Ocotal with the horses while Phipps with the mules was left between Hula Ranch and El Jicaró. Phipps, a few days later was shoved off upon call from Brigade headquarters to a devilish long hike to Jinotega, then, almost "without delay," to Casuli, a God-and-man forsaken spot some 150 miles to the northeast of Jinotega. I didn't see Phipps again until March of 1929 but heard a lot of the ground he and the Mule Platoon covered and the excellent work they did in keeping bandits out of that tremendous area.

Bandit Chasing in Ocotal District

Now in the neighborhood of Ocotal there are some irrigated patches where they grow *guate*, a corn-like grass, which they cure as we make hay, something like the *hierba de maíz* or corn grass I had used in Santo Domingo. The proprietors of these plantings asked as high as four cents the *manajo* or handful for it but it was cheap at that when the horses were starving for forage. They were given plenty of it and in a remarkably short time were ready for more field work.

We struck in the section north and northwest of Ocotal an entirely new sort of terrain—hills, yes, inevitably—but more signs of civilization and cultivation. Our work took us along the frontier of Honduras and into liaison with the "expeditionary" forces of that country along the border. Here, also, we got some action. We gathered in a respectable number of arms, a fair amount of ammunition, and several prisoners who, if not bandits, were members of the *guardia civico*, the bandits' home guard. Anyway, they were well used to bearing and handling arms, marauding, and in all respects, were worthy material for the bandit forces in general.

Our general plans long since had included preparing ambushes for our friends the bandits in return for those they set for us. Of course, we wanted to pay them in some of their coin and tried it I don't know how many times without any luck. The only hint of success I had was when I left Sergeant Evans, four privates and two native agents with their horses all inside a house in a little village called La Presa. From a hillside about a mile from that village we had seen a number of men scurrying into the brush. The entire village was deserted when we arrived although we had shown only normal march dispositions in our approach. Tito,



—Photo by Sgt. Maj. C. B. Prosser

**Mounted Marine Combat Patrol Arrives at
Ocotal, Nicaragua**

one of my agents, called my attention to a large clay caldron of boiling soap near an adobe house stating that the caldron represented at least \$10.00 in cash to the soap makers who, he thought, would return as soon as we cleared the place. I had the main body fall out aimlessly surrounding the house and under their cover eased my ambush party inside. We soon rode away with increased distances to camouflage the number left behind, planning to halt within sound of firearms beyond the village. When our ambush party rejoined us they brought four prisoners, two of them armed with revolvers, whom we identified as members of a bandit group which had based on that locality for months. This bit of luck led the men to believe that we could do more along that line but I doubt whether any of those gentlemen would have returned to the village that day or the next if their soap could have been left safely on the fire.

My point captured one of a small bandit patrol on the outskirts of La Quesera, the next village on that day's trail. After disarming him, we impressed him as guide to a spot we had heard was a good camp site. The corporal of the squad acting as point was armed with a riot gun, a weapon I had been urging as desirable to the extent of one or two for each squad, so we gave him personal charge of the prisoner. When alongside an unusually thick patch of scrub on one of the steeper hillsides, the prisoner bounded over a low stone wall, dropped about ten feet to new footing, and dived into the brush. Even so, the corporal got three shots at him before he disappeared. Well, we surrounded that acre of so of bush and beat it for an hour

without finding any more trace of the prisoner than the marks where he landed after his first bound.

Naturally, we were a bit peeved and considerably mystified by that boy's escape. A few months later, we got him anew, however, and discovered, much to the corporal's satisfaction, that he had been wounded in three places as he ran: the bottom of one foot, the thigh, and one side of his buttocks. He had run only a short way into the bush and, as soon as he thought he was screened from the trail, he lay down in a dry wash, and covered himself entirely with grass and leaves. Comparing notes with other officers who had been unable to find bandits under similar circumstances, I learned that those Indians are adept at such practices. In this case, our prisoner was also wise enough to hide himself before the blood from his wounds had leaked through his clothing.

Natives have hold me since then that Sandino himself escaped from a Marine patrol during our April drive in pretty much the same fashion. According to their story he found himself hemmed on three sides by approaching patrols whereupon he scurried into the brush with only two men. All hid under such camouflage as lay to hand after going about two hundred yards off the trail and there remained motionless until just before dawn of the following day. Jirón, erstwhile Sandino's chief of staff, stated after his capture that Sandino pulled the same stunt when, in October of that year, we ran him out of his headquarters, Chupón. I suppose either blood hounds or divining rods will be required in our equipment for such shows as this last one.

Native Ponies Show Endurance

On our next long hike, a twenty-five day affair, we struck the first onslaught of the rainy season; that is, from the last week in May to the third week in June. I was with Major Rockey again on this one and he will bear me out, I am sure, in the grief features we had to buck. Worst of all was lack of feed for our animals. Stocks of corn had disappeared almost magically although we soon realized that corn planting in its season is really a religion with those Indians. On Corpus Christi day, they invariably set stalks of growing things among the crucifixes with which they adorned their yards and at the beginning of the rains they emerged from months of hiding to plant corn and beans for the new harvest. Whatever the reasons, we found the countryside barren of corn and also the new grass little more than a laxative for our poor beasts.

With no desire to make a brief for our horses, I must say that our animal loss was about two mules for each horse, although I grant

that the horses found a great advantage when the riders dismounted to lead. The end of that hike found us again in Quilali with about sixty-five miles of trail to stagger over on the way home. I started with three canteens full of *cususa*, the native moonshine, and as many more of strong black coffee. Whenever word came up the column that one of our animals was about to pass out, I'd halt and gave him a *cususa* drench. It delighted the troop to see one little strawberry roan who had barely wobbled his way over the trails for the past three days, though carrying no load whatever, rise and trot toward the head of the column with head and tail in the air as soon as he felt the *cususa* warm his insides. Game as he was, however, we had to leave him on the trail when the medicine ran out.

To go into many details of the various patrols we made seeking contact with those bandits were of little importance, yet some specific features may show the possibilities of such little native mounts as those which proved expedient for our purposes. While they could not average 600 pounds weight, they carried in no case less than 225 pounds and in many cases the riders alone weighed over 200. There was no feed for them beyond the grass and corn we foraged as we went; the corn sometimes varied by a grain the natives call *maisillo*, something very closely similar to our sorghum seed. In one march which kept us afield thirty-one days, we actually marched twenty-three days with four night marches besides and in my last long spell afield, we actually marched thirty-nine days out of forty-five days away from home. We did not cover great distances daily, although our animals were under saddle and pack generally from 7:00 A. M. to 4:00 or 6:00 P. M. with no break at noon, men and animals alike eating only twice a day.

As practically all our marching was done at the walk, it strikes me that the little beasts labored under even greater difficulties than normally to be visualized. In all Nueva Segovia there is only one stretch of any appreciable distance where normal proportions of trot and walk may be maintained; that is, from Jalapa in the northeast through Ocotal and Somoto to Espino in the southwest, right on the Honduranian boundary. This is a stretch of about ninety miles. We have covered the trail from Ocotal to Somoto, about twenty-two miles, in a few minutes under four hours with thirty animals in the patrol; from Ocotal to Jalapa, about fifty-five miles, with sixty animals in the column in an easy day and forenoon of the second day. It was apparent on those trips, which were unusually fast for us, that the mounts and pack animals also finished in better shape than when marched over equivalent distances at the walk.



—Photo by Sgt. Maj. C. B. Proctor

Just Another River to Cross for the "Soldiers of the Sea"

Patrolling Methods in Close Country

We soon worked into simple standard practices on these patrols. When our strength was four squads or greater, one squad was detailed to each the point and the rear point, riding at twenty-five yards distance on straight bits of trail and at visibility from the man in rear on the usual sort of going. The rear man of the point regulated by visibility from the head of the main body; likewise the leading man of the rear point from the rear of the main body. We kept the main body at normal distances with the pack train in its rear and our packers spaced about equally through the train, which in the early days we handled in groups of from three to five mules tied nose to tail but herded as soon as they became reconciled to us. Each squad was armed with one Browning Automatic Rifle, one Thompson gun and one grenade discharger. On one hike, I packed a three inch mortar and twenty-four rounds of ammunition for it but, desirable as its presence was, I asked relief from it since it added quite a bit of drag and grief with the pack improvised for it at that time. I retained a Lewis gun, however, which we secured in a cache of bandit arms on El Chipote late in 1928. Each squad carried six rifle and six hand grenades though I shifted the ratio to twelve rifle to three hand later on. As all were armed with the pistol, I carried ninety rounds of rifle ammunition in the belt and the remainder of the initial allowance for all shoulder weapons in the pack train. I found it a good practice to use from two to four armed native agents ahead of the point with a few native muleros back in the pack train. These were most useful at times as scouts, guides, handy men in camp, and for foraging in the settlements along the way.

We had to go quietly at all times and always ready for the ambush since we had little means to get warning of what might be waiting for us ahead. The men soon became adept at "passing the word" accurately and almost noiselessly from one end of the column to the other, which really amazed me, since at times five squads and the pack train would cover a half mile of trail.

The greater part of the forty-five day jaunt I've mentioned was spent in the neighborhood of El Chipote where it was my great privilege to be the senior officer present of six detachments converging upon Sandino's position there. There were days when for five hour stretches one could not see a solid ray of sunlight through the growths over the trail and for one week of that march I saw my rear point only during the halt for the night. This was the most interesting part of our work in Nicaragua, however, for hardly a day passed without something to shoot at. Thanks to the assistance of two Sandinistas we captured during the first week, we avoided one of the dirtiest ambush set-ups anyone could imagine, then finally ran Sandino out of his main headquarters.

In that section, the main clew to dwelling places was the crowing of roosters. The very dogs were muzzled with a strip of bark or banana fiber tied around the mouth and behind the ears so the beast might growl or take nourishment yet remain unable to bark. Here we made no effort toward speed, which would be impossible anyway, and improved the chance to use numerous small patrols to the front and flanks while the main body, well-hidden, was spread to cover every aisle through the bush. Frankly, I like such practices very much as the security they afford robs the bush enemy of his most cherished hope of catching you in his thoroughly prepared ambush. It will mean very few miles covered in the day since when the route of the main body is only a lone *picada*, it is certain that the patrols are finding solid growth around themselves and if you don't wait until they rejoin, you'll never see them again. With several outfits working toward the same end with you, the strain on the bandits' intelligence system simply becomes greater than it can stand.

In many cases, the bandits had attempted to hide with brush or fallen timber the intersections of the *picadas* which they had slashed for intercommunication. We generally took such to indicate a worthwhile route to follow, difficult as it might prove. Generally such leads took us straight across chasms where we had to dig footing for the animals and literally lift them over ticklish places. Even so, we often had a dozen or more slip off the path to roll and slide as far as a hundred feet before a tree or the bottom of the gorge would check them. Time after time we wondered why we kept



—Photo by Sgt. Maj. C. B. Proctor

Horse Marines Return From Combat Patrol in Nueva Segovia, Nicaragua

them along when they meant heartbreaking labor unpacking, lifting them to their feet, and repacking them to have the same repeated every few miles. That was forgotten, however, when finally the ground did let the soldier mount up again. Old Williams, one morning after reporting the detachment formed for the march, said, "Captain, can't we mount just to ride down that long slope there? I'd like to be sure I got all the cobwebs out of my saddle."

Advantages of Mounted Patrols

This was by far the worst country we struck in over sixteen months in those hills and it did not prove anything against the horse over the long pull. In the main, I believe we who served there at that time were well agreed upon the expediency of making nearly all our patrols mounted. Many believe that the mounted formation is more vulnerable to ambush than is the formation dismounted but nothing in my part of the experience there indicates anything of the sort; quite the contrary, in fact.

The more difficult the trail, the closer a dismounted man must keep his eyes on the footing, so his observation of things around him is correspondingly reduced. He tires quicker than does the trooper thus sooner becomes indifferent to danger possibilities. Moreover, it is most natural for men to bunch themselves when threatened, a state impossible for mounted men because in column of troopers, as we had to go, there cannot be less than a horse's length between men. Naturally, we had to base all our plans on dismounted action and we found upon dismounting that the animals provided some very satisfactory

cover, however they might suffer. In my one real fight, we went into "action left" under fire from two machine weapons from the left front and the left rear supported by, I judged, at least sixty riflemen spread between the machine weapons, all at the mean range of 250 yards. We had six animals killed or wounded out of thirty-eight yet no man was struck at that time.

A couple of months previous to our episode, Lieut. Letcher, leading a small mounted patrol from Palacaguina on the trail of one bandit jefe, Orthez, had his mule shot from under him in the initial burst of an ambush. There were six bullet holes in the mule's breast in less than a six inch circle. Letcher told me he was certain that the bandits were expecting a foot patrol which had left the same garrison ahead of him and that he was exceedingly glad to have been mounted. If I remember his account in detail, the bandit machine gun opened fire upon them at about 100 yards' range.

Many of our officers became concerned also over the question of men going on foot becoming separated from their rifles if these were carried in the boot. I don't know how to argue that point but to me it is simply absurd. I had a little brush or so in Santo Domingo in 1919 and several in Nicaragua and I have never seen this happen. Even the one lone Marine who has run out on me in a fight in this time, hung onto his rifle with a deathlike grip. Moreover, I have always let my men leave their pieces in the boots when dismounting to lead up or down bad slopes unless the way ahead looked especially suspicious. In those cases, I might send a rifle grenade or two ahead while the point covered the flanks but this merely provoked interest to the degree that all were ready with their pieces in the hope that we'd scare up something for them to shoot at. My personal feeling is that I'd cling to the present type boot and that I'd do everything I could to dodge any scheme which hooked any more weight on the trooper's back than he has to carry at present.

Automatic Weapons in Patrols

I think I shall ever be impressed forcibly with the value of automatic weapons and weapons of high angle fire. I was never in a tighter place than I was in Cujelita in December of 1928. With thirty-one in my patrol, I was ambushed by at least four times my number and it took much too long a time to see a clear way out of it. I had four Brownings and four Thompsons in that fight but I couldn't attempt any sort of maneuver until I got the rifle grenades going. We had only twenty-four of these and shot twenty-one of them at the outset, Private Wadleigh saving three of his for later emergencies.

I am glad to add. Those grenades made it possible to move one little squad just in time to catch an attack enfilading our right. In that hour and a half of steady action, we did not have a single stoppage from the automatic weapons. I have no hesitancy whatever in saying that I'd be glad to arm every man I may have to take afield with an automatic or a semi-automatic weapon like those with which experiments are now being made, for our present day recruit simply eats up the problems of keeping such arms in perfect condition to function.

The issue rifle boot was not perfectly adaptable to the Browning and the Thompson although by alterations and shifting the boots daily from side to side, we made them serve. Frankly, I am loath to see the Browning in any status which would remove it from the squad of riflemen, however temporary the move might be. It means so much to the squad's morale and the squad must be depended upon for such extraordinary things that I believe it should never have to function at any time without this piece or its equivalent right under the corporal's eye.

Distances in Nicaragua are reckoned so vaguely on account of the paucity of maps and means of measuring the trails that I hesitate to express my estimate of the ground the 52d Company, Mounted, covered in our first year down there. May it convey some idea to state, that, according to the practice of the service schools in designating roads by key points along them, we passed through ninety-six such separate and distinct localities each with its official name and to indicate the total of our trips the number of similar designating names exceeds 176. In this time, the total number of horses procured for the company headquarters and the first platoon of the 52d Company was seventy-five while the personnel varied from forty-seven to fifty-five. May I add that under such conditions as we had to overcome, the policy of detailing two captains and at least two lieutenants to mounted units of approximately 100 enlisted bore fruit from every standpoint of military utility.

And as it is said that the outside of a horse is good for the inside of a man, let an aged Marine captain indulge the hope that before the joints become too stiff to dismount and lead up the highest *cuchillas*, he may again feel that elan which only the mount can give the soldier and lead another regular outfit mounted up the trail of the wily revolutionary.

Mechanization and Cavalry

By MAJOR G. S. PATTON, JR., *Cavalry*, and MAJOR C. C. BENSON, *Cavalry*

By special arrangements with the editors, this article appears in several other journals.—EDITOR.

THE Cavalry has been in a good many tight places during the last thousand years, but it has always managed to keep one jump ahead of its rivals. When the clothyard shafts of English bowmen mowed down the flower of French chivalry at Crecy in 1346, it appeared that horsemen had met their match. Had they been bound to the tactics previously in vogue, the Cavalry might shortly have disappeared. Later the use of gunpowder threatened to drive Cavalry from the field; but it adopted the despised firearms and soon regained its lost prestige. When the improvement of firearms again placed the Cavalryman at a disadvantage, he discarded his heavy armor and learned once more to charge in mass at speed. The Cavalry of Frederick the Great and Napoleon, despite improved firearms, scored many decisive victories. The development of accurate long-range rifles, and, more recently, machine guns, has again put Cavalrymen to the test of adaptability. The question is now raised, as it has been raised many times in the past, is Cavalry still useful enough to justify its existence? For authoritative answers to this question, we look to the well-considered views of experienced military leaders. Here is what some of them have to say about Cavalry:

General John J. Pershing.—“There is not in the world today an officer of distinction, recognized as an authority on military matters in a broad way, who does not declare with emphasis that Cavalry is as important today as it has ever been.”

Field Marshal Sir Douglas Haig.—“Cavalry is indispensable, not only to act as mobile Infantry, but to reap the fruits of victory. —Infantry and Artillery can win battles; only Cavalry can make them worth winning.”

Marshal Foch.—“On the Western Front, Cavalry especially participated in the defensive battles, where they were engaged in the most difficult moment.—The large Cavalry units, thanks to their own mobility, were able to intervene in time and bring the precious assistance of their fire to the weak points of the defense.”

Marshal Hindenburg.—“Cavalry will continue to be important. There were many times when I wished I had more of it.”

General Ludendorf.—“The Cavalry was of the greatest importance

and service to me in all campaigns of movement. In the March, 1918, offensive, I felt seriously handicapped by lack of Cavalry.”

In offensive and defensive actions in stabilized situations, as well as in warfare of movement, modern Cavalry has proved its value. One final comment, to bring the record more closely up to date, is taken from an address by General Charles P. Summerall on August 12, 1927.—“There has been a great deal of misinformation broadcast relative to the Cavalry. It is a fact that Cavalry is of far more importance than it has ever been.”

Since these views were expressed, a new problem has arisen—what to do about fast cross-country fighting machines? This problem concerns not only the Cavalry; but also the Infantry, the Artillery, Engineers, Signal Corps, supply services, and Air Forces. The armored vehicles now being built are practically immune to air attacks; they have high strategical and tactical mobility, and can drive far into the enemy's territory to attack installations, including airdromes, that have heretofore been regarded as secure. As the Cavalry is particularly charged with providing security for other forces, it naturally devolves upon the Cavalry to devise ways and means to neutralize these new weapons. To bury our heads, ostrich-like, and ignore them, would be foolish. Foreign nations are proceeding with dispatch to perfect fast tanks, armored cars, self-propelled gun mounts, and their auxiliaries. More and more of their tactical thought is being centered upon the use of these machines. We may have to face them in future wars, whether we are ready or not. All branches are vitally concerned with the problems that ground fighting machines are thrusting upon them; and so far as the Cavalry is concerned, we propose to face the issue squarely right now.

Can fighting machines replace Cavalry? Much has been written about the power of machines, and all too little about their limitations. Granting that armored caterpillar vehicles can crash through belts of barbed wire and attack machine guns with impunity, let us examine some of the limitations, that apply but feebly to Cavalry, which will restrict the use of machines. The principal items are supply, control, and terrain.

The question of supply is far more binding upon machines than upon Cavalry. Unlike men and horses, machines must have full rations. Even with full rations, their mechanical condition and efficiency deteriorate rapidly in field service. A liberal quota of replacement parts must be supplied, in addition to gas, oil, and grease, to keep the machines running. Furthermore, these supplies must arrive regularly, at timely intervals, or the machines will quit in their tracks. Once immobilized, they are easily destroyed. During the German

drives in the Spring of 1918, British tank crews had to abandon and demolish over two hundred heavy tanks that had run out of gas; but it is not recorded that any of the British Cavalrymen who helped stem the tide had to blow up their horses. With faster machines and more adequate measures for the supply of combat elements, it is true that many of the previous difficulties can be overcome. However, gasoline burns so readily that it requires a rare stretch of imagination to picture a horde of machines living off the country, as Cavalry has done many times in the past. Tank drivers are resourceful, but they have not yet learned how to dismount and lead.

Another important restriction on the use of machines is that imposed by the difficulties of control. Speed and power without control are useless. The British have been using radio phones in their tanks since 1926, and probably have the best control devices in the world. However, they have been unable to utilize in maneuvers more than half of the rated mobility of their machines. Accounts of their 1929 maneuvers indicate chaotic confusion in the engagement of comparatively small Tank units especially when Infantry of the opposing sides became involved in the melee. Dust and smoke rendered signal flags useless, and silenced the guns because it was impossible to distinguish friend from foe. Until reliable and rapid communications can be established and maintained between fighting machines, it will be practically out of the question for them to cooperate effectively in a sustained action.

A third limitation is that imposed by natural and artificial features of the terrain. Obstacles that appear trifling to a well-mounted Cavalryman often put a serious handicap upon machines. Armored cars of the wheeled type, operating in woods, mountains, or where there are numerous streams, are practically confined to the roads. A mine or mine crater in the road, a bridge destroyed, a barricade, or a fallen tree—and the machine is stopped, perhaps under fire in a position from which withdrawal is difficult. The best of these machines, the French Berliet six-wheeler, has some remarkable cross-country performances to its credit; but even this excellent machine becomes sluggish and difficult to control when forced to negotiate steep slopes or fields strewn with boulders. In rough going, the wheeled machine has less mobility than the Cavalryman, and its weapons are almost useless because the gunners cannot take good aim. In close country, where the machine has to stick to roads, its value as a fighting vehicle is materially reduced. The present Cavalry weapons, if resolutely and resourcefully used, are sufficient to neutralize wheeled vehicles on the roads. In flat country, the wheeled vehicle can operate across country with great freedom. The British and French have made

effective use of wheeled machines in northern Africa, Asia Minor, and India. However, important military operations are seldom conducted in desert country; consequently, opportunities for the employment of wheeled vehicles under advantageous conditions will be limited.

Modern fast tanks are much more formidable. They can travel across country over extremely difficult ground, and can avoid or crush many obstacles that would stop a wheeled machine. In woods or mountainous country, they too are confined to the roads, and are thus at a distinct disadvantage as compared to the Cavalryman. They cannot operate effectively where precipitous slopes, boulders, or streams obstruct their progress. Their rate of speed and accuracy of fire are considerably reduced by uneven ground, and they can readily be destroyed if they venture into areas that are unsuited to their proper use. The bogs of Flanders became the graveyard of many British tanks.

The combination wheel and track machine is the most adaptable to varying conditions of road and terrain. One machine of this type, using wheels, has attained the rate of seventy miles an hour on a concrete road. Across country, on tracks, it has done better than forty-two for a short distance; and has averaged over fourteen for hour after hour, through rain, mud, red clay, and deep sand on the test course. The writers have observed closely the performance of this machine ever since it was first submitted for test in October, 1928, and are convinced from personal experience that it is a powerful weapon. They also know from personal experience that neither this machine nor any other that has yet been invented, could operate in those parts of northern Chihuahua where our Cavalry not so long ago rounded up several hundred of Villa's followers. Even the most versatile machine could not have gone where our Cavalry had to go.

Regardless of the progress made in the development of fighting machines, Cavalry will always be necessary. It will hold its own because no other agency can perform Cavalry duties with equal reliability and dispatch. It can operate effectively in woods and mountains where machines cannot go; it can even swim streams that would stop machines; and whether its supply trains come through or not, it can carry on day and night under any conditions of roads or weather. To expect mechanical vehicles—impotent without regular supplies, blind and deaf to control, and restricted by terrain—to take over these duties, is to expect the impossible. Each arm has its limitations and its proper sphere of usefulness.

Instead of rivalry, there should be union to insure strength. The Infantry has its heavily armored tanks to lead the assault; the Cavalry

should have fast cross-country machines for extended rapid maneuver in operations against the enemy's front, flanks, and rear. The union of Cavalry and mechanized units equipped for rapid maneuver would be natural, for they have much in common. Both are highly mobile; their tactics are similar; their actions develop and culminate rapidly; and their commanders, to be successful, must possess like traits. Each supplies in generous measure what the other lacks. We have dwelt upon the limitations of fighting machines in order to counteract the present tendency to over-rate their powers; but to deny that they are valuable weapons would be absurd. On suitable terrain, armored fighting machines are indeed formidable. The obvious thing for the Cavalryman to do is to accept the fighting machine as a partner, and thus prepare to meet more fully the demands of future warfare.

How can fighting machines assist the Cavalry? First, by helping to protect Cavalry against the enemy's aircraft and armored vehicles. Protection against air attacks can be made remarkably effective by using machines armed with machine guns to cover the front, flanks, and rear of Cavalry on the march. Machine gunners thus mounted could engage the enemy, without wasting any time in placing their weapons in the firing position, before the hostile aircraft could reach the Cavalry main body. The 1929 *Cavalry Field Manual* (page 395) states:—"Machine guns, once they are in position and ready for action, constitute Cavalry's most effective weapon against hostile aircraft.—When mounted upon motor vehicles—they afford ideal antiaircraft protection for Cavalry on the march." So far as antiaircraft protection is concerned, unarmored machines would be satisfactory; but we must also consider the enemy's fast tanks and armored cars. In 1922 a study prepared at the Cavalry School raised various questions concerning Cavalry methods of defense against these new weapons. During the eight years that have elapsed since those questions were raised, fighting machines have been greatly improved. Defense against modern machines, especially in open country during the daylight hours, will be extremely difficult unless our Cavalry has a liberal quota of fast cross-country vehicles with which to neutralize those of the enemy.

If provided with machines for its own security, Cavalry will be better able to gain information and provide security for other forces. On reconnaissance in open country, its armored vehicles can cover long distances at a high rate of speed; and under favorable conditions, the machines will be of great value in extending the reach of the Cavalry. For counter-reconnaissance, Cavalry patrols could establish the screen and the machines, held centrally in reserve, could use their high mobility on previously reconnoitered terrain to drive back aggres-

sive hostile forces. On flank guard work, the business of getting patrols out soon enough and far enough would be much simplified wherever the terrain permitted the use of machines. With a Cavalry rear guard, and in delaying actions, armored vehicles could protect our flanks and threaten those of the enemy; make offensive returns to check the enemy's progress; or remain concealed in selected positions to cover the withdrawal of mounted troops. When Cavalry has to hold a defensive position, its fighting machines could initially cover the position and eventually serve as a mobile reserve for counterattacks. In short, wherever the terrain is suitable and particularly in open country, fighting machines will be to the Cavalry what Cavalry is to the Infantry.

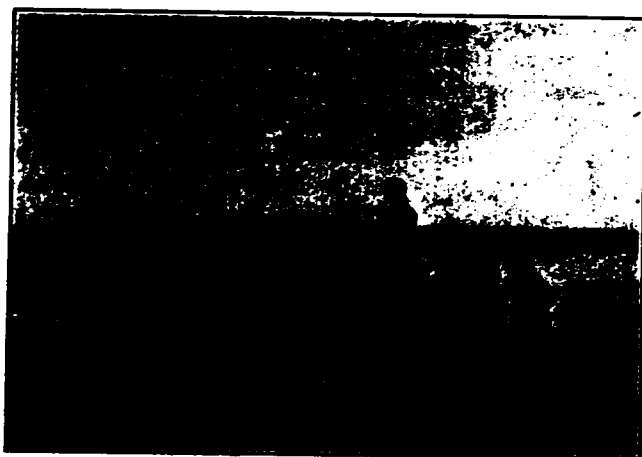
For offensive operations in open country, Cavalry can use fighting machines to great advantage. The *Cavalry Field Manual* (page 373) states:—"Tanks are valuable offensive weapons in practically all forms of combat where intense or stubborn resistance is to be overcome. Their use for this purpose facilitates a more rapid advance of Cavalry." In an attack against troops in a defensive position, and during the initial stages of exploiting a breakthrough, there will be excellent opportunities for the employment of these machines. To mount an attack of sufficient magnitude to make a breakthrough requires immense supplies, whose movement congests the roads; but Cavalry and its fighting machines can move to their appointed places across country. Heretofore, resistance met in passing through the breach has been costly to Cavalry both in time and in casualties. Fast cross-country fighting machines can materially reduce these delays and losses, and thus enable the Cavalry to get through more quickly and in greater strength. In both direct and parallel pursuit, the machines can again render valuable service by helping to brush aside delaying detachments and by preceding the Cavalry to distant defiles or bridges. So long as the terrain permits vehicles to operate effectively, their use in conjunction with pursuing Cavalry will produce more decisive results than either arm could secure alone. The fighting machine will conserve the strength of mounted troops and will contribute materially to their combat power.

One company of light tanks (infantry), and one squadron of armored cars (cavalry), are now authorized for each cavalry division. Unfortunately, there are at present no fast tanks available, and we have only about half a dozen armored cars. If our Cavalry is to study and apply the new methods that fast tanks and armored cars provide, it must have the necessary equipment.

The fighting machine is here to stay, and if our Cavalry has not

lost its traditional alertness and adaptability, we will frankly accept it as its true worth. If the 14th Century knight could adapt himself to gunpowder, we should have no fear of oil, grease, and motors. Confident of our own power, we should give to the fighting machine the serious thought that it deserves.* Field Marshal Allenby, one of the ablest Cavalrymen of our times, said recently:—"I have never felt more confidence in our arm than I do today. It has retained the good, rejected the bad, and has not shrunk from the new."

*In the July issue of the JOURNAL, Major Patton will discuss in detail the use of motorized transport and armored fighting vehicles in conjunction with cavalry.—EDITOR



Taming The Outlaw

By CAPT. H. E. TUTTLE, Remount Service

The problem of handling and immediately putting into service unbroken or so-called "bad" horses is one which will come to all Cavalry officers with troops under mobilization conditions. The author has had extensive experience in handling this type of remount at the Fort Robinson Remount Depot; the method that he describes is the result of repeated tests on difficult western horses. The article was prepared under protest by the author, he modestly declining to set himself up as an authority. The known value of the method and the clear description of the technique involved make it an extremely interesting article for consideration.—EDITOR

AN article on how to handle horses that are unmanageable can be offered only with the greatest reluctance for the reason that it is quite impossible to lay down a rule to which an exception cannot be found. Every horse presents a different problem and every problem requires a different solution. Thus it will be apparent that irrespective of the completeness of any system a case can always be found that must receive different treatment. It is because of this ever changing complex that the handling and training of horses is made so fascinating.

I think it is a fair statement to say that man's ability to train and bring horses under control is limited only by his ability to convey his wishes to them. That is, man must talk a language that is understood by the horse. Such a language is made up of words, voice inflections and muscular reactions. Because of the highly nervous temperament of most horses, fear is a common characteristic; fear of being injured or hurt by everything that is strange or not understood. Man, with his higher state of mentality and reasoning power, only too often becomes impatient at what he considers to be the insubordination of the horse, whereas it is in fact a lack of understanding or confidence. Man will then resort to violence with the result that what little confidence the horse had in man is destroyed and because of his power and strength the horse overcomes man and we have what some choose to call "an outlaw." If this is a true statement of fact it must be accepted that the horse is an "outlaw" because man made him so.

Another striking characteristic of the horse is that he gains courage and boldness with success. That is, if during a training period the horse has successfully evaded in whole or in part the will of man he will then be more difficult to handle when next subjected to training restraint. If allowed to continue, by the time he is given the title of "outlaw" a very nice problem is presented to the so-called "handler of vicious horses."

In considering a problem of this kind it will first be necessary for

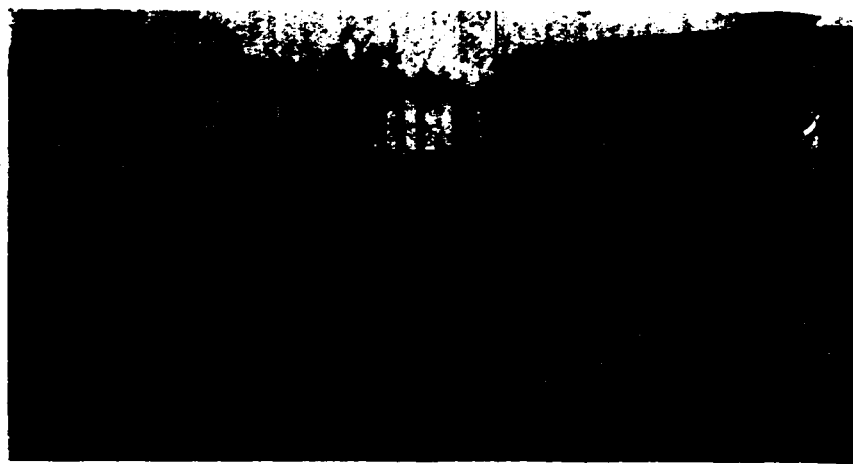


Figure 1—One Method of Laying the Loop Preparatory to Throwing the Horse

man to reestablish confidence in the horse. In doing this it is of *vital importance* that the horse be not injured or punished in any way. The horse must be convinced that his fear of man is groundless and if he submits to him he will not be harmed or injured. Briefly, bringing the horse that is unmanageable under submission is accomplished by throwing and securely tying him. All kinds of disturbances are then made around and near him and this noise is continued until the horse relaxes. The instant this is done it is an indication that he is submitting to your will and in all future handling this confidence should never be betrayed.

The person who is to take charge of the handling should be an experienced horseman—one who will recognize immediately the horse's reactions, which as a matter of fact is the only way the horse has of talking. The person in charge should have five assistants who are mentally and physically active. It is essential that all of them be fully instructed in just what they are to do and when it is to be done. This is especially necessary in the matter of throwing the horse for I assure you he is going to fight back and if a failure is made the first time the second attempt will be increasingly difficult.

Let us assume for instance that the horse to be handled will strike, kick and refuse to let you place the saddle on him. A halter is put on the horse either in a "chute" or stall and he is led into a corral, riding hall or some inclosure. The ground should not be too hard or have any rocks on which the horse could be injured. If it is difficult to handle the horse on the end of a halter rope ten or fifteen feet long

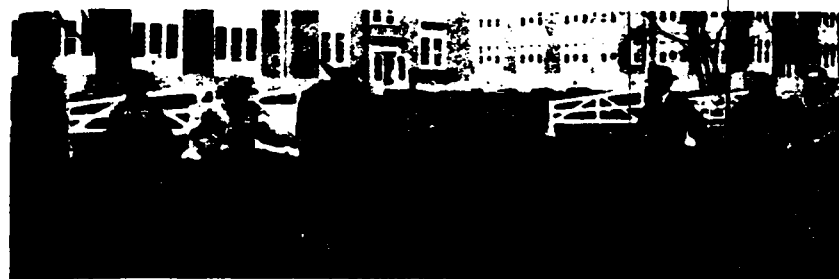


Figure 2—The Loop Has Been Tightened on the Front Legs of the Horse. The Men on the Left Should be the Same Distance Away From the Horse as the Men on the Right

he usually will give little or no trouble if led beside a quiet horse. When the horse is first brought into the inclosure do not subject him to too much restraint, that is, a too tight halter rope or any personal attitude that tends to place him on the defense. All of this that can be avoided will be found to be to the handler's advantage when the final test comes.

The chief handler should have an ordinary lariat, usually about thirty-five feet long with a loop on one end. This loop is placed around the horse's front legs; this can be done either by making a loop on the ground and leading the horse into it, or, if the handler is skilful with a rope he can cast a loop over both front legs when the horse is in motion. Irrespective of the method used several attempts may be necessary before the rope is properly placed. In many instances the so-called "outlaws" know what it is to have a rope on them and will either stand perfectly still when they feel it tighten or will fight like a demon. Either reaction may be expected.

Three of the assistants take hold of the halter rope well to the end of it. The rope should be approximately at right angles to the way the horse is standing, on the "off" side and a little to the front. The other two assistants, together with the chief handler, have hold of the lariat. They should be on the "near" side and the lariat rope should be about at right angles to the way the horse is standing. The horse should be standing on all four feet before an attempt is made to throw him. If he is rearing and plunging around keep him under control, but nothing more.

When all four feet of the horse are on the ground and both ropes tight, the chief horse handler moves up a little closer to the horse, takes his hat and throws it at the horse's head. The horse will rear on his haunches and throw himself away from the hat and in the direction of the men holding the halter rope. When the horse does this the

men on the halter rope pull quickly and violently, with the result that in nine cases out of ten the horse, taken completely off his balance, will go down.

The instant the horse's hind feet are off the ground and the horse is on his side the chief horse handler drops the lariat, jumps to the top side of the horse's neck, places his left knee in the region of the throat latch and taking hold of the nose band of the halter raises the horse's nose in the air so he cannot get up. Simultaneously with his taking hold of the nose band the men on the halter rope must ease up immediately so that they will not be pulling against his effort to raise the horse's nose. The two men on the lariat keep it tight so that the front legs will be well extended. With the chief handler's knee in the place indicated and the horse's nose well in the air it will be impossible for the horse to get his feet under him. Once the horse is down and you have him at a disadvantage it is seldom the horse will struggle. For this reason do not bend the horse's neck too sharply or use greater force than is necessary to hold the nose up. Remember, however, that the horse will take advantage of the slightest relaxation on your part and if successful in freeing his head he will probably get up in spite of everything that can be done. It will be assumed, however, that he did not get up.

Unless there are men experienced in "hog tying" an animal, it is advisable for the chief horse handler to do this, since he is, theoretically at least, responsible for the success of the treatment. He has one of the halter rope men hold the horse's nose in the air, after which the chief horse handler passes around in front of the horse to his front feet. The men on the lariat ease up on the rope and the noose is slipped down over the fetlock joint and tightened on the front pasterns. In addition to the noose a couple of half hitches should be taken around the front legs to insure security. The lariat rope is then passed around the top hind leg between the hoof and the fetlock joint. This is usually done by one of the assistants since the chief horse handler should not leave the front legs until the horse is tied up. The top leg should be tied first for the reason that if the under leg were tied first it might be badly bruised or cut should the horse kick or thrash around with the top hind leg. Kicking with the under leg cannot possibly injure the top leg after it is tied or is being tied to the front legs. It should be quite unnecessary to voice a word of caution when the assistant is placing the rope around the hind leg. Sometimes a horse in this position will kick badly when his feet are moved, and sometimes he won't. Either reaction may be expected, so it will be wise to play safe. After the top hind leg has been drawn to the front legs and made fast the bottom hind leg is then drawn to the front



Figure 3—After the Horse Has Been Thrown. The Halter Rope is Slack. The Lariat Rope is Still Tight and the Horse's Nose is Being Held in the Air

legs and tied securely. It is always advisable to take three or four turns around the rope that holds the front and hind legs together. Care should be taken not to draw the rope so tight that it stops blood circulation. The legs should, however, be secure.

The horse is now securely tied and his head should be relaxed. It is always a good plan to slip a blanket or something of the kind under the horse's head. This will keep dirt out of his eye and will prevent a possible injury to it.

The psychological reaction for the next phase is to impress upon the mind of the horse that no matter what happens he will not suffer pain or be injured by man. In creating a commotion anything can be employed that will make a noise. As a matter of convenience I usually string fifteen or twenty tin cans on a piece of hay wire and rattle them along the ground. Two or three strings of cans may be used in order to swell the chorus.

The cans should not be rattled too close to the horse at first, but within thirty or forty feet, depending entirely upon his nervous temperament as reflected by the violence with which he resists his confinement. It is always advisable to drag and rattle the cans in a complete circle around the horse, each circle being a little smaller than the previous one, until finally the cans are passed over the horse's body.

During the disturbance the chief horse handler should be on the ground immediately back of the horse's neck and should keep up a continuous line of talk in a most reassuring tone of voice. He should also keep patting the horse on the neck and impress upon the mind of the horse that man is his friend. It should be made clear and apparent

to the horse that nothing can harm him and that his security and protection must come from man.

While all this noise is being made the chief horse handler should watch the reactions of the horse very closely for the reason that the *instant* the horse submits the noise should stop. This evidence of submission is manifested in different ways. When the noise is first started the horse will struggle most violently. He will bite the ground.

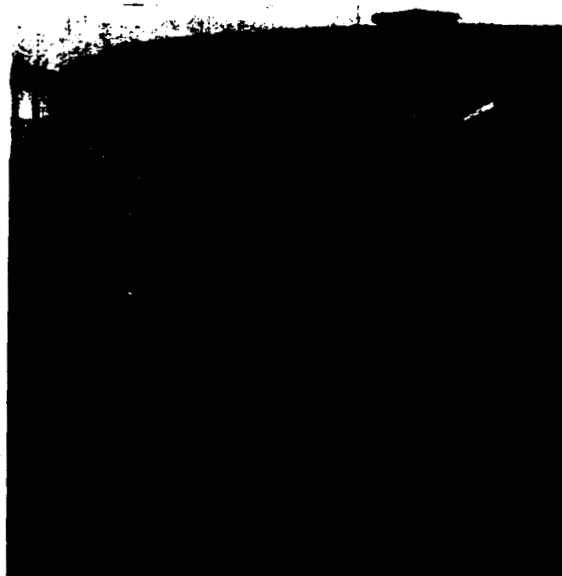


Figure 4—The Chain Hobbles—Dimensions: center ring $3\frac{1}{2}$ " diameter, $\frac{1}{2}$ " stock, chains with swivel and "D" ring 19" long. Double leather, hand stitched straps $1\frac{1}{2}$ "x20" lined with latigo leather 2" wide to which wool sheep skin should be sewed to prevent excessive chaffing

the blanket or anything else within reach. He is helpless, however, and because of his helplessness will eventually surrender. Invariably this is evidenced by a little short squeal and relaxation. The ability of the chief horse handler to recognize the act of surrender will determine to a considerable degree the success of the treatment. This is because the horse associates the discontinuance of the noise, the elimination of his tormentors, with relaxation and submission. If the treatment is carried beyond this point and the noise stopped after he submits, he can assign no reason for its stopping and the desired point is lost.



Figure 5—Hobbles on the Horse. Normally the Animal Would be Standing With Halter Rope Hanging Free Which is True of all Succeeding Pictures. The Attendant at the Animal's Head was Merely to Facilitate Photography

After the horse has surrendered and relaxed let everything be normal for a few minutes. One of the attendants should then start with a string of cans twenty-five or thirty feet away from the horse and drag them right up to him and let them touch him. This can be repeated several times. The chief horse handler should never leave the horse's head as long as he is tied up. The horse's reaction should be very carefully observed and it should be noted whether or not he still struggles and fights the noise or accepts it. When there is a reasonable acceptance of various things of this kind the treatment should stop.

The third phase of the treatment consists of giving the horse a certain amount of liberty and yet have him so disarmed that he is unable to inflict bodily harm to a person near him. This is done by putting on a chain hobble. It consists of four chains radiating from a common ring with "D" rings and leather straps on the end of the chains. (See Figure 4). The chains are of the proper length so that when the straps are buckled around each pastern the horse can take short steps but can neither kick nor strike.

This hobble is placed on the horse while he is still "hog-tied." The strap should not be tight around the pastern and the ropes can be eased up sufficiently to adjust the strap without fear of freeing the legs. Sometimes a horse that has been subjected to this treatment will continue to lay on the ground after his legs have been released. After the hobbles have been put on and the lariat removed the horse should get on his feet.

Continued treatment is governed to a large extent by the particular vices which made it impossible to handle him. We assumed in the first instance that the horse would kick, strike and could not be saddled. For kicking we will take an ordinary stable or house broom and brush him around his hind feet. (See Figure 7). If he is running true to form he will kick himself on to his knees. Sometimes the surprise is so great that he will kick again as soon as he gets his fore feet under him. I saw a horse kick his front feet out from under him six time just as fast as he could get up, and then you couldn't aggravate him into kicking again. The treatment with the broom should be kept up until the horse no longer fights it. I say "keep it up"; the chief horse handler should distinguish between fighting the casual use of a broom around the hind legs and the use of the broom in such a manner that any gentle horse would resent and kick at it. Remember the problem is merely to gentle the horse and not to break his spirit.

You now start handling his hind feet. Before beginning take an ordinary halter rope and tie it loosely around his neck so that it will be

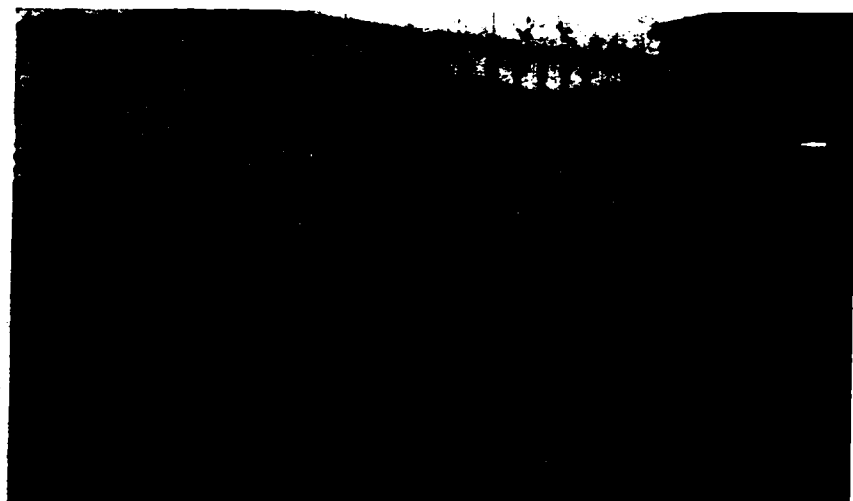


Figure 6—Showing the Halter Rope Around the Neck Which Offers Support While the Horse Handler Works Down the Hind Leg



Figure 7—Using an Ordinary Broom Around the Animal's Heels to Test for Kicking

about where the collar rests. (See Figure 6). This is something to keep hold of with one hand while you begin to work the other down on the horse's flank, gaskin, hock, and finally get the horse's foot off the ground. When starting this particular treatment lean your body firmly against that of the horse. In fact it is desirable to push against him. This tends to keep his mind occupied and consequently he will offer less resistance. In conducting this gentling exercise do not proceed too rapidly, that is, progress should not be faster than the horse will accept without resistance. After picking up one hind foot the same thing should be done to the other foot, also the front feet in case they enter your problem.

This horse also resists being saddled. The saddling should be done quietly and carefully. By using the word "carefully" I do not mean that the horse should be approached "timidly." Every movement made around the animal should be with boldness and confidence. If you are going up to the horse, walk right up to him in a positive movement as against going a step or two at a time for the purpose of noting his reaction. The horse is disarmed and cannot hurt you; thus he should receive the impression that positive definite movements on the part of man will not hurt him.

Put the saddle (or harness) on the horse as though the horse were perfectly gentle. That is, don't give the horse the impression by your conduct that the saddle is a thing to be feared and that something terrible will happen the instant it is placed on his back. Let the saddle rest on the back for a minute or two; then raise it up and replace it. This should be repeated several times, or until the horse does not

resist. Cinch up the saddle but not too tight at first. It should be rocked from side to side with the hand so that the horse will begin to get the "feel" of both the cinch and the saddle. After this is done a few times, tighten the cinch a little more and continue until it is tight enough to bear the weight of a person on one stirrup.

With a hand hold of the pommel and cantle of the saddle place your weight on one stirrup. Do this several times or until the horse no longer resists. Stand straight up in the stirrup and lean against his body and finally throw your leg over the saddle with your weight

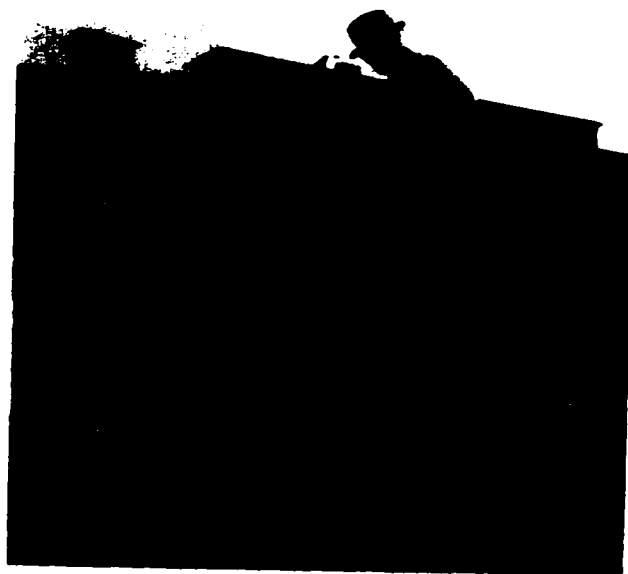


Figure 8—Bearing the Weight on One Stirrup

in the saddle. (See Figure 8). If the horse is predisposed to pitch you, you should be very careful and see to it that you can always jump clear of the horse. Even though the horse is in a chain hobble, sometimes they become frightened and will throw themselves. The horse should be mounted and dismounted on both sides a sufficient number of times so that a definite impression is made on the mind of the horse.

This should end the session in so far as actually handling the horse is concerned. It is a good idea to have someone pass the horse from time to time without paying any attention to him. He should, however, pass near enough, so that the horse will be inclined to work away from the man if he could do so. The person might run past the horse merely

for the purpose of creating a different impression. The horse should be subjected to practically constant treatment throughout the day. Of course there should be reasonable rest periods, but remember, the horse must submit to you. The hobbles should be removed at night to prevent blistering the pastern. If there is not a continued treatment you won't be able to get near enough to the horse's feet to unbuckle the hobbles.

I have never found it necessary to keep the horse hobbled more than one day—with but one exception. This happened to be an exceptionally ambitious (not vicious) animal and a two-day treatment was necessary. Horses that manifest the greatest inclination toward viciousness invariably are the first to submit, but the ambitious, determined animal will resist to the last ditch.

When the hobbles are to be removed, unbuckle the strap from the hind legs first. If this is done a bad "mix-up" may be avoided. If the front legs are released first and the horse should not stand while the straps are being released from his hind legs you are in for a lot of grief and things are quite apt to happen in rapid succession. If on the other hand the hind legs are released first, after which he should move out, the horse will step on the chains with his hind feet and down he goes. It is extremely doubtful that such a situation would be created because if the horse has not been brought under submission the hobbles should be left on a second day.

After the hobbles have been put on the horse and he has regained his feet, there should be no restraint on his head during all the treatment. The halter rope should hang free and the horse must react to the necessity of standing and submitting because of his immobility as against assuming the restraint of his movements to be on account of a tight halter rope.

The suggested method of handling bad horses is not offered in the belief that it is the best method or the only way a horse can be brought under submission. Neither is it recommended to anyone who does not have faith in it or want to use it. It is quite impossible to present other than some of the purely mechanical movements which are of minor consequences as compared with the necessity of interpreting reactions and the creation of the right impression on the mind of the horse. Personally I have used this method a great deal and found it satisfactory. I can heartily recommend it to the profession.

The Armies of To-day

(Translated from the German of Colonel-General von Seeckt.)

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The lecture that follows was given at Berlin on 3rd April, 1928, by Colonel-General von Seeckt, who was Chef der Heeresleitung until October, 1926. Von Seeckt was commissioned in 1887 into the Kaiser Alexander Garde Grenadier Regiment. On the outbreak of the war in 1914 he was Colonel and Chief of Staff of the III. Army Corps which fought against the British. Early in 1915 he was appointed Chief of Staff for the XI. Army, under General Mackensen, which shortly afterwards inflicted a severe defeat on the Russians and recaptured Przemyśl. He then became Chief of Staff to the Army Group which overran Serbia, and afterwards Chief of Staff to Tsar Ferdinand of Bulgaria. In 1917 he became Chief of the Turkish General Staff, which post he held until shortly before the Armistice.

When the Kapp Putsch occurred in 1920 and the Government fled from Berlin, von Seeckt was made temporary Commander-in-Chief with full powers to restore order. This he did without firing on the rebels. Shortly afterwards he was appointed Chef der Heeresleitung, which post he held until his resignation in October, 1926. During this period he was responsible for the complete reorganization of the German Army.

Introduction

THE FOLLOWING ideas represent purely my personal opinion, and are devoid of any official character, even though such might be imagined from the consideration of my past career. They are also unconnected with conditions in the German Reichswehr, being purely fanciful conceptions untrammelled by the fetters of the Versailles Treaty. Finally they are entirely confined to land operations, and leave naval questions to be dealt with by the competent experts.

In order to sketch out more definitely my subject, I should like to put forward, and if possible to answer, the following questions: What is the present trend of military development? Are armies still necessary? What will they look like? How will they operate? The fancies to which I shall here give rein are therefore deduced from very real actualities, though I am not blind to the dangers of all prophecies.

The Armies of the Great War

In order to establish a definite starting point, let us first briefly glance at those armies which took the field in the World War. In doing so we come to the astonishing conclusion that all of them were more or less insufficiently organized for the purpose. Comparisons are simplified by the fact that the Great Powers of the continent of Europe had based their defence systems on the principle of universal service, and that all in common endeavoured to deploy on their frontiers

very rapidly, and numerically as strong as possible. The brilliant achievements of the German organization need not be stressed here, but three cardinal mistakes may be pointed out. In spite of the universal conviction that a war would be a matter of life or death to Germany, and in spite also of the fact that, at any rate in military circles, we reckoned on a war on two fronts, that is to say with a numerical superiority on the part of the enemy, our national resources were not fully exploited from a military point of view, and universal service was not carried through to its full extent. For sustaining the struggle, i.e., for maintaining reserves, neither personnel nor material was sufficiently provided, and by the same token actual economic mobilization did not exist. We owe it to the foresightedness of Walter Rathenau and the perspicacity of the War Minister Falkenhayn that, after the outbreak of war, at any rate, the necessary measures were taken to hold out economically. Everything was risked on the strength and rapidity of the first blow, although Schlieffen had warned us by pointing out the possibility of another seven years war.

France exploited her manpower thoroughly, as well as that of her colonies. On the other hand her material equipment proved insufficient, especially after the occupation of the industrial districts in the north and east. She was helped out by America's powerful support, without which France could hardly have supplied her own requirements, particularly as regards ammunition.

Russia could not at first draw full advantage from her enormous population; she had available an almost inexhaustible reserve of manpower, and managed to put her reserves into the front line at the right time and tolerably well trained. Against this, however, material armament was and remained quite inadequate. The Allied ambassadors were continually forwarding to their governments requests on the part of Russia for arms and ammunition; her own war industry never reached a stage of any considerable production.

Austria-Hungary was of all the great Powers certainly the worst organized for the war—both as regards personnel and material. The different reasons for this state of affairs need not be considered; the consequences showed themselves in the rapid decline of the striking power of the originally splendid army and in the increasing economic demands made on Germany.

England was organized both for peace and war differently from the continental powers. Although, in military circles at any rate, participation in a big war was considered, little preparation had been made to exploit fully the military resources of the nation. Evidently it had been expected that the Navy and the seven regular divisions,

excellent and immediately ready for action, would have sufficed for the country's needs. For the equipment of this force the national industry, which was efficient enough, was adequate. It was Lord Kitchener's greatest merit that he recognised in good time that efforts of quite a different kind were necessary to produce a final victory, and that he introduced suitable measures. The results produced by English organization during the war were truly astonishing. As the new armies required time to take to the field, the national industry had time to reorganize, and where it failed America came to the rescue.

The United States of America occupied a peculiar position as regards organization for war. Together with the Navy, the comparatively small peace arm sufficed for current needs, and her geographical position allowed America to choose the precise moment for her entry into the World War. When once she had decided to come in, her organization developed an over-whelming activity, which enabled reserves of men and material to produce an army, whose resources were hardly broached at the end of the war.

The situation of the other belligerent states, though differing in detail, was in general similar.

Now to what military success did all this universal *levée en masse*, this titantic mobilization of armies lead? In spite of every effort the war did not end in the decisive annihilation of the enemy on the battlefield. Actually it petered out in the attrition of trench warfare, until the powers of resistance of one of the combatants, as regards personnel and material, and finally as regards morale, were beaten down, without really being conquered by the other's superior force. Was the victor truly elated by this success? Are the results of the war in just proportion to the sacrifices of national resources? When recourse must be made to arms, is it necessary every time for whole peoples to hurl themselves at each other's throats? The soldier must ask himself whether these gigantic armies are still capable of being commanded in the sense of decisive strategy, and whether any future war between such masses must not again end in a stalemate.

Perhaps the principle of the nation in arms, the *levée en masse*, is to-day out of date, the *fureur du nombre* a thing of the past. The mass becomes immobile; it cannot manœuvre, therefore it cannot conquer; it can only stifle.

Post-War Organizations

Let us now glance at the conclusions which the leading powers have drawn from their own experience as regards the organization

of their armies, naturally omitting those states whose armies have been restricted by the Peace Treaties. America and England have in essentials returned to their pre-war organizations, that is to say, to the principles of small peace armies, ready for immediate action; only America has now considerably extended her arrangements for industrial mobilization and for the military training of her youth, while England has developed a strong air arm. France is engaged in reorganizing her army on new lines, the main feature of which consists in the provision and maintenance of a peace army approximately at war strength, and consequently ready for action at short notice. At the same time France adopts a complete system of universal service in order to provide strong reserves. The period of colour service has been much reduced, so as to ensure that all men capable of bearing arms are trained without keeping the peace establishment at too high a level, while the value of the peace army ready for instant action is raised by the retention of a greater number of long-service volunteers. Industrial mobilization and the early training of youth are carefully worked out, as is also the utilization of black troops. The powerful French air force immediately ready for action, is especially worthy of notice. Italy seems to count on supporting her professional army by the employment of Fascist militia and in exploiting actively the military-fascist training of her youth.

Russia, still hampered by many difficulties, but making decided progress, is trying to provide herself with a peace army, ready for use and proportionate to her need for security, and at the same time is endeavoring to gain military control of her enormous manpower by a militia system. In the newly organized armies of Poland, Czechoslovakia and Yugo Slavia we find throughout the pre-war system of universal service, with the period of active service reduced as low as possible and the necessary peace armies maintained in a state of the greatest possible readiness.

Thus it would appear that the practical utilization of war experience has resulted in no great departure from the principles of pre-war days; although new tendencies are becoming very distinct. The general economic situation compels all states to reduce their expenditure in armaments, and in particular to reduce the costliest form of armament—namely strong and fully equipped long-service standing armies, and at the same time to limit as far as possible the unproductive exploitation of the nation's manpower by military service.

The present political situation is such, however, that there is need for a feeling of security against sudden hostile attack. This feeling

of security can only be obtained by the maintenance of a standing army immediately ready for action, and by the desire on the part of each state to be prepared for a war of life and death by organizing its national resistance to the fullest extent. Preparations for a national war are really defensive measures, the scope of which depends on the extent to which one state is threatened or feels itself threatened by its neighbour. This feeling of insecurity cannot be given an arithmetical value in computing the possible extent of disarmament. The only factors which are comprehensible and which can be included in striking the balance, are the figures of the available resources: the greater guarantee of peace lies in adjusting the balance of power rather than in seeking idealistic and unattainable reduction of power. Thus can we shortly dismiss the problem of disarmament.

The basis of war is the struggle between man and material. The shield was invented to meet the sword, the concrete emplacement to meet the high explosive shell, the respirator to meet gas. This struggle will continue so long as war exists, and from time to time the offensive weapon will gain the upper hand until the defence has over-reached it. Science works for both sides. It is, therefore, quite misleading to talk of the triumph of the machine over man. The machine has only defeated mass humanity and not man himself, and never will, for it can only come to life in the hand of man.

The mistake lay in opposing an immobile, almost defenceless mass of humanity to ruthless machinery. The more we increase the masses of our fighting men the more certain becomes the triumph of the machine; for its limits exceed those of the supplies of manpower. The matter therefore resolves itself into a war between the human brain and inorganic matter. As science advances and as more inventions and resources are placed at the disposal of the army, the demands made on the soldiers, who utilize the new weapons, will increase. Anyone who has even a slight idea of the technical knowledge, the highly specialized training, the complicated instruments, and the well drilled morale required in order to control effectively the fire of modern artillery, must admit that these conditions cannot be attained with hastily trained troops, and that such troops are only cannon-fodder, in the worst sense of the word, when opposed to a small number of highly-trained specialists. But what happens when these troops do not exist and when no living target is presented to the machine controlled by science? Destruction of the enemy's army, not destruction of his country, is still the first law of strategy, although sometimes it may appear in a different guise. The machine wins its

victory over the living and mortal mass, not over the living and immortal human brain.

The Air Arm

Whoever speaks of modern military science, will first of all think of the air arm. Partly in the World War, but really only after it, this new arm took its place in full partnership with the land and sea services. Yet there has been no alteration in the principles of war. The soldier and his allied technician merely have to contend with one additional battlefield with its particular conditions. The possibility of air attack on the vital points of national powers of resistance, that is to say on the by no means new but today more readily accessible centres of military strength, has led to false conclusions as to the dispensability of land forces.

The only difference is this: whereas hitherto fighting has been confined to the land and the sea, decisions will now be sought in the air. People are often apt to think that in future the fighting will be carried on above the heads of the soldiers and will be directed exclusively against the civilians in office and workshop. War against the back areas and against the civilian is no new thing in history, and it would be foolish to deny or to make light of the dangers and horrors of air attack on back areas, especially in combination with the use of gas. It brings the same dangers and the same objects into a new theatre of war; active defence against this form of attack is the task of the air arm, which, as the best counter-measure, seeks to carry the attack into the enemy's country, or at least to destroy the attacker. This new danger has given rise to a new demand, the provision of some form of passive defence for the vital centres of a country, though this method is no doubt costly and cumbrous. It is difficult to understand and still harder to justify the fact that we in Germany, to whom active air defence is denied, are doing absolutely nothing in the way of this passive defence.

After this brief examination of the present state of armaments, let us try to picture to ourselves the course which a future war will take.

Hostilities will open with attack and counter-attack on the part of the opposing air fleet, since they form the forces which are readiest for action and swiftest to strike at the enemy. The objective will first of all not be capital towns and sources of power, but the opposing air force, and only after its conquest will the other objective be attacked. When conditions are more or less equal, a decision will not be reached very rapidly, even when one side is forced to remain on the defensive. How far-reaching are the material and moral successes

of the superior attacker depends on the powers of passive and moral resistance of the defender. It must be remarked in this connection that all large troop concentrations form easy and good targets. One of the main tasks of the air attack will be to disturb the mobilization of the enemy's man-power and industry.

The Peace-Time Army

The attack initiated by the air force will be taken over as rapidly as possible by the troops most ready for action, i.e., essentially the peace-time army. The greater the efficiency of this arm, the greater its mobility, the more determined and able its commanders, the greater will be the prospect of its rapidly putting the hostile force opposing it out of action and of preventing the enemy from organizing and sending into action further forces, and perhaps even of compelling him to seek peace. Whilst the two regular armies are engaged in the struggle for the first decision, in their rear will commence the organization of the defensive power of the country. The victor in the first phase of war will attempt by means of his superior armament, training and mobility to prevent the masses—superior in number, inferior in quality—of the enemy from developing their power and particularly from organizing fronts bristling with material, whilst on the other hand he will draw from his own reserves of men and material the support required to maintain his own striking power. I therefore see, to resumé briefly, the future of the conduct of war in the employment of highly efficient and highly mobile armies, i.e., smaller armies, whose effect is considerably increased by the air arm, and at the same time in holding ready the whole of the man-power of the country either for adding weight to the attack or for defending their country to the last.

The need for these modern armies cannot be gainsaid. Their task has been briefly sketched above. It is interesting to speculate as to what they will look like.

The peace-time army, which may also be designated a covering or operating arm, will consist of professional soldiers, if possible of volunteers, serving for a long period. The length of colour service will vary and will depend upon the purpose for which the individual soldier is to be employed, it naturally following that highly technical training will necessitate a longer period of colour service, whilst in other units young men sound in mind and body are required. The strength of this army will be in proportion to the financial resources of the country, its military and geographical situation and its size.

and it must at least provide it with security against surprise hostile attack.

It will be objected that this will provoke competition in armaments; but apart from the fact that the strength of the very costly peace-time army is limited by the financial resources of the country, the strength of peace-time armies offers the best object for international conventions, and consequently for the limitation or adjustment of armaments. It goes without saying that each country will raise this army to the very highest pitch of perfection, both as regards the training of commanders and men, and its armament and equipment. In this connection there are three main requirements, viz., great mobility, to be attained by the employment of numerous and efficient cavalry, and by the utilization to the utmost of mechanized trains and of the marching capacity of the infantry, the best possible armament, and constant replacement of men and material.

For its first entry into action, this army of manoeuvre requires at best no additional personnel, or at any rate, only a small increase, therefore no mobilization.

In addition to and in close touch with this army is a permanent training staff, composed of officers, non-commissioned officers and men, through whose training units and schools pass the whole youth of the nation that is capable of bearing arms, with an initial short period of service followed by the necessary refresher courses. This will result in the creation of a force, which although unfit for employment in open warfare and offensive decisive battles, is yet in a position, after completion of its training, such as it is, and adequately armed, to undertake the task of defending the country, and at the same time, by supplying drafts drawn from its best elements, to maintain the fighting field army proper, at full strength. In order to make this short period of training endurable it must be carried out with the youth of the nation, but weight must not be laid so much on the military side as on the physical and mental training. It can take us too far afield to go into the details of this organization, such as the obtaining and training of future officers; but a few words may well be devoted to the question of armaments, which is closely bound up with that of the indispensable economic preparation for war.

Munitions Supply

In discussing this question we must proceed from the principle that any army never, or, at least, only temporarily, possesses the weapon it would like to have, and which is the possible weapon at that particular moment; for as soon as a weapon is introduced it becomes

obsolete owing to the rapid progress of science. The expense of the conversion of the armament and of the re-arming of a large army is so enormous that no country will undertake such measures until actually compelled to do so.

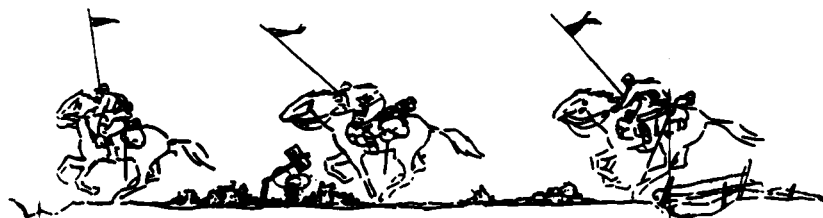
The smaller an army is, the easier will it be to arm it on up-to-date lines, while it is impossible to keep in stock sufficient supplies of modern armament for armies which number millions.

The necessity for having the field army constantly ready for immediate action and armed with the best possible weapons makes it necessary to have armament available in sufficient quantities and of the very best quality. It is also necessary to maintain reserve stocks and to organise sources from which these stocks can be replenished. The cost of this demand has the effect of restricting the strength of such a peace-time-army. But the strength having once been decided upon, not only must the armament and equipment deemed necessary be in the hands of the army, but also the stocks required for initial replacement must be available to meet requirements until the factories, which exist for this particular purpose, start producing fresh supplies. This demand is in itself obvious, and would present no novel feature if we were only dealing with the *levée en masse* of the nation. Actually, the main consideration is the smaller field army, and this places the arming of the nation on an entirely new basis. It is impossible to hold stocks of armament and equipment ready for a modern army of millions if the justifiable demand is put forward that these masses, in view of their inferior military training, require special support from the material issued to them. The accumulation of large reserve stocks is the least economical state of affairs which can be imagined. Further, in consequence of the fact that they naturally soon become obsolete, such accumulation would be of doubtful military value. Think, for instance, of stocking thousands of flying machines, which are frequently rendered worthless after the lapse of a year in consequence of the production of new types.

For the arming of the masses there is only one way; to decide upon the type of the weapon, and then to prepare for mass production when the need arises. The army, allied with science, is in a position, by constant study in experimental establishments and on the training grounds, to decide what is the best type of weapon for the time being. Arrangements should then be made with industry under which the production of this type could be taken in hand at once and in the requisite numbers. This necessitates thorough preparation for which legislation is indispensable. These preparations should be

made in close co-operation between soldiers and economists, who, after deciding what raw materials are required and after making provision for them to be available, would deal with the selection and installation of the factories for all parts of the armament and equipment. To prepare the conversion of factories from a peace to a war footing, and the holding ready of material and plant, naturally require government subsidy in peace time. This, however, will be more advantageous to the State than the acquisition and maintenance of large obsolescent stocks of arms. If the military requirements are framed with a view to rapid mass production by renouncing the finest in favour of the simplest possible material, then the time elapsing between the placing of order and the commencement of deliveries can be reduced to a minimum. This gaining of time is the task of the manœuvre army in the field.

A great number of problems of a military and economic nature suggest themselves in considering these questions. I have been able only to touch lightly upon them here, but I shall feel content if this excursion into the field of military fantasy should result in further attention being paid to these questions.



The Sixth Cavalry Marches Through Dixie

By MAJOR ARTHUR E. WILBOURN, 6th Cavalry

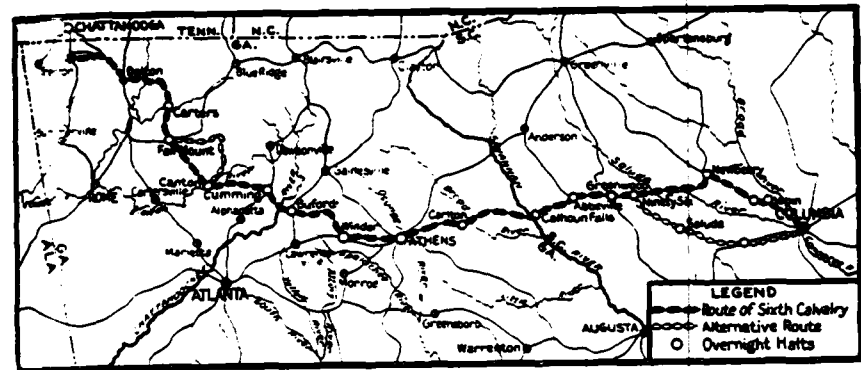
(Continued from the January JOURNAL)

The Camp Jackson Maneuvers

ON ARRIVAL at Camp Jackson, the regiment proceeded to make itself comfortable in camp. Pyramidal tents, iron bunks and straw were issued. Bed sacks had been shipped with other property by freight from Fort Oglethorpe, but on inquiry it was found that the car had been held up at Augusta, along with the 22nd Infantry and the Tank Platoon, by the flood waters of the Savannah River. Rain continued for the next two days. Then came the sun, but not the freight car, nor the 22nd Infantry, nor the Tank Platoon.

The fate of the latter units is of so much interest, in connection with the subject of transportation of troops by motors in unfavorable circumstances, that it will be related here. And particularly so, since the record they left can be compared with the march of cavalry under like conditions. The plan of the Corps Area Commander contemplated the movement of the 22nd Infantry and the Tank Platoon from Fort McPherson, Georgia to Camp Jackson, South Carolina by motor transport, these units to arrive at Camp Jackson, on September 29th. On the 25th of September, these elements arrived—at Warrenton, Georgia (see map). On that date, the 6th Cavalry was encamped at Ninety-Six. Both units were subjected to the same weather conditions. The motor columns were not at this time subjected to flood conditions. However, road conditions became so bad before the morning of the 26th of September that the motors were unable to proceed. The command was forced to remain at Warrenton for three days. When it could finally resume its march, two days were required by it to cover the short distance from Warrenton to Augusta.

Arrived at Augusta, the units were unable to cross the flooded Savannah River until five days had elapsed. Having crossed this river, it required one and one-half days for them to advance a distance of eight hundred yards. Competent infantry observers of and participants in this march are convinced that neither foot troops nor cavalry, including their animal drawn trains, would have been stopped or appreciably delayed by the conditions at Warrenton and between Warrenton and Augusta. Also, they are of the opinion that



road conditions north of the Savannah River would have retarded but little the movement of foot troops and cavalry. The 22nd Infantry arrived in Camp Jackson on October 8th. The tank platoon arrived in time for and started out to participate in the last maneuver on the 14th of October. It was not there at the finish, probably because the deep sand at Camp Jackson had the same deterring effect that the mud had had during the previous weeks.

The Terrain

The military reservation of Camp Jackson, South Carolina is three and one-half miles wide and some eleven miles long, its western boundary being about six miles east of Columbia.

Situated on the divide between the Congaree and Wateree Rivers, the area is of low relief and sluggish drainage. Elevations range from 200 to 500 feet. The soil is all but unadulterated sand. Hillocks and some fairly respectable hills, are separated from each other by small swales. Small streams abound. These widen here and there into swamps and morasses. All is covered with dense vegetation, consisting principally of tall native grasses, brush, tall pines, and scrub oaks. The latter seldom rise to a height greater than eight to ten feet. So prolific is the growth that it is generally a great obstacle to the movement and vision of mounted as well as of dismounted men. This growth had obliterated most of the war time roads, trails and clearings, making the 1918 maps of comparatively little use.

The absence of any landmarks, save one or two war time towers; the presence, on every hand, of the dense thickets; and the general sameness of the aspect of the ridges and swales, made it difficult to follow a charted course, even under the most favorable circumstances.

Regimental Maneuvers

The first exercise held was designed to familiarize the command with the nature of the reservation. A point, located at a distance of about four miles from the regimental camp, was indicated on the map. Two routes to this point were also indicated and one was assigned to either squadron. The regiment was then ordered to concentrate at the indicated point. Until this time, no reconnaissance of the reservation had been made by any squadron personnel. It required four hours for the assembly of the regiment at the indicated point. The foliage was so thick and the underbrush so dense that one squadron lost a whole troop from the tail of the column. The commander of this troop had not been informed of the location of the regimental assembly point, and wandered through the brush until he encountered the other squadron. This unit had strayed from its assigned route. Taking the lost troop with it, it finally found an unmistakable guide to the assembly area in the form of a stream bed. Both squadrons arrived at the indicated point at about the same time.

The second regimental problem had been drawn to illustrate the dismounted attack of the regiment. It was solved on the terrain which lay in the immediate vicinity of the assembly point which had been used in the previous exercise. Attack directions were maintained with the greatest difficulty, even though compass directions were announced in each case. Some men got lost from their units in the dense underbrush and remained within a few yards of them for extended periods of time without being able to locate them. It was most difficult to maintain liaison between adjacent units.

During both of these regimental exercises, hostile airplanes constantly flew over the marching columns and over the areas in which units were assembled. This gave the opportunity for much instruction in the taking of cover to avoid observation. The nature of the terrain in every way favored the ground troops in these situations.

Combined Maneuvers

With this limited knowledge of a small part of the terrain, but with a full realization of the difficulties that were to confront it, the regiment participated in the combined maneuvers of the following week. The first of these found the regiment divided, the two squadrons being placed under the command of the infantry regimental commanders. These reinforced infantry regiments were then placed at opposite ends of the reservation. Thus, they were separated by a

distance of eleven miles. The problem was so drawn as to require offensive action on the part of one of these forces and defensive action on the part of the other. Before the problem started, the unit with the offensive mission had to march a distance of seventeen miles. War conditions were to become operative at 5:30 P. M. No troops were permitted to leave camp until 12:00 Noon. Between 12:00 Noon and 4:00 P. M., the cavalry and the horse drawn artillery of this unit covered the seventeen miles. The infantry was drawn by motors.

The commanders of both forces immediately assigned reconnaissance missions to the cavalry squadrons. This gave the squadron which had marched at noon but an hour and a half to rest, feed, water and start on its mission. Since, at that time (5:30 P. M.) it was well in rear of the infantry outpost, it had to march an additional five and a half miles before it could organize its reconnaissance. Both squadrons employed reconnaissance patrols during the night from localities which were well in advance of their respective infantry outpost lines. All of the patrols employed by one squadron returned with valuable information which had to be dispatched to the infantry commander by mounted messenger, since the radio would not work. Some of the patrols of the other squadron were captured during the night. Others obtained information that was of value to the infantry commander. Both infantry commanders were well informed of the location and dispositions of their opponents when daybreak came.

The infantry force with the offensive mission marched at 3:00 A. M., to attack and drive back the opposing forces. The commander employed his cavalry to operate, first against the flanks and rear of the delaying positions which the opposing cavalry occupied along the route of the advance, and finally to operate against the flank and rear of the main position of the opposing forces. During this latter period, flank protecting missions were carried out by the cavalry assigned to the defending forces. The maneuver ended at noon. All troops were in their camps by 1:00 P. M., some having been operating continuously for twenty-five hours.

For the second combined maneuver, all troops were organized into a reinforced brigade to which was assigned a mission which required it to cover the advance of a larger force. The exercise opened with the cavalry holding, against assumed hostile attacks, a position which it had seized and occupied prior to the arrival of the infantry. This position was held with squadrons abreast and horses immobile. The frontage covered was approximately that which would be covered by two infantry regiments in a defensive position. Due to the

short time that this position had been held by the cavalry, no actual organization of the ground had been possible, but the outpost line and the main line of resistance had been occupied. The regimental reserve line also was indicated. One troop was held on this line in regimental reserve. Upon their arrival in rear of this position, the infantry regiments were ordered to take over and organize for defense the sectors which were being held by the cavalry squadrons.

The cavalry occupied this position by 8:00 A. M., the hour when the infantry columns arrived in rear of the position. Anticipating difficulties on the part of the infantry in locating the positions, sector commanders had dispatched guides to the cavalry regimental headquarters. The infantry was ordered to complete its relief of the cavalry by 9:00 A. M., but due to the difficult terrain and the fact that no preliminary reconnaissance was permitted, under the terms of the problem, the relief was not effected until 10:30 A. M. The squadrons now assembled in rear of the position, and marched to the regimental assembly point on the right flank of the position. Delayed by the innumerable wire communications systems which the infantry and the supporting artillery were installing, and forced to cut and corduroy a trail through a morass for their combat wagons, the last of these units did not reach the regimental assembly point until after 12:00 Noon. The maneuver ended when a represented enemy cavalry force drove the 6th Cavalry behind the infantry lines at mid-afternoon.

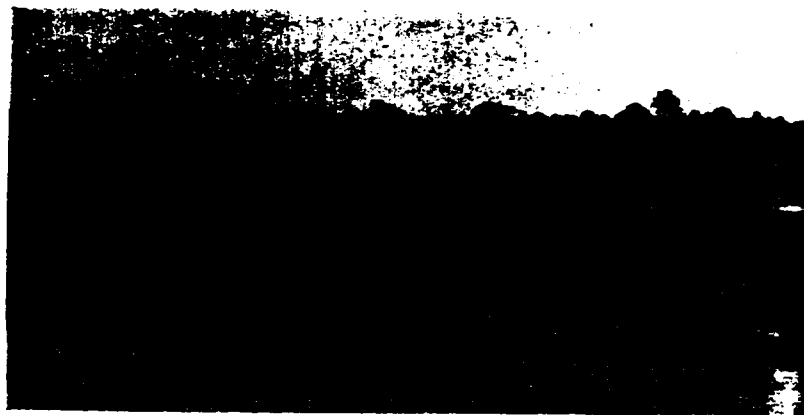
During this maneuver, the cavalry regiment used an airplane, in conjunction with ground reconnaissance and communication agencies, an airplane having been assigned to the regiment for the purpose. Prior to the exercise, a conference was held with the pilot and the observer. At this conference, the methods to be used by the plane in keeping the cavalry commander informed of the movements of the enemy and of his own troops, were determined upon. So expert did the pilot become in delivering dropped messages that towards the end of the maneuver, most of these were falling almost on top of the regimental identification panels. Communication with the observer was entirely by means of panels since the cavalry radio set could not transmit to the planes. In one case an important message from the Brigade Commander to the Regimental Commander was relayed by radio to the airdrome by the communications section of the rear echelon of Regimental Headquarters, which was located near Brigade Headquarters. This message was flashed from the airdrome to the observer in the air, who, in an incredibly short time, communicated it to the Regimental Commander by dropped message.

At the time this message was received, the Regimental Commander was on the march, some two miles from Brigade Headquarters.

The next exercise was designed to illustrate the attack of a reinforced brigade against an enemy who was occupying an organized defensive position. The enemy position was outlined by flags. The brigade commander assigned to the cavalry the mission of attacking the enemy's left flank and rear, in conjunction with the attack of the remainder of the brigade. The movement of the regiment to its initial position was made without incident. It moved from that location to a position from which it could launch a surprise attack against the enemy's left flank and rear. En route, it was delayed somewhat by the fact that columns of other arms were attempting to use the same narrow trails by which it was attempting to advance. A hasty reconnaissance of the terrain in the vicinity of the enemy's left flank showed that the regiment must make a dismounted attack. The two squadrons were now assigned zones of action and objectives. One troop was held as a mobile reserve. Led horses of the dismounted troops were held immobile. The machine gun troop, after an extended reconnaissance, which required considerable time on account of the denseness of the underbrush and the low relief of the terrain, occupied a position from which it could support the dismounted attack. In the meantime, the dismounted troops had begun to advance in their zones of action. The thicket through which this advance had to be made was so dense and the swampy areas, that had to be avoided, were so numerous, that these two advancing lines actually changed zones of action during the advance, and these had to be re-assigned, accordingly, by regimental headquarters. Communication between regimental and squadron headquarters and the troops was maintained by runners, when such communication actually existed. For long periods of time, higher commanders were in ignorance of the locations of their units due to the difficulties of maintaining communications in such close terrain. They had seen these units disappear into the brush, headed in proper directions and in compliance with their attack orders. Subsequent efforts to communicate with them by the prescribed axes of signal communications frequently failed.

In spite of these facts, the troops did reach their objective and launch a surprise attack against the left and rear of the position. Later, the mobile reserve was used to attack the enemy reserve in rear as it was moving to reinforce the threatened flank. The umpires ruled that the regiment had accomplished its mission.

The next maneuver was drawn to illustrate the advance of a



Prepared to Move Out for a Maneuver

reinforced brigade against the opposition that could be offered to it by a cavalry force; delaying action by the cavalry to a line where it must occupy a defensive position or abandon its mission; and a coordinated attack of this position by the reinforced brigade. At this point, those conducting the exercise were to furnish to both sides such information of other imaginary forces and such orders from high authority as would cause the reinforced brigade to withdraw to a defensive position, the opposing cavalry to harass it during its withdrawal.

To the reinforced brigade (Blue) was assigned one squadron of the 6th Cavalry (less one troop). This force then consisted of all the troops that were in Camp Jackson except the remainder of the 6th Cavalry and an airplane. The 6th Cavalry (less one squadron), with one airplane attached, was to represent the only Red force opposing the Blues during the delaying action phase of the exercise. During the later phases of this action, an imaginary Red Cavalry regiment (to be represented by flags) was to arrive and come under command of the Regimental Commander, 6th Cavalry. This exercise was to open with the two opposing forces separated from each other by some distance, no previous contact having been made by either side. War conditions were to be come operative at 9:00 A. M.

The Red commander planned to advance promptly to contact with the Blues, in accordance with such information as might be furnished by his air observer. Having obtained contact, he proposed to occupy successive delaying positions, in accordance with the developments of the situation. The Blue commander planned to begin his advance at 9:00 A. M., covering himself by an infantry advance guard.

To his cavalry, he assigned a reconnaissance mission. To his air observer, he issued instructions which required that all dropped messages be prepared in duplicate; that one copy of each such message be dropped at brigade headquarters, the other being dropped at the command post of the cavalry; and that brigade headquarters be kept informed of the location of the Blue Cavalry.

Under the conditions of the problem, the Blue Cavalry was not permitted to leave the initial point until 9:00 A. M. At that hour, it dispatched two reconnaissance patrols to cover the terrain on the flanks of the route of advance, and moved forward rapidly on that route, covered by a small advance guard. The point of the infantry advance guard moved out from the initial point at the same hour. Soon the cavalry point encountered the leading elements of the rapidly advancing Red Cavalry, but not until after a dropped message from the air had informed the Blue Cavalry commander of the imminence of contact. Marching hard on the heels of the Blue Cavalry, the point of the infantry advance guard now arrived and the advance guard relieved that portion of the cavalry which was engaged with Red Cavalry on the axis of movement. The Blue cavalry, less its reconnaissance patrols, now moved to the flank to continue its reconnaissance mission and to operate against the flank and rear of the Red delaying positions.

The Red cavalry, warned by its air and ground reconnaissance agencies of the approach of the Blue infantry, now occupied its first delaying position. It was dislodged from this position only after the full strength of the infantry advance guard, which consisted of a battalion of infantry and a battery of artillery, had been deployed against it. In the meantime, the Blue cavalry located the Red delaying position and furnished to the brigade commander detailed information of the Red strength and dispositions. It was prevented from operating against the flank of the Red cavalry by the fact that when the necessary reconnaissance patrols had been dispatched and the required messengers had been drawn from its initially depleted squads, it had only sufficient combat strength available properly to cover its one machine rifle platoon.

After occupying several other delaying positions and holding them until the Blue infantry advance guard had been deployed and launched in attacks against them, the Red cavalry reached its final position. Here it was reinforced by the imaginary Red cavalry regiment. The Red cavalry now occupied a defensive position and the reinforced brigade began its development for an attack.

Throughout the delaying action phase, the Blue cavalry had continued upon its reconnaissance mission. It had been unable, due to the employment of personnel in reconnaissance and messenger service, to act as more than a threat on the flanks of the various Red delaying positions. However, this threat had influenced considerably the length of time that the delaying positions were occupied by the Reds. Red squads, too, were initially depleted. Positions of considerable extent were occupied in order that real delays might be effected. This required so much of the available Red strength that no adequate force was left to guard the flanks effectively against the threatened attack of a highly mobile force. In conjunction with the air service, the Blue cavalry had kept the Blue brigade commander informed of the situation. During the development phase for the attack of the last delaying position, the commander of the Blue cavalry finally was able to assemble sufficient combat strength to act aggressively. But while moving to a position from which he could deliver an attack against the Red rear, in conjunction with the attack of the brigade, he found his further progress blocked by an impassable morass. In the meantime, the attack of the infantry brigade was launched and by dark, the situation had stabilized generally along the line which the Red cavalry was defending.

From this point the maneuver continued with a withdrawal during the night by the Blues and a change of position by the Red cavalry to the Blue flank, also during the night, in order to cover the advance and engagement of the Red infantry at that point. Both moves were executed by the time recall was sounded at 6:00 A. M. and the maneuvers were over.

The Maneuvers in Retrospect

The various exercises were carefully drawn and skillfully supervised. They gave to all those who participated in them, much valuable instruction. They were of especial value in that they gave the various branches and services, which were represented in the camp, opportunities to work with and against each other; to see the other fellow's problems at close hand; to judge of the powers and limitations of the branches and services when working on terrain which was in every sense the enemy of movement and vision; and to become acquainted with and enjoy association with the personnel of other branches.

The value of cavalry to the other arms in conducting their operations on terrain of the character heretofore described, was admirably illustrated. That the cavalry could move through the thick brush

with speed; conceal itself therein with ease; maneuver under cover so as to deliver surprise fire attacks at unexpected places and times; gather and transmit valuable information; and even deliver limited mounted attacks, was demonstrated daily. That it had great power as a delaying agency was conclusively shown on more than one occasion.

Although the deep sand which abounds on the Camp Jackson reservation did not appreciably retard the movement of the cavalry, as was the case with some of its sister branches and services, the swamps and the thick brush did present their problems with great regularity. Many patrol leaders, momentarily abandoning caution in the brush, paid the penalty in capture. Officers of high command, conducting personal reconnaissances, frequently found themselves in the presence of the enemy. One amusing incident of this occurred in the last maneuver. A young cavalry subaltern had been sent by his squadron commander to reconnoiter a trail. He had been gone but a few moments when he returned and said, "The Colonel (meaning the Commander of the opposing cavalry force) is right there in that clump of trees and has only an orderly with him." When this same officer led a squad into the brush a few moments later to capture his colonel, the bird had flown. Frequently, patrol leaders, venturing too close to or attempting to cross a low and swampy piece of ground had one or more of their men engulfed in a bog. In one maneuver, it required two hours for a troop to remove one of its number and his mount from a swamp.

The maneuvers again demonstrated the fact that the Radio Pack Set cannot be depended upon as a means of communication. Only under the most favorable circumstances and after the most elaborate and detailed prior arrangements could communication be established at all. The absence of wire communication of any kind in the regimen was felt seriously in these maneuvers, where close liason with infantry units over very moderate distances for more or less extended periods of time, became possible and desirable; where dismounted attacks in close terrain became the rule; and where many delaying and defensive positions had to be occupied. The presence of a modest amount of wire, in such circumstances, would have saved much horse flesh. The value of the mounted messenger as a sure means of communication did not need to be proven. That the airplane can be used as an all but sure means of communication was demonstrated daily.

From the very first maneuver, the Regimental Commander took great pains to see that the air observer assigned to the regiment understood his plans and had a working agreement with the regimental

communications section. Frequently he conferred personally with the pilot and observer before the exercise began. His efforts in this respect were amply repaid in the quality and the quantity of the work that the air service did for all cavalry units during the whole period of maneuvers. That the air service could assist the cavalry powerfully in its operations and that it could save it much time, labor, and horse flesh, was already known. That it can, by pre-arranged plans and through a thorough understanding of the purposes and needs of the Cavalry, work in the most intimate liaison with it, was shown daily.

These maneuvers were a test of the present cavalry organization. That this organization has many advantages is evident. That it has some disadvantages, the maneuvers demonstrated. A great defect in the two troop squadron was apparent when the regiment left Fort Oglethorpe. One troop had to be left behind. The regiment was minus one-fourth of its rifle and machine rifle strength. A squadron headquarters was needlessly superimposed upon a troop headquarters. During the maneuvers, this defect constantly stuck out like a sore thumb. Always there was this superior commander, without a command, a glorified troop commander in effect, issuing orders because he had become a simple channel of communication and always tending to take actual command of the troop in order to save time. And the same may be said of the two squadron regiment. Once a squadron was detached, as happened to the regiment throughout the maneuvers, the Regimental Commander could not do better than to command the remaining squadron, even though he did have to give orders to a machine gun troop besides. Of course the regimental overhead in such a case is entirely unwarranted. The strength of the platoon also came in for its share of criticism. Never was it possible during the maneuvers to get out three full squads in the platoon. Frequently, two full squads were not available. The great advantages that would accrue from the four squad platoon were daily evident. The platoon should consist of four squads in order that it may be of respectable combat strength for training and on service. A three troop squadron, in regiments serving with divisions and corps, would be more economical in commissioned personnel, would permit of the detachment of troops for reconnaissance without depriving squadron commanders of their commands, and would better serve the needs of the type of combat that cavalry must always employ if it makes maximum use of its mobility. And the same may be said of the regiment. With the present overhead, it could consist of three squadrons. Although it is well known that in war, troops are to be increased to four platoon and regiments to three squadrons, the probability that this may be

realized in any except a major war is slight indeed, when consideration is given to all the factors that enter into the situation. In the first place, it is more than probable that all cavalry units will be at less than peace strength when the emergency arises. If the cavalry is to be used to best advantage, it should be the first to arrive on the scene of action. When it arrives, its strength should be such that it can begin to function immediately. From the beginning, its regiments must be prepared to detach portions of their strength and still be able to operate effectively. So, also, must the detachments they make be able to do likewise. If the Camp Jackson maneuvers were any test of these essentials, it is dangerous for the cavalry to maintain its units at peace strength at all, and it is equally dangerous for it to place itself in the position of being forced to initiate active operations with a defective organization. For it is more than likely that units entering a campaign with the present organization would have to go through it under the same organizational handicap as did the participants in these maneuvers. And this for the following reasons. Should the emergency arise unexpectedly, and most of them do, regiments would enter the theatre of operations at less than peace strength. Their first replacements would have to be used to overcome this defect. In the meantime, they would have begun to incur their daily percentages of losses incident to service. Further replacements would have to be used to fill these and to bring existing units to war strength. Should the campaign develop into a strenuous one, the chances are small indeed that the flow of recruits would be such as would permit of the organization of a third squadron for each regiment, unless the emergency should be so serious as to bring about the passage of a Universal Service Act by Congress.

It must be understood that the above discussion is purely theoretical and that it is based solely on tactical considerations. The difficulties confronting those who must determine the distribution of the personnel available to the cavalry for its peace time activities and training, are fully realized. It is appreciated that practical considerations will not permit of even an approach to ideal conditions as regards peace time strength and organization. It is known that the present organization represents a compromise that is designed to maintain the greatest possible number of active regiments, from the personnel allotted to the Cavalry by law, in order that maximum command and training experiences may be had by all ranks and grades. It is believed that the present organization does function, in so far as these considerations are concerned, and that the desirability

of maintaining as many active regiments as possible cannot be successfully controverted.

The Return March

Breaking camp at about 3:00 P. M., on Sunday, the 20th, the regiment marched to New Brookland, where it bivouacked for the night.

As compared with the march to the east, this journey was all but entirely lacking in thrills. Most of the camp sites used on the outward march were occupied a second time. The animals constantly gave evidences of their locality bumps by the way they stepped out along the route and by the determined manner in which some of them tried to enter old camp sites which were not to be used on the homeward trip. This seems to have applied equally to horses and mules since the trains averaged nearly four miles per hour. It will be noted that no stop was made at Ninety-Six. Some rain fell, as was to be expected. The days were cool and some of the nights were quite cold. Many fires lighted the bivouac areas at night. The same high morale which had been so noticeable during the trip to Camp Jackson and during the maneuvers, continued to prevail during the return march. All but nine animals of the regimental mount completed the journey with the regiment and this in spite of the strenuous usage they had had during the preceding nine weeks. On the return trip, as on the march to Camp Jackson, there were neither absences nor "lates" and there was no sickness.

SPORTS

Indoor Polo in New England

By CAPTAIN P. S. WAINWRIGHT, 122d Cavalry

A SUCCESSFUL indoor polo season was brought to a close at the Cavalry Armory, West Hartford, Conn., on February 28th and March 1st when the New England Elimination Tournament was held to determine the teams from this section which are eligible to compete in the National Indoor Tournament to be held in New York City the latter part of March.

The first night's program resulted in the defeat of Troop A by Troop B, 122d Cavalry, for the first time in four years, by a score of 14 to 8. On the second night the Yale Officers defeated a Class D team selected from the local squad, and known as the Hartford Cavalry Whites, and the Yale Junior Varsity out-scored the Farmington Valley trio in Class C in a close game.

The tournament was officially set in motion by Adjutant General William F. Ladd, who threw the first ball to the players.

Three teams have represented the Hartford Cavalry Polo Association in a schedule of thirteen games which started on December 7th. They are the teams of Troops A and B, 122d Cavalry, C. N. G., and the Farmington Valley trio. They have met combinations consisting of the Yale Officers; 7th Infantry, N. Y. N. G.; Fort Hamilton Officers, Brooklyn, N. Y.; Troop E, 122d Cavalry, R. I. N. G. of Providence; Yale Junior Varsity; Wenonah Military Academy; Squadron A, N. Y. N. G., Class C; Pennsylvania Military College Junior Varsity; and the West Point Officers.

The popularity of indoor polo among the public of Hartford has shown a remarkable growth each year since the formation of the local Association five years ago, and each Saturday night finds the Armory crowded with cheering and excited fans. General and Mrs. Ladd have become enthusiastic followers of the game, and it is a rare occasion which does not find them occupying their box with a party of friends. The inauguration of the game here was largely due to the efforts of Captain T. E. Voight, U. S. A., then on duty with the 316th Cavalry.

Much of the success of the past season has been due to the able coaching of Major H. C. Fellows, Cavalry, D. O. L., Inspector with the

122d Cavalry, who has come weekly from New Haven for the practice play on Wednesday and Thursday nights.

Fort Bliss Monthly Horse Matinees

ALTHOUGH the annual horse shows at Fort Bliss have brought forth many promising four-foot jumpers, the "Olympic prospects" have been few and far between. With a view to developing this class of mounts, monthly "Horse Matinees", are now being held under the direction of Brigadier General Walter C. Short.

Up to the present, two Matinees have been held, the first, in January, in the South Riding Hall, and the second, in February, outdoors in Howze Stadium. In the former, three military classes were shown: a three-foot eight-inch remount jumper class; a three-foot ten-inch novice jumper class; and a four-foot six-inch open jumper class. In the latter, these classes were repeated and a charger class, stressing schooling, added. For the March Matinee, a four-foot nine-inch class has been scheduled.

As the Matinees are not intended to be Horse Shows in any sense of the word, but rather, tests of progress in horsemanship, no cups are awarded to individuals. A non-permanent trophy is awarded, however, to the regiment attaining the highest score. In order to add social interest to the Matinees a ladies' or children's class is added each month to the program, and the main event is followed by a tea-dance at the officers' club. So far, both the Matinees and the teas have been enthusiastically attended.



TOPICS OF THE DAY

Major General W. C. Rivers Retires

AFTER an army career extending from Indian warfare days through the major combats of the World War, Major General William C. Rivers was retired for age on January 11, 1930. His range of experience in the service has rarely been equalled, comprising as it does forty-seven years active duty.

Graduating from the Military Academy in 1887 at the age of twenty-one, he reported for duty to the 1st Cavalry at Camp Sheridan, Wyoming, in time to take part in the field service of that regiment incident to the Ghost Dance troubles among the Indians in 1890-91. Duty at West Point and with the 3d Cavalry in Arizona, then officer in charge of the White Mountain Apaches filled his service until the Spanish-American War. Rejoining the 1st Cavalry, he saw service in Cuba. After a period of detached service in the United States, he went to the Philippines in 1903, there first serving with the Military Information Division, then becoming successively Adjutant General, Inspector General and Assistant Chief of Philippine Constabulary. Thereafter, from 1912 to 1914, he commanded the Constabulary, Districts of Mindanao and Zamboaga, and was Chief of Philippine Constabulary, January to March, 1914. After serving with the 2d Cavalry as Colonel until June, 1917, he joined the 18th Cavalry which was converted into the 76th Field Artillery. Arriving with this regiment in France in May, 1918, it completed its training just in time to take part with its division, the Third, in stemming the German advance at the Marne. The gallant part this regiment took in that famous battle under his command will ever be a source of pride to cavalymen. Participating in the San Mihiel and Meuse-Argonne offensives, General Rivers was promoted to Brigadier General in October, 1918, and was in command of the 5th Artillery Brigade in the Thiucourt-Pont-a-Mousson Sector at the Armistice.

On returning to the United States, General Rivers was successively in command of the Brownsville District, the 12th Cavalry at Columbus, N. M., the 3d Cavalry at Fort Myer until April, 1923. From that date he was detailed in the Inspector General's Department until 1927, when he was appointed The Inspector General, which post he held until the time of his retirement.

With campaign badges ranging from the Indian Campaigns through the World War, General Rivers was awarded the French Croix de Guerre with star and the Distinguished Service Medal. The citation for the latter is as follows: "For exceptionally meritorious and distinguished services, as commander of the 76th Field Artillery, he was a material factor in stemming the tide of the enemy's advance during the second battle of the Marne. Subsequently, upon being promoted to the grade of brigadier general he displayed marked leadership and high military attainments in command of the 5th Field Artillery Brigade in the Meuse-Argonne Offensive."

The good wishes of the Cavalry Service go with General Rivers on his retirement and congratulations on a proud record of service.

Troop E, 3d Cavalry Wins Goodrich Trophy

OFFICIALLY declared winner of the Goodrich Trophy test, in which each Regular regiment entered a troop, Troop E, 3d Cavalry was awarded the trophy at an exhibition ride at Fort Myer, Virginia, on March 7, 1930. The presentation was made by Colonel



The Goodrich Trophy

Guy V. Henry, commanding the 3d Cavalry. Major General Hugh A. Drumm, The Inspector General, and a number of distinguished guests witnessed the ceremony. Following the presentation, the troop gave an exhibition drill.

The officers and non-commissioned officers of the troop participating in the test were as follows: Capt James M. Shelton, Commanding, 1st Lt. D. W. Sawtelle, 1st Lt. G. B. Hudson, 1st Sgt. Lawrence, Sergeants York, O'Brien, O'Connell, Mylor and Field, Corporals Quaticquesy, Miller, Williams, Mulgannon, Mann, Reeser, Rogaleskie, Coughlin and Wright.

The Cavalry Rifle Team

LIEUTENANT George A. Rehm has been selected by the Chief of Cavalry to organize the 1930 Cavalry Rifle Team. As now planned, the results of regimental try-outs are to be in the office of the Chief of Cavalry by April 10. About fifty of the winners in the regimental try-outs will be selected for the final competitions to determine the representatives of the Cavalry. This final try-out will be held at Camp Perry. No coach has yet been selected, but will probably be named during the final try-outs at Camp Perry.

Acknowledgment

THE JOURNAL is again indebted to Major Norman E. Fiske, Cavalry, for his interest in obtaining material. The article on the activities of the Swedish Cavalry School and the excellent photographs accompanying it were obtained by him on his recent visit to Stroms-holm, following his completion of the course at the Italian Cavalry School at Tor Di Quinto.

Minutes of the Annual Meeting of the Cavalry Association

Washington, D. C., January 31, 1930.

THE meeting was held at the Army and Navy Club, Washington, D. C., this date, and was called to order at 8:30 P. M. by the Vice-President, the President being absent from Washington. Thirty-six members were present in person and 183 by proxy, 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, 1929.

The annual report of the Secretary-Treasurer-Editor was read as follows:

Washington, D. C., January 31, 1930.

To: The United States Cavalry Association
Gentlemen:

There is submitted herewith, as required by the Constitution, the financial statement for the year ending December 31, 1929, and report of the activities of the Association for the same period.

**Financial Statement of the United States Cavalry Association
for the Year Ending December 31, 1929**

Receipts

Advertising	\$ 4023.97
Book Department	4428.83
Cavalry Journal	4450.03
Interest	642.39
Rent	420.00
Telephone	79.98
Saddle Department	1474.40
Securities	3000.00
Postage, Stationery and Incidentals89
Cash on hand, January 1, 1929	1886.48
Total	\$2040.57

Expenditures

Advertising	\$ 263.40
Book Department	3690.23
Cavalry Journal	4432.00
Rent	1080.00
Telephone	142.17
Saddle Department	1018.23
Securities	2942.23
Salaries	2555.00
Trophies	485.17
Postage, Stationery and Incidentals	542.28
Cash on hand, December 31, 1929	3255.96
Total	\$2040.57

Assets

Cash in bank, December 31, 1929	\$ 3255.96
Two Real Estate Notes of \$1000 each	2000.00
Interest accrued on above	50.00
Two Baltimore and Ohio Railway bonds @86	1720.00
Interest accrued on above	40.00
Two Rio Grande Western Railway bonds @82.75	1655.00
Interest accrued on above	20.00
Two Kentucky Utilities Co. bonds @95	1900.00
Interest accrued on above	41.66
One North Carolina Gas Co. bond @93	930.00
Interest accrued on above	10.00
One Foltis-Fischer bond @97	970.00
Interest on above	32.50
Two Consolidated Gas Utilities Co. bonds @86	1720.00

Interest accrued on above	10.83
One Professional Arts Bldg. bond @95.50	955.00
Interest accrued on above	10.00
Two Theatre Realty bonds @90	1800.00
Interest accrued on above	40.00
One Atlantic Gas Co. note @96	960.00
Interest accrued on above	30.00
Interest due on Trust Fund Savings Bank	73.97
Stock on hand, books	547.59
Equity in consignment saddlery a/c import tax paid	165.39
Office equipment and supplies	331.55
Credit at Postoffice, Baltimore	32.31
Accounts Receivable { Ledger	2275.82
F. A. Assn. Rent and Telephone	47.54
Service Advertising, unpaid ads	1321.23
Credit with National Service Publishing Co.	12.66
Petty Cash	45.71

Total \$23004.72

Liabilities

Ledger Accounts	\$ 148.75
Telephone, November and December	27.67
Bills Payable { Hermes (Exchange at \$.0393)	223.22
Salary	75.00
Due Customers on Unfilled Orders	45.75
Net Value, December 31, 1929	22484.33

Total \$23004.72

Washington, January 29, 1930.

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, 1929, 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.

GEORGE GRUNERT

Lt. Col., Cavalry (G. S. C.)

W. C. CHRISTY

Major, Cavalry (G. S. C.)

GUY W. CHIPMAN

Major, Cavalry.

Net Assets

The net assets of the Association on December 31, 1928, as presented in the last annual report were \$20,333.72. The present net assets, namely, \$22,484.33, therefore show a gain during the year of \$2,150.61. It will be noted that of the net assets, \$18,395.60 are represented by investments, accrued interest, cash deposits and cash.

Accounts receivable amount to a total of \$3,644.59. Of this amount it is estimated that probably \$500.00, mostly amounts due on 1928 advertising, will prove uncollectable, thereby cutting down the actual net gain in value during the year to about \$1,600.00. It will be seen from this that the Association is operating at a profit.

Investments

The Executive Committee, at its meeting, January 31, 1929, authorized the Secretary-Treasurer to make such changes in the list of securities held by the Association as appeared advantageous, under the advice and recommendation of General F. W. Coe, Retired, of Brooke, Stokes & Co. In March a re-investment was made following the advice of General Coe which resulted in increasing the yield of invested money approximately 25%. The list as given in the above financial statement is at market value December 31, 1929, and shows a depreciation over the purchase price in March of \$473.74 or an average loss of 3.13% for the entire list. The average loss of thirty high grade rails, utilities and industrials during 1929, as reported by the *Wall Street Journal*, was 3.73%. From this it will be seen that our bonds suffered less than the average depreciation. The general consensus of opinion among investment bankers is that an improved bond market may be expected in 1930. The decline in value of the bonds represented by the \$473.75 above mentioned and discounted in the statement of assets may therefore be considered temporary.

Membership and Subscriptions

The following is an analysis of the Association's membership and subscription list:

Regular Cavalry Officers.....	846
National Guard Cavalry Officers.....	222
Reserve Cavalry Officers.....	324
Other Active (Retired Cavalry and General Officers).....	75
Associate Members (Other Branches, Non-Commissioned Officers, etc.).....	35
Honorary Members	3
Life Members	3
Subscribers	330
Exchange, Advertisers, Publicity.....	128
Total	1966

The above figures show 84.6% of Regular Officers, 27.7% of National Guard Officers and 8.8% of Reserve Officers members of the Association. This is a slight gain in Regular and National Guard percentage and a loss in Reserve Officers of 2%, with a total decrease in

membership on December 31 of thirty members. Delay of members in renewing dues makes it difficult to give exact figures on membership, since above figures are for paid members only. An effort is being made to have all members signify their desire to become continuous members; that is, to authorize continuance of membership until they express their desire to be discontinued. This allows us, under Postal Regulations, to continue sending the JOURNAL and to maintain members on the rolls even though they allow their dues temporarily to lapse. It is expected by this method to eliminate the quarterly falling off of membership which has to be regained through circularization.

From the cash statement it will be seen that the dues and subscriptions practically equal the actual expense of publishing the JOURNAL. The other departments are depended upon to support the other activities of the Association and the overhead.

Cavalry Journal

The principal activity of the Association is the publishing of the JOURNAL. Through the past year it has been maintained at a standard size of 160 pages. The policy has been to put surplus earnings into the JOURNAL, trophies, etc., rather than to try to make large clear annual profits. Thus the expense of publishing the JOURNAL in 1929 was \$4,432.00 against \$3,198.01, in 1928. The use of more illustrations and the payment of author's fees at a rate of \$2.00 maximum per page, as authorized by the Executive Committee at the last meeting, it is hoped, have justified the increased cost.

The editor wishes to express appreciation of the efforts of Major Norman E. Fiske and Major R. W. Strong in obtaining and translating the material for the Italian and French Cavalry members of the JOURNAL published during the year. The material could not have been obtained other than through their enthusiastic and energetic efforts.

Beginning with the January JOURNAL, a new department has been instituted, with the heading "Progress and Discussion." It is the intention to make this department a medium for free discussion by members of matters of current interest and to keep readers informed of current developments in either equipment or methods. It is hoped that members will cooperate by contributing ideas, suggestions or criticisms which will be useful to other members of the service. It is felt that many officers have valuable ideas or methods which they hesitate to embody in a formal article for publication, yet which would be of general interest if communicated informally in this section.

Business Departments

As pointed out above, the dues and subscriptions defray the expense of printing the JOURNAL. Other income is derived from the Advertising, Book Department, Saddle Department and interest from invested funds. The advertising has brought an increased income during the year. Under the present arrangement Service Advertising, a New York firm, handles our advertising, in common with the other service journals. Advertising is sold strictly on the basis of the value of the publication as a medium of reaching individual service readers.

The Book Department contributes a profit from the sale of books and magazines. This department shows a decrease in profit for the past year. There was a noticeable shrinkage in the usual Holiday book business, possibly due to general financial conditions at the time.

The Saddle Department shows an increased profit. The Association makes a very small margin on goods sold, due to the present high tariff and increased value of the franc, since all equipment sold is manufactured by Hermes in Saumur France.

Other Departments

The profits from the above mentioned-departments support the overhead of rent, salaries, telephone and trophies. In accord with the policy of using any increased profits in current disbursements for promoting the objects of the Association, a total of \$485.17 was expended for trophies during the year as against \$296.60 last year. The following trophies were donated:

For special 22-calibre rifle for rifle team, \$65.00; Transportation of Goodrich Trophy, \$6.94; Trophy for Fourth Cavalry Polo Association, \$10.00; Secretary, International Equestrian Federation, membership of Association in Federation, \$19.85; Expenses, Rifle Team, \$75.00; Trophy, West Point Horse Show, \$50.00; Medals for Rifle Team, \$134.50; Trophy for best all-around non-commissioned officer of 1929 Class at Fort Riley, \$22.50; U. S. Army Athletic Association, \$25.00; Cup for El Paso Horse Show, \$98.88.

Other Activities

The Association acts as custodian of the fund donated for the Leadership Test for Small Units. \$4190.68 have to date been donated, of which \$3,000.00 have been disbursed for the three annual tests, leaving on hand \$1,190.68 deposited in the Savings Bank.

The Association will hereafter send monthly notification to Cavalry Officers in Washington of officers sick in hospital at Walter Reed.

Suggestions for other services which the Association could legitimately render members are invited.

Upon motion the report of the Secretary-Treasurer-Editor was accepted.

The following were unanimously elected to the office indicated, there being no other nominations:

<i>President:</i>	MAJOR GENERAL HERBERT B. CROSBY
<i>Vice-President:</i>	COLONEL GUY V. HENRY
<i>Executive Council:</i>	COLONEL LEON B. KROMER, <i>Cavalry</i>
	COLONEL W. I. FORBES, <i>305th Cavalry</i>
	COLONEL HOBART B. BROWN, <i>302d Cavalry</i>
	COLONEL GEORGE B. COMLY, <i>Cavalry</i>
	LIEUT.-COL. GEORGE GRUNERT, <i>Cavalry</i>
	LIEUT.-COL. JOHN HERR, <i>Cavalry</i>
	LIEUT.-COL. J. W. CONVERSE, <i>103d Cavalry</i>
	LIEUT.-COL. A. W. HOLDERNESS, <i>Cavalry</i>
	LIEUT.-COL. J. J. O'HARA, <i>Cavalry</i>

Following the election of officers, a discussion was held of the advisability of combining with other service journals in the future.

There being no further business, the meeting adjourned at 9:15 P. M.

OLIVER L. HAINES, *Major, Cavalry, Secretary.*

PROGRESS AND DISCUSSION

This section of the JOURNAL has been instituted for the purpose of recording the state of development of various items of material in which the Cavalry is particularly interested, progress in technique or tactics and also to encourage discussion of matters of general professional interest to cavalry officers. Suggestions concerning new methods developed and discussions or constructive criticisms of present methods, equipment, etc., are invited. It is believed that there are many practical ideas and improvements which officers are using in their organizations which may be of benefit to others in solving similar problems. If you have an idea or suggestion along the lines indicated, send it in. It will be welcomed.

Some Machine Rifle Suggestions

CAPTAIN A. G. OLSEN, 12th Cavalry

As he rides the sun-baked trails along the dreary Rio Grand and gazes at the vast expanses of mesquite and cactus that cover the landscape or at similar stretches of milder vegetation found elsewhere, the thought will frequently strike the cavalry officer as to how he could make use of his machine rifles under such conditions of terrain. Another thought may follow as to how they could best be employed as anti-aircraft weapons. He has seen or at least heard of various schemes but all seem to be more or less awkward and necessitate loading down the packs with additional equipment for which no provision had been made in the original issue. Pondering over these problems while leading the troop through the chaparral back of Fort Ringgold, one of those brilliant ideas that occasionally come to even the most wooden of us came to me. The scheme seemed as simple as falling off the proverbial log. Briefly it amounted to this: since the gunner could not see to fire lying down and since the weight of the weapon made any other position impracticable, especially in anti-aircraft fire, why not let the assistant gunner hold the bloomin' thing while the gunner concerned himself only with pulling the trigger? We had with us some loaded magazines so we decided to try it out right then and there to convince ourselves that the notion was feasible.



Anti-aircraft Firing Position

Using Cover

It seemed to work all right and the assistant seemed to suffer no discomfort other than a mental one just before the gunner cut loose.

The scheme was developed and tried out in varied situations which required fire on ground targets and on aerial targets. In marching fire the weapon may be employed to deliver a sheaf of accurately aimed shots while keeping up with the assault echelon. As an anti-aircraft weapon it has an advantage over the machine gun in that it may be put into action so much quicker and also in the flexibility of the trajectory.

The following descriptions of the methods as we developed them are offered as suggestions. Perhaps some one else may find that a few modifications would improve upon them. The snapshots illustrate the weapon in action while the gun crew utilizes the cover available.

1. Being mounted in any formation, to engage hostile air-craft, the command is given: AGAINST AIRCRAFT, FIGHT ON FOOT. The platoon (squad) halts. Gunners and assistant gunners dismount at once, each gunner runs to unpack his machine rifle while the assistant turns over to the horse holder the gunner's and his own horses. The gunner, inserting a magazine, quickly selects a firing position. The assistant, without the extra ammunition box, joins the gunner and takes his post facing him. Grasping in each hand one leg of the bipod,



Platoon in Action

he raises the rifle over his head. The led horses are immediately taken to cover or dispersed by squads or half squads according to the instructions of the leader. Firing takes place upon command or signal. The assistant gunner assists in reloading by withdrawing from his own and the gunner's belts the magazines as required and hands them to the gunner to insert in the machine rifle.

2. Being in any mounted formation, to engage in immediate action against hostile aircraft, the command is given: 1. AGAINST AIRCRAFT, FIGHT ON FOOT, 2. FIRE AT WILL, the horses of the gunners and the assistants are habitually turned loose and firing is begun as soon as the gun is ready. Loose horses are collected by the horse holders and men not actually required in the service of the machine rifle. Led horses are disposed of as in the foregoing paragraph.

Each gunner and assistant gunner carries, in the first pocket on the right of his belt, forty rounds of ammunition in two magazines reserved for use against aircraft. Fifty per cent of the ammunition should be tracer.

The immediate delivery of fire upon low-flying and quickly moving targets being of paramount importance, the exact alignment of guns is neither practical nor desirable. However, in selecting his firing position the gunner should make use of the cover offered in his immediate vicinity to hide his position from the air. Should time permit the leader should place his guns so that the approaching situation may be met in the most efficient manner.

To employ this method in marching fire, it is modified by causing the assistant gunner to face to the front. He supports the machine rifle over his right shoulder, taking care that the forearm of the piece is well forward and that his cheek is held away from the hot rifle barrel.



Marching Fire

For use against ground troops while firing from a fixed position, the assistant may be posted as in anti-aircraft action. The gunner and assistant by standing, crouching, or sitting accommodate themselves to the cover.

To reassure the sceptical, the weapon has been fired in the above described positions and found to be both practical and safe.

Notes From The Cavalry Board

THE Thompson sub-machine gun, Navy Model 1928, has been modified and will be tested again by the Cavalry Board in connection with maneuvers to be held in May and June at Fort Riley by Troop A, 2d Armored Car Squadron. The tests will be for the purpose of determining the suitability of this weapon for use in close defense of armored cars and also the advisability of issuing a certain number to line troops for use in patrols and outposts.

A redistribution of machine gun pack loads is under consideration with a view to placing the picks and shovels on the gun loads instead of on the instrument pack as now carried.

Experiments being carried out on modification of the 37-mm. gun mount by the Cavalry Board indicate that a much simpler and smaller mount is practicable which will obviate the difficulties caused by the present trial which makes a difficult load due to its length.

Experiments are contemplated this spring on a new type of aerial target. By use of a long, suspended cable it is expected to operate the aerial target at the actual speed of a plane in flight, which will allow data to be obtained on the efficiency of ground fire of the various weapons used by the Cavalry. It is expected that by means of this special equipment more nearly actual conditions can be simulated than

heretofore possible. The results of these tests, which will be carried out by the Cavalry School, are expected to be of great value in definitely indicating the results which may be expected from ground fire against aircraft.

The saddle, training, model 1926, manufactured at the Jeffersonville Depot, is now being tested by the Cavalry Board. It is expected that this saddle will prove satisfactory. It is of the Saumur type. None are for general issue or sale as yet.

The new radio pack set, SCR-163, is now undergoing test by the Cavalry Board. Six of this type have been manufactured, three being issued to the Board and three to the 1st Cavalry Division for test. The Cavalry Division has completed its test and reports received on the set to date are very favorable. This is a two-horse pack, high frequency, short wave set, with a sure range of forty miles. The generator is a small and very easily operated machine, capable of being turned with one hand. Communication has been had with it over 200 miles in Texas, although such performance may be due to local conditions. It is known that short waves leave the earth at certain distances from the set and travel for a period high in the air, creating dead spaces in which reception is poor or impossible. The exact distance from the set that the waves leave the vicinity of the earth is not as yet definitely known and probably varies at different localities and under different atmospheric conditions.

Training Regulations 425-120, Pack Transportation, is now being prepared in original draft by Colonel A. B. Phillips, Cavalry. Colonel Phillips is detailed with the Quartermaster Corps at Jeffersonville Depot, Indiana.

The New Cavalry Field Manual

THE Cavalry Field Manual (Tentative) has been issued to regiments of the Regular Army, National Guard and Reserve. This combines in one volume all the material now in training regulations which should be carried for ready reference by officers and non-commissioned officers. When approved in its final form it will do away with most of the Cavalry training regulations. Part I is devoted to Characteristics, Organization and Weapons. Part II covers Training, Drill and Combat formations, Ceremonies, Inspections. Part III is devoted to Tactical Employment. In form the volume is four and three-eighths by five and a half inches, with 441 pages of text. The prefatory note states: "The Cavalry Field Manual in tentative form is published for the use and guidance of the Cavalry pending approval and publication by the War Department. Comments and constructive

criticism are invited and should be promptly submitted to the Adjutant General." Inasmuch as some changes in the drill are made, and a great deal of material has been included in this volume, the careful scrutiny by the service will doubtless bring to light numerous desirable changes before the text is approved in final form. Now is the time to discover such parts as can be improved and the responsibility is in great part now on the officers serving with organizations to study the manual carefully and make constructive suggestions and criticisms. It will in the future be the Cavalryman's Bible; all the experience of the service should contribute to bring it as near perfection as possible.

Copies of the Cavalry Field Service Manual can be obtained by individual officers from the Book Department of the Cavalry School, Fort Riley, Kansas.

New Experimental Armored Cars

ELEVEN new experimental armored car vehicles are now under construction by the Ordnance and Quartermaster departments in collaboration and will be completed by the end of the present fiscal year. These will be turned over to Troop A, 2d Armored Car Squadron for test. Five of these vehicles are on a small and extremely light commercial chassis protected by a minimum of armor. They have no resemblance to the present light type, in that they are completely enclosed. Six of the new cars will be on the new three-quarter ton truck chassis developed by the Quartermaster Corps, having a four-wheel drive, ninety-five-horsepower, air-cooled engine, with speed up to sixty-five miles per hour on the road and able to make a ten per cent grade in high gear. Two of these vehicles will be equipped with dual steering for movement in either direction. From conclusions drawn from the tests of these vehicles, together with results of the service tests of the vehicles now in the hands of Troop A, 1st Armored Car Squadron at Fort Bliss, it is hoped to crystallize thought more definitely as to what type of wheeled armored car should be adopted for the Cavalry. It is not, however, to be expected, in this day of rapid change in mechanical materiel, that any final standardization can be reached.

ORGANIZATION ACTIVITIES

1st Cavalry Notes

ON December 8, 1929, General Abundio Gomez, Commanding the 5th Military District of Mexico, with Headquarters at Chihuahua, accompanied by Brigadier General Gil and ten other staff officers, visited Fort D. A. Russell. These visitors from the Army of Mexico were received at the Commanding Officer's home, given lunch at the 1st Cavalry Club, and entertained during the afternoon by an exhibition polo game.

On departing General Gomez invited Colonel Fair, his polo players and all the officers and ladies of the 1st Cavalry to visit him. Later a formal invitation was extended to the 1st Cavalry by General Gomez to visit Chihuahua February 22d to 26th. He stated that his purpose was to have the Mexican Cavalry become better acquainted with the Cavalry of the United States, and to cultivate good friendship between the Armies of the two republics. In addition he desired to have a three-game tournament between the 1st Cavalry Polo team and his team from the 20th Cavalry of Mexico.

Permission was obtained from the War Department to accept General Gomez's courteous invitation.

On the morning of February 22d, the Commanding Officer, 1st Cavalry, accompanied by eight ladies, twelve officers and ten enlisted men of the regiment, and twenty ponies, crossed the Rio Grande at Presidio. Thirty of the representative citizens of the Big Bend, many of them accompanied by their wives, went with the 1st Cavalry as the guests of the Chihuahua Chamber of Commerce. At the Border the northern visitors were received by representatives of the military forces and of the civil government of Mexico. Arriving at Chihuahua, three thousand people met the train carrying the Big Bend visitors. A Mexican Band of sixty-seven pieces, gave a beautiful rendition of the Star Spangled Banner, followed by the Mexican National Anthem.

General Gomez and a staff of twenty officers, representing the military forces of Mexico; Governor Almada; General Vernal, representing the Mexican Secretary of War; and the President of the Chihuahua Chamber of Commerce received the visitors, and after welcoming them to the city, escorted them in automobiles to hotels.

Not long after their arrival, this radiogram was received by Colonel Fair from the Mexican Secretary of War:

"Gentlemen:

"You have done us the honor to accept the invitation made by General Gomez to visit Chihuahua City as the guests of the Fifth Jefatura de Operacions for a friendly fight on our Polo grounds against our Cavalrymen. We do feel very happy to have you here with us on Mexican soil where you are very welcome. During your visit, we contemplate to show you our appreciation for that great American people of yours, we all admire, and specially for the glorious institution to which you belong.

"In behalf of the Mexican Army, of General Gomez and in my own, let me wish you a pleasant and happy stay in Chihuahua City, and when you go back to the States, please carry our friendly greetings and salutations to your brother officers, as well as our best and sincere wishes for the American happiness and prosperity. Amaro."

Sunday morning all visitors were conducted by General Gomez and his Staff to the National Palace where they were received by Governor Almada. Next they were received by the Mayor of Chihuahua who gave the guests the freedom of his city. Last of the important official visits was made by all, to the offices and headquarters of General Gomez. Refreshments were served at each place visited that morning. The visiting Americans received full assurance of the friendship and good feelings toward them from the Army and people of Mexico. Late that afternoon the party visited many places of historical interest, and attended the Y. M. C. A. athletic events. That night the great fiesta, given for charity, took place, and all visitors were there. Dancing, music, and special performances in beautiful and striking costumes featured the "Gran Noche Mexicana." The last guests departed for their hotels at daybreak.

On Monday, General Gomez entertained the visitors by giving an exhibition drill by a company of his 33d Infantry Battalion. That afternoon all guests and thousands of Mexicans were entertained at the bull ring, where there was a fine exhibition of riding and roping.

After the third polo game on Tuesday, the visitors repaired to one of the large theaters where, before a crowded house and all high officials, the Mexican Polo Team was awarded a handsome silver loving cup. Here there were many expressions of good will and friendship. It was evident that the Army of Mexico and the people of Chihuahua are sincerely friendly to the United States. The last night of the visit was made memorable by the Grand Ball in the reception room of the Palace.

The Mexican Polo Team defeated the 1st Cavalry Team in all

three games. Their horses far outclassed ours. This Mexican Polo Team would make a good showing in any high goal tournament. They have a fairly good bare ground field at Chihuahua. The same team played all three games against us. It was composed of the following officers:

- No. 1. Captain Juan Garcia
- No. 2. Captain Jose Angeles
- No. 3. Captain Florentino Comacho
- No. 4. Major Jose Kennedy (Captain of the Team).

Keen interest in mounted sports continues. Horse shows once a month, with generous programs of jumping are well attended by towns-people as well as members of the garrison. A special feature of each show is an exhibition class of Olympic Prospects. In the last show these jumpers were put over Course "A" without wings.

Flat racing, however, is the most popular sport with the spectators. The monthly Race Meeting draws enthusiastic followers of the "Sport of Kings" from the surrounding country and Race Day is a gala occasion for the post. The ninety-seventh anniversary of the Regiment was the occasion of the last meeting.

Since January first, the eight horses of the 1st Cavalry constituting the Olympic Prospects have received daily work in schooling, jumping across country. These horses, *Hazel Gloarning*, Dressage or three-day event; *Dark Rosaleen* and *Bloomfield*, three-day event; *Kitty*, *Columbine*, *Ansonia*, *Wing*, *Concho*, *Oscar* and *Tyrol* in training for the Prix Des Nations are beginning to show the results of training and regular work. Captain Frank Nelson, who has these horses and their riders in charge, is very optimistic about the chances of these prospects and expects to find several of these horses in the try-outs a year hence.

Major Horace T. Aplington has departed on leave of absence prior to a permanent change of station with the organized reserves. New York City; Major Philip H. Sherwood has recently been assigned to and joined the regiment; 2nd Lieut. Samuel L. Meyers has been relieved from detail in the Air Corps and has joined; 2nd Lieut. Paul W. Shumate has been relieved from detail in the Air Corps but has not yet joined; Captain Harrison S. Beecher departed on February 28th for the Army and Navy General Hospital for observation and treatment; 2nd Lieut. Charles R. Pinkerton has been detailed in the Ordnance Department, effective June 15, 1930.

2d Cavalry Notes

THE Regiment has been engaged in the usual garrison duties. In addition the small bore rifle practice competition is being carried

on. Troop "B" and the Second Squadron each sponsored a successful horse show during February.

Orders have been received announcing the promotion of 1st Lieut. Garnett H. Wilson, to the grade of Captain. Lieutenant and Mrs. Harrison W. Davison, lost from the regiment last September through his detail to the Air Corps training school, have rejoined the regiment. Lieut. Basil G. Thayer, 26th Cavalry, has been assigned to the Second and is expected to arrive in time to assist in the summer polo activities of the Regiment. Since the last issue of the Journal, Lieutenants George W. Bailey, Jr., and Ralph M. Neal left for their new station in the Philippines.

3d Cavalry Notes

THE 3d Cavalry (less 1st Squadron) has been engaged with the winter exhibition rides since the Christmas holidays. The rides and tea dansants now are considered outstanding events in the Washington social season, being attended by members of the Army, Navy, Marine Corps, members of Congress and the Diplomatic Corps. Mrs. Hoover and a number of her guests were interested spectators at one of the rides. Mrs. Summerall is in frequent attendance at the rides and at the tea dansants which are given immediately following the rides. A number of new events have been perfected so that it is now possible to stage a different program each week. The rides have been so enthusiastically received and the demand for tickets so great that it is now necessary to reserve seats at least ten days prior to the exhibitions.

Rehearsals have already been started in preparation for the annual Society Circus which is the culmination of the riding hall season. Over forty of Washington's debutantes and thirty children are busily engaged in practice. They will participate in an historic pageant, the tandem drill, the musical quadrille and the hunt ride. The remaining acts will be staged by the personnel of Fort Myer.

The regiment participated in the Washington's Birthday celebration held at Alexandria, Virginia, on February 22, 1930. The parade was reviewed by President Hoover, Secretary Hurley and Governor Pollard of Virginia. Major General Fred W. Sladen, Commanding the 3d Corps Area, was grand marshal of the parade. He was assisted by the Corps Area staff and the staff of the 3d Cavalry.

Troop E, 3d Cavalry, has been awarded the Goodrich Trophy for the year 1929. The troop staged a complete ride for the members of the garrison and their guests on Thursday, February 27th. It consisted of a troop entrance, gymnastic ride, platoon jumping, officers and non-

commissioned officers jumping, a fire jump demonstration, musical drill and exhibition of high jumping by Sergeant York and his horse *Levi*. Following the exhibition the Commanding Officer and the members of the Goodrich Trophy board were guests of the troop at dinner.

Troop F, 3d Cavalry, held a circus and dance for the members of the garrison and the guests of the enlisted personnel. In addition to the usual riding hall stunts the troop staged a camp scene, clown stunts and a minstrel act. Following the circus all adjourned to the Service Club where the dance was held and refreshments served.

4th Cavalry Notes

ON Friday, February 28, all remounts, forty-seven in number, were turned for duty with troops. These remounts have been undergoing training for several weeks, under a detachment especially detailed for the work, commanded by 1st Lieut. C. W. Feagin, 4th Cavalry. The result of their training reflects creditably on the detachment under which they were trained.

Organizations and individuals began indoor rifle practice on Monday, January 27.

A number of pheasants have been released on the reservation and precautionary measures have been taken to protect this fine game bird during the coming season.

Members of the Post Gun Club made use of the warm weather on Sunday, February 16th, and met for a few hours of clay pigeon shooting on the club range. As the weather moderates trap shooting will be a weekly event every Sunday morning.

On March 3d, the 75th anniversary of the organization of the 4th Cavalry was celebrated. All duties were suspended for the day and the celebration began with serenades by the band marching around the post at reveille and playing the regimental march "Riders for the Flag" and other selections. The formation "Escort to the Standard," scheduled for the morning and the baseball game scheduled for the afternoon had to be omitted due to the inclement weather, but very impressive substitutes were made. The Standards were escorted to each organization where inspiring talks were given on the regimental history, standards, decorations and coat of arms. At noon the field music marched around the post playing the regimental march. In the evening the enlisted men attended free moving picture shows in the gymnasium of especially selected pictures. The officers and their families and friends attended a dance in the evening, held in the post auditorium which was prettily decorated with guidons, sabers and machine guns. A very impressive ceremony took place during the

dance when the regimental standards were escorted to the center of the hall and the field music played appropriate airs. Later in the evening a large photograph of the Colonel of the regiment was displayed, inaugurating the custom of each year placing in the officers' club at Organization Day a photograph of the Colonel of the regiment, if it had not already been placed there.

A very elaborate booklet was given to each member of the regiment, embodying therein a history of the 4th Cavalry and Fort Meade and containing photographs of the organizations and individuals of the command.

The following changes amongst officer personnel has taken place in the post since last issue of the Journal: Arrivals are: Colonel W. L. Luhn from leave; Captain and Mrs. J. I. Gibbon from leave; Captain A. H. Besse from leave; Captain F. F. Duggan from Cooks and Bakers Course, the Cavalry School; First Lieut. O. M. Massey from recruiting duty, Toledo, Ohio. Departures are: Major S. V. Bingham to leave of absence; Major Howard A. Hale, D. C., to Detached Service Fort Snelling, Minn., and Fort Lincoln, N. D.; Captain W. R. Mobley to 10th Cavalry, Fort Huachuca, Arizona. Captain Gardner R. Jones, Veterinary Corps, has been assigned to the regiment, effective upon completion of his course of instruction at the Veterinary School, Carlisle Barracks, Pa. First Lieut. A. F. Forsyth has been assigned to command of the Machine Gun Troop vice-Captain W. R. Mobley transferred to 10th Cavalry. First Lieut. O. M. Massey has been assigned as Post and Regimental Personnel Adjutant, replacing Lieut. Forsyth who formerly held that office.

5th Cavalry Notes

WITH the opening of the New Year the Regiment entered upon the training in preparation for the tactical inspection which will be made by the Brigade Commander the latter part of March. This training which has included a weekly Regimental problem together with the garrison and unit schools has kept all members of the Regiment well occupied during the winter months.

The horse shows which have been held periodically during the winter months have kept up the interest in this branch of the sport.

For the show on January 19th Mrs. Wm. M. Roberts of Baltimore, Md., a house guest of Major and Mrs. Wilfrid M. Blunt donated a handsome silver cup to be awarded the winner of the Class for Green Hunters. After a very close contest Captain Boudinot, 1st Cavalry Brigade, riding the government mount *Gipsy* was awarded the cup and blue ribbon. Captain Rieman was second with his private mount

Royal Watch while Major Chandler, 1st Cavalry Brigade, was third with the government horse *Omega*.

The interest and active participation in polo continues. Games are held three times a week. In the slow periods green ponies are worked in, and new players given an opportunity to play.

March 3rd being the seventy-fifth anniversary of the Regiment, the day was observed as a holiday and an appropriate ceremony was held in the morning at the Service Club where the Regiment was assembled. This was followed by the annual baseball between the 1st and 2nd Squadrons and in the afternoon there was a dansant at the officers club which was attended by the members of the garrison and their invited guests.

6th Cavalry Notes

THE month of February was devoted to Squadron training and regimental maneuvers. A series of five maneuvers coming generally a week apart was participated in by the regiment, assisted by a battalion of the 22d Infantry and two observation planes which were sent to Fort Oglethorpe each week with pilots and observers from Maxwell Field, Ala. The maneuvers were conducted by Colonel E. H. Humphrey who on all except one occasion acted as the chief umpire. Various kinds of cavalry missions were most successfully carried out and the interest manifested by the Non-Commissioned Officers and enlisted men as well as the Officers was the outstanding feature.

The officers of the regiment are all enthusiastically engaged, under direction of Major Arthur Wilbourne, in the training of remounts and the development of horse-show prospects which have recently arrived for the regiment. Polo pony training has been under the direction of Major Terry Allen. The prospects for polo are exceptionally bright. A ladies riding class has been added to the horse activities of the post and weekly horse shows for the entire command is also an added feature.

The regiment is expecting orders to go to Atlanta, Ga., early in April for the purpose of participating in the Atlanta Horse Show and polo matches to be held in connection with the show.

Troop F under the command of Captain George Goodyear made a splendid showing for the regiment by being placed fourth in the Goodrich Trophy Test.

Troop E under command of Captain William R. Stickman will proceed by marching to Camp Knox, Ky., for the purpose of assisting in the summer training at that camp. They will leave the early part of June.

Plans for a new swimming pool for the officers, a gift from the citizens of Chattanooga, are now under way and the pool is expected to be completed before the hot weather starts.

7th Cavalry Notes

SINCE the beginning of the New Year The Garry Owens have been successful in maintaining a standard of hard but interesting work combined with numerous pleasant activities.

The training for the most part has been in the field. The schedules of the troops show that, out of the six days a week, three or four have been devoted to problems outside the drill ground. The problem of defense against airplanes has been stressed, experimented with and taught the troops, and it is believed a fair amount of success has been accomplished. Experiments have been made in the defense and offense against armored cars. From them many valuable solutions have been found. The principle of field work is continuously emphasized.

And just as everything must be repaired, so is the situation in the 7th Cavalry Polo Machine. The horses suitable for fast tournament polo have become fewer in number since the last tournament. Consequently a scheme has been put into operation whereby a group of new remounts has been picked to be developed into good polo ponies before the next busy polo season. It is expected that by then the Garry Owens will have a string of ponies as good as the best.

In the Division Tournament held at San Antonio, one promising young player, Lieutenant Harkins, was chosen from the 7th Cavalry to play on the Fort Bliss team. Lieutenant Harkins did some beautiful playing in the tournament last fall.

A Hunt Breakfast or Treasure Hunt, a Ladies Bridge or a dance has been held every week much to the pleasure of officers and ladies in the regiment. On February 14th a very successful Valentine Costume Dance took place at the Officers' Club.

The Garry Owens greeted with pleasure their new Commander, Colonel Charles F. Martin about February 7th. Colonel Martin has just come to us from the Cavalry School at Fort Riley. Other new arrivals are Major Gerald D. France, Medical Corps, and Captain Winfred Houghton.

9th Cavalry Notes

CAPTAIN RUSSELL C. WINCHESTER, after seven months on detached service at West Point and Governors Island, N. Y., with the U. S. Army Horse Show Team, was assigned to the regiment. Captain Winchester joined November 20, 1929, and assumed command

of Troop G. He has been detailed on special duty with VI Section, Academic Division, The Cavalry School, in connection with the development of horses for the Olympic Equestrian Team, in addition to his other duties.

The regiment was host at Christmas Dinner, December 25, 1929, to about three hundred guests, which included the Commandant, officers of the post, prominent citizens of Junction City, and the families and friends of the enlisted personnel of the regiment. There was dancing by the enlisted personnel at the 9th Cavalry Club, from 8:30 P. M. until midnight.

Lieutenant Hayden A. Sears, spent ten days during the month of January, at Fort Worth, Texas, inspecting horses at that place for Olympic prospects.

Lieutenant Colonel Charles L. Scott, was transferred from the Quartermaster Corps to the Cavalry, and assigned to the regiment February 5, 1930. He was detailed on temporary duty at Washington, D. C., in conference with the Chief of Cavalry, in connection with the training of the personnel of the Cavalry. Upon completion of this temporary duty Colonel Scott availed himself of ten days leave of absence and reported at this station March 3, 1930. He has been placed on special duty with the Academic Division as Assistant Director.

Major General Herbert B. Crosby, Chief of Cavalry, arrived at the post, Sunday, February 16, on an official visit, and departed on February 19th.

Orders have been received relieving Captain Paul C. Febiger, from assignment to the regiment, effective on or about June 15, 1930. Captain Febiger is directed to report to the Commandant, the Command and General Staff School, Fort Leavenworth, Kansas for assignment to duty.

The retirement of Staff Sergeant Gibson Thompson, Headquarters Detachment, 2nd Squadron, November 29, 1929, was celebrated at the 9th Cavalry Club, December 12, 1929 with an appropriate program followed by dancing until 12 o'clock midnight. Refreshments were served.

10th Cavalry Notes

SINCE January 1, 1930, the regiment has been very busy handling a post repair program and drilling at the same time. Barracks and quarters are being given a thorough overhauling, roads are being repaired, etc. It is expected that this work will be completed by March 31st, when uninterrupted training can again be started. The Chemical Warfare Officer of the 1st Cavalry Division will conduct the Chemical

Warfare Training of this regiment during April and May preliminary target work is begun. A few copies of the new Cavalry Field Manual have been received and training is being conducted in the manner prescribed therein. We all welcome this compact book in lieu of the voluminous Training Regulations and hope that it will soon be adopted as the official textbook for cavalry. Troops have individually taken a one day march each month since the first of the year and squadron overnight hikes were taken in March.

A great deal of enthusiasm is being shown by the officers training the 10th Cavalry horses in preparation for the 1932 Olympic Games to be held at Los Angeles, Calif. Our particular assignments were the two equestrian events: The Prix des Nations and Equestrian Championship. Lieutenant F. P. Tompkins has been placed in charge of the training and, assisted by Lieutenant Walter Burnside selected the mounts and organized the training. Training has been outlined with the idea of bringing all mounts to their maximum state of efficiency about September 1, 1930; at which time it is contemplated tryouts will be held and any suitable prospects sent to Fort Riley, Kansas, for further training. In addition to Lieutenants Tompkins and Burnside the following officers are working one or more mounts: Lieutenant Frank Turner, Lieutenant Raymond W. Curtis, Lieutenant Thomas F. Trapolino, and Lieutenant Chandler P. Robbins.

Thirteen horses are now being trained, five for the Equestrian Championship and eight for the Prix des Nations. Two of these mounts are privately owned, six have had considerable previous training and five have had practically no training of this type. Although it is possible that no material suitable for the Olympic Games will be developed, it is believed that a strong regimental horse show combination will result.

Captains Wiltshire and Patton and Lieutenants Tompkins and Stockton went on a hunting trip into old Mexico between January 16th and 26th. They reported a good time and many ducks but no big game.

Word has been received that Colonel McCaskey hopes to return to this post from sick leave about April 1st. Captain Hurt has returned from Walter Reed General Hospital. Lieutenant M. J. Asensio has been transferred to the Corps of Engineers and expects orders transferring from this post. Lieutenant N. F. McCurdy left on January 28 for the Philippine Islands. Lieutenant-Colonel T. L. Sherburne, present on duty at the Army War College and Captain W. R. Mobley at present on leave of absence have been assigned to the regiment.

11th Cavalry Notes

THE regiment completed a very successful qualification season this year making high averages in all the Cavalry weapons. The following qualifications were made with the rifle: Headquarters Troops, 94.82 per cent; Troop A, 96.22 per cent; Troop B, 98.18 per cent; Troop E, 96.49 per cent; Troop F, 100.00 per cent; Detachment at Fort Rosecrans, 100.00 per cent; regimental average, 97.51 per cent.

Our shot-gunners did pretty well, too, qualifying 100.00 per cent with their machine guns.

Since the qualification season, there have been frequent marches to Gigling Reservation for combat firing and field exercises to break the monotony of the routine garrison duty.

On February 28, 1930, a platoon of selected men from each troop and a section from the Machine Gun Troop participated in anti-aircraft firing. The firing was done at towed targets. The target, the first time, passing parallel to the firing line, and next time, over the heads of the riflemen. This was something new to all of us, and although some hits were made, we found out that there was much to be learned about firing at airplanes and much practice required to make it effective.

There was much interest shown on the post in basketball last season. Troop F won the championship. A post team was picked to compete for the Corps Area Championship. This team under the coaching of Lieutenant August W. Farwick, 11th Cavalry, made an excellent showing, but was finally defeated by Fort Scott.

The Post Baseball League started March 3d, and all of the organizations of the post are now bending their efforts toward the training of a championship team.

An Enlisted Men's Gymkana was held February 20th in which all organizations took part. It was enjoyed by officers and their families as well as by enlisted men.

We are now looking forward to a horse show to be held March 27th.

In the first low goal tournament, the 11th Cavalry Team reached the finals and was eliminated by Del Monte, but they won the second about two weeks later by defeating San Mateo.

Fort Brown Notes

MANEUVERS in May involving the troops in San Antonio and the lower Rio Grande Valley make an early target season necessary this spring. The troops march 100 miles to Fort Ringgold for

target practice. So this winter became a very active training season with preparations for maneuvers, target practice and the wid-winter horse show coming simultaneously.

On January 15th, the second field meet of the winter was held on the parade ground. Fifteen mounted and dismounted events ranging from Roman racing to the running broad jump, resulted in close competition and excellent scores. Troop A, Captain Herbert L. Earnest, captured the coveted championship streamer which has flown from Machine Gun Troop's guidon since the November meet.

Unprecedented bad weather so delayed the San Antonio polo tournament that it was impossible to hold the annual mid-winter polo tournament at Fort Brown before the target practice. However, polo was played regularly three times weekly throughout the winter. A civilian team was organized at Harlingen, twenty-five miles from Brownsville, and several games were played with this team mounted on 12th Cavalry ponies. Although the regiment had no outside military competition by which it could measure its strength, a number of good ponies and new players were developed. Major Oliver I. Holman is polo representative.

Captain Vernon M. Shell after four years at this station first as Adjutant and then in command of Headquarters Troop, has left for Athens, Ga., on R. O. T. C. duty. Captain Clyde E. Austin has accepted a four-year detail in the Quartermaster Corps and left for his new station, Brooks Field, in February.

13th Cavalry Notes

SINCE the publication of the last Journal, orders have been received relieving Lieutenant-Colonel W. W. Overton, Regimental Executive, from assignment to the regiment, effective June 20th, and assigning him to duty with the Organized Reserves, 83d Division, Columbus, Ohio. First Lieutenants Frank H. Bunnell and Don E. Carleton left the regiment on leave during January, preparatory to taking transport for foreign service in the Philippine Islands. Lieut. Col. Robert Blaine has been ordered to the regiment from the Army War College, effective about July 20th, and Captain Royce P. Gerfen will be transferred from the 7th Cavalry, effective May 1st. First Lieutenants Leslie M. Grener and Paul G. Kendall will join this spring from foreign service, as replacements for Lieutenants Bunnell and Carleton.

In accordance with the regimental commander's policy of setting a definite standard of appearance for the regiment, the members of the composite platoon, composed of one squad from each troop in

the regiment, have been busy polishing and shining all the articles of a cavalry soldier's equipment.

Eight Olympic prospects have been selected by the regiment to undergo special training for the Equestrian Championship and the Dressage. The government horses selected have been assigned to the best enlisted or commissioned riders, who are held responsible that the horses so assigned are trained. During the winter months at least forty-five minutes daily is spent on conditioning and training. The preliminary work-out consists in training in simple movements such as mount and dismount without horse moving; broken lines; the serpentine; half turn in reverse; the figure eight; half turn and circle.

The regiment march and song is now tentatively completed and ready for a public hearing. The lyrics were composed by Sergeant William Christy, Band, 13th Cavalry, and set to music by Warrant Officer W. W. Sidwell, 13th Cavalry.

"Here comes the Thirteenth Cavalry, none better you will find,
There's not a man among us from the Colonel down the line.
Who will not fight for what is right and shout 'It shall be done.'
From the early light of morning 'til the setting of the sun.

CHORUS

From the Sunflower State to the plains of Mexico,
Up and down the Texas border you could see us gaily go.
Here we are, all spick and span, as you can plainly see,
When we come 'It shall be done,' by the Thirteenth Cavalry."

SPORTS

In these days of business like pugilism it is a great relief to find that in the Army there are still embryo Dempseys who are willing to battle for nothing more substantial than glory and love of the game. The 13th Cavalry has a large squad entered in the amateur boxing tournament, now in progress at Fort Riley.

During the cold winter months the Post Exchange bowling alleys were scenes of closely contested battles. A bowling league was formed from the troops stationed on the post. Headquarters Troop, 13th Cavalry, although it finished up in third place, did some exceptional bowling. They held the team high score of 981 for a five-man team and also held the individual high score of 242.

The Post Basketball League was a big success this year. Much enthusiasm was in evidence. Headquarters Troop won the game and

championship. This is the fourth consecutive championship for Headquarters Troop of the 13th Cavalry.

Following last year's procedure, the enlisted men of the 13th Cavalry again sponsored a series of three horse shows. By voluntary contributions from the enlisted men, sufficient funds were raised to purchase a trophy to be awarded to the troop making the greatest number of points for the series. The regiment and each troop contributed additional amounts so that cash prizes and ribbons could be awarded in addition. Judges were selected from the Advanced Equitation Class. Master Sergeant James A. Grady presided as ring master with First Sergeant George Kershner as assistant. Much enthusiasm was developed over these shows, and a noticeable improvement in the horsemanship throughout the regiment was in evidence. The first show was held February 6; the second show February 21; and the third show March 6.

Notes From 14th Cavalry (less 1st Squadron)

COLONEL EDGAR A. SIRMYER, was the principal speaker at a special dinner tendered in honor of Master Sergeant Ernest T. Rudolph, Headquarters Troop 14th Cavalry on February 10, 1930, the date of his retirement from the regiment. Colonel Sirmyer's talk was most interesting to the younger generation of the regiment, he having recalled the days when he was serving with Sergeant Rudolph while a junior officer in the 14th Cavalry. The dinner was given to Sergeant Rudolph, by the Machine Gun Troop 14th Cavalry. Sergeant Rudolph's record of nine discharges bearing character "EXCELLENT" with not a single day lost. This record is one for any soldier to be well proud of.

The exhibition rides given by the troops of the garrison are attracting large crowds at each performance. Colonel Sirmyer, issues special invitations to the various civic organizations in Des Moines for the purpose of bringing the civilian population in closer contact with the Army. These rides will continue throughout the months of March and April.

In addition to the preparation for the exhibition drills, the troops of the garrison are now being given their quarterly proficiency tests by the Commanding Officer, these tests have prepared the men of the regiment for their outdoor training period which will begin on April 1st, in preparation for the annual tactical inspection by the Corps Area and Brigade Commanders, which will be held in the middle of May.

The officers are daily working out different horses in the riding

hall with a view of picking entries for the coming Olympic Games. This training is under the direction of the squadron commander, Major John D. Kelly, 14th Cavalry.

The Commanding Officer received and published a letter from Major General Herbert B. Crosby, Chief of Cavalry, congratulating the regiment on the occasion of its approaching birthday. General Crosby, once served with the "Fourteenth" and we feel as we are losing one of the active members when he retires on March 21. General Crosby carries with him the best wishes of every officer and man in the regiment.

Organization Day, was celebrated on Wednesday, March 5th, following list of events. On Tuesday a Gynkanna was held in the riding hall for the enlisted men of the regiment. Tuesday evening the enlisted personnel were hosts at a dance held in the Enlisted Mens' Club. On Wednesday the officers were formed at post headquarters and marched to the barracks where the men joined and paraded to the band stand headed by the Regimental Band. Colonel Sirmyer welcomed to the regiment the men who joined since last organization day, and gave an interesting talk to the members of the regiment relating the many experiences encountered when he was a junior officer in the Fourteenth. Special dinners were served for the men by their respective organizations at noon.

1st Squadron, 14th Cavalry Notes

THE 1st Squadron, 14th Cavalry, has been able to compete in all athletic events held at Fort Sheridan, Ill., during the winter months and was able to make a good showing. Troop B won the Post Championship in Soccer Football and Troop A came out on top in the Inter-Company competition with the 22 Rifle, and Troop B was second. Indoor Pistol and Rifle matches are now being fired.

The Post Gallery Rifle Team, is being coached by Captain W. C. Gatchell and is composed of five members, two of which are Cavalrymen, Sergeant Frank Kloss, and Corporal Stephen Newman, Troop B. Four matches have been fired to date with the Marines from Great Lakes Naval Training Station and the Post Team has won three of these matches. Sergeant Kloss and Corporal Newman were both firing members of the team.

Lieutenant-Colonel Charles R. Mayo, left the Squadron on March 1st for change of station, with the Organized Reserves in Maryland. (62d Cavalry Division).

ceived and it is expected he will arrive about the middle of May. His coming will be a big boost for polo.

March 5th the Squadron celebrated the 29th birthday of the 14th Cavalry by holding a Gymkana in the Post Riding Hall. Preceding the mounted events the Squadron was assembled and a short address was delivered by the Post Commander, Brigadier General C. H. Conrad, Jr., and then the Squadron Adjutant, Captain Chas. W. Fake, gave a short account of the Regimental History.

26th Cavalry in Philippine Division Movement

THE 26th Cavalry, Colonel R. J. Fleming Commanding, was attached to the Philippine Division for the annual maneuvers and concentrated with it at Fort William McKinley on January 8, 1930, marching from Fort Stotsenburg for that purpose on January 5, 1930.

January 12 found the Regiment protecting the right flank and rear of the Division at Mozon on Balayan Bay, while the main body of the Division, having moved from McKinley by motors, was carrying out its mission of defending the beaches at Batangas Bay. The Cavalry organized for defense a sector of the beach about two miles wide and five miles from Mozon and was prepared at all times to occupy and defend it in case of attack.

The first march north from the maneuver area was a night withdrawal. Upon arrival at McKinley, the 1st Squadron acted as escort to the Department Commander, Major General Douglas McArthur, and the Regiment participated in a Division review for him and for the Division Commander, Major General Paul B. Malone.

The Regiment arrived home at Fort Stotsenburg on January 26, having marched 275 miles in sixteen marching days, not a bad average in this climate for a unit the animals of which left the post in soft condition immediately after the Christmas holidays.

Both the Department Commander and the Division Commander expressed themselves as highly pleased with the performance of the Regiment, especially with its smoothness in marching and camping. Colonel Fleming's excellent conduct of the march, with flexible distances between units, caused the least possible interference with traffic on the road and brought the men and animals to the end of each day's march in the best possible condition for further effort.

305th Cavalry, Philadelphia, Pa.

THE Winter Inactive Duty Training of the 305th Cavalry started in October with the opening of two riding classes held on Wednesday and Friday of each week from 5:30 to 7:30 P. M.

Thanks to the great courtesy of the 1st Troop, Philadelphia City Cavalry, this regiment has the use of the Troop's equipped armory. The Troop has furnished the 305th Cavalry with two Colonels and several junior officers. Colonel William Innes Forbes, our present commander, was, at one time, First Lieutenant of the Troop.

Once a month there is held an evening conference while noon day conferences, at which either an officer of the regiment or an officer of one of the National Guard units gives a talk, are held twice weekly. The attendance at these informal talks is exceedingly gratifying and shows clearly that there is an active interest being taken in military affairs. The regiment is well represented in the correspondence courses—quite a few of the men have completed the basic course and many have gone through several subcourses.

Polo, under the leadership of Lieutenant Town is quite popular and several games have been played. Among other games the team played West Point at the Point and the 110th Field Artillery at Baltimore.

On February 13th and 14th, the Chief of Staff, 62d Cavalry Division, Colonel George T. Bowman, made an inspection of the officers of the regiment. He attended the meeting held at noon, February 14th, and gave a very interesting talk. There was a very gratifying turnout to greet this popular officer.

Officers of the regiment have been giving equitation instruction to members of the Infantry and Artillery Reserve Units in and about Philadelphia. These classes are well attended and are held as a rule at the Q. M. C. Corral. On Sundays a great number of the members of the regiment ride either in Fairmount Park which has wonderful bridle paths, or in the Armory of the First City Troop.

Philadelphia is very fortunate in having a large number of Hunt Clubs in the surrounding country. There are ten recognized packs that hunt wild native red fox and one pack hunting drag. These clubs hunt exclusive of cubbing from November 1st to April 1st and average three days per week. This gives the members of the regiment ample opportunity to hunt and of course provides excellent cross-country rides.

On March 12th the regiment held its annual hunt meeting. Through the courtesy of Charles W. Walker, Esq., M. F. H., the Whiteland Hounds are placed at the disposal of the 305th Cavalry once each year. The Hunt started at 2 p. m., Lochiel Farms, Exton, Chester County, the home of Max Livingston, Jr., Captain and Adjutant 305th Cavalry where the Whiteland Hounds are kenneled. Horses were lent by members of the Hunt to those officers who do not own suitable

mounts. As these animals are nearly all qualified hunters, many of them thoroughbred, the men who participated were guaranteed a good ride. After the hunt there was a dinner at the Warren Tavern, Malvern, Pa., an old inn dating from Colonial days.

Regimental Day, with its distinguished visitors, who are all met in official cars accompanied by guards of motorcycle police, will take place on April 17th. The day ends with the Graduation Ride of the Regimental Riding Class and a dinner at the Racquet Club. Many prominent officers of the Regular Establishment have been invited.

306th Cavalry, Baltimore, Md.

COLONEL JOHN PHILIP HILL, Commanding the 306th Cavalry has been selected to command one brigade of the 62d Cavalry Division at the 3d Corps Area Command Post Exercise to be held at Fort George G. Meade, Md., July 6th to July 19, 1930. The brigade staff is now being selected from members of the 306th Cavalry, a few other officers of the regiment, including the regimental executive, Lieut. Col. Matthew F. James, will be members of the division staff. This will afford these officers an opportunity to receive valuable training and should prove very interesting to them.

Additional meetings will be held during the remainder of the training year in order to give more time to the preparation for the C. M. T. C. at Fort Myer, Va., next summer. Lack of horses is proving a serious handicap in the preparation for this duty by the Baltimore personnel.

The Washington contingent is better situated in this regard as Colonel Guy V. Henry has made available to them the horses and equipment at Fort Myer, Va.

2d Squadron, 306th Cavalry, Washington, D. C.

INTENSIVE training in preparation for the Citizens' Military Training Camps this summer has been carried out. In this connection, all officers of the Squadron have sent to Riley for copies of the "Cavalry Field Manual. This little book fills a long felt need, and will be of great help to us by combining so many valuable facts in one text.

Considerable interest in mounted drills at Fort Myer has been manifested. About forty officers and Enlisted Reservists turn out for the Sunday rides.

Realizing that time is short and that the training problem is a big one this summer, several officers have spent one or two week days at Fort Myer, as guests of regular officers there, going through the reg-

ular daily routine of the post, including stables and care of animals, drills, guard duty, messing, etcetera. It is hoped more officers will be able to do this before camp.

Squad and platoon drill, Reserve Officers commanding, have progressed to the point where most creditable performances are given.

Twenty-three officers and men of this organization attended the February 11th meeting of the 306th Cavalry in Baltimore, at the residence of Colonel Hill, 306th Cavalry. Colonel George T. Bowman, Chief of Staff, 62d Cavalry Division, was present. After the regular meeting a general get-together of the regiment was enjoyed by all.

307th Cavalry (less 3d Squadron), Richmond, Va.

THE officers of the regiment are busy in preparation for active duty training this summer.

One field officer and seventeen line officers will be ordered to active duty at Fort Myer, Va., to assist in training students at C. M. T. C. July 18th to July 31st, inclusive. Other active duty periods will be the 3d Corps Area commanded Post Exercise, July 6th to July 19th, inclusive, at Fort George G. Meade, Md., and cavalry training at Fort Myer, Va., August 10th to August 23rd, inclusive.

Colonel William Henry Clifford was at regimental Headquarters on business this past month.

Indoor pistol practice will be held during March, through the courtesy of Major Liggan, Commanding the Howitzers, Virginia National Guard.

Conferences are being held on the last Thursday of each month.

3d Squadron, 307th Cavalry, Norfolk, Va.

THE officers of the squadron have been undergoing inactive duty training to prepare them for duty as instructors at the Cavalry Citizens' Military Training Camp to be held at Fort Myer, Va., July 18-31, 1930.

The attendance at the conferences and rides held at Norfolk has been excellent. The subjects covered at the conferences are those in which the officers will be required to instruct at the summer camps.

Several officers of the squadron attended the conference held at the Naval Y. M. C. A. on February 20th. The subject of the conference was "The Interpretation of Aerial Photographs," and was illustrated by numerous lantern slides taken from various heights and in various parts of the country. Captain Gerard H. Matthes, Aux-Res., who is an expert on aerial photography, conducted the conference.

308th Cavalry, Pittsburgh, Pa.

INACTIVE duty training has been progressing satisfactorily during the winter months with a monthly conference, rides twice a week and extension school work. The attendance at rides has averaged over twenty-five per ride since October.

At the January and February meetings a Command Post Exercise was given. A message center was in operation, messages coming in and out bearing on the S-2 and S-3 phase; thirty-two officers and men attended the February meeting. In March a problem on Class I and ammunition supply of a regiment in combat was given; twenty officers attended.

A great interest in polo is developing and it is the hope of the Regimental Commander to have a creditable polo team represent the regiment.

862d Field Artillery (Horse), Baltimore, Md.

THE most popular phase of inactive training this winter has been instruction in the use of the service pistol, held, by courtesy of the Maryland National Guard, at the Howard Street Armory every Thursday evening, under the supervision of Headquarters Baltimore Reserve Units.

We have been particularly fortunate in developing, as instructors, two Reserve Officers, Captains Arthur Blackburn and Joseph Savage, who are excellent shots and keenly interested in pistol marksmanship. These officers have aroused so much interest that it has been necessary to assign certain weeks to the various units to avoid overtaxing the capacity of the range. The improvement in marksmanship since last fall has been most noticeable.

A few otherwise successful citizens who were, at first, somewhat chagrined by the results of their first scores are now talking expectantly of qualifying as experts.

BOOK REVIEWS

The Way of a Man With a Horse. By LIEUT.-COL. GEOFFREY BROOKE, D. S. O., M. C. 90 Illustrations. J. B. Lippincott Co., Philadelphia, Pa. \$7.00.

Reviewed by Captain W. B. Bradford, Cavalry

A number of modern volumes are now being prepared for the Lonsdale Library on the subject of sports, games and other pastimes. Lieut.-Col. Geoffrey Brooke, D. S. O., M. C. was requested to contribute a work on horsemanship that would deal fully with the many intricacies that confront the novice. The choice was a happy one, for Colonel Brooke is an excellent horseman, of international fame, and a leader of thought in England. He was one of the first to break from traditional British methods of riding and his ideas are in close accord with all that is best in this and other countries.

With the collaboration of Col. A. G. Todd, R. A. V. C., D. S. O., and Lieut.-Col. Arthur Brooke, D. S. O., M. C., Colonel Brooke has prepared one of the best, if not the best, modern works on the subject. His opening history of the horse dates from ancient times and quotes most interestingly from Xenophon's Treatise on Horsemanship, showing how closely the ideas of the era are akin to ours of today in all matters of principle. He continues with a chapter on stable knowledge and routine, with particularly well chosen remarks as to feeding and exercise. The young rider is then considered and a complete course of training is given which begins with establishment of confidence and seat, instruction in the use of the aids, jumping and hunting. The trend of Colonel Brooke's ideas may be readily seen from the following quotations from his book.

In discussing the seat: "By suppleness of the body *from the hips*, which insures control of his balance, the rider is instantly able to adapt himself to any movement of the horse. *Correct balance, in sympathy with the horse's motion*, reinforced by grip of the thigh, knee and at times the upper part of the calf, is the fundamentals means by which the rider maintains his seat in the saddle." In speaking of the gallop he says: "He should first shorten his reins, as he will require to lean forward and keep contact with the horse's mouth. He must stand up in his stirrups, *increase the grip of his knees, on which he must support his balance, with the body leant forward and the weight taken off the back part of the saddle.*" For jumping he prescribes: "The pupil must learn to lean slightly forward as the horse takes off, allowing the body to resume the normal position as he lands." And in preparing horse and rider for the jump: "The instructor must make the rider canter around, — instead of sitting down in his saddle, he should lean forward, supporting his weight on his knees and stirrups, without using the reins to retain his balance."

Very little has been said with reference to getting the horse on the bit, an essential that is sadly neglected and misunderstood both in England and in this country. The author's description of balancing and collecting his horse before jumping leads one to understand that he advocates an equilibrium in which the center of gravity of the mass is displaced much more to the rear, and the horse is further back on his hocks than is desired in either the American or foreign continental armies. He desires an equilibrium and collection more suited to high school riding than jumping.

There are several excellent chapters on the prevention of disease and treatment of minor ailments, prepared by Colonel A. C. Todd, formerly Commandant of the Royal Army Veterinary School. These chapters are very simply and practically written and deal with only the more usual occurrences of this nature.

The author speaks of hunting, and of riding school training (French system) and includes an excellent outline for the training of hunters, jumpers and polo ponies. There are



A Water Jump The Cavalry School Graduation Race Meet

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Motorization and Mechanization in the Cavalry

By MAJOR GEORGE S. PATTON, *Cavalry*

"FUTURE wars" said General Pershing, "may begin in the air but they will end in the mud." Nor was the seventy-year-old remark of a Russian officer to McClellan less apposite when he said: "In war all roads are bad."

Yet, since that far distant day when the transcendent genius or an unknown savage devised the wheel as an aid to locomotion, the road in all its forms from marble to chicken-wire has played the predominant role in the bellicose meanderings of mankind.

Motorized Supply

The invention of the motor car and its variants has not only failed to alter this condition but has in fact emphasized it.

The mechano-military experiences of our army form an apt illustration. First, in Chihuahua, roads in the normal acceptance of the term did not exist, so that their construction and maintenance constituted one of our prime considerations, with the result that though the task was difficult it was in a measure accomplished and the trucks passed through. In France, on the other hand, the situation was wholly different. There the enormous network of good roads so facilitated truck movements as to give us an exaggerated idea of its ease and possibilities.

Yet, in neither France nor Mexico were our roads subject to enemy attack so that in this respect our experience lacks finality.

Now, while the two cases cited are diametrically opposed, it is none the less certain that in any theater of war save Western Europe the general condition of roads will approximate more nearly to those of Mexico. For example, in the continental United States at the present time less than 6½ per cent of roads are improved. As a consequence, it is patent that our previous exaggerated expectations in

the line of culinary and lethal conveniences will have to be rigorously curtailed.

It is realized that these statements will be challenged by that vast fraternity of motorists who spend their Sundays in pleasant perambulations along our arterial highways. But let these skeptics try our vastly more numerous byways and the valor of their ignorance will be abated. Moreover, let them remember that the difficulties they encounter are as nothing to the conditions which would confront the hundredth truck of a convoy.

If, for example, the Wilderness campaign of 1864 were reenacted on the same terrain with modern equipment, it is highly problematical if either side could maintain forces materially larger than those of Grant and Lee; while if an attempt were made to maintain World War standards in supplies and munitions the number of men would have to be considerably reduced.

Again, what Leavenworth graduate honestly believes that the blithe deployments and marvelous marches his phantom armies have made on the old Atchison pike could be accomplished during wet weather?

It may seem that we are over-stressing the question of roads but such is not the case. They are the Alpha and Omega of military operations and their number and condition will absolutely determine the character of the next war. Truly, there is grave danger lest the statement "Weather cool, roads dry and hard, all bridges two-way and up to fifteen tons," so often appearing in the general situations of map problems, may be taken seriously and delude us into a belief in the existence of such Elysian fields of war.

Vast concentrations, such as we saw in Europe cannot exist if they cannot be fed. Hence in most parts of the earth contending forces will be smaller or else tied like unborn babies to the placenta of a railway or river line. This reduction of forces will result in making the creation of flankless lines impossible.

As a consequence, maneuver will reappear. Time will again become the vital factor and TIME will not suffice for the assemblage of the enormous quantities of shells, guns, and material requisite for the set piece attack. When a choice must be made between the maw of the guns and the bellies of the men, the bellies win.

Before proceeding it is important to emphasize that our remarks are in no way intended to belittle the importance of motor transport. No matter how clearly we envisage the recrudescence of war of movement, the fact remains that progress and the memories of 1918 have conspired together so to increase the complexity of our requirements

that, no matter where we fight, the maintenance of the minimum supplies on which existence will be possible will require a maximum effort and one which can only be met by the employment of the utmost usable number of motor vehicles.

What we do wish to emphasize is the fact that such transport will have to surmount difficulties undreamed of on a holiday tour.

Role of Motor Combat Vehicles

Thus far we have been dealing with motors solely from the supply angle. Their usefulness as combat vehicles whether mounted on wheels or on caterpillars is equally important. In the remainder of this paper we shall consider these machines in all the various situations under which they may be employed either with or against Cavalry.

Before beginning this phase of our inquiry it seems relevant to advert once more to history in order definitely to confound blithe theories of the self-styled mechanists or scientific warriors who are so exhilarated by the gaseous exhalations of their pet machines as to be oblivious to the necessity for more prosaic arms.

It is confidently asserted that if any one of these gentlemen will take the trouble personally to examine the districts made famous by the Peninsular and Bull Run campaigns of '62, of the Wilderness campaign of '64, he will have to admit that no machine yet made or dreamed of could have replaced to any appreciable degree the man on foot or the man on horseback.

True, there are a limited number of gasoline neophytes who, while admitting the impossibility of using machines in such country, avoid the issue by the happy statement that, in future, wars will not take place in that sort of country. The futility of such evasions seems almost too flagrant to merit remark, yet due to their insidious influence on the mechanically minded and gullible public it is necessary to answer them.

In the first place, any army deficient in fighting machines will inevitably do its utmost to nullify this defect by the use of geographical features inimical to machines. An airplane journey along the Atlantic seaboard will quickly convince the timorous passenger, eagerly searching for safe emergency landing fields, that forests and wooded country are more notable for their presence than for their absence even in this highly industrialized section.

Having had the honor of commanding tanks in action* we are the

*Major Patton commanded the 304th Tank Brigade in the San Mihiel offensive and in the Meuse-Argonne offensive until wounded.—EDITOR.

last to belittle their importance, but knowing their limitations as we do, we are unalterably opposed to the assigning to them of powers which they do not possess. Such action not only foredooms them to failure but also condemns the army which relies principally on them to disaster and defeat.

History is replete with accounts of military inventions, each heralded by its disciples as the *dernier cri*. Of yore the chariot, the elephant and, later, gunpowder were severally acclaimed as the mistress of the battlefield. Within our memory the dynamite gun and the submarine were similarly lauded. Now gas, the tank and the airplane share with each other this dubious honor. The glory of the skyrocket elicits our applause; the splash of its charred stick is unnoticed.

The inevitable fate of these specialities remind us of that verse of the Rubaiyat which reads:

"When you and I beyond the grave are passed,
Oh! what a long, long time the world shall last.
Which of our coming and our going heeds,
As ocean's self should heed a pebble cast."

Just so does the ocean of manpower receive the brightly tossed special pebble, utilizing for a time the ripples it causes and then absorbing them and it into the mighty surge of its eternal omnipotence.

The wrestling adage that: "There is a block for every hold" is equally applicable to war. Each new weapon demands a new block and is mightily potent until that block is devised. The development of these new weapons and their counters, these holds and blocks is desirable in that they add to the repertoire of our attack and defense. They are dangerous when they cause us to pin our whole faith on their efficacy. It is only in the writings of the romantic novelists that we find the hero invincible due to his knowledge of some diabolically clever lunge. In the duel and in the fencing room victory comes to the man of many good attacks and sound parries; the man who uses all the means at hand to the accomplishment of the end sought victory.

Modern Cavalry

While Cavalry is usually classed as an auxiliary arm, it is more in that it is capable of separate and wholly independent action.

Since the memory of man runneth not to the time when we entered a war with the pre-war organization, it were a waste of time to investigate the current one beyond the point of saying that cavalry units run the full gamut in size from squads to army corps.

There, are, however, certain increases and additions which deserve remark. The proportion of automatic weapons in our Cavalry is

now much larger than in any other Cavalry of the world. This will have most striking results. Formerly we were weak in fire power and that which we attained was paid for at the price of immobilizing a large number of our men. Now the use of automatic weapons permits us to develop a formidable fire effect while at the same time leaving the great majority of our men mobile, thus giving us a double threat in the offensive and making us more tenacious on the defense.

We have already incorporated the wheel-type armored car into our cavalry divisions and at this writing are carrying the process one step further by adopting a combined wheel and track machine for use with cavalry corps and, perhaps, divisions. This latter weapon is ideally suited to play the part of an offensive reserve and may on occasion be used for reconnaissance.

Finally, the partial motorization of cavalry supply trains will have a far-reaching beneficial effect on our mobility. This statement is such an apparent contradiction of our former mud-infested outlook that it requires explanation.

Throughout history wagon and pack transportation have never been able to keep up to the maximum useful speed of Cavalry, with the result that Cavalry has either hung back waiting on its wagons or else has gone on without them and gained a precarious livelihood off the country. Now when the conditions of roads and weather permits the use of trucks (seldom as this may be) our supplies can keep pace with us; for the rest of the time we are no worse off when we were before. The net result is clear velvet.

Cavalry Operations and Motorized Fighting Vehicles

Space will be saved and clarity increased if we examine the several functions of Cavalry in the sequence in which they will occur during our next attempt to insure the peace of the world by combat, and show the part we believe armored fighting vehicles will take in conjunction with Cavalry.

Distant Reconnaissance: The debut of effective airplanes gave widespread vogue to the notion that in this field they would more or less wholly replace Cavalry. However, riper experience of the effects of storms, fogs, darkness, forests, and enemy planes has so modified this view that now the airplane is considered as the ally, not the supplanter, of Cavalry for strategic reconnaissance.

For example, the airplane can indubitably spot large enemy concentrations at a distance and with a speed absolutely unattainable by Cavalry. On the other hand, information it gains is only positive. It can say there are enemy troops at Blank, but it cannot definite-

ly say there are *no* enemy troops at some other place. Airplanes cannot obtain identifications nor can they maintain constant surveillance. For all these purposes Cavalry is necessary. But the early information secured by the planes will materially assist the Cavalry in giving them a general direction in which to look and by aiding them constantly during the search.

Thus helped, the Cavalry's mission of gaining and maintaining contact with the enemy and locating and reporting the movement and position of his main bodies will be greatly facilitated.

When the number and condition of the roads permit the use of the wheeled-type armored car, these vehicles will add strategic feelers to the Cavalry. Their role is intermediate between the plane and the horse. Their speed permits them to gain contact sooner; they can frequently secure negative as well as positive information and they can occasionally get identifications. On the other hand, their inability to leave the road or to operate at night makes them useless for *tactical reconnaissance* and renders the probability of their penetrating the enemy screen to locate his main bodies small indeed. Another defect which is often overlooked in considering them is their inability to live off the country and the fact that with them it is all or nothing when a puncture or a breakdown bags the whole show. A lame horse loses one trooper.

In our opinion the organization of armored cars into tactical units is useless save for supply. They will act as naval cruisers, possibly in pairs, and will have to move and fight on their own. If they encounter enemy cars they should use Nelsonian tactics and close, shooting rapidly. Ambushes and barricades will be costly to them. As messengers in enemy country they will attain fine results.

When either the condition of the roads or lack of sufficient machines precludes their independent use, it will still be well to attach a few of them to cavalry units to be used as messengers, connecting patrols or for special limited missions close in.

Since the space separating the opposing armies is usually measurable in hundreds of miles and since, regrettably, the race of Deer Slayers and Kit Carsons is practically extinct, it is futile to send individuals on reconnaissance, despite the Biblical precedent established by Noah's dove. Recourse is therefore had to so-called reconnoitering detachments. There is nothing tricky or abstract about the name; it is a unit of Cavalry, sometimes a troop but usually a squadron, temporarily charged with reconnoitering duties.

Generally the fire power of the unit will be augmented by the at-

tachment of machine guns and, as just pointed out, armored cars may well be added.

The essential idea governing the use of these reconnoitering detachments is to furnish a control force and mobile base for patrols. Perhaps if we picture an ambulatory beehive moving down the road with small groups of bees going in and out searching for the honey of information, we will form an accurate notion of such a detachment. Like the hive, too, it can be stirred into vindictive activity against any interference with the endeavors of its members.

In determining the number of such detachments we are bound to consider three factors—namely, the amount of Cavalry we have available, the character of the enemy, and the number of roads. We will certainly be spreading it pretty thin if we figure a squadron for every twenty miles of front, and this distance would often be impossible were it not for the presence of the armored cars which can investigate distant and important localities and further act as communicating patrols to collect and rapidly transmit important information.

Suppose now that we have a reconnoitering squadron with a twenty-mile wide ribbon of country leading towards the enemy to examine, how does it act?

In the first place the squadron itself and all its patrols move by road. The squadron on the best or most centrally located and the patrols on the other ones leading towards the enemy. The squadron is preceded by five to ten miles by a patrol and its immediate safety is secured by the use of the normal advance guard.

Eventually the patrols meet enemy bodies of sufficient strength to force them to leave the road, when they proceed to find out the size and flank of this force.

It is after the mounted patrol is forced off the road that its superiority to its motorized brethren becomes especially marked. Small groups of horsemen are relatively inconspicuous; any bush, house or fold of the ground will hide them. They can see without being seen. More important still, they can use their own ears as well as profit by the keener hearing of their horses. Finally, they can keep on going by day and night, a capacity which does not adhere to the motor conveyed scout. If he descends from his machine to investigate on foot, he is not only slow but must always retrace his steps or be lost. By night he is immobile.

Eventually a number of such patrol encounters will induce the conclusion that there is a considerable body of enemy in a given locality. Good patrolling would definitely indicate the position and strength of the enemy.

If the reconnoitering squadron commander abides strictly by his mission of hunting the hostile main body he will try to avoid this enemy; but, since it is probable that the opposing force is part of a screen whose duty it is to prevent the further advance of our detachment, a fight will ensue. Our personal feeling is that even if the enemy were not trying to stop us, we would attack him. War is a question of killing, and the sooner it starts the better. However, the method first described is orthodox.

In reading of the tactics appropriate to such a fight we are apt to find ourselves enmeshed in a web of strange words, such as the "Pivot of Maneuver," "The Mass of Maneuver," etc. If instead of this we describe the tactics appropriate by saying: "Grab the enemy by the nose and kick him in the pants," we sacrifice purity to precision but we express the idea.

Cavalry tries to do just this. It grabs the hostile nose and tries to hold it by a violent and noisy head-on attack, using its automatic weapons and some dismounted troopers; while with most of its force mounted, it moves rapidly to a place from which the pant attack can be made with vigor and by surprise. We have dismounted part of our force to hold the enemy and have sent the rest off mounted to gain a position in rear from which they may attack.

If the enemy learns what is going on in time to deploy an effective, unshaken firing line against the turning movement the attacker has the choice of either repeating the nose and pant attack by dismounting a portion of his own force to grab the new nose and again turning with the rest, or to risk the fire and charge home.

When the ground permits the use of armored cars there are two ways in which they may be employed in the above operation. First, to add to the fire power of the nose attack by joining in the fire fight from a defiladed position. Second, by facilitating the march of the pant group. Remembering our contention that roads will always be used, part of the march of this column will surely be by road; armored cars with the advance guard could clear out enemy patrols which otherwise might delay the march. When the horsemen leave the road, the cars should seek a position from which to aid their attack by fire; or, failing this, should try to get around to the road by which the enemy advanced and moving on this either cut off his retreat or attack him in rear. Whatever happens they must be used. They are not intended to live forever.

Defiles: Some times during the reconnaissance period the duty of seizing defiles or bridges with a view either to holding them for

our Infantry or else of delaying the enemy at them will devolve on the Cavalry.

Rapidity of march is the first essential. And in such missions armored cars may be of vital assistance by aiding in the rapid brushing aside of small enemy detachments or hurrying on independently to seize the place itself and hold off minor enemy attempts until the arrival of the rest of the Cavalry.

In attacking a bridge an effort must be made to turn it, by finding a ford or by swimming. While this is going on the enemy at the bridge should have his nose held by a frontal fire attack. It is interesting to note that at the present time great difficulty has been encountered in teaching machines to swim. Providence has already instructed the horses.

In the case of a defile, turns will probably be impossible and a dismounted attack will have to be used.

In the natural course of events the next duty devolving on Cavalry would be:

Counter-Reconnaissance: The ability of the airplane to execute strategic reconnaissance irrespective of the activities of ground troops has to a degree deprived counter-reconnaissance of its strategic importance; still as we have seen the airplane does not secure sufficient details even to wholly fulfil this mission. Since these missing facts must be obtained by ground troops and since they alone are capable of tactical reconnaissance, the necessity for counter-reconnaissance is still important.

The measures may be carried out either offensively or defensively.

Offensive Counter-Reconnaissance: The technique employed differs but slightly from reconnaissance.

The size and density of the patrols is increased so as to insure the apprehension and destruction of hostile patrols. This of necessity causes the use of more reconnoitering detachments. The supporting brigades or regiments are moved up closer in order to be on hand to prevent the enemy breaking the line by destroying a detachment. Since wheeled armored cars can only operate on the roads and then only by day, they are of little use save as a means of determining the routes being used by the enemy.

While combined wheel and track cars can move off the roads, they are so hard to conceal that small enemy patrols can avoid them; at night they are useless.

Where both sides are aggressive a situation occurs latent with great possibilities of a cavalry battle. The best way to lift a veil is to destroy it.

In such fights in open country the track-laying type of car will be very useful. It will be employed either for frontal attacks or for turning movements. A pre-requisite for the success of either type of action is efficient combat reconnaissance. Even the best caterpillar machine has definite limitations as to the ground over which it can operate, to be held up by an obstacle under fire is fatal.

Defensive Counter-Reconnaissance: This is in effect a form of outpost differing only in that its purpose is to guard the secrets, not the security, of the main bodies in rear. The reconnoitering detachments remain still in the guise of supports while the patrols take on the character of outguards. The larger units in rear act as reserves to prevent ruptures of the line.

Natural obstacles are very suitable for the siting of such lines. The chances of an active enemy bringing on a cavalry battle against this type of screen is excellent.

Armored cars and portée Infantry are well suited to assist. The Infantry has time to examine and repair the roads they may have to use. Their movement and detrucking are covered by the Cavalry so that they have great liberty of action.

Wheeled armored cars will be utilized as communicating patrols and as observation posts by day. They can effectively cover long stretches of river also only during daylight.

The track type will be used in the cavalry battles which occur.

Convoys: The question of providing security for portée infantry columns in war of movement has been very lightly considered.

In very open country this duty can unquestionably be effected by the use of armored cars of the two types.

In closed country, since machines are incapable of tactical reconnaissance, protection must be afforded by Cavalry. This will certainly reduce the rate of the columns and require them to move by bounds, but nevertheless they will still be able—provided roads are passable—to move faster than marching Infantry. The more portée Infantry is used in open warfare the more will Cavalry be necessary to cover its march and its detrucking.

General Battle: Eventually the main forces of the two armies will get so close that the Cavalry will be squeezed out. Before this happens the army commander must decide on which flank he wants the bulk of his Cavalry; this must be a clear-cut decision and no straddle; a fifty-fifty split is fatal to its effective employment.

Being collected it must be used. The practice of letting it participate in the guise of a spectator is as absurd as it is usual.

Before considering the employment of Cavalry in general battle.

it is well to pause a moment and enumerate the characteristics which make Cavalry particularly effective.

These characteristics are: Its variable speed and individual road and cross-country mobility in any type of country and capacity of its units to fight either on foot or mounted. The high proportion of mobile automatic weapons in our Cavalry permits it to develop powerful fire effect while at the same time maintaining a large proportion of its men mobile for flank or rear attacks.

Again, its facility of movement permits it to apply its force at widely separated localities within a very brief space of time.

Since it can move across country in invulnerable formations, it can deliver its men at the desired place in an unfatigued condition.

It always supplies its own security.

If on reaching the vicinity of the enemy it seems expedient to execute further turning or enveloping movements, it can do so promptly and rapidly without being deterred by considerations of fatigue or waste of time.

In the event of successful action the immediate presence of the horse enables it to pursue vigorously and at speed.

If the fight is unsuccessful the same conditions of mobility enable it to withdraw rapidly straight to the rear.

Like Infantry it can operate tactically by night or day.

Offensive Battle: In such battles Cavalry should be used in wide turning movements against the enemy flank or preferably his rear. In these circumstances night attacks will be common. Fire fights will be the rule, but Cavalry must be prepared to charge boldly though usually in small units. It seems hardly necessary to say that in night charges success will depend on careful reconnaissance or previous knowledge of the ground.

The fact that Cavalry can live off the country is of material advantage, since in such operations supplies other than those of the enemy will be lacking.

The presence of track-laying armored cars will be a material help. In the open they can precede Cavalry or move abreast of it and add to its fire and shock powers. In closed country they will follow and, taking advantage of the information secured by the horsemen, can clear up resistances or act as pivots about which the Cavalry can maneuver.

Wheeled-type armored cars will be of little use.

Defensive Battle: Unless the enemy is very superior in Cavalry we should still employ our own as above outlined in incessant attacks on him.

When the hostile Cavalry is superior we will use ours in preventing him from carrying out against us the operations we have above outlined. We will also use it for delaying enemy enveloping infantry assaults by attacking their outer flanks.

The rapidity of its marches and its ability to worm its way across country without being impeded by traffic congestion, makes Cavalry particularly efficient in filling gaps in the line. A good illustration is afforded by the action of the first and second German Cavalry Corps on the Marne in 1914.

Track-laying armored cars will be employed in a manner similar to that described for the offensive. The question of their gas supply will be less difficult.

Exploiting a Break-Through: This situation applies chiefly to war of position because in open warfare it will generally be preferable to use Cavalry on the flank.

The creation of a breach of sufficient width to justify a break-through is not a function of the Cavalry but a responsibility of the other arms. The fact that in the World War on the Allied side no such breaches occurred until the last weeks is no criticism of the Cavalry. Lack of Cavalry made the German break-through of March 1918 abortive.

Due to its cross-country mobility Cavalry can be more readily moved up preparatory to an exploitation than can any other arm because in rear of an attack of sufficient magnitude to create a penetration, the congestion of the roads due to traffic and shelling will be appalling.

The fluid mobility, fire power, and ability to live off the country and maintain constant pressure both day and night inherent in Cavalry render it priceless for exploitation. Tactically it may either be employed to maintain contact with the enemy and prevent his reforming or else it may be directed to operate against the rear of the intact portion of his line and widen the breach.

Armored cars of the track-laying type, fast tanks and airplanes will be most useful in getting the Cavalry over the difficult task of making the initial passage of the breach, where without their aid it would suffer losses and delays. Indeed for the first step tanks and track-laying armored cars are superior to Cavalry, but almost at once their value dwindles due to the absence of supplies, the terribly exhausting nature of the work on their crews, and the fact that they are more subject to delays incident to the ground and to the effects of artillery fire. Finally, they cannot operate at night, or hold captured ground.

The airplane will be useful throughout daylight and to a degree at night, but can neither take prisoners, capture material nor hold ground.

Pursuit: When during the course of a general battle it becomes apparent that the enemy is preparing to withdraw, the Cavalry must be warned so as to have time to assemble to the front and flank preparatory to pursuit.

It is a well-known fact evinced both by childhood experience and the history of countless battles, that a man running away can always outdistance a pursuer running after him. For this reason Cavalry is the ideal means for pursuit; first, to catch up with the enemy and then to delay his march until the arrival of the Infantry.

In gaining a position on the enemy line of retreat from which to delay him, Cavalry should start with a sufficiently wide turning movement to avoid his Cavalry detachments. If it should encounter such forces it should not fight but rather use its speed to get around.

Having gained a position on the hostile flank and rear, Cavalry should at once start attacking the enemy and breaking up his rest. Its operations must be *ceaseless day and night*. The method of action will depend on circumstances. At first it will have to be by fire. Bursts of surprise fire will be particularly effective. When the enemy becomes demoralized, free use should be made of the charge.

When defiles or bridges exist on the line of retreat the Cavalry should try to reach them first. However, it should not plug up all holes of retreat too soon. By pretending to be on the point of closing the last bolt hole, the enemy is induced to demand ever increasing marches of his men with the result that soon fatigue and demoralization will claim more casualties than bullets. After a satisfactory reduction is produced, the rest may be rounded up.

Whatever supplies Cavalry obtain during pursuit must come either from the enemy or from God—none can be sent them.

For pursuit both types of armored cars will be useful: the wheeled-type to move far around the flank to raid or to precede the Cavalry in reconnaissance until contact is made; the track-laying type to accompany the Cavalry in open country or to follow it in closed and to participate in combat. The possibility of getting some fuel up to them will be small but worth trying.

The fact that they cannot work at night is a heavy drawback.

There should be close liaison with airplanes who will not only attack the enemy but also apprise the Cavalry of his routes and, if possible, of the position of his delaying detachments.

In this, as in all other operations in future wars, our own air-

planes must be counted on to afford a maximum protection to our march columns of ground troops of all sorts.

Covering Withdrawals: If the shoe is on the other foot and we are the beaten and retreating party, it is up to our Cavalry to cover us and minimize the effects of hostile pursuit.

This they accomplish by fighting off hostile Cavalry, by attacking the flanks of pursuing Infantry, and by protecting the withdrawal of our own Infantry covering detachments.

In case there are unprotected defiles or bridges on our line of march the Cavalry must keep the enemy from occupying them.

Armored cars of the wheeled-type will be used to make short delays on the roads. The smoke devices with which they are provided may facilitate their escape. These cars will be effective in making small demolitions. They will carry the explosive and cover its emplacement. Their efficiency will depend on the valor and initiative of their crews. Their casualties will be excessive.

The track-laying armored cars will be especially valuable in covering the retirement of Cavalry. They will remain in position until the last mounted unit is well away and will then rejoin. If the enemy is using artillery they will have to occupy concealed defiladed positions and attack the leading elements of the pursuit as these reach the position just abandoned.

Flank Guards: This task should be performed by the use of very aggressive delaying action.

The earliest possible contact must be gained with the enemy with a view to at once attacking him and causing him to deploy. Ambushes will be utilized. Since at first it is not a question of holding ground but simply of slowing up the hostile march, positions parallel to the line of march may be utilized. Such positions should be selected on the flank in the direction of which the force being covered is marching so as to prevent the Cavalry from getting cut off. Demolitions must be used to the full.

Where roads permit it, wheeled-type armored cars should be pushed out early to locate and engage the enemy. Later they cover the flanks.

Track-laying armored cars should be used for surprise attacks and to cover the withdrawal of the mounted units.

Cavalry in Combat Against Mechanized Forces: In considering this phase of combat it is desirable first to call attention to certain limitations which will effect the employment of mechanized forces, because thus far the glamour of the unknown attached to them has caused us to gloss over or neglect their shortcomings.

In the first place, no mechanized force the size of a brigade, using any known type of vehicle, is any less tied to roads for marching and supply than is a brigade of other arms.

In order to force the passage of obstacles such as creeks, gulches, etc., it is necessary for them to establish a bridgehead. This fact alone will always demand the presence of a considerable number of portée Infantry, or as some writers call them "Tank Marines."

The transport of this force necessitates the presence of numerous non-fighting vehicles, with a corresponding elongation of the column.

This elongation increases the very real difficulty of transmitting information and orders along the column. A fact which is bound to seriously delay both the speed of the march and the rate of the deployment. Most roads are not concrete boulevards and are more apt to be twelve than forty feet wide.

Kipling's famous lines about

"The everlasting waiting on the everlasting road,

For the commissariat camel with his commissariat load" may tomorrow have to be revamped so as to contain some reference to this new problem.

Up to the present no mechanically transported security groups have been able to insure effective tactical reconnaissance at a speed commensurate to the capabilities of mechanized forces.

While this defect is serious for the fighting vehicles, it is far more disadvantageous in the case of the portée and fuel-supply elements of the command.

Without gasoline, machines are junk. The question of maintaining an adequate and timely supply of this priceless liquid will absolutely determine the mobility of mechanized forces. The shoe will begin to pinch on the second day. It seems to us that the difficulties which will be encountered will seriously limit widespread maneuvers of independent mechanical forces. In our own experience it was far more fatal than enemy fire.

The question of effecting battle reconnaissance for mechanized forces is extremely important. It is well to remember that the speed these monsters attain over the intimately known terrain of the maneuver areas will be materially reduced when they come to undertake independent operations in new country.

Except under circumstances so favorable as to be practically non-existent, machines cannot fight at night.

Finally, the battle command of mechanized forces offers tremendous and as yet unsolved difficulties.

The preceding analysis is in no way intended to detract from the

very real efficiency which mechanized units possess. In enumerating their difficulties we have but reverted to our "Block and hold" thesis.

It is by a vigorous and courageous understanding and utilization of these "Blocks" that Cavalry must devise means for combating machines. Only the unknown is feared.

In the first place, too much significance should not be attached to such expressions as: "Open country" and "Inclosed country." In all open country there are many inclosed areas; and in closed country there are numerous open patches. Think, for example, of how few places there are in the world, except target ranges, where one can see every foot of ground from zero to a thousand yards.

In combating mechanized forces Cavalry must begin with distant and wide reconnaissance. In this it should derive the maximum assistance from airplanes and armored cars. The units making this reconnaissance do not need to be very thick as armored forces are easily seen and heard.

When the force has been located Cavalry should move towards it in deployed columns, but must avoid head-on collision in the open. Wherever cover exists Cavalry should open fire with automatic weapons and cause itself to be attacked. It must of course avoid small isolated woods as in these it will be surrounded.

Extensive obstacles such as creeks, gullies and wooded draws should be held in force. At such places mechanized forces can be stopped. If they know their business, however, they will not attack but go around. The stationary gun is vastly superior to the moving one.

The speed and mobility of Cavalry, enabling it as it does to readily occupy and evacuate successive positions, renders it better suited to delaying mechanized forces than is any other arm.

While this delaying action is in progress, the Cavalry units on the flanks will close in and get behind the armored force across its line of supply.

With the advent of darkness Cavalry assumes the offensive.

Owing to their inability to fight at night in strange country, mechanized forces will close up at dark and go into a bivouac concealed from aerial attack. They are so weak in men that the outpost they establish will be very close in. Machines will be placed to sweep with fire all roads leading to the camp.

While it will be quite impossible for Cavalry to destroy such a bivouac, it can be very easily annoyed, harassed and injured by an active Cavalry breaking its rest, shelling its machines and assaulting

its outposts. In dry weather woods must be fired. The road in rear of it will be cut and all bridges on it destroyed or damaged.

In order to get up supplies convoys of armored machines must be used. The supplies so convoyed will be inadequate unless so many machines are used as materially to reduce the fighting force.

Of course the Cavalry will not get off scatheless. Sad to say no effective means of fighting without killing and getting killed has yet been invented.

In consideration of the foregoing it is our firm belief that the independent employment of mechanized forces is so largely illusory that it will never be seriously employed. Certainly not after a few trials.

The true medium of these forces is in the form of offensive reserves to be used in the final stages of a general battle to strike the decisive blow.

Airplanes: Throughout this paper stress has been laid on the advantages Cavalry will derive from the aid of friendly airplanes.

In considering the effects of air attacks on Cavalry, the following points are noteworthy:

Due to the variable speed of Cavalry and its ability to move via trails and across country with little heed to bridges, except at the larger rivers, it can split up its columns into relatively small march units and still be able to concentrate them at the desired point.

The mobility possessed by each individual of these little units enables them to disperse and reassemble rapidly in the event of air attack and so offer very poor targets.

The same characteristics permit Cavalry to disperse its bivouacs so that the effects of bombing attacks will be slight and highly localized. The days of nicely ordered Cavalry camps on the open sunny slopes of a hill are as defunct as the buffalo among whom they used to flourish.

The danger from air attacks will certainly force Cavalry to keep its led horses mobile and concealed.

The best block for enemy aviation is our own.

Supply: The details of cavalry supply have been skimmed just as the supplies will be. It is hoped that enough has been said to indicate the exceptional difficulties to be expected.

Cavalry usually operates in small units. It never is, or better it never should be, near the principle lines of supply save those of the enemy. The proper use of Cavalry may be epitomized to read: "In movement there is strength." It would be as foolish to hamper the movements of Cavalry by the attachment of heavy trains as it would

be to hitch a trailer to a racing car. Cavalry, to be useful in war, must be hungry Cavalry. It must eat where and how it can. De Bruck, one of Napoleon's officers, said that he had done eighteen campaigns in the Cavalry and had seen but one supply wagon, and that one upside down in a ditch.

Supply therefore will reduce itself to starving and foraging, interspersed with periods of plenty when some extemporised supply column is rushed through or when some future Mr. Commissary Bank is captured.

Cavalry wounded who cannot ride are out of luck unless the country people are merciful. Their graves' registrators will be the buzzards. In the words of the old song: "If you want to have a good time jine the Cavalry".



Cavalry-Infantry Maneuvers, 1930

By MAJOR JOHN B. COULTER, *General Staff Corps*

THE Cavalry-Infantry field maneuvers held in the vicinity of San Antonio, Texas, May 7-10, 1930, were the most instructive. It is believed, since the war in that they provided an opportunity for the arms of the service represented to operate against one another and, at the same time, demonstrate how each can assist the other in modern warfare.

The object of the maneuvers, as outlined by the Corps Area Commander, was to illustrate the employment of troops with present strength and equipment under all modern conditions of warfare in a sparsely settled country with poor communications. The underlying idea was that the maneuvers should be as free as possible, uncontrolled by special situations, except as might be necessary to keep the maneuvers within the limits of the territory over which permission had been obtained to operate. In addition to tactical situations and the necessary orders and actions on the part of the two commanders to meet these, it was hoped that the problems of supply, of ammunition, forage and rations would present special features.

Other special features which the Corps Area Commander hoped would be illustrated were:

- a. The movement of regular troops toward the border; to cover concentrations and seize important bridgeheads while awaiting reinforcements.
- b. The difficulty of supplying Cavalry by motor, pack and wagon transportation over forty miles of poor road, and the supply of Infantry, by truck and wagon, over thirty-five miles of poor road.
- c. The use of only one road for movement and supply.
- d. Reconnaissance by foot, horse and air by both sides, and probable reconnaissance in force.
- e. The defense and forcing of river crossings.
- f. The use of a motorized infantry battalion by Blue as well as motor transportation for all Blue foot troops.
- g. A continuous maneuver from the declaration of war to the end of the maneuver.
- h. The use of smoke.
- i. The extent to which Infantry can be delayed by Cavalry.
- j. Use of armored cars in very brushy country.
- k. Use of attack and observation planes in the field.
- l. Concealment from air reconnaissance.
- m. Difficulty of night movements, except on main roads, in mes-

quite and cactus covered country and the difficulty of communication over such country.

n. Extreme difficulty of any movement in this country in case of wet weather. (The average rainfall for the month of May is 3.84.)

o. Radio communication with airplanes.

Terrain

The terrain over which the maneuvers would take place was varied in character and afforded quite diversified conditions for operations. North of the Frio River the area was generally flat, densely covered by high mesquite, and cut by many small streams and sloughs. The Charlotte-Fowlerton highway was a dirt road, fairly improved, but narrow. The bridges on this, as on all other roads in the area, were old and capable only of carrying medium loads. The other roads were of the same type, or poorer than the above so-called highway.

The Frio River formed a rather formidable obstacle, except at a few places. One bridge crossed the river just north of Fowlerton. All other crossings were fords and difficult of passage, especially by motors.

The country between the Frio and Los Angeles and for about ten miles directly south of the latter place was either under cultivation or was fenced, thereby restricting operations, to a great extent, to roads.

In the area between the Frio and Nueces Rivers little cover was available, except for small patches of low mesquite. These patches were far apart and afforded cover for only a limited number of troops.

One railroad ran through the area, as may be noted on Map No. 1.

Composition of Forces

The Blue force, under the command of Brigadier General Halstead Dorey, consisted of the 2d Infantry Division, less one infantry brigade and one battalion 23d Infantry; with six airplanes of the 12th Observation Squadron; twelve airplanes of the 3d Attack Group; one Platoon Troop A, 1st Armored Car Squadron; Company "C," 8th Engineer Battalion (mounted); and a detachment Chemical Warfare troops, attached.

The White force, under the command of Brigadier General Hamilton S. Hawkins, consisted of the 1st Cavalry Brigade, less the 1st Cavalry; with the 12th Cavalry; 2d Battalion, 15th Field Artillery; one platoon Troop A, 1st Armored Car Squadron; six airplanes of

the 12th Observation Squadron; twelve airplanes of the 3d Attack Group; Company "B," 8th Engineer Battalion (mounted); 5th and 6th Pack Trains; 83d Motor Repair Section, and a detachment Chemical Warfare troops, attached.

General Situation *

The general situation, and first special situations, (see Map No. 1) which brought the troops into the area of concentration, were as follows:

a. The NUECES RIVER forms a portion of the boundary line between states: BLUE (North) and WHITE (South).

b. War is imminent between the two countries and both are mobilizing, with concentrations of BLUE at SAN ANTONIO and WHITE at LAREDO.

c. It is known that BLUE has an infantry division, (less one infantry brigade and one engineer regiment) and one company of mounted engineers at FORT SAM HOUSTON, and that WHITE has a brigade of cavalry reinforced by a battalion of field artillery and a company of mounted engineers on, or south, of the line CARRIZO SPRINGS—ALICE. Each side is known to have observation and attack aviation and armored cars immediately available.

d. Both sides have reconnoitered the territory within their own boundaries.

Special Situation (Blue)

On May 1st, the Commanding General (Blue) received the following message from General Headquarters:

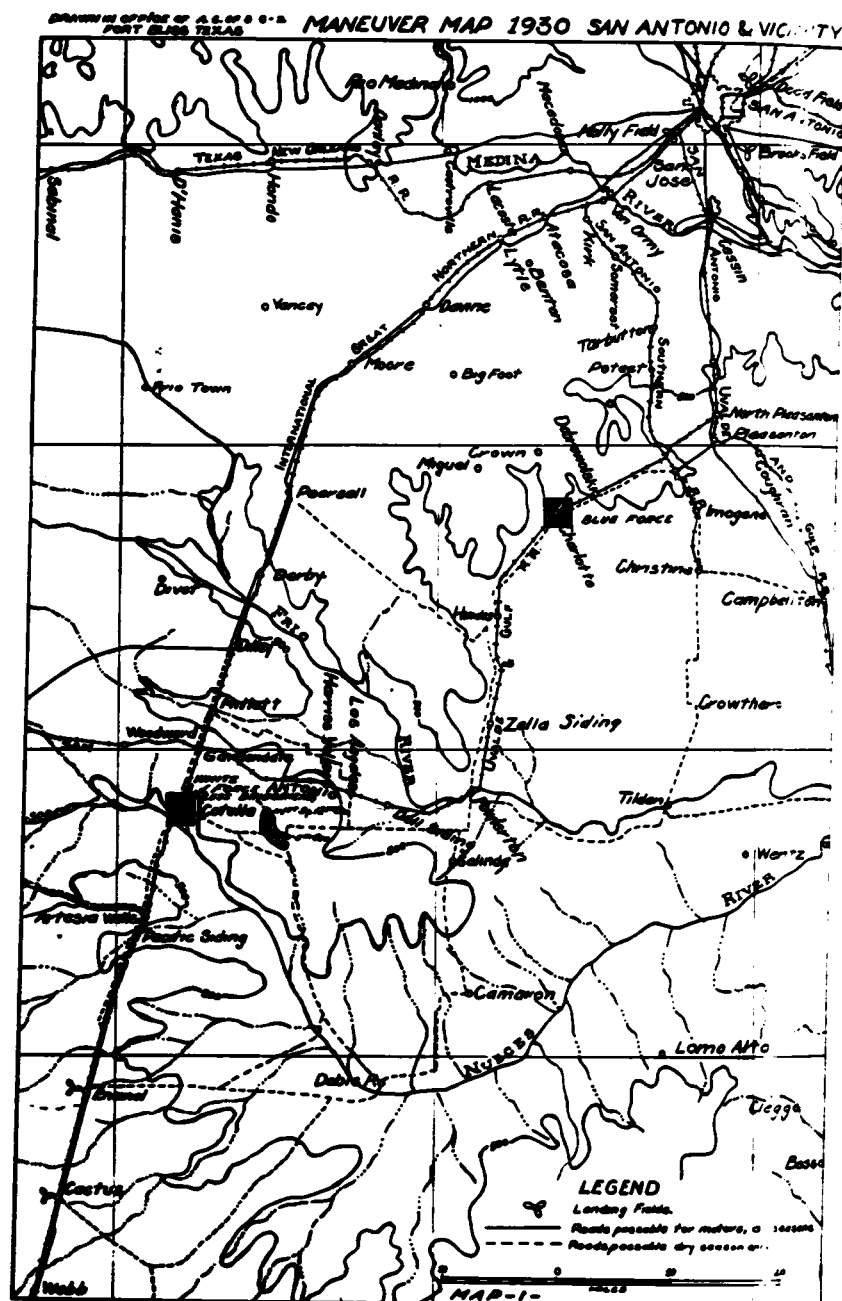
"You will assemble your command in the JOURDANTON-CHARLOTTE area by the evening of May 6th, 1930. Trucks available at FORT SAM HOUSTON, TEXAS, to transport the foot elements of your command. Observation and attack aviation will join you at FORT SAM HOUSTON, TEXAS, on May 5, and Company "C," 8th Engineer Battalion, will join you at CHARLOTTE, TEXAS, on May 6th.
(Signed) McCLEAVE."

Special Situation (White)

On April 25 1930, the Commanding General (White) received the following message from General Headquarters:

"The 12th Cavalry and 5th Pack Train now at FORT RINGGOLD and Company "B," 8th Engineer Battalion (mounted), now at FORT McINTOSH are attached to your command and the 1st Cavalry is re-

*See Map No. 1 for General and Special Situations.



Map No. 1

lieved therefrom, effective at once. You will assemble your command by the morning of May 6th in the vicinity of ENCINAL, with a strong advance force at the DOBIE and FORT EWELL crossings of the NUECES. The 2d Battalion, 15th Field Artillery, 83d Motor Repair Section and Observation and attack aviation will join you at ENCINAL on May 6th.

(Signed) McCLEAVE."

Due to heavy rains and high water in the Nueces River the White plan was changed on May 3d as follows:

"1. Previous orders requiring you to concentrate in the vicinity of ENCINAL with an advance force at DOBIE and OLD FORT EWELL fords of the NUECES are revoked.

"2. You are hereby directed to concentrate your forces in the vicinity of COTULLA and base your operations on that place.

"3. Further instructions will be sent you within one or two days covering the changed situation.

"4. Modify your supply plans to meet the situation, but no additional funds can be furnished you."

The assembly of the White Force at Cotulla north of the Nueces River in Blue Territory constituted an act of war and on May 4, at 11:00 A. M., the following letter of instructions was issued to the Commanding General, White Force, at Cotulla:

"1. So far as can be determined Blue has not advanced in force down the SAN ANTONIO-COTULLA-LAREDO Highway; his advance parties are at PEARSALL. Reports indicate that another Blue force is moving south on the SAN ANTONIO-PLEASANTON Road.

"2. Our First White Division has crossed the NUECES at COTULLA and advanced to the crossing of the FRIO north of DILLEY. The Commander-in-Chief intends to utilize the flooded condition of the NUECES to prevent the southward advance of the enemy. He will utilize the First Division at the FRIO and your command to harry the enemy and delay his crossing of the FRIO River.

"3. You will hold yourself in readiness to move to seize the crossing of the FRIO at FOWLERTON with a view to delaying the enemy in his approach to and crossing of the FRIO.

"4. It will be necessary for you at once to locate suitable landing fields for your aviation in the neighborhood of COTULLA or elsewhere."

f. Following this, instructions were issued to the Commanding General of the Blue 2d Division, at 10:00 A. M., on May 5th:

"1. White has declared war and coincidentally has crossed the frontier in the neighborhood of COTULLA.

"A considerable force has advanced up the LAREDO-COTULLA-SAN ANTONIO Road and is holding the crossing of the FRIO.

"Judging from the enemy's aggressive attitude, flanking movements to the right and left of his main advance are to be anticipated, and it is probable that the columns involved will have to cross the NUECES at COTULLA, in view of the flooded condition of that river.

"2. Our main force approaching from the north has been delayed by heavy rains and washouts, and consequently our advance southward in force will be delayed.

"The VIII Corps has advanced parties as far south as PEARSALL on the LAREDO-COTULLA-SAN ANTONIO Road.

"3. Until our reinforcements arrive and until further information is obtained as to the enemy's intentions, you will take a position in readiness in the general vicinity of CHARLOTTE, prepared to advance either to the west or the south to protect the flank of our main advance over the SAN ANTONIO-COTULLA-LAREDO Highway."

The White force was concentrated at Cotulla on May 4. The Blue concentration was complete at Charlotte on May 6. In view of the fact that the crossing of the border by the White Force was tantamount to a declaration of war, the air corps of the two forces were made available at this time for such use as the two commanders desired to make thereof.

The Maneuvers

The maneuvers opened at 6:00 P. M. May 7th, by the issuance of the following missions to the Blue and White force commanders:

Blue

"1. WHITE is holding a bridgehead at the crossing of the FRIO RIVER by main highway SAN ANTONIO-COTULLA-LAREDO, and has considerable force in the vicinity of COTULLA.

"2. Our reinforcements have arrived in SAN ANTONIO and the VIII Corps will proceed at once with its main axis on the SAN ANTONIO-COTULLA-LAREDO highway to effect a crossing of the FRIO RIVER and to proceed to the attack of the COTULLA crossing of the NUECES.

"3. You will proceed to cover the left flank of our main advance, seizing the crossings of the FRIO at and near FOWLERTON and driving back any enemy force attempting to approach and cross in that vicinity.

"Since our main force is believed to be greatly superior to that of the enemy it is anticipated that we will not be long delayed in reaching the NUECES at COTULLA and cutting off any enemy force to the east, relying upon the bridge there for its crossing of the NUECES."

White

"1. Up to noon today information as to the enemy indicates that his main strength is between PEARSALL and SAN ANTONIO along the general line of the SAN ANTONIO-COTULLA-LAREDO highway and that he has flanking force in the general neighborhood of CHARLOTTE.

"2. Our first WHITE Division is still holding the crossings of the FRIO north of DILLEY. A bridgehead has been established to cover the crossing of the NUECES at COTULLA.

"3. You will proceed to cover our right flank, seizing the crossings of the FRIO at and near FOWLERTON and harassing and delaying any enemy force attempting to approach and cross in that vicinity.

"4. Before leaving COTULLA you should make all preliminary plans for shifting your supply base to old FORT EWELL or DOBIE FORD in case you should become cut off from COTULLA."

(Locations of opposing forces at the opening of the maneuvers were as shown on Map No. 1.)

Blue Operations to Include Midnight, May 7th

Upon receipt of his mission, the Blue Commander directed one battalion of Infantry and one battery of the 12th Field Artillery, with one day's rations, completely motorized and covered by armored cars, to move without delay on Fowlerton with the mission of seizing that place and forming a bridgehead south of the Frio River pending the arrival of the remainder of the Blue force. This command moved at 6:30 P. M. and twelve miles south of Charlotte the leading trucks broke through a bridge. This bridge was repaired in one and one-half hours and the column resumed its march.

Heavy sand was encountered just south of Hindes and another bridge went out about two miles south of Hindes, causing the commander to start forward a detachment of Infantry (about thirty-five in strength) with a section of machine guns to secure Zella Siding until the remainder of the column could resume its march. This detachment gained contact with the leading element of the White Force (Troop "E," 5th Cavalry, reinforced by one section of Machine Guns, and detachment Chemical Warfare troops) about six hundred yards south of Zella Siding at 11:30 P. M., and after being attacked three separate times by the cavalry force, the Chief Umpire halted the forward movement of the opposing forces.

White Operations to Include Midnight, May 7, 1930

At 6:00 P. M., May 7th, the White Force had the 5th Cavalry, with one squadron of the 12th Cavalry attached, forming a bridgehead

about nine miles east of Cotulla on the Cotulla-Fowlerton Highway

These troops were observed by the Blue air force moving to this position on the afternoon of May 6th, but by excellent use of the cover in the vicinity of its bivouac was practically hidden from view of air observation throughout the 7th of May, causing concern to the Blues as to the whereabouts of particularly one squadron, as stated by the Blue Commander.

Upon receipt of his mission, the White Commander ordered the 5th Cavalry to march without delay, seize Fowlerton and move on Esperanza Creek (seven miles north of Fowlerton), delaying the advance of the Blues on Fowlerton.

The 1st Squadron, 12th Cavalry, was directed to march at once (via Los Angeles and the fords over the Frio River, generally northeast of Los Angeles), on the Hindes road crossing of the Esperanza Creek to delay the advance of any Blue troops attempting to move on Los Angeles.

The Armored Car platoon was directed to move at once via Los Angeles and the fords over the Frio River, generally northeast of Los Angeles, to destroy the bridges on the Fowlerton-Charlotte road over the Esperanza Creek, to destroy the bridges in the vicinity of Hindes and to cover the roads west of the Fowlerton-Hindes road as far north as Hindes.

The 1st Cavalry Brigade Headquarters, the 12th Cavalry, less 1st Squadron (Colonel Daniel Van Voorhis commanding) and the 2d Battalion, 15th Field Artillery (Major L. R. Dougherty commanding) were ordered to move initially to the Los Angeles road intersection with the Cotulla-Fowlerton Highway, where further instructions would be issued, dependent upon the successful crossing of the Frio River at Fowlerton by the 5th Cavalry.

Troop E, 5th Cavalry, with one section of Machine Guns and a detachment of Chemical Warfare Troops attached, left the regimental bivouac at 7:00 P. M. and reached Fowlerton (23 miles distant), at 9:50 P. M.; or in two hours and fifty minutes; it gained contact with the leading element of the Blue force, 600 yards south of Zella Siding (seven miles north of Fowlerton) at about 1:30 P. M.

As the mission of this troop was to seize Zella Siding, the troop commander twice moved to out-flank the infantry detachment south of Zella Siding; but as he gained the flank and rear of the Blue position, the Chief Umpire ruled his command back and declared that neither the Blue nor White forces could advance further.

The 5th Cavalry, less Troop E, and detachments (Colonel S. F. Dallam commanding), marched at the rate of six miles per hour and

had gained the Esperanza Creek by 11:35 P. M., where it prepared for the defense of the south bank during the remainder of the night of May 7-8.

The armored cars gained the Fowlerton-Charlotte Highway, placarded the bridges over the Esperanza Creek and north thereof as destroyed and withdrew to the east to cover the roads to the southwest of Hindes.

The brigade commander, upon reaching the road intersection, three miles south of Los Angeles, and learning that the 5th Cavalry had gained its objective, directed the 12th Cavalry, less the 1st Squadron, to cross the Frio River, and from the vicinity of J. Martin's cover the gap between the 5th Cavalry and the 1st Squadron, 12th Cavalry; and to harass the Blue Force in right flank.

The Artillery was directed to move to a position just south of Fowlerton to support the 5th Cavalry in its delaying action against the Blues.

The operations this date were particularly outstanding in that the Cavalry moved an approximate distance of thirty miles, under cover of darkness and over unfamiliar roads, in about four and one-half hours and arrived with its animals, pack equipment and light wagons closed up and ready for immediate operations against the Blue Force.

On the morning of May 8th the Blue and White Commanders received the following missions:

Blue

"1. Our VIII Corps has advanced, driven the enemy south of the Frio in the Vicinity of DILLEY and is steadily forcing his troops back on the crossings of the NUECES at COTULLA.

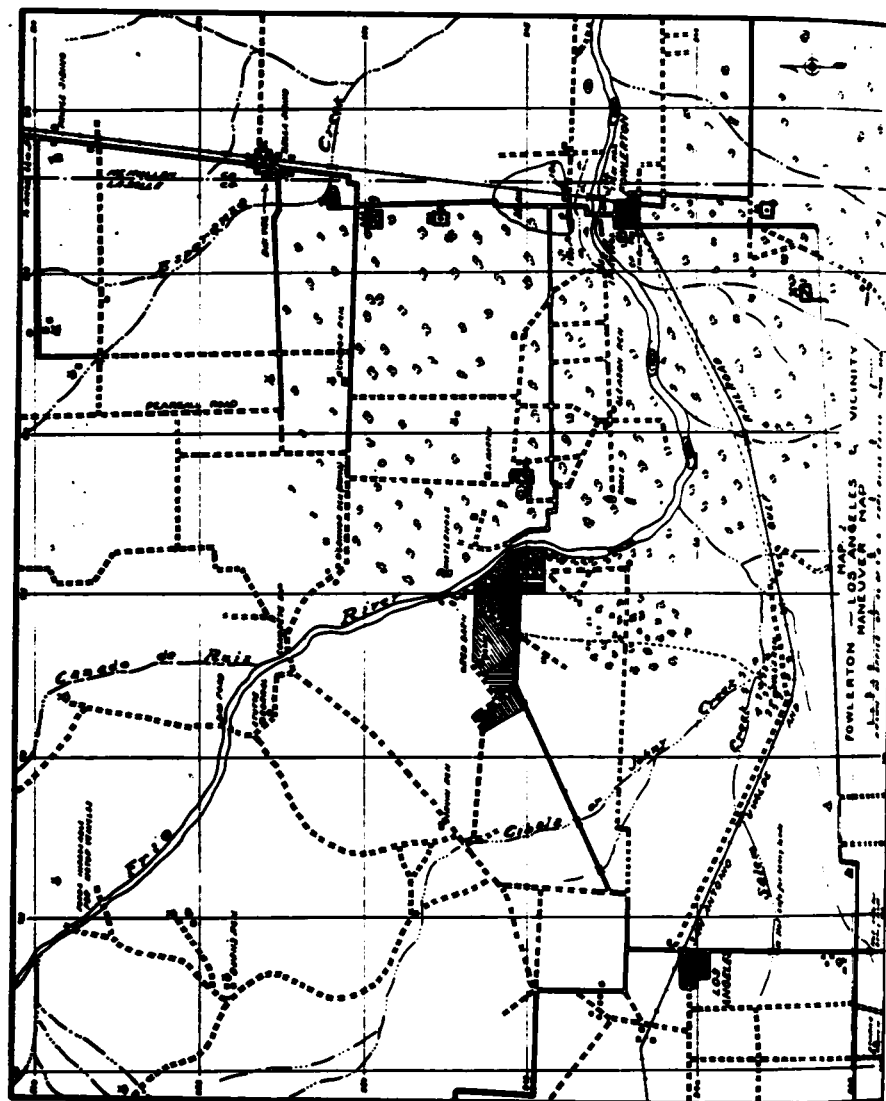
"2. Due to this retirement of the WHITE troops along the main SAN ANTONIO-LAREDO highway, our air service reports that the WHITE FORCES along the FOWLERTON-ZELLA-HINDES Road are beginning to retire south of the Frio at FOWLERTON.

"3. As soon as the bridges in the vicinity of HINDES have been repaired and your troops have been given a reasonable rest you will resume the advance and force the crossings of the Frio in the vicinity of FOWLERTON."

White

"1. The BLUE troops on our front have attacked and our advanced forces in the vicinity of PEARSALL are retiring behind the NUECES at COTULLA.

"2. You will withdraw at once from your present position and



take up a position south of the FRIO at FOWLERTON covering the crossings of the river in that immediate vicinity.

"3. In case our main forces on the LAREDO-COTULLA highway are driven further back, you will be prepared for a further retirement either to the south or southwest as circumstances may dictate."

Blue Operations on May 8th

The Blue force spent May 8th moving into position to force a crossing of the Frio River in the vicinity of Fowlerton, and bringing up their trucks and animal-drawn transportation. On the evening of May 8th the 23d Infantry had two battalions in line astride the Zella-Fowlerton road, in front of Fowlerton. The 9th Infantry was near the Pearsall-Fowlerton road junction in division reserve.

The 12th Field Artillery was in support of the 23d Infantry. The Division Headquarters and the divisional troops were in the vicinity of Zella Siding.

The 2d Tank Company encountered heavy roads and bad bridges near Hindes and never reached a point further south thereof during the maneuvers.

The Blue air force executed observation missions over White territory through the 7th and 8th and made several ground attacks on White installations.

White Operations on May 8th

In accordance with orders, the 5th Cavalry withdrew during the forenoon of May 8th to the south bank of the Frio in the vicinity of Fowlerton, where it began its defense of the river line with squadrons abreast and with one platoon in regimental reserve. The 2d Battalion, 15th Field Artillery, in position approximately 2500 yards south of the river, supported the 5th Cavalry. Colonel Van Voorhis, in command of the 12th Cavalry (less 1st Squadron and detachments) ordered saddle packs, forage and rations, and kitchen and picketline packs, cached under cover near J. Martin and marched his command at 9:30 A. M. toward O'Connor's Ranch. His reconnaissance patrols had been active since dawn.

At 2:10 P. M. his advance guard encountered what was apparently an infantry flank guard about 1½ miles east of O'Connor's Ranch consisting of one company of Infantry with machine guns. After reinforcing his advanced guard by automatic weapons he initiated a flanking movement through high mesquite. This movement caught another company with machine guns in the act of detrucking with the result that the 12th Cavalry was awarded the capture of

two companies of Infantry, 3 trucks, 4 machine guns, and the armored car which was convoying the entrucked Infantry. He then withdrew to J. Martin Ranch. His losses this day were one officer's reconnaissance patrol captured.

At J. Martin Ranch he united with his 1st Squadron which had marched there from Sutt's Ford on orders from Brigade headquarters, and the entire regiment rested there during the night of May 8th.

In the past 24 hours the 12th Cavalry had marched over fifty miles, not counting the additional distance covered by reconnaissance patrols.

The White air force executed observation missions over the Blue troops throughout the day and made seven attacks on Blue masses, troops and transport on the road and on the hostile airdrome.

(Dispositions of opposing forces on the evening of May 8th were as shown on Map No. 2.)

At 7:30 A. M., May 9th, the Corps Area Commander issued the following additional instructions:

Blue

"1. Our main force on the SAN ANTONIO-COTULLA-LAREDO Highway has succeeded in crossing the FRIO but its further progress has been checked.

"2. The enemy's main body is vigorously resisting our advance on COTULLA but our forces are outflanking on both flanks and it is anticipated that within the next 48 hours he will be driven across the NUECES at COTULLA.

"3. It is important for you to defeat the enemy in your front and advance to threaten enemy communications in the direction of ENCINAL."

White

"1. The enemy's main force has driven our forces across the FRIO and while we are still holding him off, it is probable that he will, within the next two or three days, force our withdrawal across the NUECES at COTULLA.

"2. You should delay the flanking forces in your front as much as possible at the fords of the FRIO near FOWLERTON and make arrangements at once for falling back on the fords of the NUECES at DOBIE RANCH and OLD FORT EWELL, delaying him as you retire."

Blue Operations to Include the Morning of May 10th

At 11:00 A. M., May 9th, the Blue force began its movement on the fords northeast of Los Angeles in three columns, with the plan of

crossing the Frio River, seizing Los Angeles, and using the latter place as a base for further operations to the south, instead of attacking the cavalry force at Fowlerton, as was expected.

The motorized column, consisting of one battalion of the 23d Infantry covered by two armored cars, moved on the West Ford (concrete dip) road. The center column, consisting of the 9th Infantry (less one battalion), four batteries of artillery, and divisional troops (Infantry in trucks) moved on the ford west of J. Martin, and the south column, consisting of the 23d Infantry (less two battalions), moved on the east and west road just north of the Frio River.

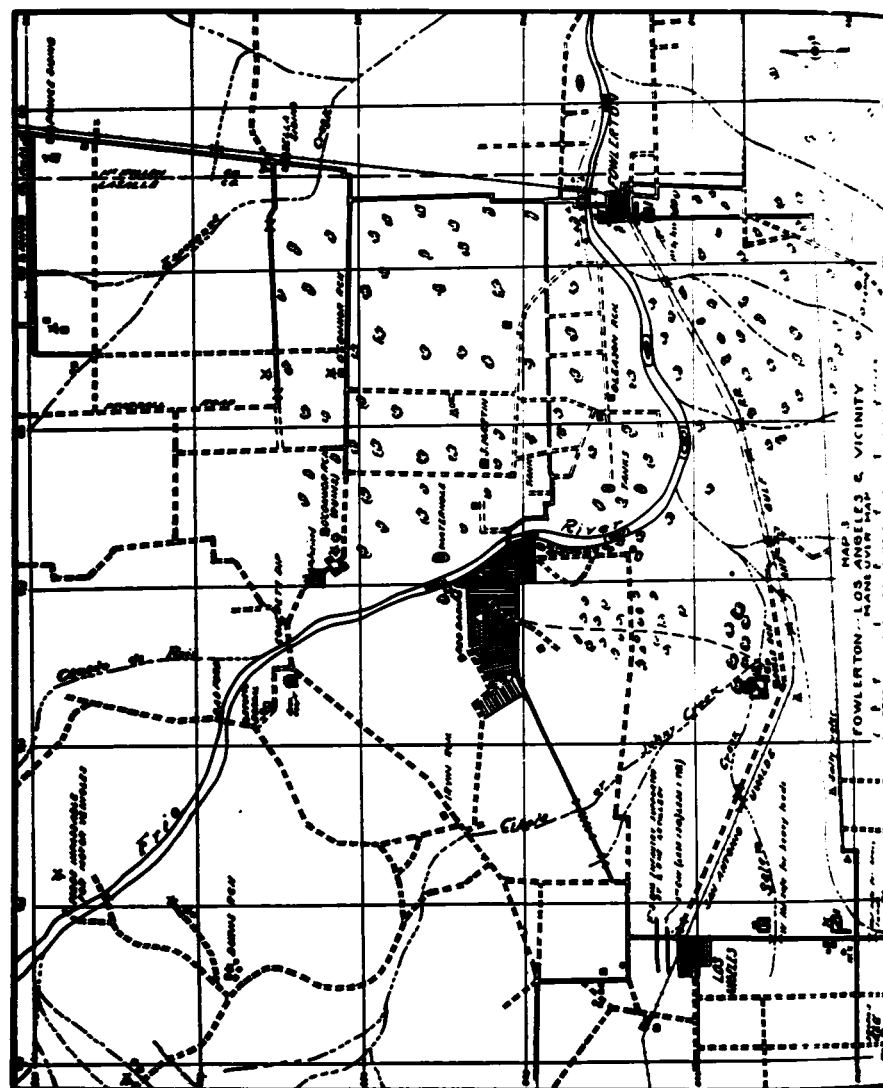
Contact was gained just east of the ford over the Frio River on the Zella-Los Angeles Road with the 12th Cavalry at about 2:00 P. M. By 3:15 P. M. the 9th Infantry had gained the southwest bank of the Frio and as it prepared to attack the second delaying position of the 12th Cavalry, 1000 yards west of the river, the Chief Umpire caused the Infantry to assemble on the road (due to cultivated ground), gave the Cavalry twenty minutes to withdraw and the Infantry thirty minutes to assemble before it could resume its advance.

Upon resumption of the advance, the Infantry learned that the entire 12th Cavalry had withdrawn to its left flank. Covering detachments were then thrown out; the troops were fed and trucks brought across the ford. By 11:00 P. M. enough trucks were on the southwest side of the Frio to entruck the leading infantry battalion in its advance on Los Angeles (seven miles distance). By 3:00 A. M., May 10th, sufficient transport had been brought across the ford to move all troops which were to advance on Los Angeles.

The movement on Los Angeles was preceded by a mounted detachment from the 9th Infantry, the majority of which was captured by the leading element of the 5th Cavalry, which had taken position astride the Los Angeles road, one mile north of the latter place, to cover the position of the 5th Cavalry. The leading infantry battalion attacked the 5th Cavalry position at 2:00 A. M. but was repulsed.

White Operations to Include May 10th

Contact was gained between the Blue leading elements moving west on the Zella-Los Angeles road and the 12th Cavalry east of the ford near J. Martin at about 12:00 o'clock, noon. The 1st Squadron of the 12th Cavalry, after delaying the Blues in four successive positions, withdrew from its delaying position east of the river about 3:00 P. M., covered by the remainder of the regiment, and occupied a delaying position astride the Los Angeles road about 1000 yards west of the river. The 1st Squadron was later joined by the remainder of the regiment on this position.



When the leading battalion of the 9th Infantry deployed to attack the delaying position west of the Frio and the 12th Cavalry was preparing to withdraw, the Chief Umpire ruled (due to cultivated fields over which troops could not operate) that the 12th Cavalry must withdraw in twenty minutes and the leading battalion of the 9th Infantry must assemble on the road and not resume its advance for thirty minutes.

The 12th Cavalry, executing the original order of the brigade commander, withdrew four miles direct to the south (left flank of the infantry column) to Dull's ranch, where the regiment expected its rations and forage to arrive after dark May 9th.

Upon learning of the situation, the White brigade commander ordered the 5th Cavalry, (less one squadron), to march from Fowlerton on Los Angeles, via the railroad to delay the advance of the Blues on Los Angeles. (This force left Fowlerton at 5:30 P. M.) He further ordered the 12th Cavalry to remain at Dull's ranch during the night of May 9-10, prepared to make a flank attack on the Blue force at dawn, May 10th. The brigade headquarters was moved to the road intersection of the Los Angeles and Fowlerton-Cotulla roads, and the new command post was established by 10:00 P. M.

The 5th Cavalry, (less one squadron), reached Los Angeles about 8:55 P. M., where it immediately occupied a delaying position astride the Los Angeles-Zella road immediately north of Los Angeles, with Troop F about one mile in advance of the position. Troop B, 5th Cavalry, left Fowlerton at 11:30 P. M. and joined its regiment before dawn of May 10th.

The plan of the White brigade commander was to have the 5th Cavalry, (less one troop), delay the advance of the Blue force south of Los Angeles and at dawn May 10th, to send the 12th Cavalry via the road over which it had withdrawn the afternoon before, and strike the Blue force in left flank and rear.

Troop F, 5th Cavalry, encountered the leading infantry battalion (motorized, with a dismounted advance guard) about midnight May 9-10, three miles north of Los Angeles.

This troop withdrew slowly in front of the attack of the Infantry and reached Los Angeles about 1:30 A. M. At 2:00 A. M. this battalion attacked the position of the 5th Cavalry (less one squadron) supported by the 2d Battalion, 15th Field Artillery, at Los Angeles. This attack was repulsed by 3:00 A. M., with a loss to the Infantry one company, ruled out of action by umpires, and twenty prisoners. A number of led-horses of the 5th Cavalry were also ruled out.

The Blues launched a coordinated attack against the 5th Cav-

alry (less Troop A) position at Los Angeles at dawn, May 10th, with three infantry battalions, supported by the 12th Field Artillery.

As the 5th Cavalry began its withdrawal to the next delaying position, two miles south of Los Angeles, by squadron, and orders were on the way for the 12th Cavalry (two miles to the southeast of Los Angeles) to attack the Infantry in left flank and rear, the maneuvers were terminated by the Corps Area Commander.

(The locations of the opposing forces at the termination of the maneuvers were as shown on Map No. 3).

The Blue and White forces thereupon assembled at Los Angeles, where they remained until the return march for home stations began on May 11th.

Critique

In the critique following the maneuvers, two significant statements were made by the Corps Area Commander: the first, "The Cavalry accomplished its mission," and second: "The Cavalry has demonstrated its historic mobility and modern fire power."

General Hawkins demonstrated the mobility of his command on the evening of May 7th, when it moved from the vicinity of Cotulla to the point of contact with the Blues, north of Fowlerton, and in the concentration of the White force in front of the Blues near Los Angeles during the night of May 9-10.

The fire power of the cavalry regiment was illustrated, both by the 12th Cavalry in its delaying action east of the J. Martin ford, and by the 5th Cavalry in front of Los Angeles.

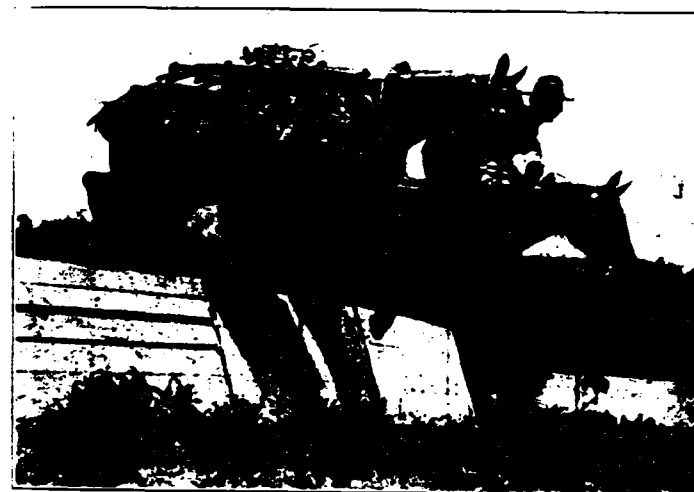
The maneuvers were terminated on terrain which offered the best opportunity for cavalry employment. While the reasons for the termination of the maneuver were fully appreciated, it was a disappointment to the cavalymen that they were not continued and opportunity given for the further application of cavalry tactics: the test of communications, supply, and of other subjects constantly under consideration by the cavalry arm.

The maneuvers furnished an unusual opportunity for the thinking and professionally interested officers of all branches to visualize what part each element of our army must play in modern war; how necessary it is that one arm should thoroughly understand the powers and limitations of the other arm; and how each can be employed best and so provide the essential team work on the battle field.

It is particularly unfortunate that all cavalry officers could not have participated in, or at least observed the maneuvers. The masterly handling of Cavalry by Brigadier General Hawkins was not only

a convincing proof of the soundness of the cavalry doctrine of employment, as taught at the Cavalry School and the Special Service Schools, but furnished an impressive example of the power of Cavalry in modern warfare.

In conclusion, the maneuvers clearly demonstrated that any force of Infantry of appreciable size must be accompanied by its own Cavalry, when confronted by hostile Cavalry. Else the constant necessity for deployment, the waste occasioned by close-in defense, and the continuing delay will be sufficient, as it was in this case, to impair seriously the accomplishment of the mission of the dismounted force.



The Cavalry Combat at Jaroslavice

By COLONEL EMIL VIDALE, Retired, Austrian Army

The following article presents valuable material for critical study of the handling of large cavalry forces, covering army concentration areas, prior to contact with the enemy and in combat. THE CAVALRY JOURNAL in the issues of January, April and June, 1923 and April, 1927, published articles on this great cavalry encounter (known as "Volchkovtsy" in Russian) by General N. N. Golovine of the Russian Army. The present article presents the situation and action from the Austrian viewpoint. The author, Colonel Emil Vidale, Retired, of the Austrian Army, took an important part in the battle as a major in the 4th Cavalry Division. We are fortunate in being able to complete the story of the battle and events leading up to it by presenting this detailed account which is the fruit of years of study of the official records and of the author's personal observation of the fight. Due to its length the article will be published in two parts, concluding in the October issue.—EDITOR.

NEARLY sixteen years have elapsed since Austrian and Russian riders met in a combat on horseback on the fields between Jaroslavice and Wolczkowce. Both had sought the encounter, both had endeavored to bring on the decision, not by a protracted struggle for superiority of fire or for local advantage, but by the true weapons of the cavalryman, the sword and the lance.

The experiences of the Boer war and of the Manchurian campaign, however, had forced the Cavalry to revise many previous views. The influence of modern technique upon warfare and upon the course of battles had been fully comprehended, and fighting dismounted was practised more from a sense of duty than from enthusiasm. But in the armies of all the belligerent countries the conviction had remained that in a future war the task devolving upon the Cavalry would be solved by combat on horseback. Fighting dismounted was regarded as a necessity—often to be expected—to which one was prepared to have recourse when ground and tactical exigencies should make impossible the genuine horsemanlike action, namely, the charge. We were educated in the firm belief in its prime importance and with this belief we went to war.

The World War has taught us that we were mistaken. Its history reports only one case of an encounter between two large bodies of mounted Cavalry. It was near Jaroslavice where, on the 21st of August, 1914, the ground trembled under the hoofs of more than three thousand horses, when Austrian and Russian regiments rushed to meet each other in combat.

The encounter at Jaroslavice, or, as the Russians call it, the "Fight at Volchkovtsy," has remained unique in this greatest of all wars. It

is therefore not to be wondered at that it has already been mentioned in war literature. Field Marshal Conrad, since deceased, mentions the affair in his memoirs. Short descriptions are to be found also in the "Oesterreichische Wehrzeitung" and in the German "Wissen und Wehr." Being sure, therefore, that the exploits of our dragoons and uhlans on the 21st of August, 1914, would not fall into oblivion, I was nevertheless surprised, on the occasion of my researches into the history of the conflict, to meet with a series of articles in THE CAVALRY JOURNAL* which represents the best—and from a military point of view the most valuable—report of this event, so memorable in the history of Cavalry. The author is the Russian Lieutenant General Golovine. In a highly attractive manner he unrolls the picture of the bloody day and shows by it the influence of modern weapons on the tactical practice of Cavalry. He does justice to the enemy and finds words of highest appreciation for the courage of the Austrian commander, General von Zarembo, and also, in part, for our troops. Thus he follows the example of his Russian comrade, our chivalrous adversary in this combat, Lieutenant General Count Keller, commander of the 10th Cavalry Division, who said on the evening of the same day to one of our officers, who was wounded and taken prisoner like myself, "Your men have fought like lions."

If, in General Golovine's account the lights on the Russian side appear more radiant and the shadows on the Austrian more darksome, he cannot be reproached. What soldier's pen would not be winged with satisfaction and pride, when it describes a success of his own army?

More difficult and less gratifying is the task of him who sets about writing the story of a defeat of his troops. It was a disastrous day, a true *dies nefastus* for the Austrian 4th Cavalry Division, this 21st of August. I do not say so for the purpose of palliating blunders. Certainly mistakes were committed, as well by the higher commands as by patrols. But also on the Russian side the arrangements on this day do not show a harmonious picture. Count Keller's daring spirit and brilliant initiative contrasts strongly with the hesitating clumsiness of Lieutenant General Prince Begildejew, commander of the 9th Cavalry Division and highest commanding general on the Russian side during the combat. It may be said that Count Keller's squadrons obtained the victory, not owing to, but in spite of the management of the Russian supreme command.

*THE CAVALRY JOURNAL.—January, 1923: Cavalry Fight at the Village Volchkovtsy on August 21st, 1914; April, 1923: The Fourth Austrian Cavalry Division in the Fight at Volchkovtsy; August 21st, 1914; June, 1923: The Cavalry Fight; Lessons from the Fight at Volchkovtsy; April, 1927: The Fight at Volchkovtsy. By General N. N. Golovine, translated by Colonel A. M. Nikolaieff.

I. General Situation at Beginning of the War

The 4th Cavalry Division and the 35th Landwehr Infantry Regiment were occupied with the frontier protection from the first day of alarm, the second of August.* The mission of the units designed for this service was to conceal and to secure the concentration of their own armies and, beginning with the first day of war (the 6th of August) also the reconnoitering of the enemy. This service had become very toilsome and exhausting for the 4th Cavalry Division. The space assigned to it had a front of sixty kilometers (fifty kilometers air line). The task of covering involved hindering hostile units from reconnoitering the movements of our troops in the concentration areas and included also the protection of important objects (buildings, railroads, etc.) from enemy attempts to destroy them. As is well known, persons and also troops not accustomed to war are prone to overrate the strength of hostile forces. So it happened often that from the frontier guards, consisting of gendarmerie, customs officers, and militiamen, and also from frightened peasants and Jews, arrived reports that caused repeated and hasty movements of the division or of parts of it. For the most part the reported strong enemy forces were revealed as some sotnias (troops) of Cossacks or as patrols even, if they had not preferred to take to their heels before our troops had reached the place. On the 15th was the beginning of the distant reconnaissance which involved, of course, considerable marching. The results gained accorded by no means with the wearing-out of the horses caused by these marches. A discussion here of the breeding and training of the cavalry horse is a subject beyond the scope of this article. Here it may be said only, that the previous long period of peace had brought forth a sort of hyper-refined aesthetics in riding that were of no advantage for military purposes. Also the equipment of the cavalry soldier and the saddle and harness of the horse did not correspond with the exigencies of war. The clumsy and bulky saddle transferred the whole weight of the rider, including his weapons and outfit, to the horse's back by means of two narrow wooden blades. Even in the maneuvers in peace time it was not possible to avoid entirely sores caused by the constant pressure of these blades upon the horse's back, though saddle fitting had grown to artistic perfection in the Austrian Cavalry. In the war, this perfection being illusory in consequence of the changing condition of horses and the want of sufficient reserve saddles, the number of such sores

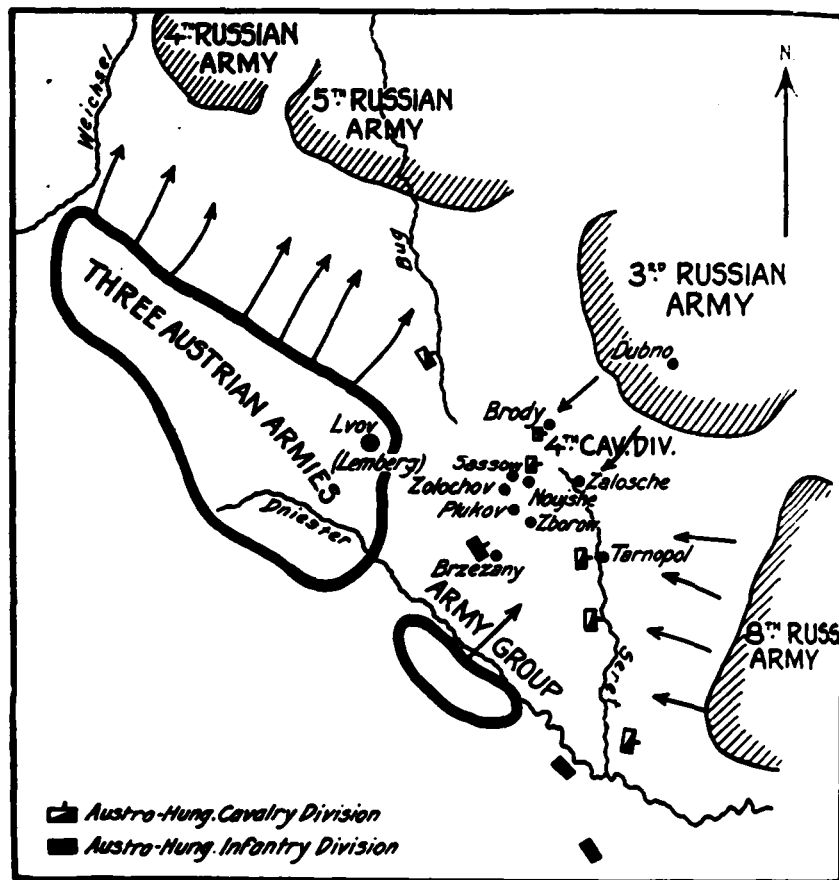
*The first day of mobilization was the 4th of August, 1914. But the whole Cavalry Horse Artillery, and some battalions of Infantry of the 1st, Xth and XIth Corps, stationed in Galicia had the "Alarm designation," which means, these units had to start some hours after the "Alarm order" with peace strength for the purpose of frontier protection, and had to await their completion to war strength in these regions.



Austrian Trooper With Field Equipment, 1914

increased in a threatening way. I remember that I returned from a reconnoitering raid I had undertaken from the 8th to the 10th of August across the frontier toward Nw. Poczajew with about 160 uhlands, with thirty horses disabled principally in consequence of such sores; an appalling result considering that the longest distance on one day was no more than sixty kilometers (patrols approximately eighty kilometers).

Since the 16th of August the 4th Cavalry Division had been billeted in the villages of Lasowiki—Suchowola—Buczyna, southeast of Brody. From this region it had made a raid to Kapanie, ending with a short fire action. Except for some patrols and two reconnoitering detachments, the troops of the division had on this occasion come



Sketch No. 1. Austrian and Russian Concentration Areas

in contact with the enemy for the first time. There had been quite insignificant casualties up to this time. Nevertheless the regiments were worn out and had already lost ten to fifteen percent of their prescribed number of horses by sores and injuries to the legs. Now, in the cantonments, the utmost was done to heal all these injuries. Saddles were changed or adapted by filing with rasps and pieces of broken glass to make them fit the emaciated horses, sore backs treated with compresses and lost nails restored. Zealous captains and old sergeants, who had grown gray in many years of service, carefully examined the hurts their quadruped proteges had suffered in this first period of war, which had lasted only three weeks, and even they could be satisfied in seeing the eagerness which officers and troopers displayed in this simple but important work. Everybody knew that

such work was absolutely necessary, if we would regain full fitness for the struggle with an enemy that had hitherto continually avoided combat. For this combat all our troops longed: our Ruthenian uhlands as well as the dragoons of the 15th Regiment from Lower Austria, and the Rumanians of the 9th Regiment of dragoons, not less than the Polish uhlands of the 1st Regiment, and the gunners of the 11th Horse Artillery Division. It was a perfect example of the old Imperial Army, this 4th Cavalry Division. In the Austrian parliament the deputies of the different nations oftentimes quarrelled. Here were the sons of four nations, obeying *one* command and united by the strong feeling of membership in the common army and in the self-reliance of the Austrian cavalryman based on a great tradition that caused them to believe in their own superiority over every possible adversary. This feeling of superiority was increased by the perception that the enemy patrols and reconnoitering groups had until this time, always given way and had carefully avoided an engagement with the *arme blanche*. Officers and men burnt with impatience to prove this superiority in an encounter.

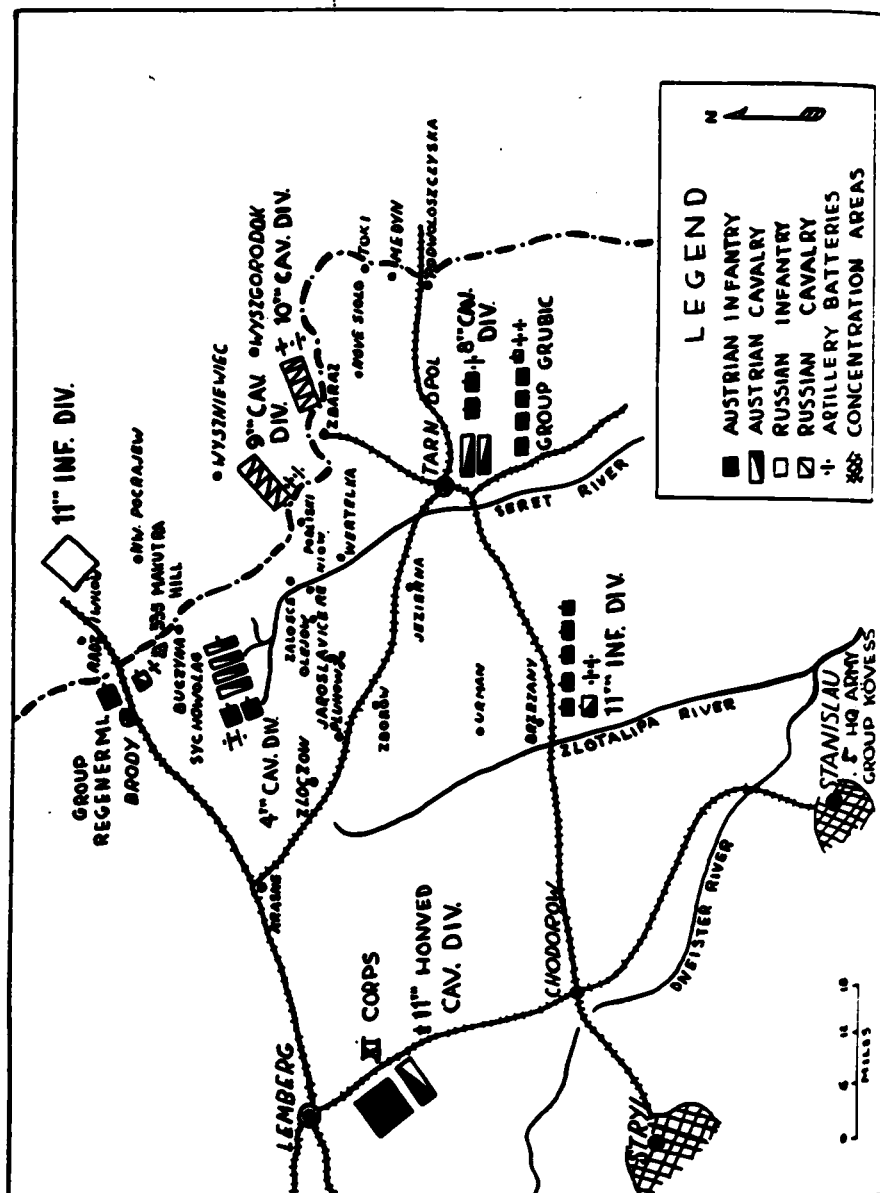
Thus the spirit of the troops was self-confident and daring. Everybody longed for the moment of meeting with the enemy in combat on horseback.

II. Results of Reconnoitering and Situation up to the Evening of the 20th of August

The Third Army (General der Kavallerie von Brudermann) had taken command of the subsectors Zolkiew and Zloczow and of the troops of the XI Corps and the 11th Honved Cavalry Division billeting in and near Lemberg on the 11th of August. The troops of the subsector Zloczow, the 4th Cavalry Division and the 35th Landwehr Infantry Regiment*, formerly belonging to the XI Corps, received their orders thereafter through this corps, while the Third Army commanded the 2d Cavalry Division and the $\frac{1}{2}$ 11th Honved Cavalry Division of the subsector Zolkiew directly. The Army Group Kövess† (afterwards Second Army), whose main body was concentrating at Stryi

*The Austro-Hungarian forces in the field, here simply called Austrian for the sake of brevity, consisted of the common army, recruited from the Austrian and the Hungarian half of the monarchy; the Landwehr, recruited only from the Austrian part, and the Honved, recruited only from the Hungarian part. Both the latter were troops of the first line and equivalent to the common army. The troops of the second line (militia, *levée en masse*) were called Landsturm.

†It was an often employed usage to denote units by the name of their commanders, e. g., the 4th Cavalry Division, commanded by Major General von Zarembo, was called Cavalry Division Zarembo. Especially this nomenclature was made use of, if units which were not in a definitely organized connection stood under a common command, e. g., Army Group Kövess means all troops standing under command of the General der Infanterie von Kövess.



precise news about the enemy, of which I am entirely in want at present, owing to the inactivity of the Cavalry."*

The aerial reconnaissance was, at the beginning of the war, still in leading strings. Commanders and troops still lived in ideas born of former wars; they expected from the Cavalry exploits which were impossible under the conditions of up-to-date weapons and modern tactical camouflage. Neither the Austrian nor the Russian Cavalry had been wanting in good will and zeal to do their best. Both had attempted to procure the required news and to bring out the desired clearness. These efforts had caused a number of skirmishes between the patrols and fights between the larger reconnoitering cavalry bodies.

For the purpose of putting an end to such hostile expeditions into our areas of concentration General von Kövess issued, on the 16th of August, Operations Order No. 55, proclaiming his intention to obviate such invasions by offensive counter attacks in the future.

Already, on the 19th, the 4th Cavalry Division had been informed that the Russian 9th Cavalry Division was in cantonments in Wiszniewiec. On the 20th there arrived a dispatch from the 8th Cavalry Division (Tarnopol) from which it appeared that the division had been compelled by two Russian cavalry divisions to retreat from Zbaraz to Tarnopol, and that enemy Cavalry and Infantry had reached Zalosce. The 4th Cavalry Division had forwarded this news to the 11th Infantry Division at Brzezany (Lieutenant General Pokorny commanding) and had received an answer affirming its correctness. At 3:14 a. m. of the 20th the 4th Cavalry Division received the daily information summary from the Third Army containing the following situation: (See Sketch No. 3.)

"The Russian 11th Infantry Division is billeting in the region of Radziwilow-Dubno; 9th Cavalry Division near Podliski. 10th Cavalry Division, Wyszgorodok; strength of the squadrons about 120 riders."

This showed that on the one hand a strong force of the enemy threatened Brody from the northeast. A movement of this group had not been reported up to this time. On the other hand, strong Cavalry marching from Wiszniewiec had, with its advanced guards, already passed the frontier.

By his mission, General von Zaremba, commanding the 4th Cavalry Division, was obliged to protect our own areas of concentra-

*The fear of meeting with the disapprobation of this categorical general may have been the reason that General Wannowski, commander of the combined cavalry division, extended his raid toward Lemberg too far. He fell into an ambush near Turynka, prepared by the Austrian 2nd Cavalry Division of General von Ziegler. The Russian division was for the most part annihilated or dispersed: General Wannowski himself, being mortally wounded, died some days afterwards in Lemberg.

tion against disturbances. Therefore, he had to decide to oppose one or the other of the two enemy groups. He resolved to form a detachment under Colonel Regenerml, commander of 35th Landwehr Infantry, for the protection of the important region of Brody, and personally to attack with the main force of his troops the enemy that had invaded our territory at Zalosce. Considering the situation, this decision seems to be the right one. If the enemy continued his advance from Zalosce in a westerly direction he could possibly destroy the main railroad between Zloczow and Tarnopol or threaten the rear of the 4th Cavalry Division. The enemy group at Radziwilow had not shown any intentions to advance up to this time. General von Zarembo could take for granted that the detachment Regenerml, consisting of one battalion of the 35th Landwehr Infantry, one squadron of the 9th Dragoons and one battery of the 11th Horse Artillery Division, would be able to retard an advance of this hostile group long enough so that the main army reserve at Lemberg could send reinforcements in time. But apart from these considerations the resolution to assail the more threatening enemy was the stronger one; it corresponded better with the idea of securing our own regions of concentration. It arose, as did the above mentioned Operation Order No. 55 of the Army Group Kövess, from the conviction that an efficacious protection of our concentration areas was not to be attained by passive defense only, but by short and resolute offensive thrusts, that probably would discourage the enemy from making such invasions in the future. So the general gave the order to the division to stand ready for march at Lasowiki at 7:45 a. m. on the 20th of August.

Of course the Army Group Kövess had also received information about the enemy's reaching Zalosce. It issued on the 20th of August at 12:40 a. m. the following order to the 11th Infantry Division at Brzezany, 8th Cavalry Division at Tarnopol, and Group Major General Grubic at Tarnopol: (See Sketch No. 3.)

Operations Order No. 95.

1. Enemy Infantry and Cavalry are said to have advanced on the 19th of August from ZALOSCE by OLEJOW and RENIOW on JEZIERNA.

2. In order to oppose this invasion according to instruction Operation Order No. 55 the 11th Infantry Division is directed forward into the region of ZBOROW.

3. The division will move, starting early in the morning on the 20th from Brzezany into the designated region. One battalion and the dispensable train will be left behind at Brzezany. The division will attack enemy forces which may try to advance against the railway line PLUHOW-JEZIERNA.

4. A similar task is allotted to the command of the Subsector Sereth (Lieutenant General von Lehmann, commanding the 8th Cavalry Division, having in the subsector the 8th Cavalry Division, two battalions 15th Infantry and the group Major General Grubic in the region east of JEZIERNA as far as PODWOLOSZCZYSKA.

*Which proved to be false; they probably were patrols.

5. The 11th Infantry Division and group Lehmann will act in permanent accord and will support each other. The 8th Cavalry Division is, whenever possible, to enter into the combat by resolutely pushing in the enemy's flank and rear.

6. Communication by telephone with Stanislaw No. 280 (Army Group Kövess) is to be kept as far as possible by switching on.

7. This order is issued in the same tenor to the 11th Infantry Division, 8th Cavalry Division and Group Major General Grubic.

From the memoirs of Major Count Gudenus (Chief of Staff, 8th Cavalry Division), it is to be seen that he was not very much pleased with this task. The 8th Cavalry Division had from beginning of the war filled its field of action, the subsector Sereth, with zeal and success. It had skirmished on the Zbrucz, had discovered near Zbaraz an enemy much stronger than itself, and had stopped him. It had a sort of recovery station at Tarnopol, where men and horses could be restored after hard raids, under the cover of General Grubic's four battalions. In this region the division felt at home, there it had its proper domain, and there the commander of the division, his troops, and last but not least the Chief of Staff, Count Gudenus, expected to have the solid basis for their operations. An order obliging them to leave this place and to move toward Zalosce meant showing their backs to an enemy till now successfully kept in check; it meant abandoning their own burning house, to quench the fire in that of a neighbor. No wonder that the command did not enter wholeheartedly into this matter and that he was inclined to hear more loudly from the above quoted order the instructions of paragraph four: to cover the railway between Jezierna and Podwolszczyska, than those of paragraph five: resolute advance in flank and rear of the enemy at Zborow.

Lieutenant-General von Lehmann therefore resolved first to wait for the arrival of the 11th Infantry Division and for further clearing of the situation. He was not wrong in doing so. It was yet unknown whether the encounter would take place at Jezierna or at Zborow (first paragraph in the order). In the first case the squadrons and horse batteries would arrive in two hours, in the latter case in approximately three hours and a half, on the battlefield, provided that the 11th Infantry Division sent notice in time. Thus the 8th Cavalry Division remained in Tarnopol. Here about noon of the same day, the 20th, it received the resumé of information from the Army Group Kövess, as follows: (See Sketch No. 3.)

"1. Gendarmerie report: Strong enemy column, Infantry and Cavalry, invaded at Zalosce, advanced up to Olejow—Reniow—Wertelka; presumable aim the railway Tarnopol—Zborow.

"2. Reports by our own troops: Several squadrons Cavalry with Artillery and some Infantry are said to have invaded at Nove Siolo.

At Toki cavalry advancing on Medyn. The Army Group has the impression of the enemy's southern wing being at Gorodok."*

This news of course forced the commander of the 8th Cavalry Division to direct his attention toward the east, and it had the effect of strengthening his inner resistance against crusades in the neighboring sector while his own sector was immediately threatened.

Essentially different was the state of affairs for the 11th Infantry Division which had detached almost two-thirds of its battalions. The battalions and batteries in Brzezany had been exempted from the marches and fatigues of frontier protection. Being a sector reserve far away from the enemy it was the natural task of these fresh and spared troops to fling themselves upon the enemy with full impetuosity. Following the above mentioned disposition, the commander of the 11th Infantry Division ordered his troops to line up to start marching on the road Brzezany—Urman at 7:00 A. M. on the 20th of August.

Unfortunately General Golovine does not report in his account what occurred within the Russian lines on the 19th and the deliberations and decisions of the Russian leaders. He begins with the fact that the Cavalry of the Russian Third Army took possession of the bridges across the Seret on the 20th of August. The main columns probably arrived there in the forenoon.

Resuming the situation on the morning of the 20th of August, the following picture is given: (See sketch No. 3.)

Strong Russian forces in or near Zalosce. The bridges across the Seret in Russian hands.

At Brody, the Group Regenerml, detached from the 4th Cavalry Division, covering the area on both sides of the railway Krasne—Brody against the enemy reported as being at Radziwilow.

At Suchowola—Lasowiki, the 4th Cavalry Division, about to start for Zalosce for the purpose of forcing an encounter with the enemy, as it corresponded with the spirit of initiative of its leader.

North of Brzezany, the 11th Infantry Division ready for march to Zborow, conforming to the disposition of the Army Group Kövess.

In Tarnopol, the 8th Cavalry Division still hesitating as to how to accord the orders received with their own task and situation. Finally also in Tarnopol, the Group Grubic, which in the case of departure of the 8th Cavalry Division was concerned with the not easy task of replacing the fast moving cavalry regiments of this division by its own more weighty but less mobile infantry battalions on a frontier almost 100 kilometers in extent.

*It was actually some thirty kilometers farther toward the south.

The Army Group Kövess had resolved to oppose the enemy's invasion in an offensive way immediately, when it had got news of it. This resolution was not only in accord with the intention, expressed in the more than once quoted operation order No. 55, viz., active defence of the frontier, but also with the importance of the Seret-Grabarka line as a strategical barrier before the railway Lemberg—Tarnopol. General von Kövess had absolutely resolved to drive out the troublesome adversary with his own forces only, as he could not reckon on the support of the Third Army from which he had received the following telegram at 3:00 P. M.

Operation Order No. 135. Invasion of strong enemy forces from OLEJOW by ZLOCZOW reported. Please stop an advance toward LEMBERG—ZLOCZOW by attacking rear. From LEMBERG a counteraction against this enemy at present impossible. 4th Cavalry Division stands opposite strong forces at SUCHOWOLA."

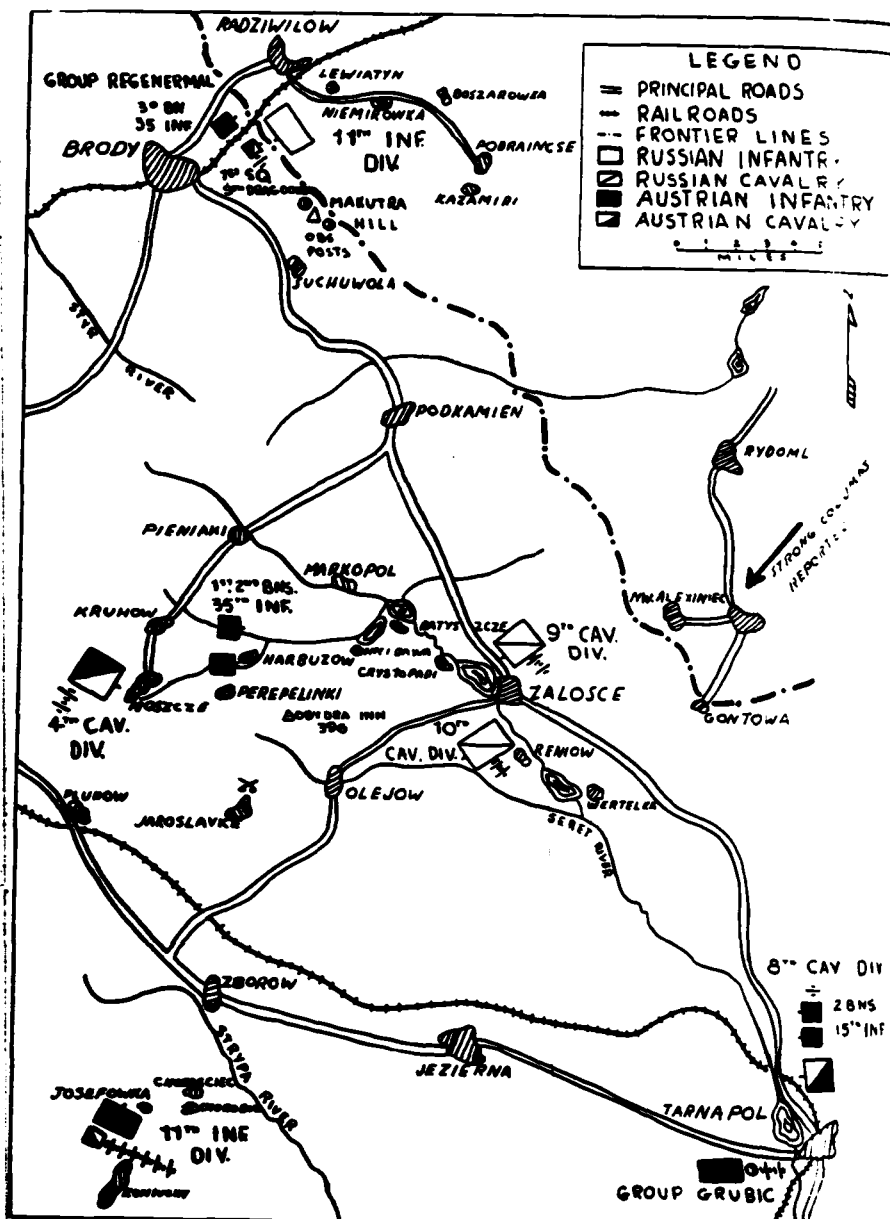
The Third Army presumed at this time that the 4th Cavalry Division was still in the region of Brody, while actually it had already set out on the march in the forenoon. An explanation of this striking misinformation of the Third Army about the doings of one of its subordinate units may be found in the complicated conditions as to organization, mentioned previously. The 4th Cavalry Division still regarded itself as belonging to the XI Corps, so it communicated with the Third Army through this corps. However, the question remains open as to what circumstances delayed the forwarding of the report concerning the departure of the 4th Cavalry Division from the XIth Corps to the Third Army.

This telegraphic call for help confirmed General von Kövess in his intention. So at 4:00 P. M. he gave a similar order to the 11th Infantry Division and 8th Cavalry Division as follows:

Strong hostile force advancing from OLEJOW to ZLOCZOW. Attack them according to yesterday's Operations Order No. 95. Third Army informed by telegram.

As it is to be seen, the Army Group Kövess had understood from the above mentioned call for support, that the enemy was already advancing from Olejow to Zloczow or from Zloczow even farther, and had in consequence of this directed his units toward the region where the enemy probably were to be found. General von Kövess's understanding of the communication did not correspond with the facts. To be sure, the text of the Third Army's dispatch, "Invasion of strong enemy from Olejow by Zloczow reported," admitted this interpretation.* We shall see later the fatal consequences of this awkward composition on the course of the action.

*The German text "Von Olejow über Zloczow Einbruch starken Feindes gemeldet" has an ambiguous sense. From it can be concluded that the enemy had moved from Olejow to Zloczow, or that the moving of the enemy was reported from Olejow by Zloczow. The latter was the actual meaning.



Sketch No. 4. Situation in the Evening of August 20, 1914

Before leaving Suchowola, (See sketch 4) the 4th Cavalry Division had detached two troops (quarters of a squadron) as observing posts to the Makutra Hill. Captain von Adamovich was sent forward for reconnaissance with his squadron of the First Uhlans. The First and Second Battalions of the 35th Landwehr Infantry, under command of Lieutenant Colonel Reichelt, was ordered to march by Perepelniki to Harbuzow, where presumably would be the quarters for the night. Lieutenant-Colonel Reichelt, who asked where the enemy were, was answered by the Chief of Staff, "The enemy is everywhere." This sounds very high minded; less magnanimous was the fact that from the twenty-two half-squadrons that remained to the division after deducting all detachments, not a single rider was attached to this isolated marching Infantry.

Informed by Captain von Adamovich that the enemy had taken possession of the bridges across the Seret downstream from Ratyszcze, the division marched first to Podkamien, in order to prevent an eventual enemy rush in this direction. As this did not occur, the march was continued by way of Pieniaki—Kruhnow to Nuszcze. At 7:00 P. M. this place was reached. The division was billeted in Nuszcze and neighboring farms. Lieutenant-Colonel Reichelt arrived with his battalions at Harbuzow late in the evening after a thirty-two kilometer's march, and spent the night here.

Neither the division nor the group Reichelt had had any contact with the enemy during the march. On the other hand, patrols and detachments had done good work. By evening the commander of the division had received the following news:

- (a) From group Regenerml: "Radziwilow occupied by the enemy."
- (b) From Gendarmerie in Markopol and from the postmaster in Pieniaki: "Two sotnias of Cossacks are marching from Ratyszcze and Czystopadi to Hnidawa."
- (c) From Lieutenant Babecki and Second Lieutenant Preissecker, leaders of the observation parties on the Makutra Hill: "Enemy cavalry patrols and little groups of Infantry in the line Lewiatyn—Niemirowka—Boszarowka—Kazimierz."
- (d) From scouting patrol from the 9th Dragoons, under Sergeant Wanko: "In Kruhnow no enemy."
- (e) From detachment Captain von Adamovich, First Uhlans, and the scouting patrols of Lieutenant Gojan, 9th Dragoons, and Count Ressguier, First Uhlans: "Since the 19th of August in Zalusce much Cavalry and Artillery and some Infantry. It is said that they will move on the 20th to Olejow. A long

transport column followed by Pieniaki." (The occupation of the Seret bridges had been reported before.)

- (f) From the militia sentry at Pieniaki: "Pieniaki free from enemy."
- (g) From scouting patrol of Lieutenant von Horodynski. First Uhlands: "Enemy column, 10 squadrons, 4 guns, and some machine guns moved on the 20th of August from Wyszniwiec, passing south of Rydoml to Nw. Alexinieć. Zagorze abandoned by our gendarmerie and militia."

With this information the commander of the 4th Cavalry Division could be satisfied. The report of strong hostile forces of Cavalry marching on the one hand to Olejow, on the other hand to Alexinieć, pointed to two groups of the enemy, a new circumstance that ought not to be overlooked. In Nusscze Major General von Zarembo received the following order of the XI Corps soon after midnight:

"Strong enemy detachment, composed of much Cavalry and guns, is advancing by way of Olejow to Zborow. Patrols of this detachment were only two kilometers distance from Zborow in the evening. From Brzezany 5 battalions of the 11th Infantry Division moving to Zborow, will probably arrive there this evening. From Tarnopol one division of Cavalry will start in the direction of Zborow. The 4th Cavalry Division will start tomorrow, early in the morning, and will try to operate in the enemy's rear. Communication with Tarnopol, Zborow and Pluhow (reporting center of the Sector Lemberg) desirable."

Thus the divisional commander received in good time the important news that he would not stand alone in the impending combat. This circumstance made it necessary to arrange his own actions in accordance with both the other groups. Major General von Zarembo had not counted on such co-operation when he left Suchowola on the morning of the 20th. He had set out from his cantonments, obeying only the strong impulse of his valiant mind, that yearned to meet the foe; he had supposed that the 20th would already bring the desired encounter somewhere in the neighborhood of Zalosce. After his arrival in Nusscze he still gravitated toward this place, or it may be said, approximately toward the east. So he had intended to place the two battalions of the 35th Landwehr Infantry on the morning of the 21st, as a sort of folding screen from behind which it would be possible for him to throw his mounted regiments wherever the enemy should appear. In consequence of this plan Lieutenant-Colonel Reichelt was ordered to seize the hills on both sides of the inn Obydra on the 21st at 5 A. M.

The above telegram of the XI Corps made the whole situation appear in another light.

If the enemy was already marching from Olejow toward Zborow, an advance to Zalosce meant a thrust in the empty air. Not at Zalosce but at Zborow, perhaps even between Zborow and Pluhow, the fight

between our own 11th Infantry Division and the hostile forces was to be expected. The commander had to direct his attention, not toward the east, but toward the south. There, on the fields near Zborow,—well known to the 13th Uhlands of his division from their rather unpleasant garrison in peace time—he hoped to lead into combat his regiments, whose high standard of horsemanship and daring spirit seemed to warrant certain victory.

According to General von Kövess's project, the 11th Infantry Division had to seize the enemy in the front line, while the 8th Cavalry Division was directed toward his flank and rear. By the co-operation of the 4th Cavalry Division this plan was enlarged to a complete surrounding maneuver which should have its zenith in the crushing of the enemy between the two arms of the tongs formed by both cavalry divisions. Altogether it was not a simple affair. On the morning of the 20th of August, the 4th Cavalry Division was placed at a distance of seventy kilometers, airline, from the 11th Infantry Division; the latter was fifty kilometers from the group Lehmann; between this group and the 4th Cavalry Division there was a distance of sixty kilometers. A precise co-operation of units so remote from each other, for a joint action, is always a rather difficult undertaking, especially if the enemy consists of easily movable Cavalry. In this case fortune had presented a finger to the Austrian divisions. None of them had been influenced by disturbing accidents. So the distances, above referred to, were, on the evening of the same day, only 30, 35 and 40 kilometers.* And what is more, from General Golovine's memoirs, it is evident that the Russians had no knowledge of the three approaching groups. Now the point in question was resolutely to seize the offered finger of fortune in order to gain her whole hand and thus to hold fast the favor of the capricious goddess. It was possible that this surrounding maneuver, so greatly planned, could succeed. Indeed it was sure to succeed—in the supposition that the enemy advanced in the above mentioned region,—if initiative of the leaders, ability of their staffs, and fitness of their troops, corresponded to the standard of the task.

Surveying the situation on the evening of the 20th of August, we see the commander of the 4th Cavalry Division had resolved to meet with the enemy in any event. In the morning, not waiting for orders, but acting on his own initiative, he had directed his regiments where he hoped to find the enemy. So he ordered the division to stand ready to march at 4:00 A. M. the 21st of August, on the southeastern egress of Nusscze.

*Situation on the evening of the 21st of August: (See Sketch No. 4.)

The 11th Infantry Division had not reached the prescribed destination of march, but had quartered five kilometers south of it in the villages Chorobow—Chorosciec—Jozefowka. This delay is said to have been caused by heavy intermittent showers of rain, that drenched the roads and thus retarded the march. The start on the 21st was ordered at 10:45 A. M., and weariness of the troops was assigned as a reason for this late hour. I cannot remember that the 20th of August was a rainy day or that the roads on our line from Suchowola by Podkamien to Nussze were drenched. It may be that a local thunderstorm had occurred in this region which the 11th Infantry Division passed through. However, attention must be called to the circumstance that the First and Second Battalions of the 35th Landwehr Infantry under command of Lieutenant-Colonel Reichelt, walked thirty-two kilometers on the same day, a little farther than the 11th Infantry Division; that these battalions, attached to the 4th Cavalry Division were in the frontier guard service from the beginning of the war, being therefore somewhat exhausted; and finally, that they were ordered to stand to on the 21st at 5:00 A. M. near the inn Obydra, which involved breaking camp at 3:00 A. M. The 11th Infantry Division apparently did not burn with impatience to cope with the enemy, much in contrast to the impetuous eagerness to fight of the 4th Cavalry Division.

The 8th Cavalry Division remained for the night in Tarnopol. Its commander obeyed the order of his superior command, not with enthusiasm, but in soldierlike subordination to his duty. All dispositions were given to perform the undersired order as well as possible, though perhaps not with such buoyancy as personal initiative grants to military actions.

So we see keen eagerness to fight at the left, hesitating clumsiness in the center, and temperate but passive conscientiousness at the right of the three groups, which had to pursue a common aim of combat on the 21st. In whatever way the goal was to be reached, *one* will had to rule over all of them, *one* will had to regulate the pace and the co-operation in the action.

It is one of the tactical principles that forces not organically united, bound for common task of combat, should be subordinated under one command. In the case in question there were different possibilities to meet this exigency. Either both commands of the armies (Third Army and Army Group Kövess) could nominate a higher general as the supreme leader of the action, or they could charge the highest in rank of the three divisional commanders with this task. In want of such disposal the latter,—in this case Field Marshal von Lehmann,—had to seize the generalship of his own accord, in con-

formity with the service regulations of the Austrian army. The omission of this arrangement was a fault that cannot be explained even by want of experience in warfare. During the night Major Count Gudenus had called by telephone the Chief of Staff of the 11th Infantry Division, Major Baron Grancy, in order to talk over some details for the common advance on the following day. The latter had answered that the division was very much exhausted and therefore it could scarcely start before noon. Count Gudenus remarks this fact in his memoirs, and adds that under such circumstances he had no great hope for the success of the action. The events of the 21st have proved him to be correct.

The Russian 9th Cavalry Division passed the night in Zalosce, the 10th in the region of Reniow.

(To be concluded in the October issue)



Armored Cars in the Cavalry Maneuvers

By MAJOR E. C. MCGUIRE, Cavalry, Instructor Cavalry School

TROOP A, 1ST ARMORED CAR SQUADRON under command of Captain H. G. Holt, Cavalry, is the first armored car unit to be organized in the United States Army. This unit was organized at Fort George G. Meade early in 1928 and joined the 1st Cavalry Division, as a divisional unit, in November of that year.

The Cavalry division maneuvers which began October 7, 1929, over the terrain in and about Fort Bliss, Texas, came after this pioneer armored car unit had performed about a year's duty with the division. During this year of service many small exercises were held to test the employment of the armored car unit with cavalry commands up to and including the reinforced brigade, and many experiments, involving necessary changes in organization and equipment, were conducted, so that by the time the maneuvers began the armored cars were ready to show the service they could render their division in operations in the field.

It must be remembered that up to the present time our Cavalry has adopted in principle the light and medium armored car for use with Cavalry units, and considers the primary mission of these cars one of reconnaissance. The combat value of these cars is considered very great under certain circumstances and conditions, but their employment as combat vehicles must always be subordinated to their use for reconnaissance.

During the maneuvers numerous discussions arose involving the elimination of the medium armored car, and having only the light car for reconnaissance. The problem seemed to resolve itself into a question of whether the light car could stand the hard usage to which reconnaissance vehicles are subjected and the possibility of mounting a suitable anti-armored car weapon in the light car. To the unbiased mind only actual test can answer these questions and if this test shows that they can be answered in the affirmative, the small weight of the light car, its small initial cost, and its ease of maintenance, would seem to make it ideal for reconnaissance purposes. On the other hand, if a stronger car is necessary to do the work and carry the essential anti-armored car weapons, then the medium car will be necessary and in all probability the latest types of light truck

chassis will be the frame work upon which will be built the most suitable type of armored car body.

The need for a heavy armored car for work with the Cavalry has been recognized for some time and numerous opportunities arose during the maneuvers where fast cars of such a type would have been invaluable for combat purposes. One has only to visualize cars of this type, equipped with smoke canisters, preceding a mounted attack at twenty or thirty miles an hour to see how the terrifying effect of a Cavalry shock action can be brought to bear with the help of these modern auxiliaries. Certainly wire and automatic weapons would lose much of their effectiveness and the only sure defense would be that of securing terrain inaccessible to mechanical vehicles, but terrain of this nature is often a boomerang to a defender.

Organization and Equipment

For purposes of the maneuvers, due to the equipment and personnel available, Troop A, 1st Armored Car Squadron was organized into two platoons. These platoons had the following cars:

1st Platoon	2d Platoon
1 Pontiac (Light) (Radio).	1 Pontiac (Light).
2 La Salle (Medium).	2 La Salle (Medium).
1 Acme (Medium).	1 Dodge (Medium).

Troop Headquarters

- 1 Scout Car (similar to Pontiac).
- 1 Truck, 5 Ton (Auto Car).
- 1 Truck, 1½ Ton.

The bodies of the Pontiac (Light) cars were constructed by the Ordnance Department. They mount two .30 caliber machine guns and the car assigned the 1st Platoon was equipped with an SCR-127 radio set operating on batteries and a motor generator.

The bodies of the La Salle (Medium) cars were constructed by the Ordnance Department. They carried different armament. Of the two with the 2d Platoon, one carried a .30-caliber machine gun and the other a .50-caliber machine gun. Of the two with the 1st Platoon one carried a .30-caliber machine gun and the other a combination 37 mm. gun and .30-caliber machine gun. In these cars all guns were mounted on pedestal mounts and all carried an extra .30-caliber machine gun equipped with the portable tank tripod. In addition these cars were equipped with smoke canisters, mounted in rear, which could emit a heavy smoke cloud for several minutes.

The body of the Acme car with the 1st Platoon was constructed by the personnel of the armored car troop. The body was designed

in accordance with their own ideas and the .30-caliber machine gun was mounted on a 32-inch aviation ring mount. The Acme chassis was originally designed for a light truck.

The body of the Dodge car with the 2d Platoon was also constructed by the personnel of the armored car troop on a Dodge light truck chassis along similar lines as the Acme and mounted a .30-caliber machine gun on an aviation ring mount.



Experimental Dodge Armored Car

The scout car assigned troop headquarters was very similar to the Pontiac light car and like that car it mounted a .30-caliber machine gun on a pedestal mount similar to the rear gun on the Pontiac car.

The five-ton Auto Car truck carried much of the supplies and maintenance equipment for the troop. It was pneumatic tired, could make forty-five miles an hour on good roads and easily kept up with its unit. This was an experimental vehicle loaned by the Motor Transport Corps.

The one-and-a-half-ton truck was the ordinary solid-tired truck furnished throughout the service. It performed satisfactorily throughout the maneuvers.

The crews assigned varied with the type of car. The Pontiac had one non-commissioned officer as car commander, a driver and gunner. The La Salle had a non-commissioned officer as car commander, a driver, a gunner and assistant gunner. Ordinarily, the platoon commander rode in one of the La Salles at the head of his platoon, in which case the assistant gunner was assigned to another car. The Acme and Dodge cars ordinarily had only a non-commissioned officer as car commander and gunner, and a driver, but these cars could

carry three men and at times an assistant gunner rode beside the driver.

Each driver was armed with the rifle. Thompson sub-machine guns were available for each La Salle car but these were not carried due to the fact that there was no means of firing blank ammunition from the guns. It was planned to carry 3,500 rounds of .30-caliber ammunition in belts in each car armed with the .30-caliber machine gun, 1,000 rounds for the .50-caliber machine gun and 200 rounds for the 37 mm. gun, but a much smaller amount of blank ammunition was carried for maneuver purposes.

Terrain

The terrain over which the maneuvers were held was that which could be included within a radius of sixty miles of Fort Bliss, Texas. Much of this terrain is sandy loam desert land, more or less flat, with small sand mounds dotting its surface. What vegetation there is consists of mesquite, cactus, and other desert growths which are seldom over waist high. Near the Rio Grande River the usual rim rock formation is encountered and in the Franklin and Organ Mountains, soil and rocks of volcanic origin are found, together with the typical desert vegetation.

Wire fences were numerous near towns, but were encountered very infrequently outside of these inhabited areas.

The weather for the early part of the maneuvers was clear, but rains of cloud-burst intensity were encountered during the later phases.

During the dry weather it was found that the armored cars could move at will across country but at a greatly reduced speed of about ten or twelve miles per hour. During wet weather the cars could still move across country provided they followed the contour of the high ground. Any attempt to cross low ground during the wet weather meant that the cars were bogged down, and could only be moved with the assistance of their crews digging out in front of the rear wheels and the laying out of artificial traction. Several instances of work of this kind by the armored car crews were observed and demonstrated the principle that the ability of armored cars to get through depends largely on the energy and resourcefulness of the crews.

During the maneuvers only one puncture was known to have occurred. This was undoubtedly due to the fact that the cars were equipped with puncture-proof inner tubes, which would allow pieces of wood or even headless nails to pass through to the interior of the tube, without deflating the tire.

General Plan of Maneuvers

In general the maneuvers consisted of a regimental phase, a brigade phase and a division phase.

During the regimental phase there were four exercises in which regiment operated against regiment, and two marches involving the move of dismounted regiments by motor transport to locations from which two of the regimental exercises could begin. Armored cars were involved in the two marches mentioned and the two exercises following these moves. In the other two exercises the armored cars did not take part.

During the brigade phase there were three exercises in which brigade operated against brigade and three marches for the purpose of moving the troops into position for the exercises.

In the division phase there was only one exercise and the armored car troop functioned as a unit in this.

Regimental Phase

During this phase the 1st Platoon, Troop A, 1st Armored Car Squadron, was the only armored car unit employed.

This platoon was attached successively to the regiments moved by motor transport and was assigned reconnaissance, delaying and security missions.

During the first march the platoon was ordered to precede the column by ten miles and reconnoiter five miles to either side of the axis of advance. Reports by radio were required every two hours and a line was designated, about a mile beyond the march objective of the column, which the armored cars were not to pass.

The holding of the cars at a specified distance ahead of the column was not thought wise. At this distance they were useless for local security and their ability to go on to their objective, while still performing the lateral reconnaissance should not have been restricted. Control could have been maintained by requiring radio reports on passing definite points or lines.

If sufficient cars had been available some should have been held with the column for local security while the others were sent on the long-distance reconnaissance mission. In this situation sufficient cars were not present and the long-distance mission which involved a move of some sixty miles was the more important.

In the second march the above errors were corrected and the armored car platoon functioned smoothly and efficiently covering the entire front of advance.

The radio set of the platoon proved most valuable and allowed

messages to be sent quickly without the necessity of sending messengers long distances. A radio set should be in every armored car platoon.

In the delaying action which followed the first march the platoon proved of great value and well suited to this action against troops moving on or confined to roads.

Contact was gained with a mounted regiment about six miles in front of the first delaying position of the motorized column.

The tactics of the armored cars varied between ambushing and scattering the leading elements of the advancing column, and long range machine gun fire accompanied by retirements by echelonment of sections.

The advancing regiment soon discovered that by leaving the road and moving against the flanks of the positions assumed by the armored cars, while supported by the fire of their 37 mm. guns, fair progress could be made, but their rate of advance for the six miles hardly exceeded three miles per hour.

This action showed clearly the value of armored cars for reconnaissance, maintaining contact, and delay. The necessity for Cavalry opposed by armored cars to operate and move off the roads, and for having 37 mm. or other suitable anti-armored car weapons well forward with leading elements to form a pivot around which flanking action could be instituted, was clearly shown.

The use of smoke by the armored cars to cover their withdrawal, or that of other troops, was observed during this action. The smoke cloud seemed thin and although it might have been most effective in an emergency, too much of this would lead to an early discovery of the cars.

During the action which followed the second march, the armored car platoon was again given a mission requiring the gaining of contact with a mounted regiment and delaying its advance. In this case the mounted regiment on leaving its bivouac made a wide detour around the left flank of the motorized column. The armored car platoon made a rapid reconnaissance on about a mile front towards the bivouac of the mounted regiment, but upon arrival found their quarry flown and were content with capturing the trains of the regiment which were moving out on a different route.

The performance of this mission by the armored cars seemed faulty in that they should have used their speed to move by bounds and at each bound reconnoitered well to the flanks. If this had been done the detour of the mounted regiment might have been discovered.

Again upon arrival at the former bivouac of the mounted regi-

ment, the armored cars should have made every effort to determine the direction the combat elements had taken by observing tracks, and questioning prisoners. This information would have been most valuable to the motorized column and the armored cars might have had the opportunity of following the tracks of the mounted regiment and gaining their rear, where considerable harassing action could have been accomplished.

On the other hand, it seemed apparent that to depend on armored cars alone for reconnaissance is an error. Their work is most efficient in moving long distances and locating the dispositions of large hostile bodies. Being confined to roads, their work should always be amplified by patrols, especially for close reconnaissance.

After completion of the detour by the mounted regiment in this problem, an attack was organized against the troops composing the motorized column. The armored car platoon, after disposal of their captured trains, arrived on the scene just as this attack was about to be launched and were assigned a mission to cover the right flank of a dismounted line. This involved action entirely off roads and across country where the speed of the cars would hardly exceed ten to twelve miles an hour. Moving out on the flank, the armored car platoon soon sighted the reserve of the mounted regiment and moved to the attack. This brought about a meeting between the armored cars and the maneuvering force of the mounted regiment launched against the right of the dismounted line.

The mounted troops in this attack were aggressive, and many seemed to have been told that their pistols would be ineffective against the armored cars, so that they moved at full speed with their rifles held above their heads much in the manner of *spahis*. Needless to say, the armored cars were quickly surrounded and put out of action. One of the crews was saved from sudden death by saber thrusts only by the opportune arrival of an umpire.

This action showed quite clearly that the armored car of the type employed in the maneuvers is primarily a reconnaissance vehicle. Their combat value is considerable only when the action is characterized by a sudden appearance, followed by the immediate development of their full fire power, and the maximum use of their mobility. In this case their mobility was so restricted that their combat value was small, but if they had been kept in motion on the outer flank of the dismounted line the maneuvering force could have been attacked in flank or the cars might have caused a wider envelopment which would have assisted the dismounted force to meet the attack.

As it was, the losses on the cavalry side would have been heavy

and a considerable portion of the maneuvering force was diverted to put out of action the armored cars.

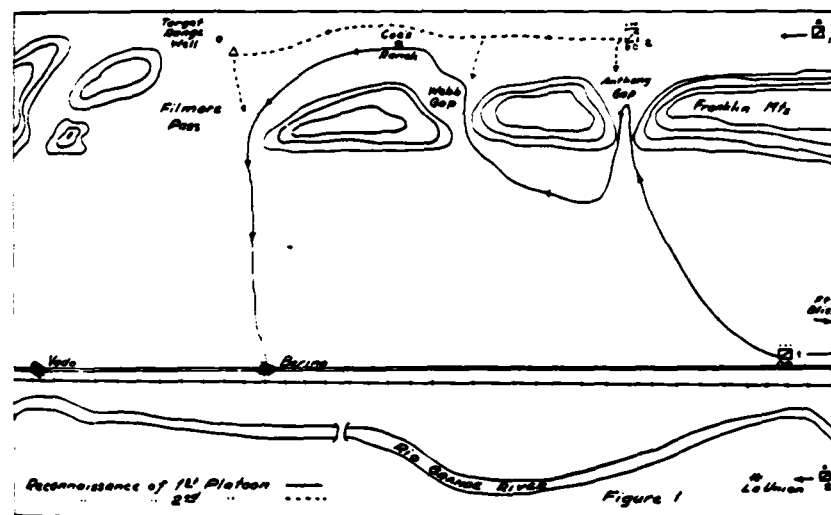
It was noted in this action that all cars did not conform strictly to the movements of the leader's car. This led to considerable dispersion of the cars.

Brigade Phase

During this phase the 1st Platoon, Troop A, 1st Armored Car Squadron was attached to the 2d Cavalry Brigade and the 2d Platoon to the 1st Cavalry Brigade.

The armored car units were naturally employed on reconnaissance missions during the moves of the two brigades to their maneuver areas. The direction of march of each brigade together with the reconnaissance performed by each armored car platoon are shown in Figure 1.

The reconnaissance of the 2d Platoon, Troop A, 1st Armored Car Squadron into Anthony and Webb gaps was made after the passage of the 1st Platoon. The 2d Platoon then continued on to the Target



Range Well and, operating from that point, sent patrols to keep the passes under observation.

The reconnaissance of the 1st Platoon was made with the platoon assembled. No contact was obtained with the 2d Platoon except that while returning through Filmora Pass a single car of the 2d Platoon was observed approaching from the direction of Coe's Ranch at considerable speed. This car, on account of its dust, was observed at

least a mile away. It was cleverly ambushed and put out of action.

This latter incident showed the danger of employing a single car on a mission, for on being fired upon, the car lacked all fire support during the turn around and retirement. Of course, the possibility of a break down hardly needs comment.

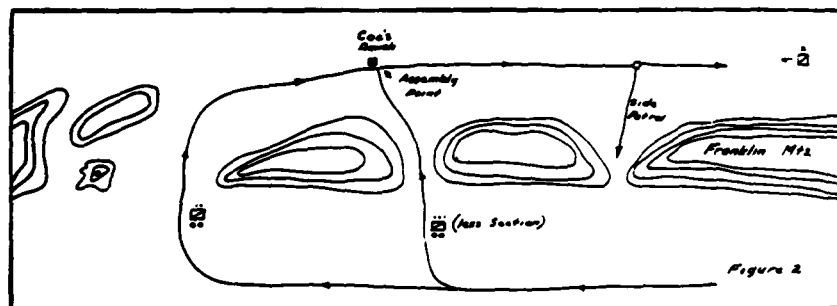
Again it seemed obvious that armored cars on reconnaissance must move by bounds and reconnoiter the terrain through which they are passing. They must always remember the dust they are throwing up when considering concealment.

In performing a reconnaissance such as called for in this problem, armored cars should cover a wide front and cover as many points as possible simultaneously.

A possible solution for the reconnaissance of the 1st Platoon is shown in Figure 2. In this problem this solution could not be carried through to the gaining of contact with the enemy main forces on account of restrictions, but it will serve to illustrate the point.

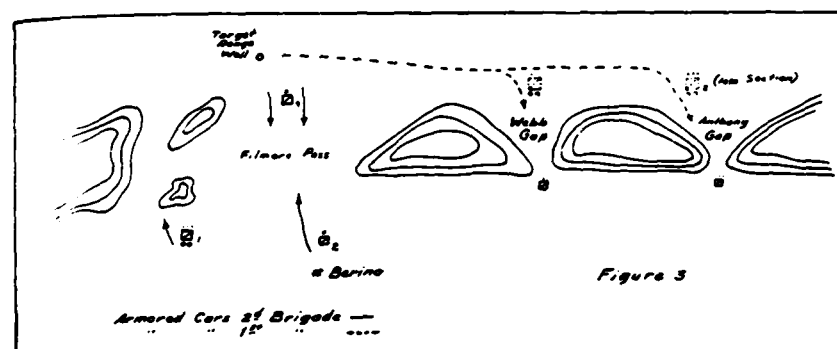
After the arrival of the brigades in their proper maneuver areas, three problems were held in which brigade operated against brigade.

In the first two problems the 2d Cavalry Brigade had an aggressive mission while the 1st Cavalry Brigade had a defensive one.



There is shown in Figure 3 the use made of the armored cars on both sides during the first problem and, as the second problem was almost identical, will cover pretty generally both of these exercises.

The armored cars of the 1st Brigade with a motorized radio set attached were given the mission of holding Webb and Anthony gaps and reporting the advance of any enemy attempting to pass these points. To accomplish this mission the 2d Platoon, less one section and with a motorized radio set attached, proceeded to Anthony Gap, and one section was sent to Webb Gap. A set of pyrotechnic signals was provided for use of the section sent to Webb Gap in communicating with the platoon headquarters. The platoon headquarters was



in constant communication with the brigade by radio. One of the cars of the section assigned to Webb Gap went out of commission before starting but the single car remaining was sent to Webb Gap. Due to heavy rain this single car was mired. Two of the crew dismounted the machine gun from the car and advanced on foot into Webb Gap where they ambushed a platoon of Cavalry and put it out of action although they themselves were soon captured by the remainder of a group of Cavalry coming through.

The armored cars with the 2d Brigade were given the mission of reconnoitering the north side of Filmore Pass and covering the left flank of the brigade. This platoon found little to do until an attack was launched by the second Cavalry Brigade against the right flank of the 1st Cavalry Brigade, when the lieutenant commanding the armored car platoon engaged his command on the outer flank of the maneuvering force and assisted in the attack.

During this problem and the one which followed, it seemed that it would have been better had the armored car units with each brigade been used to reconnoiter the front of advance of their main bodies, and small detachments of Cavalry used for the flank missions. This would have given early information of dispositions of each side in the advance, and should have furnished information of great value to the commanders of each side in the meeting engagement that followed. After contact had been gained the cars could have easily been withdrawn to the flanks.

Under ordinary circumstances armored cars are not suited to holding passes or other localities, especially where their mobility is adversely affected by weather and terrain. The danger of using a single car on a mission was again illustrated. The removal of machine guns from a car should be done only in emergencies and then only for short distances from the car.

The necessity for radio equipment in each armored car platoon was again demonstrated in these problems, and the value of visual signals within the platoon was emphasized. In this connection the need of some means of communicating with aviation was indicated in each armored car platoon.

During the problems it was noted that each armored car platoon commander was carrying complete copies of the brigade field order. It is believed that this is a mistake on account of the danger of capture, and that instructions for armored cars should be given in letter form similar to those given a reconnaissance troop, with all information of the enemy and our own troops omitted and given verbally to each commander.

The fact that armored car commanders will frequently have to act on their own initiative and in conformity to the general plan was clearly demonstrated by the armored car platoon with the 2d Cavalry Brigade.

During the last problem of the brigade phase the 1st Cavalry Brigade was given an offensive mission, while the 2d Cavalry Brigade took over the defensive one.

In this problem both brigades employed all or part of their armored cars for reconnaissance on their front of advance.

The rain which fell before and during this problem defies description, and the condition of the ground was far from favorable for armored car work.

The armored cars with the 1st Cavalry Brigade had only three cars in commission and in moving out on their mission of reconnaissance made a poor choice of routes, and immediately mired two of the remaining three cars. The platoon commander then dismounted all .30 caliber machine guns from the mired cars, placed them in the remaining car, and pushed on to a point of observation on his objective. Here the machine guns were taken from the car and emplaced on the ground to cover a ravine which led up to the point of observation and threatened the left of the 1st Cavalry Brigade.

The removal of the machine guns from the mired cars and pushing on to the objective appeared to be a good idea initially. However, the emplacing of the guns on the ground made the remaining car nothing but a machine-gun carrier, and resulted in making the other two cars useless upon their release from the mud, which occurred within twenty minutes to one-half hour.

The armored cars with the 2d Cavalry Brigade were employed so that one section reconnoitered the front of advance of the brigade

while the platoon less a section with two experimental anti-aircraft cars were employed to cover the right flank.

These armored cars performed their missions well, selected good routes and at no time were mired down. It is believed that the entire platoon might have been better employed for reconnaissance on the front of advance but this has been already stressed.

Division Phase

During this phase there was but one problem. This involved the entire cavalry division in a delaying action against an assumed infantry division.

Troop A, 1st Armored Car Squadron was employed so that the troop, less one platoon, reconnoitered the right flank of the division advance and one platoon reconnoitered the left flank. Both armored car units were given definite localities, opposite the flanks of the first delaying position, from which these flanks were to be covered.

The troop less one platoon from its position far out on the right flank reported by radio what would be seen of the advance of the infantry division which was represented by flags.

The platoon covering the left flank reported on the progress of the attack of the infantry division, which took the form of an envelopment of the left flank of the first delaying position. This position also assisted in delaying action on the left, and covered that flank.

In this problem it is believed the division should have employed the armored car troop to reconnoiter the entire front of its advance, and to delay the advance of the infantry division. This assignment would not have precluded the use of a cavalry reconnaissance troop as was done in this problem, but the cars would have operated far in advance of this reconnaissance troop and would have assisted it greatly in its detailed reconnaissance. Upon being driven in on the first delaying position the cars could have been withdrawn to the flanks and performed the missions that were assigned them.

General Comment

We are living in a machine age and to be modern, Cavalry must take every advantage of the machines this age places at its disposal. This the Cavalry has done, and will do, more and more as these mechanical auxiliaries are developed and proved of value.

The need for Cavalry to perform missions requiring a measure of dispersion, and timely offensive or defensive action at critical points of the field of battle, is as real today as it ever was, for the simple reason that there is no machine or group of machines that can perform the missions that Cavalry can perform.

In performing these missions, however, modern Cavalry to employ its mobility with the least waste of effort, and to intervene at the psychological moment with its fullest combat strength, must have every modern facility for reconnaissance.

The machine age has so far furnished aviation and armored cars to fill this need, and these auxiliaries should be thought of in this sense.

It is not much of an effort to imagine large cavalry units of the future preceded by aviation on long-distance reconnaissance, with light or medium armored cars amplifying the work of the aviation, and with mounted patrols amplifying the work of the light or medium armored cars. Certainly the engagement of the main columns of the cavalry command, based on the information gained by their reconnaissance agencies, should be much simplified, especially if these main columns are equipped with heavy armored cars to overrun light resistance encountered and assist in their engagement. However, in considering these machine auxiliaries, it must never be forgotten that they have definite limitations, based upon weather, terrain, mechanical difficulties, and supply. The cavalry troops themselves are alone able to function twenty-four hours a day, 365 days in the year.

The work of the armored cars in the maneuvers was excellent and certainly tended to prove the truth of the statements made above. The *esprit* of the personnel was high, they showed the qualities of boldness, initiative, and resourcefulness, and every mission assigned was carried out with an earnestness that was edifying to observe.

Much must be done in the development of the cars themselves by the technicians concerned in this work. The question of whether the light or medium car should be adopted for reconnaissance was far from decided during the maneuvers, due to defects encountered in both types of car present, but experiments should continue in this line.

It does seem, however, unnecessary to have both the light and medium car included in the platoon organization, and eventually either one type or the other should be adopted.

The bodies on the cars varied in design, but all were open at the top giving an unobstructed vision, and field of fire. The idea seemed to be sound. The pyramidal shaped body seemed superior to the others in the work observed.

The ring type of gun mount seemed far superior to the pedestal mount, both as to weight and ease of handling the gun. It is believed the ring or revolving open turret mount will be found most satisfactory.

The need of a heavy armored car for combat purposes was

apparent. The function of the light or medium cars should be primarily reconnaissance.

In the matter of communication, the inclusion of radio equipment in the platoon, troop, and squadron, seems essential. If possible these radio sets should be able to communicate with aircraft, but at any rate, suitable means of communication in this regard should be furnished.

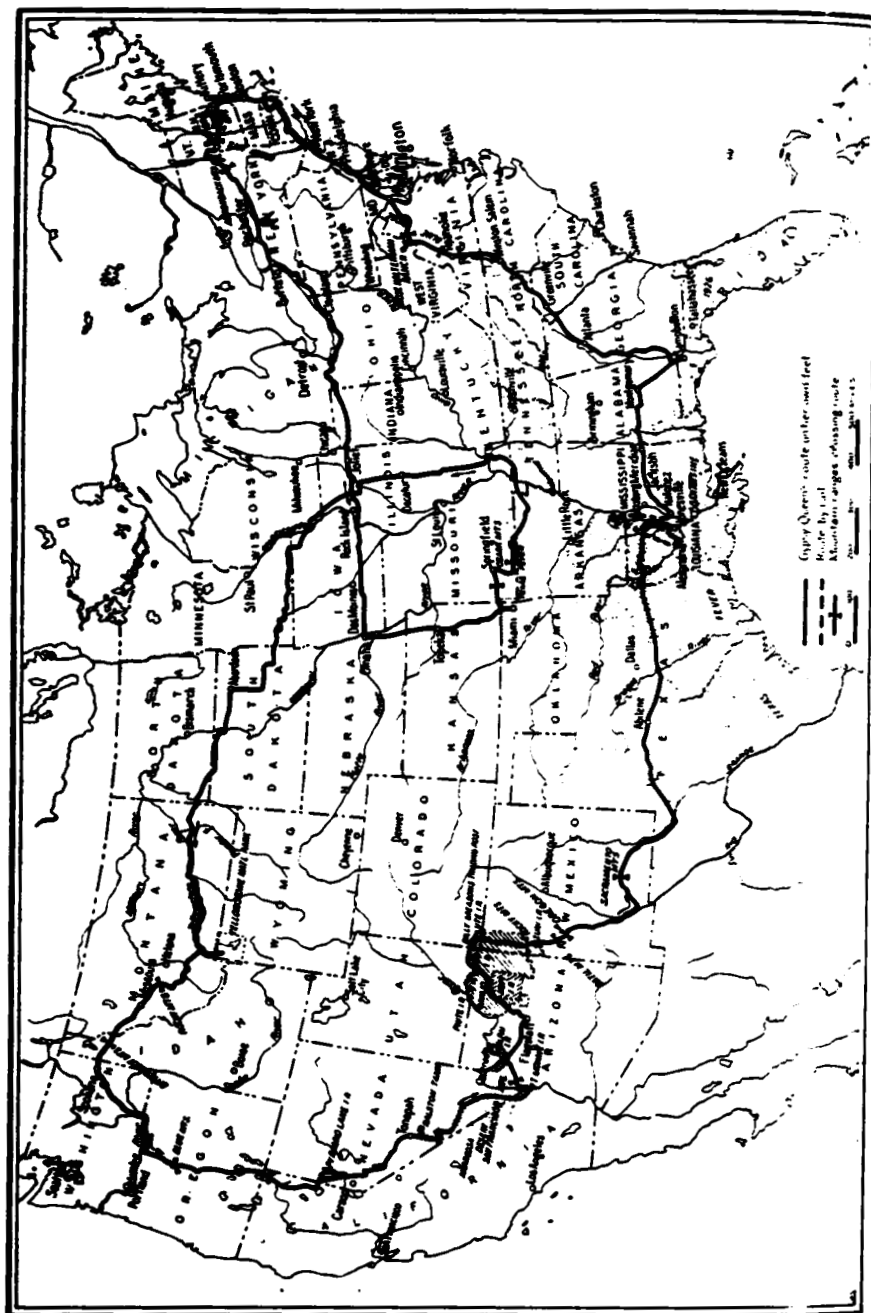
A cross-country car or other liaison car should be in each platoon for message work. The possibility of using motorcycles in this work should be considered, but the armored car personnel that were interviewed seemed against this, due to the difficulty of keeping these vehicles in running order, and the increased number of spare parts needed.

Suitable pyrotechnic signals should be developed for use with armored cars. Lamps also might be used in prearranged code work.

In the employment of the light and medium armored cars, it should be remembered that these are primarily reconnaissance vehicles. When employed in combat their action should be characterized by a sudden appearance, the immediate development of their maximum rate of fire accompanied by constant changes of position. The missions of harassing or delaying action are therefore ideal for these cars.

Armored cars should never be used in an attempt to hold a locality but should be used far in advance of troops to gain contact, reconnoiter, and delay, eventually withdrawing to the flanks on a covering mission.

Armored car officers should be so trained that they can advise superior commanders as to the proper employment of their units.



Route Covered by Gypsy Queen

What One Horse Did

By FRANK M. HEATH

ONE of the avowed reasons for my undertaking a trip through every State of the Union was to prove by actual test the capabilities of a good horse. And I placed the time—barring major accidents—for the completion of our trip within a limit that I believed would bring out new actual proven facts that would mean an addition to the science (or records) of horse husbandry.

The proposed undertaking as announced on departing from the Mile Stone in Washington, D. C., on April 1, 1925, was "to hit some part of every State in the Union and return to Washington on or before July 1, 1927, riding one horse."

I tried to make it plain that by "riding" I did not mean that I must stick in the saddle all the time, especially as I anticipated packing my one horse more or less. It turned out that I did pack her to more than one hundred pounds dead weight for many hundreds of miles at a stretch and probably averaged seventy pounds all the way. I had no other animal with me at any time except for 350 miles—Miles City, Montana, to Mammoth, Wyoming and that horse I did not ride. She carried camp equipment, feed and my rations. My only objects were to recuperate my health, to win for a good horse a place in Heaven—Horse Heaven—and to add a little to that education acquired in the school of hard knocks. By "a good horse" I let it be understood that I meant a representative good horse, of the saddle-road type.

Fortunately I had not far to go from Washington, D. C. to find what I termed "a good horse." I obtained *Gypsy Queen*, a solid dark bay, south of Warrenton, Virginia. She was foaled and reared near Sperryville in the Virginia foot-hills with their limestone, blue grass and moderately rugged winters.

She came from the progeny of some of those good old Southern horses of the saddle-road type. She cost me \$110.00. She was ten years old, stood fifteen hands and weighed about 950 pounds. She is fairly up on legs, has a short back and a good middle. Her best gait on our trip was just a good walk. She has three distinct trots, including a "fox trot" besides what I term a "jog" or long, easy swinging trot. The latter is her best gait other than the walk. She is not good at a canter, which I did not consider a great disadvantage. I would seldom canter a horse on such a trip. She can run a fair clip in a pinch. She has two walks, a quick snappy one which she assumes "in



Gypsy Queen After Completing the 11,356 Mile Trip

society," being very proud, and a long, strong stride she takes automatically on the road. She has black markings, including a black stripe down her back and good hoofs. She has hazel eyes, a slightly Roman nose, indicating grit, a strong jaw and wonderful teeth.

When I got *Queen*, she had her tongue cut about one-third off by some kind of a bit. Her mouth was split fully one-half inch beyond its natural size. She was "trading stock." She evidently would resent cruel treatment which made me like her the more. I believed she would respond to kindness and firmness. She did.

I had a lot to do before starting. Laying out my route roughly, was no small job. I planned to hit as nearly as possible the hot places in cold seasons and vice versa. I knew I could not hit all the Northeastern States and cross the Rockies before the northern winter set in, and have my horse fit to go on. That is why I planned "the loop" the first season (see map). Then came estimates of the time it should take us to make each leg, at a rate I believed a "good horse" could stand and keep going. This was by no means a matter of how far a horse can travel in one day, a week or a month. One can draw on a horse's stamina for that. It was a case of replacement under untold handicaps. For many years I have had no patience with the general belief that a horse has no resistance against such changes as our

undertaking, living off the country as I proposed to do, required.

The choosing of equipment caused me some study. I knew that every pound of dead weight meant a reduction of miles in a given time, but I yet had to learn to what a vast extent this applied on a sustained trip. I chose a McClellan army saddle as the best I knew, or yet know of, for the purpose. We started out with saddle bags containing very light grooming kit, one front, one hind shoe, nails (took a chance on borrowing tools), some credentials and cards and schedules and shaving kit. I had two army rain coats. The reason for this was to use the extra when very cold, at the same time it would serve as bedding. Later I often found this second rain coat came in handy in protecting *Queen's* loins from a cold rain. I fastened it to the back of the saddle by means of a long string passed through both sleeves and with a kind of crupper to go under her tail. Of course, we could not both use the extra coat at the same time but sometimes I thought *Queen* had it coming to her. We started with two army blankets. One of these was used under the saddle in the army way. (In addition to this I had fastened securely under the saddle one-half of a common collar sweat pad on each side, taking care not to crowd the backbone.) The other blanket, together with a lined duck horse blanket, a shelter half, an extra shirt, an extra pair khaki breeches and blouse, a change of underclothing, socks and a towel, were rolled in a poncho and fastened to the cantle of the saddle. Here I departed from the army regulation, by using long whang leather strings. In tying the roll I use a single bow knot. Then I throw a half hitch over the loop and tie on a rain coat; another half hitch and another rain coat. Thus I can remove one without loosening the whole.

On the pommel of the saddle I arranged a kind of hook on either side by means of a heavy wire. Suspended from these were a nose bag on the right in which I sometimes carried an emergency feed and on the left an old-fashioned army haversack containing a mess kit and miscellaneous articles which I divided at times into the nose bag to distribute the weight. I had a Red Cross medical kit divided into compartments, one for a little sack of coffee, one for each of several items indispensable in preparing a camp meal. This was fastened to the saddle back of the left stirrup by two snaps. I found this a great convenience and well worth its weight. On the opposite side I had a small cooking pot, a small frying pan, etc., tied in a gunny sack. Later I used in place of it a regular pouch also fastened on with snaps. I carried no fire arms. I had shipped many things on

ahead to be picked up as needed; for instance, a lot of stuff to Spokane, Washington, to be used later in the desert.

We started out under a handicap, *Queen* having just recovered from a severe cold as a result of a hard tryout I gave her in late February on our way home, and the sudden change of climate and altitude. Later I tried always to avoid such a combination.

As per plan we were at the Mile Stone back of the White House at noon April 1, 1925. There were present, beside a few newspaper reporters and photographers, Colonel Sterrett, then chief of the Remount Division of the Army; Major Scott, assistant chief; Major A. A. Cederwald, executive officer, now editor of *The Remount*, a couple of globe-trotters and others. The officers, especially, wished us luck. But they seemed greatly to doubt our ever completing the trip. That night we stayed at our place near Silver Spring, Md.

Next morning out on the country road away from the noise and strange sights *Queen* seemed rather listless. The principal reason was not hard to solve. In coming through Silver Spring I had been surprised to find we had a full hundred pounds dead weight by the scale. I made up my mind right then that the longer I persisted in the mistaken notion that I could carry all the conveniences of civilization on a horse and expect her to keep going the less chance we had.

A friend of ours had invited us to stop to dinner as we passed. As I devoured his chicken I arranged with him to deliver most of our pack in Baltimore next day. I dispensed with the horse blanket, extra suit, saddle bags and contents less grooming kit, and "cup-board" utensils. Storm rubbers I threw away. We were rid of about forty pounds. *Queen* tripped it off as though relieved of the proverbial brick house. Too soon we would have to take it all on again and much more. The discarded equipment went into a Parcel Post package, and from that time on I kept it going, changing the articles from time to time.

Right from the start we had a very hard time in finding shelter for *Queen*. Nearly all the barns were turned into garages. The very first night from home I led *Queen* from one prospect to another for over an hour, then fed improper feed (carried hay loose two blocks) in a narrow stall with no bedding.

On April 13 we pulled into New York City. We had not had too much trouble with the traffic, until passing under the Elevated at 66th and Columbus Avenue. A train rushed over. That was too much for *Queen*, a green country girl. She ran over a block with myself and pack in the dense traffic. But she was not hit, nor was she once

touched by a car on the entire trip, though I estimated we met or were passed by 162,352 cars—estimated conservatively from counting one day's traffic, of hardly average number. We had some close shaves, but *Queen* was alert and nimble. In fact she was and is high strung.

Before we reached New York we nearly met our Waterloo in the way of hard and rough-surfaced roads. In trying to keep the "shoulder," *Queen* often would be half on, half off the rough edge. This and crushed rock and gravel so wore the outside of the left front rubber pad that she got to rolling out on that foot. I did not discover this quite in time to prevent some strain on muscles, ligaments and joints. Though she was never laid up with it, that leg had to be taken care of the rest of the trip. A horse of poorer metal, or one too fractious to be easily handled would have quit right there. We were fortunate in finding an expert shoer. We gave her an extension shoe in order properly to distribute the weight on the foot, thus relieving the undue strain. That was the only special shoe I ever had made. I had her reshod, all told, twenty-two times on the trip, besides resetting a shoe a few times myself when I could get the tools. Shoeing was one of our major problems. Too many "blacksmiths" who have no knowledge of a horse's anatomy are shoeing horses. One job by such a one nearly proved disastrous. I learned to inquire ahead for either an old army shoer or an honest-to-goodness race-horse man and, so, got by. Those who do not know how are usually the last to loan either shop or tools. I discarded the pads south of the Great Lakes, when we were over the worst of the pavements.

On April 26, we rode into Longwood Riding Academy, Boston, at 11:30 P. M. We had spent five hours and ridden nearly across western Boston in quest of a stall. We had ridden that day only forty-five miles, all but seventeen of which were on hard pavement. But, as I estimated, I had taken out of her an amount equal to eighty miles of normal natural travel. I had some idea then, and have since been fully convinced, that if one expects to keep a horse going he must consider what the *conditions* are taking out of his horse more carefully than the miles traveled. Especially is this true when it comes to the horse's underpinning. With this in view I have traveled twenty miles where I knew I had good footing rather than twelve on hard pavement and saved horse flesh. As a basis for deduction I learned from close and long observation to estimate it this way: one mile of pavement takes out of a horse more than two miles of good dirt. One mile of road that is rough and inflexible, is still worse. One mile of strange city traffic reduces a horse as much as three miles of good

dirt road in the country—there is the nervous strain. A mile of average gravel road takes more out of a horse than one and a half miles of good dirt. And I find that when I *over strain* my horse by continuing too long upon unnaturally hard or rough and inflexible footing I must pay back the distance so gained, with a much greater penalty than I must pay for just plain over-fatigue under natural conditions.

As we proceeded northward up the Atlantic Coast we faced for several days a cold wind off the ocean. *Queen* missed her winter coat of long hair. Several nights when we had not a warm stable I divided the blankets with her. Still her cold returned.

It is well known that it is not safe to move a horse about too much in spring. I began to wonder if, for one reason, a horse does not put out more vitality, especially as to protein in throwing out his new coat, than we realize.

I also had a lot of trouble in finding the proper feed locally. A few times the best I could do was a direct change from oats to corn and against my better judgment fed nearly a full feed. In such a case whether we feed too much, and so damage the horse, or whether the safer policy of cutting the ration is followed there is a great loss of vitality. You know that, so did I. Still it takes a lot to make us heed it. Several times I was fortunate in not meeting utter disaster. I in part retrieved my error by letting *Queen* miss a feed and then "sweeping her out" with a large bran mash containing a little salt, about a dram of nux vomica, and half an ounce of ginger.

On April 30, we pulled into Portsmouth, N. H. in a cold rain. We crossed the river into Kittery, Maine, and got a signature from the town clerk.

Up hill, down dale, we reached Concord. Near Lake Sunapee we passed the remains of last winter's snow drift. Over the Green Mountains to Rutland and on to the U. S. Morgan Horse Farm near Middlebury, Vt. But here we are near the limit of our space and scarcely started yet. Please follow the map.

We spent Nov. 20, 1925 to Apr. 12, 1926, in winter quarters at Princeton, Ill., after making the loop. We lost nearly three months in Montana on account of a fractured knee (my knee) as a result of a kick from my pack horse—formerly mentioned. This threw us off our schedule and caused a change of route. We crossed Eastern Washington and Oregon in the early winter of 1926-27 often facing severe snow storms. We celebrated New Year's, 1927, in Alturas, California. At Needles, California, flowers were in bloom. Near Flagstaff, Arizona, we took refuge from a blizzard in an old root cellar of a deserted ranch.

We crossed the Navajo and many other Indian reservations. For a distance of 473 miles we never saw a railroad. Many times we had two days' journey between human habitations. Feed we packed or went without for three days at a stretch—I had only the one horse—days without a spear of grass—often more than twenty-four hours without water. I usually started across those stretches with one army canteen of water. Once on reaching a certain water hole I'd been told



In the Arizona Desert

about I found the banks strewn with animals that had drunk and died. We "checked it out" until we reached civilization.

Space does not admit of complete details of feeding, one of our major problems. I fed about everything a horse ever ate, including bread and molasses. About Alturas the only grain was rolled barley. I found I could with impunity feed nine pounds per day as against twelve pounds of oats. When I again came to corn I did not repeat my former mistake of putting sympathy in place of prudence. Where the only roughage was a few nibbles of hard dry bear grass or a bite of sage brush or shad scale I found I could with impunity feed an extra feed of oats at midnight—if I could get them. Failing oats I found four pounds of bran and one and a fourth pounds of good shelled or cracked corn to be a good substitute for four pounds of oats—if I could procure them.

Weeks at a time we were never under shelter of any kind. Once I took refuge from a storm in a cave from which I first removed some prehistoric human bones, giving them "Christian burial" in a niche. *Queen* was less fortunate. She could not get in so stood tied to a rock. There were long stretches where the ground was white with alkali

that, but for lard, tallow and tar, would have eaten the feet off *Queen*.

Caught behind the Mississippi River flood. Weeks of lost time and dodging about. Caught in the Texas Tick Quarantine and a tedious back track of over eighty miles to a Federal dipping station, besides four days wait in the disease infested post-flood area.

The most dangerous of these diseases was charbon (anthrax) of which horses, mules and cattle were dropping dead all across the post-flood area. This disease can be taken from drinking the impure water, gnawing the roots of the short grass, in which bacteria live twenty years, or from the bite of the dreaded charbon fly. After I learned this I kept *Queen* off the infected grass, gave her only well water, fought the flies, kept her toned up on nux vomica, kept her vitality up—and thanked Heaven when we were out of it.

Another danger is locally known as "foot evil" (not foot and mouth disease). A parasite or microscopic animal finds an opening about the coronary band. Infection follows. The hoof comes off. Often the horse dies. I avoided this by avoiding places where the sun was excluded, keeping the feet clean and daubing the top of the hoofs with zinc ointment. Then hundreds of miles in a stock car in compliance with the law (this railroad travel was not counted in our mileage), to Natches, thirty miles east of where we were quarantined. This thirty miles is the only break in this "Longest Horseback Trail"—unless we count ferries. North around the tick area, thence south to Florida, which we entered in the hottest season, August 2, 1927.

Then the long grind northward across Dixie, and at the Mile Stone again, November 4, 1927. Major Scott, then Acting Chief of the Remount, was there with other army officers and identified *Gypsy Queen* as the mare I had left that spot with on April 1, 1925. *Gypsy Queen* had traveled on her own feet under saddle 11,356 miles.* She had gained seventy-five pounds.

You are wondering what happened meanwhile to the strained leg. Where cold water was plentiful I used it: stood her in it, showered with it, applied it, when she was standing, with burlap wrapped loosely as a bandage. Burlap admits the air. I kept the fever out of the feet with water, mud, packing; stood her in cow dung when obtainable.

For over 1,000 miles where water was not plentiful at all times

*Note: Our mileage was recorded day by day. If in doubt, I recorded the minimum distance. In footing up hurriedly at the end of the trip, I made a slight error, giving the distance as 11,389 miles. Later, in trying to carry the mileage while computing other data hurriedly, I admit another error: first giving it as 11,532 miles. Finally, I employed a mathematician in Government employ to check and verify my more leisurely compilation of figures, finding those given above to be correct. This is a small matter. But, as this seems to be the only trip of the kind on record, the reader is entitled to verified data. Author.

traveled her in an elastic (knit) bandage and cotton, and a good "brace" or lotion. I would wrap the sheet of medical cotton from pastern to the knee. Then giving the bandage two wraps on the pastern I brought it up pressing the surplus cotton into the groove between cannon bone and flexor tendon. I wound the bandage reasonably tight, fastening it below the knee with two safety pins. I tightened this several times a day. At noon I would air the leg. At night—after airing—I would sop the hair full of the "brace," put on an old cotton, wrap an old bandage loosely and soak the cotton by pouring it full of the brace. Thus I kept her going without undue pain and virtually cured the strain under saddle. I don't say she is quite as sound as though never strained but she delivered the goods and showed no signs of soreness afterward until we again hit the pavement in nearing home.

When it came to long, hot stretches under pack I had trouble with *Queen's* back. I tried everything. Finally at Shreveport, La., I got a Felt-Less pad. Its all simple when you think of it. This pad is made of cool instead of hot material. In the hottest season and the hottest parts, I cured the back.

The miles I gave were actual miles. Aside from this, I estimate I had taken out of *Gypsy Queen* on account of unnatural, hard and rough footing alone more than 47,000 miles of good old turf would take. Hundreds of miles where she balled up with snow we count as a natural occurrence. She never once lost her feet even on unavoidable frosty, slick pavement. We forded some bad streams. We averaged roughly twelve miles a day for the 948 days out. I had been in the saddle 580 days, counting any day we progressed one mile or over, averaging over nineteen and a half miles per day and about seven hours in saddle.

I do not believe all the accidental delays could rightfully be called beneficial rests. The environment was usually a detriment.

Queen is well and happy and kicks up her heels like a three-year old. This spring she produced a fine colt for the next trip.

Tactics of a Mechanized Force: A Prophecy

By LIEUTENANT COLONEL K. B. EDMUNDS, *Cavalry*

THE development of motor driven vehicles has progressed far enough to make it possible for us, without undue strain on the imagination, to visualize a machine capable of maneuver and attack across nearly all types of terrain at a speed of from ten to sixty miles an hour, armored to the extent of being invulnerable to anything but a direct hit by artillery, and having the radius of action and freedom from mechanical breakdowns of an automobile. A unit made up of such machines may have within itself the fire power of artillery, machine guns, and automatic rifles, and may possess a shock effect and rapidity and range of maneuver greater than those of Cavalry.

We are already in the habit of referring to such a unit as a "mechanized force." Discussions of it are appearing frequently, but it is doubtful if we have yet realized the profound effect this new arm will have on our tactics if the machine on which it is based is perfected to the extent indicated above. The tendency of the existing arms is to adapt the new arm to our present tactics. What we rather must do is to change our tactics to fit the characteristics of the mechanized force.

The Infantry, still worshiping at the shrine of the "Queen of Battles," whose creed is that the sole function of all arms is to assist the advance of the foot soldier and, misled by the characteristics and functions of the World War tank, is inclined to see in this new engine only another auxiliary. But, as the speed of the tank increases from three to sixty miles an hour, as its radius of action rises from five to a hundred miles, and as its mechanical faults are eliminated, it becomes a weapon, not of the infantry battalion, but of the field army or of General Headquarters. It becomes a separate arm characterized by mobility, fire power and shock, capable of self-sustained action, of rapid maneuver, and of dealing the decisive blow in battle; a mobile reserve in the hands of the commander-in-chief, used at the decisive stage of battle to overthrow the enemy by shock.

The Field Artillery, taking a defensive attitude, depends on being able to stop the assault of a mechanized force by gun fire and is trying to adapt its comparatively clumsy and unwieldy tactics and system of fire control, developed to support the slow stages of an infantry attack

or defense, as well as the anti-tank gun of the World War, to this end. It does not give sufficient consideration to the difficulty of getting a direct hit on a rapidly moving target, or the great maneuvering range and surprise effect of a mechanized force. The function of the Artillery will be to support the attack or to support the counter-attack. It cannot stop either one.

Our Cavalry is instinctively hostile to any machine which may supplant the horse, and inclined to disparage its effect. We are retreating to mountain trails and thick woods, hoping that no fast tank can follow. Our policy, on the contrary, should be to encourage the new arm, experiment with it, and bring out its characteristics, both favorable and unfavorable, since the place of the new arm in the army team, its missions and tactics, are far closer to those of Cavalry than they are to any other arm. The cavalryman is best able to understand its potentialities. It is improbable that a machine will ever be invented that is more efficient for all military purposes than the horse. But, whether our cavalry divisions are completely mechanized or not, cavalry missions and cavalry tactics will remain, and the mechanized force will act in conjunction with the Cavalry.

Composition of the Mechanized Force

Experiments and study, both in this country and in England, indicate that the composition of a mechanized force will be somewhat as follows:

- a. A shock component (assault echelon) consisting of light tanks, armed with the one-pounder, or some other light cannon, and the machine gun.
- b. A mopping-up and holding component, consisting of machine gunners and automatic riflemen, in carriers capable of rapid movement across country.
- c. Fire support, consisting of motorized artillery capable of rapid movement across country.
- d. Auxiliary troops (engineers, anti-aircraft, etc.) in motorized carriers.
- e. Motorized trains, at least part of which will consist of carriers capable of rapid movement across country.
- f. Present plans call also for a component of armored cars; but, as the speed and mechanical reliability of the tank, or combination wheel and track vehicle, increases the necessity for the armored car will disappear.

With the possible exception of part of the trains, all these components should have the common characteristics of speed, maneuver-

ing ability, radius of action and protection against any fire but a direct hit by artillery. Homogeneity in these characteristics is essential, and probably the eventual development will be that all vehicles, to include the combat trains, will be mounted on the same chassis as the light tank. The artillery will have either self-propelled mounts, or tank tractors with trailers of such a design that the speed of the tractor will not be impeded thereby on any terrain.

The size decided on for the force will depend on tactical considerations such as the desirable frontage to be covered in its attack and the dispositions in depth desired, as well as on the limitations imposed by logistics. Study and experiment must continue on these points, but as a basis for discussion the following arbitrary assumptions may be made:

Frontage for attack..... 5000 yards
 Number of waves in assault echelon... 3
 Additional reserve..... Equivalent of one wave
 Frontage for a single tank..... 100 yards

Using these figures, we get fifty tanks in each of the three waves of the assault echelon which, with the allowance for the general reserve, gives a total of two hundred tanks.

For the holding component we may take as a basis the machine guns and automatic rifles of the number of front line battalions necessary to hold a front of 5000 yards, i. e. four battalions. These amount to 48 machine guns and 216 automatics. Allowing two machine guns or eight automatics, with their crews, to each carrier, we arrive at a total of about fifty carriers for this component.

For the artillery component we may assume about the same number of batteries as are necessary to support the attack of an infantry force on a front of 5000 yards, viz. about 25 batteries, or 100 guns. Ammunition and service vehicles will raise the number of vehicles to about 200. The requirements of mobility will limit the calibres to the 75-mm. gun with, possibly, the 105-mm. howitzer.

Granting the assumptions of characteristics and organization, it is now possible to come to certain conclusions:

a. The number of vehicles in the mechanized force, exclusive of trains, need not be over five hundred.

b. The road space of its combat units will be about 15000 yards, allowing 30 yards to each vehicle.

c. Assuming a marching rate of only ten miles an hour, the force can pass a given point in about one hour.

d It can be disposed for attack from single column in about one-half hour.

e It can move from a position in reserve to any point on the front or flank of a field army in three or four hours.

Tactics of the Mechanized Force

Its tactics must be primarily offensive: a straight drive to its objective, either in attack or in counter-attack. The shock component will drive rapidly through the enemy's defense, breaking up his defensive organization of machine guns, infantry weapons, anti-tank guns and wire, continuing through his supporting artillery to the objective of the force, whatever it may be; then reforming behind its holding component, possibly to meet the enemy's counter-attack.

The artillery component, advancing by bounds from one firing position to another, will support the stages of the attack. Its principal targets will be those weapons of the enemy most dangerous to the shock component, viz. anti-tank guns and enemy tanks. In the last stage it will move to positions to support the holding component. Almost coincidently with the advance of the shock component from its assembly positions, the artillery will advance rapidly to previously reconnoitered positions for direct fire. From these it will open on the enemy's anti-tank guns as the latter expose their locations by fire. To the objection that such tactics will expose the artillery to destruction by the enemy's supporting artillery, it may be answered that the time the attack lasts will be a matter of minutes, not of hours, and any counter-battery by the enemy will draw his fire away from the shock component.

The holding component, following the shock component closely, will complete the overthrow of the enemy on his organized position, and the capture of his supporting artillery within its zone. It will then move to the final objective which it will organize and hold, supported by the artillery component, providing a pivot behind which the shock component may rally, reorganize and prepare to meet the counter-attack of the enemy's mechanized force.

The defense against such an attack will be a counter-attack by a mechanized force.

Place of a Mechanized Force in Combined Arms

Such may be the tactics of the mechanized force within itself. Before considering the place and missions of the force with the combined arms it is necessary to say that, in the opinion of some students, there will be no combined arms; that future armies will be completely

mechanized and will consist simply of a collection of mechanized units like that described above; or that other arms will be relegated to areas which, by fortification or by the nature of the terrain, are impassable to a mechanized force. Granting this, it might be said that the shock component of the force is the future Cavalry and the holding component the future Infantry, but this is going too far for intelligent discussion at this time. It will certainly take the lessons of the battlefield to effect such a revolution, and we can expect to enter the next war with Infantry and Cavalry *missions* and *tactics* essentially as they are at present, the mechanized force being an arm added as aviation has been added. The theories of the extremists in mechanization are not likely to have more effect on our doctrine than those of certain extremists in aviation. Our units may be largely motorized and mechanized within themselves; organization and equipment may change but the conception of Infantry as a comparatively slow-moving arm intended to gain ground, to seize and to hold; and of Cavalry as an arm of mobility, to cover, to reconnoiter, to maneuver and to exploit will not change. Twenty years ago it could be said truthfully that the infantryman was a foot soldier armed with the rifle and bayonet. Infantry now has machine guns, automatics, mortars, one-pounders, grenades and tanks; it is often transported in trucks; but its mission have remained.

Fast tanks, may of course, be attached to infantry or cavalry divisions, just as cavalry squadrons may be attached now. However, this paper is concerned with the mechanized force as a separate arm, having the same relation to the field army as that of our cavalry divisions.

It seems evident that an army commander will hold his mechanized force in reserve until the other arms have developed the situation. It can then be determined at what part of the front its blow will be most effective, and where the character of the terrain will permit its use. If the maneuver decided on be an envelopment, the infantry divisions will make a holding and enveloping attack on the enemy's front line units. The Cavalry, operating on the flank selected for envelopment, will form a screen behind which the mechanized force will reconnoiter for its assembly positions, select the ground over which its attack will pass, and when its reconnaissance is completed, move to its assembly positions. Since this movement will utilize the roads it is important that it be made behind a screen which will insure physical possession of the routes of advance. The movement will be made under cover of darkness in ample time to refuel at the assembly

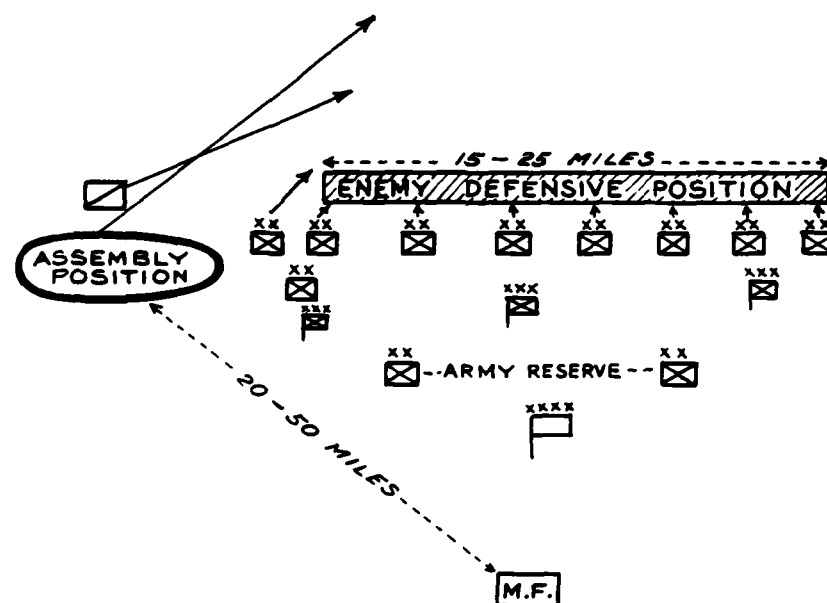


Figure 1

positions and start the attack at daybreak. The attack will probably be directed at objectives in rear of the infantry envelopment. The Cavalry will follow, either in exploitation or to connect with the infantry flank. (See Figure 1).

From this it can be seen that, in an envelopment, the missions of the Infantry and Cavalry will not be essentially different from what they are now. The maneuver of the mechanized force is simply added. The penetration, however, will differ from our present tactics in that the actual break in the enemy's defensive organization will be made by the mechanized force rather than by the infantry divisions. Having made the break, the force will continue through the supporting artillery to objectives in rear. The Infantry, following, will exploit against front line units and supporting artillery, widening the gap. The Cavalry will pass through the gap, either in exploitation or as a connecting link between the mechanized force and the Infantry. (See Figure 2).

Against a zone defense it will probably be necessary to assign limited objectives, the mechanized force first preceding the Infantry through the outpost and delaying areas, then reorganizing, during the period of infantry advance, for the assault on the battle position.

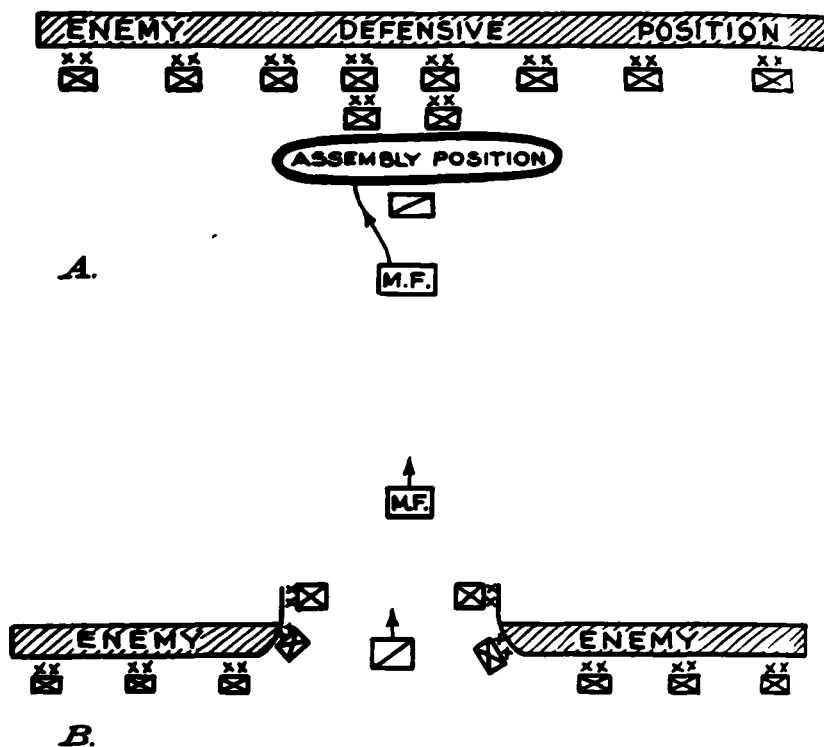


Figure 2

As has already been stated, the objectives of the mechanized force in attack will be well in rear of the enemy's front lines. Such objectives may be: enemy reserve divisions, army artillery, command posts and lines of communication, areas of tactical importance to its own army, critical areas essential to the enemy in his withdrawal; or may be the *opposing mechanized force*. The last named may well be the first objective for, like Cavalry and Aviation, a mechanized force cannot take full advantage of its characteristics until it obtains mastery over the corresponding arm in the ranks of the enemy.

On the defensive, the mechanized force must also be held in general reserve. Having determined the direction of attack of the enemy's force by reconnaissance, it will counter-attack, endeavoring to strike its opponent while the latter is still in motion, or before he can re-organize on his objective.

The potentialities of the mechanized force for maneuver and surprise are obvious. From a position many miles in rear of its army it can, within a single night, move to its attack position and can then start its attack at daybreak. It cannot be stopped by machine guns

and wired trenches. Its fire power approximates that of a division and its shock effect is greater than any arm which we now have. In effect the mechanized force will restore, to the main battle, tactics which the limitations of the horse and the development of the machine gun, the automatic and wired defenses have caused to disappear: the tactics of heavy Cavalry. It is important that we do not allow its wings to be clipped by too great conservatism, by the assignment of limited objectives, by associating it with assault battalions, or with corps and division Artillery.



Rules

By CAPTAIN CHARLES R. JOHNSON, *Cavalry*.

CHARLEY DALY once said, "No rule is absolute. Break any rule to succeed." Many of us remember one of his quarterbacks, who had the ball in his own territory, second down, and six inches to go. That quarterback broke the rule. He called for a forward pass. The pass went. I do not remember now whether it went for a touchdown but that is not material to the issue. The indisputable fact is that the pass was unexpected, and that it succeeded.

It must be admitted that we are creatures of rules. Take any training regulation as an example. Read two consecutive pages, and you will find at least five rules. Try it.

Let me cite an example. I have turned to Employment of Cavalry, and have opened it at random. I find that I have opened at page 118, and the first complete sentence on that page is:

"(4) When adequate fire support cannot be furnished by the pivot of maneuver and centrally located weapons, additional firepower is attached to the maneuvering force." I give you my word that I have picked this sentence honestly. There are other sentences in the book better adapted to illustrating my point. Let us discuss it.

That rule is an absolute statement. How will an unimaginative man construe it? You realize that the great majority of us are unimaginative. The tendency is this: if no good machine gun position exists near the pivot from which it is possible to cover the approach march, the unimaginative breed will, by rede and rote, attach forthwith a platoon of machine guns to the squadron that makes the envelopment. Why will he attach a platoon? Why not a troop? Why not a section? Simply because in his memory he senses that he has read the statement "a squadron with a machine gun platoon or troop." As a matter of fact, he really read that statement under the heading "Advance Guards."

Anyway, he goes ahead and attaches a machine gun platoon. Now, here is the question: Did he consider whether or not the enveloping squadron needed additional firepower? True, it was impossible to furnish "adequate" fire support from the pivot, and the word "adequate," of course, might be analyzed, and it might be argued at length that the use of the word "adequate" implied that the squadron needed the additional firepower, but remember that we are soldiers, not lawyers or etymologists, and we have no time to argue such matters while we are observing from hill 626-a.

Very apparently the entire issue is this:

"Does, in this situation, the maneuvering force need additional firepower?" If it doesn't, then the rule quoted is wrong as quoted, and by our attachment we will have violated our old friend "Economy of Force," likewise "Simplicity" and several others.

In other words, to make the rule good, we must presuppose that a maneuvering force needs additional firepower, regardless of the size, nationality, morale, equipment, dispositions, and honorable intentions of the enemy, and irrespective of the terrain over which the envelopment approaches. Such a supposition is on the face of it an affront to our horse-sense.

Don't mistake my attitude. I am not an iconoclast; I have no use for destructive criticism. I have no wish to tear apart that excellent text, Employment of Cavalry, for which I have a profound respect. I am only attacking our natural human and present-day tendency to reduce all things to rules, a result of human inertia. Recourse to rules is the refuge of the man who is too lazy, or too torpid, to reason out the governing circumstances.

Now, let us go a bit further; let us enter the conference room of an advanced class at one of the service schools, and listen in on a conference problem. What I cite, I believe, is typical.

The instructor has called upon Captain X for a solution of first requirement. Captain X states that his flank guard is a troop (1 12th of the command). Upon being told by the instructor that in this particular situation a squadron would have been preferable, Captain X says.

"But, Major, what is the *rule*?"

The major then explains, patiently, carefully, and at length, that, in the situation being considered, the main body cannot, due to its mission, come to the support of the flank guard, and that in such an instance the size of the flank guard is determined by the strength of the enemy, rather than by the size of one's own main body. A very good explanation, as far as it goes.

Captain X, however, who, just like all of us, is lacking in imagination, goes a bit further, and queries:

"Yes sir, I understand that, but what *fraction* of his size should his flank guard be?"

And there you have it. By the Gods and again by the Gods: what instructor can answer that question? The answer depends, and has to depend, on a multitude of conditions, varying in each different situation. Yet the only recourse open to the poor instructor is to answer:

"That depends on the circumstances." *And it does.* Yet the in-

structor has been forced to fall back on a seemingly weak answer, an answer whose strength will be admitted by only the broadest minded.

And that brings us all to the kernel of this article. **WHY DEAL WITH FRACTIONS? WHY SPECIFY DISTANCES?** Why state that the advance party will precede by from so many to so many yards? There is in truth but one test to a solution, and that it to ask one's self the question.

"Does my decision (plan—order—etc.) (strike out words not applicable or desirable) accomplish my mission? Am I using good common sense? Am I chasing poor, tired soldiers all over the map when there is no necessity for so doing?"

Let us get together, those of us who instruct, and refuse to fall back weakly upon rules, except where we can quote them and break them and at the same time show the student that we are using better judgment by flaunting them. Then and then only will we accomplish our mission and shove our disciples out of the lazy rut known as Rule of Thumb.



Prevention of Injuries and Diseases in Army Animals

By CAPTAIN EDWIN W. ROGER, V.C.

Reprinted from the March, 1930, Veterinary Bulletin.

WE ALL are familiar with the methods of prevention of most injuries and many diseases but we cannot be present with the various organizations at all times so the number of animals on sick report will depend to a large extent upon our ability to impart this information to others. Therefore, we should instruct all personnel which has to do with animal and stable management as fully as time and opportunity will permit.

Three very good opportunities to do this are as follows:

1. Be present with a troop or battery at each period of stables.
2. During your lectures to the officers' class on hippology. On a cavalry post the veterinary officer is required to conduct the class in hippology which usually consists of twenty lectures of one hour each or ten lectures of two hours each. Several of these lectures could be used to good advantage in discussing the prevention of injuries and diseases.
3. At the stable sergeant's school here there is a stable sergeant and one or more stable orderlies from each of the organizations. This school usually lasts for four months of sixteen lecture hours per month.

Under the heading of "Stables" the writer wishes to mention a few things which are worthy of discussing with the troop commander or stable sergeant during the grooming period.

Abrasions from a rope result from carelessness in tying the halter shank. When the regiment is in the field there are always a large number of animals on sick report from rope burns and other traumas unless the importance of precautionary measures has been impressed on those who are responsible. Many of the troopers will tie the halter shank at a most improper length. In the field the animals are usually fed hay from the ground and many troopers purposely tie their mounts at the end of the halter shank so they can reach the hay after it has become scattered. The animal should be tied at a length which will only allow him to reach the ground immediately in front of him. The picket line guard should keep the hay raked up within easy reach of the animals. The importance of this

should be in the minds of the veterinary officer, the troop commander, and the stable sergeant whenever they are near the picket lines.

Saddle abrasions on the sides and top of the withers are of frequent occurrence, especially after the troops have been in the field a few days and the animals have commenced to lose weight. All animals should be inspected daily when in the field for these abrasions and attempts made to remove the cause, otherwise, they may develop into cellulitis, necrosis, or fistula. As a rule the cause of these abrasions is the shrinkage of the muscles and fat in the dorsal region just back of the withers where the front part of the saddle bars rest. The conformation of the withers of some horses is frequently a predisposing factor in causing sore backs. Both types of injury can be prevented or relieved and given a chance to heal while being ridden by folding the saddle blanket so as to elevate the front part of the saddle and stop the rubbing on the withers. The method recommended is as follows: Fold the blanket in the usual way and holding the front edge of the blanket against the withers about two or three inches from the top, take the front corner and raise it upward and backward until the front edge of the blanket is parallel to the spinal column. Fold the other side in the same manner, put on the saddle, and it will be found that the front of the saddle has been elevated enough to prevent rubbing against the withers.

The advisability of keeping animals well clipped is another subject to discuss with the troop commanders. The importance of this, especially in the tropics or on the Mexican Border, should be emphasized. The properly clipped animal will present a neater appearance and will require from 10 to 20% less forage to keep him in good condition and he will be healthier and more easily groomed. Clipping should be done if possible just before starting on long marches or field maneuvers during hot weather for invariably it is the long-haired animals that are affected with heat stroke and exhaustion. The writer has seen many animals die from heat exhaustion while in Texas but does not recall ever having seen a recently clipped animal affected. The column is usually so long that it is impossible for the veterinary officer to inspect every animal during the ten-minute-per-hour halts. The energetic troop commander will look over all of his animals at every halt and any animal that shows excessive fatigue is relieved of his rider and equipment and taken along with the column as a "led horse" or brought into the next camp at a slow gait. The troop commander who does not look over his animals at every halt is the one whose non-effective rate runs high and the attention of the commanding officer should be called to this omission when it exists.

Thrush is another subject which should be taken up at "Stables." The veterinary officer should select a case of thrush, and one of atrophied frog with contracted heels which usually go together, and make a five-minute talk to the organization on thrush and its attending evils. Have every man examine the case so that he will be able to recognize it should his own mount become affected. The veterinary officer should discuss the cause and prevention of the condition emphasizing the seriousness of the disease if it is allowed to go on without treatment. Bring out the probable effect of softening of the frog which makes this structure more susceptible to injury from stone, snag or nail wounds. Describe the conditions which often follow neglect of thrush, such as canker, atrophy of the frog, contracted heels, fractures of the hoof (the so-called quarter-cracks) and pododermatitis circumscripta. It is also well to call attention to the number of days lost by animals affected with these conditions during the previous year. Mention how easy the disease is to control in the early stages and ask every man to report to the stable sergeant, any case which shows up in his mount, who will have them sent to the hospital for treatment.

The following are worth while subjects in all Hippology and Stable Sergeant's schools: *Lucilia macellaria* infestation, (screw worms) which is quite prevalent in stations located in the Southern States, especially in Texas. In discussing this condition the writer likes to take the class on a tour through the corrals and point out the various breeding places of flies, showing the student the larvae of the flies in these places and giving the methods of eradication. If possible, have a supply of the adult flies and larvae so that the students may study and learn to identify them. Explain the short time required for the eggs to hatch into larvae, (four to ten hours) the parts of the animals most often affected and how to prevent infection. Fresh wounds should have all the blood washed off; older wounds will not become infested if they are kept free from exudates and odors. Next in order is the condition of the sheath. When the sheath is allowed to become foul it makes a favorite place for deposit of eggs by these flies. This can be prevented by keeping the sheath clean. Some organizations require the stable crew to wash the sheaths regularly once each month. A better system, especially in the summer months, is for the stable sergeant to examine all sheaths every two weeks and have those sheaths washed which need it. Some horses will have a dirtier sheath in seven days than others will in as many months. A few horses in every mounted outfit acquire the habit of urinating without extending the penis and these are the

animals which are brought most frequently to the hospital with screw worms, and warrant frequent inspections. Animals in pasture should be examined daily for evidences of infestation. As many as thirteen cases were admitted to sick report in one day with infestation of the penis or sheath or both. Symptoms which are diagnostic are swelling of the sheath, dark colored discharge from the sheath if the larvae have destroyed any tissue, switching of the tail with a jerky movement, stamping the hind feet, and trying to bite the sheath.

If one will look through the file of 115 M. D.'s in almost any station he will find that at least one-fourth of them give as the cause of admission "Wound, lacerated" or "Wound, contused." It is my opinion that four-fifths of these wounds are the result of kicks from other animals. Anything that produces 20% of sick report cases merits serious attention. My method of prevention may differ somewhat from the others.

In the first place, get the stable sergeants interested and thus their co-operation. The stable sergeant's school usually calls for 64 hours instruction, and, unless the instructor is a better talker than the writer, he runs out of material before the time is up and is glad to find some subject to fill in with. I go through the file of Forms 115 to find out how many cases were admitted to sick report the result of kicks, and note from which troops they came. This list is read to the sergeants who are surprised at the large number. Ask each sergeant what he has done to reduce the incidence of these cases. You may get a pointer from their answers or you may not, but at least it helps to get them interested and your methods of prevention will now find sympathetic listeners.

A very good preventive is to have each stable sergeant pick out the known kickers in his troop and designate a particular place for these animals to be tied; at the end of the picket line, to the fence, or other point out of reach of other animals. While in stables these animals should be kept in stalls separated from the others and if this is not possible kicking bars should be installed which would prevent them reaching the animals next to them. These kickers should never be allowed to run loose in the corrals with other animals. The stable sergeant will have to have the co-operation of his troop commander to put this system into effect, and will invariably get it.

All of these known kickers should be examined by the veterinary officer for evidences of cryptorchidism. We are not supposed to purchase any of these animals but sometimes they slip by the board. They will do considerable damage if allowed loose in a corral with other horses. The writer knows one such case where a cryptorchid

put nine animals on sick report in one day from kicks and bites. This class of kickers is the most easily handled. A few days after the operation they can be allowed to run with other animals with safety.

At the average Army post penetrating wounds are the cause of admission of about one-fourth of the entire sick report. Street nails will be found to be the chief offenders. It has been demonstrated that the number of cases of penetrating street nails as a cause for admission can be materially lowered if the necessary effort is made. Some of the larger Army posts have a large magnet arranged as a drag which is hauled over the streets, alleys, parade grounds, and other places much traveled by animals. These magnets are supposed to pick up all loose nails and wires that it passes over.

At stable sergeants' school we took up the subject of penetrating wounds, showing that for the previous year between one hundred and fifty and two hundred animals were on sick report from one cause: "Wound penetrating, street nail." The average number of days in the hospital or on sick report for each case and the total number of days lost were discussed to bring out the seriousness of this condition. Then the stable sergeants were told that they would be held personally responsible for a reduction in the number of cases of penetrating wounds from their troop in the coming year. It was then explained how they might lower the number of cases by making a daily inspection of their corrals and stables for loose nails and for boards with nails in them. Each stable crew to police up all loose nails in their area and especially after each rain, for at that time more loose nails are visible than at any other time. This area included their own stables and corral and such part of the road as was designated. They were instructed to see their first sergeants for additional help when needed. In the veterinary hospital area the same procedure was carried out. Some of the soldiers of veterinary detachment were sentenced to so many hours of picking up nails for minor infractions of orders. As a result, the number of cases for the year was reduced to approximately two-thirds of what it had been for the previous one.

The number of animals on sick report from preventable injuries and diseases may thus be lowered by acquainting the personnel with this phase of veterinary sanitation. Opportunities are presented from time to time to discuss these various subjects and the alert veterinary officer will not fail to take advantage of them.

"In Them Days . . ."

LIEUTENANT C. C. CLENDENEN, *Cavalry*

YOU recruits can that chatter, see? And you, Willie Smith, if the Cap'n heard you use them words, you'd go on K. P. for a month. Why, it was just yesterday he says to me, "Sergeant Bennett," he says, "There ain't goin' to be no more swearin' out of these here recruits. If you hear any more of that kind of language out of 'em, you take 'em and wash out his mouth with G. I. soap." Y'get that, Smith? I mean you. He says, "As long as I'm skipper of this here troop, I'll do the swearin' for the whole damn outfit." And when he ain't here, I'm runnin' the troop, see?

I wish the canteen 'd get some decent tobacco. Y' can't get anything there no more except stuff that ain't supposed to bite your tongue. I want to be able to *taste* my tobacco. Gimme a match, Kurzinski. There. Might just as well smoke cornsilk. Things didn't used to be that way when I was a recruit. Soldiers was soldiers, in them days, and not a lot of kids, just run away from their mothers. You could get real beer at the canteen, too; none of this four percent belly-wash.

Yeah, the whole Army is different now, from what it was in them days. What's that? Oh, in a lot of ways. Just take the officers. They learned how to soldier by gettin' out and soldierin'. Nowadays, they send 'em to school to learn 'em how to ride a horse, and learn 'em what causes glanders.

In them days when a new shavetail joined the outfit fresh out of West Point, they give him to some hard-boiled old captain, who'd train him just like we're tryin' to train you recruits. Well, we had a captain who'd been trained that way an' he'd broke in four or five new lieutenants himself. He was an old-timer—been soldierin' ever since the Indian Wars. None o' these here book soldiers, he wasn't. He only had one book. Why, I seen him go up to a lieutenant one day, and he says, "Young man, what is this?"

And the lieutenant looks at what he has in his hand, and he says, "The Cavalry Drill Regulations, sir."

And then the captain says, "Young man," he says, "That's the cavalryman's Bible. When you know everything there is in that book, you'll know everything you need to know out of books, and you'll know a damn sight more than you know now."

Toca, throw that log on the fire. Gimme another match, Kurzinski.

Well, the Old Man had been soldierin' for pretty close to forty years, and he'd learned everything he knew by experience. And he knew pretty near everything about field soldier'n' there is to know. He'd go down the picket line at stables and he could spot a sick horse further'n any stable sergeant in the army. And he'd get out on the range and take a strange rifle away from some johnrecruit and knock out a string of fives that'd made your eyes pop out. And he'd snake an outfit across country faster'n any other officer I ever seen, and without a sore back or a case of lameness in the whole troop. And hard-boiled! Why, I heard him cuss for twenty minutes one day, and he never used the same word twice.

That's all right, Smith. If the troop commander wants to cuss, why, that's his privilege.

Well, the Old Man hated book-soldiers. He hadn't no use for these here officers what got their trainin' out of one of the service schools. Well, bye and bye, we got a new lieutenant—a first lieutenant. He came to us from Riley or Leavenworth, or one of those places, and he'd seen maneuvers in England, and he'd read a lot of books about wars, and he thought he was pretty hot.

Well, the new lieutenant got in bad with the Old Man the very first day he rode out to drill. He looks the troop over and he says, "Captain," he says, "You don't teach the men to ride with the Mounted Service School seat."

The Old Man turns purple all over, and he says, "Young man, I was chasin' Indians when you was still buttonin' your clothes with a safety pin. And to chase Indians I had to teach soldiers to ride, and I taught 'em to ride the same way you see these here soldiers ridin'.

I was dog-robbin' for the Old Man then, and I heard all this myself. The lieutenant rode away and the Old Man looked at 'im, and he seen how his stirrups was short and his legs was way back, and he turns to me and he says, "Bennett," he says, "I've been in this man's army for pretty near forty years, and I never knew before what a monkey ridin' a football looks like.

Gimme a match, Kurzinski. Huh? Gimme one, Stein. Damn recruits don't even carry matches, any more. There was a time when soldiers was men, but they're just a lot of babies in knee breeches, now.

Well, the Old Man and the new lieutenant went round and round for about six months. The lieutenant'd tell the Old Man what he read in some book, or heard in some lecture, and the Old Man'd git madder 'n hell, and he'd swear up and down that there ain't

but one way to learn how to soldier, and that's by gittin' out and soldierin'.

'Bout six months after the lieutenant joined up, we was moved to one of those little outposts, down in Texas, where we was the only troop. And we hadn't much more'n got the horses unsaddled when an inspector general comes blowin' in and tells the Old Man that he's goin' to conduct a tactical inspection. So we packs our wagon and our saddles and goes into the field to be inspected. Of course, the three officers et together, and all the time they was eatin', the Old Man and the lieutenant argues about wars and cavalry. You see, the lieutenant says that a cavalryman should stick to his horse and charge, and the Old Man says that anybody but a plain damn fool'd dismount and begin to shoot. And the inspector just sits there and listens, and don't say nothin'.

Well, the next morning, we hadn't much more than started out when the inspector says, "Captain, I was very much interested in the discussion between you and your lieutenant yesterday evening. This morning I will give each of you a chance to demonstrate his theories. That hill to the southward is held by a force of the enemy, strength unknown. They have just fired upon your platoon, lieutenant. You are without immediate support and are in hostile country. Show me what you are going to do."

Well, the lieutenant turns around in his stirrups and he yells, "Follow me." And then he draws his saber and signals "Line," and takes up a good fast gallop toward the hill.

When the dust clears away so we can see what's happening, they was half way to the hill, and the Old Man eased himself out of the saddle and began to cuss.

Well, the Old Man told me that morning to look after the inspector, so I stays up on my horse.

And the Old Man, he says, "Well, I never thought to live to see the day when a lieutenant of mine, with a platoon of mine would ever make such a damn fool spectacle of himself and his troop as that, and in front of an inspector, too.

The inspector just smiles a little bit, and then he said, "Well, Captain, let me see how *you* will handle that attack."

The Old Man turns around and ordered, "Fight on foot, action right, led horses here." And with that, the Old Man and the rest of the troop advances dismounted toward the hill.

Pretty soon the inspector, he said to me, "Orderly, have the bugler sound recall."

But you see, the only windjammer we got then was dogrobbin'

for the lieutenant, and of course, a windjammer's got no brains, and he rode off with the lieutenant, instead of stayin' with the troop commander, where he belonged.

What happened then? Well, with nobody to sound recall, neither the Old Man nor the lieutenant knew when to stop, 'cause the lieutenant hadn't never read in no book what to do, and all the Old Man's experience learned him not to stop 'til he was ordered to. So they both kept on goin'. Somebody seen the lieutenant's platoon swimmin' past Cape Horn headed toward the South Pole, and the dismounted outfit kept on goin' 'til they wore through their shoes, and then their feet wore off, and the last that was seen of them was a line of campaign hats floatin' across the Panama Canal.

Smith, you report to the mess sergeant right after breakfast, and I'm goin' to tell him to give you the dirtiest job he's got and keep you on K. P. for the rest of the week.



SPORTS

Cavalry School Graduation Events

FOLLOWING a successful Horse Show and Race Meet, held May 29-31, the Cavalry School Graduation events centered the attention of the post and horse lovers of the surrounding country. Favored with delightful weather, the graduation period furnished a thoroughly pleasant and interesting climax to the year's activities at the school.

Following is the list of those placing in the various events:

Event I. THE NONCOMMISSIONED OFFICERS' CLASS NIGHT RIDE:

- 1st-Corporal S. O. Thorpe, Tr. E, 13th Cav.
- 2nd-Sergeant C. I. Thompson, Tr. A, 2nd Cav.
- 3rd-Sergeant J. R. Williamson, Tr. B, 2nd Cav.
- 4th-Corporal H. M. Younger, Tr. E, 13th Cav.

Event II. NONCOMMISSIONED OFFICERS' STANDARD STAKES:

- 1st-Corporal H. M. Younger, Tr. E, 13th Cav.
- 2nd-Sergeant W. F. Couch, Tr. E, 13th Cav.
- 3rd-Sergeant A. L. Parr, Tr. F, 2nd Cav.
- 4th-Sergeant H. J. Swift, M. G. Tr., 2nd Cav.

Event III. TROOP OFFICERS' CLASS OUTDOOR JUMPING:

- 1st-2d Lt. R. L. Howze, Jr., Cav.
- 2nd-2d Lt. R. M. Shaw, Cav.
- 3rd-1st Lt. W. J. Bradley, Cav.
- 4th-1st Lt. L. C. Vance, Cav.

Event IV. NONCOMMISSIONED OFFICERS' CLASS OUTDOOR JUMPING:

- 1st-Sergeant J. R. Lerdrup, M. G. Tr., 2d Cav.
- 2nd-Corporal John Colley, Tr. A, 2d Cav.
- 3rd-Sergeant J. R. Williamson, Tr. B, 2d Cav.
- 4th-Corporal Raymond Curtis, Tr. C, 9th Cav.

Event V. NATIONAL GUARD AND RESERVE TROOP OFFICERS' CLASS JUMPING:

- 1st-2d Lt. C. C. Harman, Jr., Cav-Res.
- 2nd-1st Lt. H. I. Abbey, Tr. F, 114th Cav. Kans. N. G.
- 3rd-1st Lt. J. M. Gilbough, Hq. 112th Cav., Tex. N. G.
- 4th-1st Lt. R. E. Simms, Cav-Res.

Event VI. ADVANCED EQUITATION CLASS. GREEN JUMPERS:

- 1st-Major Calvin De Witt, Jr., Cav.
- 2nd-Captain J. T. Cole, Cav.
- 3rd-Captain C. Burgess, Cav.
- 4th-1st Lt. J. M. Callicutt, F. A.

Event VII. ADVANCED CLASS JUMPING:

- 1st-Captain H. E. Eastwood, Cav.
- 2nd-Captain H. A. Buckley, Cav.
- 3rd-1st Lt. J. P. Rodriguez, Cav (Cuban Army)
- 4th-Captain I. A. Correll, Cav.

Event VIII. HUNT TEAMS:

(First Place) 2d Plat. T. O. Class

- 1st-2d Lt. R. M. Barton, Cav.

- 2nd-1st Lt. L. K. Ladue, Cav.
- 3rd-2d Lt. W. H. Wood, Cav.

(Second Place) Adv. Equit. Class

- 1st-Captain J. T. Cole, Cav.
- 2nd-1st Lt. E. F. Thomson, Cav.
- 3rd-1st Lt. S. P. Walker, Jr., Cav.

(Third Place) 1st Plat., T. O. Class

- 1st-1st Lt. C. W. A. Raguse, Cav.
- 2nd-Captain C. A. G. DeGeer, Royal Horse Guards (Swedish Army)
- 3rd-1st Lt. J. H. Stadler, Jr., Cav.

(Fourth Place) Advanced Class

- 1st-Major T. F. Limbocker, Cav.
- 2nd-Captain R. Russell, Cav.
- 3rd-Captain L. A. Pulling, Cav.

Event IX. ADVANCED CLASS REMOUNT COMPETITION: SCHOOLING PHASE.

- 1st-Capt. H. A. Buckley, Cav.
- 2nd-Capt. G. A. King, Cav.
- 3rd-Capt. H. H. Neilson, Cav.
- 4th-1st Lt. J. P. Rodriguez, Cav (Cuban Army)

INDOOR JUMPING PHASE.

- 1st-Capt. H. A. Buckley, Cav.
- 2nd-Capt. R. Russell, Cav.
- 3rd-Capt. W. B. Van Auken, Cav.
- 4th-Capt. D. A. Young, Cav.

CROSS COUNTRY PHASE.

- 1st-1st Lt. J. P. Rodriguez, Cav-Cuban Army
- 2nd-Capt. L. A. Pulling, Cav.
- 3rd-Capt. H. A. Buckley, Cav.
- 4th-Capt. G. A. King, Cav.

EVENT COMPLETE.

- 1st-Capt. H. A. Buckley, Cav.
- 2nd-Capt. G. A. King, Cav.
- 3rd-Capt. H. H. Neilson, Cav.
- 4th-Capt. W. B. Van Auken, Cav.

Event X. NONCOMMISSIONED OFFICERS' CLASS. REMOUNT COMPETITION:

SCHOOLING PHASE.

- 1st-Sgt. F. S. Brown, Tr. A, 12th Cav.
- 2nd-Mr. Sgt. H. A. Dietsche, M. D. (V. C.)
- 3rd-Corporal H. B. Wiley, Tr. E, 2d Cav.
- 4th-Corporal B. Galstead, Tr. A, 13th Cav.

INDOOR JUMPING PHASE.

- 1st-Corporal Shirley Creasy, M. G. Tr. 13th Cav.
- 2nd-Corporal W. A. Parker, Hq & Ser Tr. 9th Cav.
- 3rd-Sgt. C. I. Thompson, Tr. A, 2d Cav.
- 4th-Corporal W. D. Browne, Tr. A, 3rd Cav.

CROSS COUNTRY PHASE.

- 1st-Sgt. John Goeble, Tr. A, 13th Cav.
- 2nd-Corporal S. O. Thorpe, Tr. E, 13th Cav.
- 3rd-Sgt. Floyd Barrett, M. G. Tr., 11th Cav.
- 4th-Corporal R. O. Long, M. G. Tr., 8th Cav.

EVENT COMPLETE.

- 1st-Sgt. F. S. Brown, Tr. A, 12th Cav.
- 2nd-Corporal S. O. Thorpe, Tr. E, 13th Cav.
- 3rd-1st Sgt. Floyd Barrett, M. G. Tr., 11th Cav.
- 4th-Corporal R. O. Long, M. G. Tr., 8th Cav.

Event XI. TROOP OFFICERS' CLASS. REMOUNT COMPETITION: SCHOOLING PHASE.

1st-Capt. B. B. Vail, Cav.
 2nd-1st Lt. J. H. Stadler, Cav.
 3rd-2nd Lt. R. L. Howze, Cav.
 4th-1st Lt. F. G. Trew, Cav.

INDOOR JUMPING PHASE.

1st-1st Lt. J. H. Stadler, Cav.
 2nd-1st Lt. R. O. Dewey, Cav.
 3rd-Capt. E. H. de Saussure, Cav.
 4th-2d Lt. R. L. Howze, Cav.

CROSS COUNTRY PHASE.

1st-Capt. B. C. Bridges, V. C.
 2nd-2d Lt. R. M. Barton, Cav.
 3rd-1st Lt. J. H. Stadler, Cav.
 4th-2d Lt. Wm. H. Nutter, Cav.

USE OF ARMS PHASE.

1st-1st Lt. J. H. Claybrook, Jr., Cav.
 2nd-1st Lt. C. B. Hutchinson, Cav.
 3rd-1st Lt. C. W. A. Raguse, Cav.
 4th-1st Lt. C. L. Ruffner, Cav.

EVENT COMPLETE.

1st-Capt. B. B. Vail, Cav.
 2nd-2d Lt. R. L. Howze, Cav.
 3rd-1st Lt. J. H. Stadler, Cav.
 4th-Capt. B. C. Bridges, V. C.

Event XII. ADVANCED EQUITATION CLASS OLYMPIC PROSPECT COMPETITION.**SCHOOLING PHASE.**

1st-Capt. J. T. Cole, Cav.
 2nd-1st Lt. E. F. Thomson, Cav.
 3rd-Capt. M. E. Jones, Cav.
 4th-1st Lt. G. B. Rogers, Cav.

ENDURANCE PHASE.

1st-1st Lt. C. W. Bennett, Cav.
 2nd-Capt. M. E. Jones, Cav.
 3rd-Capt. Carleton Burgess, Cav.
 4th-1st Lt. R. L. Taylor, F. A.

JUMPING PHASE.

1st-1st Lt. E. F. Thomson, Cav.
 2nd-Capt. M. E. Jones, Cav.
 3rd-1st Lt. J. M. Callicutt, F. A.
 4th-Capt. A. B. MacNabb, Cav.

EVENT COMPLETE.

1st-1st Lt. E. F. Thomson, Cav.
 2nd-Capt. M. E. Jones, Cav.
 3rd-Capt. J. T. Cole, Cav.
 4th-Capt. A. B. MacNabb, Cav.

Event XIII. ADVANCED EQUIT. CLASS GREEN SCHOOLED HORSE COMPETITION:

1st-Captain J. T. Cole, Cav.
 2nd-1st Lt. G. B. Rogers, Cav.
 3rd-Captain M. E. Jones, Cav.
 4th-1st Lt. S. P. Walker, Jr., Cav.

Event XIV. SWORDSMANSHIP COMPETITION:

1st-1st Lieut. F. G. Trew, Cav.
 2nd-2d Lieut. W. H. Nutter, Cav.
 3rd-1st Lieut. J. H. Stadler, Cav.
 4th-1st Lieut. L. K. Ladue, Cav.

Event XV. COMBINED PISTOL AND SABER COMPETITION. TROOP OFFICERS' CLASS AND NATIONAL GUARD AND RESERVE TROOP OFFICERS' CLASS:

1st-Captain A. J. Yanausch, 113 Cav., Iowa, N. G.
 2nd-1st Lieut. W. W. Yale, Cav.
 3rd-2d Lieut. A. A. Cavanaugh, Cav.
 4th-1st Lieut. W. H. Wood, Cav.

Event XVI. COMBINED PISTOL AND SABER COMPETITION. NONCOMMISSIONED OFFICERS' CLASS:

1st-Sgt. J. R. Lerdrup, M. G. Troop, 2d Cav.
 2nd-Corp. Arthur Moss, M. G. Troop, 10th Cav.
 3rd-Corp. S. O. Thorpe, Tr. E. 13th Cav.
 4th-Corp. H. M. Younger, Tr. E. 13th Cav.

Event XVII. NATIONAL GUARD AND RESERVE ADVANCED AND TROOP OFFICERS' CLASSES POINT TO POINT RIDE: TROOP OFFICERS' CLASS

1st-Capt. R. L. Hatt, Tr. B. 115th Cav., Wyo., N. G.
 2nd-1st Lieut. F. D. Huyler, Cav-Res (61st Cav. Div.)
 3rd-1st Lieut. H. D. Simmons, Cav-Res (312 Cav.)
 4th-2d Lieut. E. F. Griggs, 110 Cav., Mass., N. G.

ADVANCED CLASS.

1st-Capt. Albert Hlavac, Cav-Res.

Event XVIII. TROOP OFFICERS' CLASS JUMPING. INDOOR:

1st-2nd Lieut. M. A. Giddens, Cav.
 2nd-1st Lieut. C. L. Ruffner, Cav.
 3rd-1st Lieut. L. K. Ladue, Cav.
 4th-1st Lieut. F. G. Trew, Cav.

Event XIX. NATIONAL GUARD AND RESERVE TROOP OFFICERS' CLASS, JUMPING INDOOR:

1st-Capt. Walter Livingston, Tr. E. 113th Cav. Iowa N. G.
 2nd-1st Lieut. F. D. Huyler, Cav-Res (61st Cav. Div.)
 3rd-1st Lieut. H. M. Hopp, Cav-Res (318th Cav.)
 4th-Capt. A. W. Morse, Cav-Res.

Event XX. NONCOMMISSIONED OFFICERS' CLASS JUMPING. INDOOR:

1st-Sgt. C. I. Thompson, Tr. A. 2d Cav.
 2nd-Corp. S. O. Thorpe, Tr. E. 13th Cav.
 3rd-Corp. H. B. Wiley, Tr. E. 2d Cav.
 4th-Corp. H. M. Younger, Tr. E. 13th Cav.

Event XXI. ADVANCED EQUITATION CLASS GREEN POLO PONY COMPETITION:**SCHOOLING PHASE**

1st-Captain J. T. Cole, Cav.
 2nd-1st Lieut. E. L. Harrison, Cav.
 3rd-Captain M. E. Jones, Cav.
 4th-1st Lieut. G. B. Rogers, Cav.

JUMPING PHASE:

1st-1st Lieut. S. P. Walker, Cav.
 1st Lieut. R. L. Taylor, F. A. (TIED)
 1st Lieut. E. F. Thomson, Cav.
 2nd-1st Lieut. E. L. Harrison, Cav. (TIED)
 1st Lieut. J. M. Callicutt, F. A. (TIED)
 3rd-Captain C. Burgess, Cavalry (TIED)
 Captain M. E. Jones, Cavalry
 4th Major C. DeWitt, Cavalry

SHOWING PHASE:

1st-Captain J. T. Cole, Cavalry
 2nd-1st Lieut. G. B. Rogers, Cavalry
 3rd-1st Lieut. E. L. Harrison, Cav.
 4th-Captain M. E. Jones, Cav.

EVENT COMPLETE:

1st-Captain J. T. Cole, Cavalry
 2nd-1st Lieut. E. L. Harrison, Cav.
 3rd-1st Lieut. G. B. Rogers, Cav.
 4th-Captain M. E. Jones, Cavalry

Event XXII. THE NORWICH STAKES. (Old Standard Stakes)

1st-Captain E. A. Williams, Cav.
 2nd-Captain V. M. Cannon, Cav.
 3rd-1st Lieut. P. C. Hains, III, Cav.
 4th-1st Lieut. R. H. Bridgman, Cav.

Event XXIII. HORSESHOEING JUDGING COMPETITION.

1st-1st Lieut. H. J. Theis, Cav.
 2nd-1st Lieut. C. W. A. Raguse, Cav.
 3rd-1st Lieut. L. K. Ladue, Cav.
 4th-1st Lieut. Clyde Massey, Cav.

Event XXIV. THE NIGHT RIDE.

1st-Major Renn Lawrence, Cav.
 2nd-1st Lieut. J. H. Claybrook, Cav.
 3rd-1st Lieut. P. C. Hains, III, Cav.
 4th-1st Lieut. C. B. Hutchinson, Cav.

HIGH MAN, National Guard and Reserve Officers—

Capt. Walter Livingston, Tr. E, 113 Cav. Iowa, N.G.

Event XXV. TROOP OFFICERS' ALL AROUND EQUESTRIAN CHAMPIONSHIP.

1st-1st Lieut. P. C. Hains, III, Cav.
 2nd-2d Lieut. R. L. Howze, Cav.
 3rd-1st Lieut. C. B. Hutchinson, Cav.
 4th-2d Lieut. W. O. Heacock, Cav.

Event XXVI. THE CAVALRYMAN'S CUP.

1st Lieut. P. C. Hains, III, Cav.

Event XXVII. THE LORILLARD CUP.

1st-Captain J. T. Cole, Cavalry
 2nd-Captain M. E. Jones, Cavalry
 3rd-1st Lieut. E. F. Thomson, Cavalry
 4th-1st Lieut. C. W. Bennett, Cavalry

Event XXVIII. THE UNITED STATES CAVALRY ASSOCIATION TROPHY.

Corporal Harrold M. Younger, Tr. E, 13th Cavalry



TOPICS OF THE DAY

Death of Lieut. Col. James J. O'Hara

WAR DEPARTMENT
 OFFICE OF CHIEF OF CAVALRY
 WASHINGTON, D. C.

June 4, 1930

Order No. 1

It is with deep regret that the Chief of Cavalry announces the death on Friday, May 30th of Lieut. Colonel James J. O'Hara, Cavalry, Personnel Officer, this office.

Entering the Military Academy in August 1900, he was commissioned a 2d Lieutenant of Cavalry in June 1904, and passed successively through all the grades, reaching his promotion to Lieut. Colonel, Cavalry, on August 28, 1928. From the first, his career showed that unremitting devotion to duty and that large mindedness which won him in so marked a degree the love and admiration of those associated with him.

As a junior officer Lieut. Colonel O'Hara served with the 4th and 1st Cavalry regiments until 1911, when he was detailed as an instructor in the Department of English and History at the U. S. Military Academy, where he remained until 1915. As a Captain and later as a Major, he served with the 15th Cavalry in 1916 and 1917. During the World war he served in this country and abroad as a Squadron Commander, and Regimental Commander 15th Cavalry. In the American Expeditionary Forces in France he served as Remount Officer, Base Section No. 2, and in the Office of the Assistant Chief of Staff, G-1, G. H. Q. A. E. F. On August 31, 1918, he was promoted to Lieut. Colonel, and held this temporary rank until he was honorably discharged therefrom on August 28, 1919.

After the armistice he was successively Chief of Staff, Western Department, Captain of the Cavalry Rifle Team in 1920, Assistant Professor in the Department of English, History, and Economics at the U. S. M. A., until 1923. He graduated from the Advanced Course, Cavalry School, in 1924, and was a Distinguished Graduate of the Command and General Staff School, Class of 1925. His name was

borne on the General Staff Corp Eligible List. From 1925 to June 1928, Colonel O'Hara served as a member and recorder of the Cavalry Board, Fort Riley, Kansas. From July 1928 to the date of his death he was on duty in the Office of the Chief of Cavalry as Chief of the Material and Equipment Section and later as Chief of the Personnel Section.

A thorough student of his profession, with a mind lucid and keen, friendly and tolerant towards all, with a moral fortitude which conquered his none too vigorous physique, he did himself and his chosen arm significant honor.

The heartfelt sympathy of the whole Cavalry Arm is extended to his bereaved family.

GUY V. HENRY,

Major General.

Chief of Cavalry

Commendation of the 112th Cavalry

OF several recent cases of civil disorder requiring the intervention of the National Guard, the outbreak of mob violence at Sherman, Texas, was one of the most serious. Units of the 112th Cavalry of Dallas were called upon to aid the civil powers of the city of Sherman in restoring order. How well these Guardsmen performed their duty, one of the most trying and unpleasant which a soldier can be called upon to perform, is shown by the following letter addressed to the officers and men of the 112th Cavalry by the Military Affairs Committee of the Dallas Chamber of Commerce:

"I am directed by Mr. Charles W. Davis, chairman of the Military Affairs committee of Dallas Chamber of Commerce, to convey to you an expression of appreciation for your splendid service in aid of the civil powers at the city of Sherman. Mr. Davis speaks for his colleagues on the committee and to this extent expresses the sentiments of Dallas Chamber of Commerce.

"It is realized that in the initial stages of military intervention at Sherman the small group of Dallas National Guardsmen on the scene conducted themselves with a measure of forbearance rare in the annals of the Guard service. Understanding that the use of their weapons would have caused many casualties among women, children and others not actually engaged in rioting, the troopers withheld fire under provocation that would have taxed the patience of veteran

soldiers, thus establishing a standard of discipline reflecting the greatest credit on officers and men engaged.

"Contemplation of the possibilities attending the use of weapons at this stage of the riot makes the altitude and steadiness of the Guardsmen stand out conspicuously. Insofar as warm appreciation of your fine discipline under tremendous provocation can repay you for the injuries and indignities suffered, you have this in full measure.

"Mr. Davis desires you to understand that your fellow citizens of Dallas recognize this additional contribution to the maintenance of peace and order in Texas and are proud of the young man from this city who wear the uniforms of our Country's auxiliary forces.

Yours faithfully,

ROLAND A. LAIRD, *Secretary, Military Affairs Committee.*"

Cavalry Rifle Platoon Competition

THE Chief of Cavalry has announced a platoon competition for all regular regiments and separate squadrons not having an opportunity to have entries in the 1930 Leadership Test for Small Cavalry Units, to take place during the fiscal year 1930-31. The competition will be based on the actual records made by competing platoons in pistol marksmanship, swordsmanship and rifle marksmanship in the regular record courses during that period. According to the regulations for the competition, one entry will be made by each eligible regiment and squadron, and all personnel of the competing platoons must have been regularly assigned to the troop to which the platoon belongs on June 15, 1930. A minimum of twenty members of the entered platoon must in each case participate in each phase of the contest.

An award of \$250.00 will be made to the winning platoon to be divided among the members. The funds for this award will be furnished from the excess accrued in the Trust Fund for the annual Leadership Test for Small Cavalry Units over and above the amount necessary to provide the annual prize of \$1,000.00 for that event.

The Cavalry Rifle Team

THE squad for the Cavalry Rifle Team tryouts assembled at Camp Perry on May 15, 1930, and were quartered in the Erie Ordnance Depot.

In selecting Camp Perry as the scene of the tryouts, it was hoped to secure the advantage of gaining a thorough knowledge of all the

various weather conditions which might prevail at the place where the matches are actually held.

The first week was devoted to putting the squad through a thorough small arms school. During the second week a complete course was fired with the small bore, ending with a two-days' competition.

Firing with the calibre .30 rifle began June 2d, with the following program in effect:

June 2-19. Rifle practice. One record score to be fired each week.

June 20. Rifle record, Course "A."

June 23-28. Rifle record. First elimination. Five times over the National Match Course. Squad to be cut to 30 men upon completion of these scores.

Special Matches

The following special matches to be fired in conjunction with first elimination. Trophies and medals as follows:

Cavalry Regimental Team Championship Match: Fired June 24, 1930. Course: National Rifle Match Course. Open to one team of two competitors from each cavalry regiment or organization. The team making the highest score will be awarded the Cavalry Regimental Team Championship Trophy, with a bronze medal for each member.

Cavalry Individual Championship Match: Fired June 27, 1930. Course: National Rifle Match Course. Open to any member of the United States Cavalry. The individual making the highest score will be awarded the Cavalry Individual Championship Trophy and a gold medal; 2d place, a silver medal; 3d place, a bronze medal.

200-Yard Individual Championship Match: Fired June 26, 1930. Course: 20 shots at 200 yards offhand with the service rifle. Open to any member of the United States Cavalry. The individual making the highest score will be awarded a silver medal; 2d place, a bronze medal.

1,000-Yard Individual Championship Match: Fired June 25, 1930. Course: 20 shots at 1,000 yards with the service rifle, no sighting shots. Open to any member of the United States Cavalry. The individual making the highest score will be awarded the Fort Bliss Trophy and a silver medal; 2d place, a bronze medal.

Individual Rapid Fire Match: Fired June 23, 1930. Course: Rapid fire phase of the National Rifle Match. Open to any member of the United States Cavalry. The individual making the highest score will be awarded a silver medal; 2d place, a bronze medal.

The Holbrook Trophy Match: Fired June 23-28, 1930. Course: Total record scores of the first rifle elimination. Open to all com-

petitors for the Cavalry Rifle Team. To the individual making the highest total score will be awarded the Holbrook Trophy and a gold medal; 2d place, a silver medal; 3d place, a bronze medal.

Cavalry Individual Pistol Match: Fired June 9-14, 1930. Course: Total record scores of the first pistol elimination. Open to all competitors for the Cavalry Pistol Team. To the individual making the highest score will be awarded a gold medal; 2d place, a silver medal; 3d place, a bronze medal.

The Cavalry Regimental Team Championship Trophy will be retained by the winning regiment and the other trophies by the regiment or organization to which the winner belongs for one year, or until the next competition.

All medals awarded are furnished by the United States Cavalry Association and will become the permanent property of the individual.

June 30-July 24. Individual instruction and practice. Record scores to be fired twice each week.

July 25-31. Record firing. Second elimination. Five times over the National Match Course. Squad to be cut to twenty men upon completion of scores.

August 1-23. Team practice and instruction. Record scores to be fired twice each week.

August 25-30. Final elimination. Squad to be cut to twelve men.

September 1-14. Participation in National Matches.

Work with the pistol was scheduled to run simultaneously with the rifle, the first elimination to take place during the week June 9-14. All competitors were to be required to fire through the first elimination consisting of firing five times over the National Match Course the squad to be cut to ten men upon completion of the scores.

Through the generous financial support of the Cavalry School and the various units which compose the Cavalry service, coupled with the energy and ingenuity of the Team Captain and various members of the squad, it will be possible this year to acquire considerable property for the use of this and future Cavalry teams. The chief items will be a new and modern Fecker Team telescope, a pair of telescopes for pressure barrel rifles and telescope stands of a convenient and uniform design for the entire squad.

The following were selected to guide the 1930 squad:

Team Captain: George A. Rehm, 1st Lieutenant, 3d Cavalry. **Team Coach:** Clyde A. Burcham, 1st Lieutenant, 7th Cavalry. **Team Supply Officer:** R. H. Bridgman, 2d Lieutenant, 12th Cavalry. **Publicity Officer:** Sidney C. Page, 1st Lieutenant, 14th Cavalry.

PROGRESS AND DISCUSSION

This section of the JOURNAL has been instituted for the purpose of recording the state of development of various items of material in which the Cavalry is particularly interested, progress in technique or tactics and also to encourage discussion of matters of general professional interest to cavalry officers. Suggestions concerning new methods developed and discussions or constructive criticisms of present methods, equipment, etc., are invited. It is believed that there are many practical ideas and improvements which officers are using in their organizations which may be of benefit to others in solving similar problems. If you have an idea or suggestion along the lines indicated, send it in. It will be welcomed.

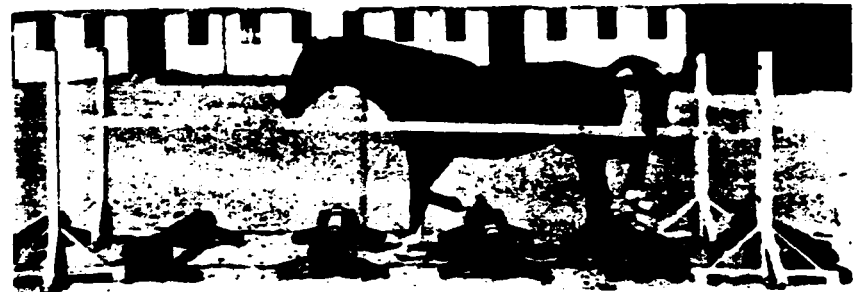
Use of the Cavaletti

IN an article in the April, 1930 JOURNAL, on the Swedish Cavalry School, an illustration (reproduced herewith) was given of the use of the *cavaletti* for schooling horses. The purpose of this device in training was not explained in the article. The following interesting communication was received from Lieutenant Colonel H. R. Smalley, now on duty with the Quartermaster Corps, who has long been interested in high schooling:

"I was quite interested to note the illustration, on page 194 of the April CAVALRY JOURNAL, of the *cavaletti*, called in the title an Italian method of training. No explanation was given in the text. Perhaps your readers would like one.

"Years ago, when I was working a young horse at the school walk, an elderly civilian who had been looking on engaged me in conversation and asked how I secured the movement initially. He had been a trainer of circus horses and described to me how he secured the school walk by the assistance of the *cavaletti* illustrated in the JOURNAL. I should hardly call the use of this apparatus a 'method' of training, but a 'device' to assist the rider in securing the school walk.

"This brings up the subject of gaiting which is not considered of much importance in our service, and on which our training regulations are silent. (Timing is not gaiting.) With the limited attention paid to this subject there seems to be a hazy idea that one should



The Cavaletti

walk a horse to teach the walk, trot him to teach the trot, and gallop him to teach the gallop. This is 33 1/3 per cent correct. As Baucher, who learned horsemanship in Italy, wrote: 'The walk is the mother of the gaits.' When a high school rider like Baucher said 'walk' he meant the school walk of two beats.

"A horse is high schooled by the same means that he is gaited, that is, by supplying what he lacks, a muscular activity of the forehead that matches that of his hind quarter. Mounted or dismounted a horse's fore legs bear the greater part of his weight and at the walk do the most work and gain the most muscle. Once he leaves the walk for the trot or gallop the more active hind legs can do the most work leaving the less active fore legs to act as passive weight bearers. This always happens without man's intervention. High school riders by the walk, school walk, backing, pirouettes, etc., where the shoulders do the work initiate forehead activity and then exploit same at the trot, canter, passage, piaffer, etc.

"This forehead activity is evidenced by quickened breaking over of fore feet. If, at the walk, we quicken the action of the front feet we secure a walk of two beats as shown in the illustration of the *cavaletti*. Quickened action of front feet means more muscular effort and resultant muscular development. Muscles well developed are easy to excite to action.

"The high school has long used the mysterious term called the *rassembler*, usually defined with reference to the rider's prowess and misinterpreted even by those who could produce it at will.

"The *rassembler* is nothing more than a harmonious muscular activity of the fore and hind quarters. The limiting factor being always in front, the forehead receives the early attention of the high school trainer. The hind quarters will always tend to an equal or greater activity and this extra activity excites the attention of the onlooker and thus conceals the secret of higher training.

"I suggest that the young horseman who would train a mount for the 1932 dressage contest do a great deal of walking, devote his entire attention at first to forehand development, and, by means of the *cavaletti* easily improvised, learn how to secure the school walk which DeBussigny refers to in his book as the most difficult feat in horsemanship.

"The picture shows the horse at liberty. I should recommend that he be ridden very, very slowly. The added weight of rider will assist in muscular development, and after a few efforts the rider may discover how to maintain the two beat walk as he leaves the *cavaletti*, in which case he has crossed the 'pons asinorum' that divides ordinary riding from the high school and the latter becomes an open book, as Baucher wrote: 'The poetry of equitation.'"

Cavalry Center for Reserve Unit

OFFICERS on duty with Reserve units are usually faced with the old army problem of making something out of nothing. To make a live, active organization out of a paper unit requires something more than periodic conferences. The summer training camps help to put life into the organization, but practical preparation for the camps is difficult to arrange. How the problem has been handled in one place is described by Colonel W. F. H. Godson, Cavalry, stationed at Detroit with the 160th Cavalry Brigade. It will be remembered that Colonel Godson worked out the same idea in establishing the original Cavalry Center on Long Island which later became the Army Polo Center, while on duty with the 61st Cavalry Division.

Colonel Godson in answer to an inquiry from the Journal describes the development of their plant for real Cavalry training as well as for enjoyment of social activities as follows:

"I think the plan we are adopting here is the only one which can inject life and actuality into our paper Cavalry units. When I got here and picked up the pieces I was sick to see what a pitiful show it was and I started in to sell my old 61st plans to these lads here. Our 'activities' consisted in classes one evening a week in the offices of the 85th Division where we have a desk and a staff sergeant. Strange to say a chosen few turned up for the group schools, I cannot understand why, but they actually did.

"I went to work on the officers and got them enthused with my idea. It was not hard, for they had already realized the need, so my part was easy. Now we are working along the lines of my Long Island plan.

"This is the progress up to date. We found just out of town an old farm, 100 acres, and an old nine-room house with a poor barn. This was empty and running to ruin, part of a prospective real estate development but not liable to be wanted under present conditions for three or four years. Owner likes Cavalry soldiers, had a son killed in France and was willing to rent us the place for a nominal rent \$15 a month and give us a two-year lease. This farm is surrounded by hunt and riding clubs and ideally located. Everybody got busy and gave work or money or furniture, pictures, or what have you. We had several general fatigues, painted, papered, put in electric light fixtures. We now have a comfortable house furnished, iron flag staff with flag flying, office, three good lounging rooms, kitchen and dining room which is a conference room every Saturday. We have a garden in, barn is already sheltering an officer's horse, we have an old darkey man and wife in charge and can get a lunch or dinner any time. Club is open all the time for use of officers and their wives and with the exception of Saturday afternoons which are entirely military from 2:00 till 6:00 p. m. when we have our schools, boards, etc., and an equitation class. There is a riding establishment on the next place half a mile away and the owner gives us a special rate for horses for our officers. I keep my two mounts here as it is very handy. The terrain is ideal for all sorts of minor tactical problems and training. The officers of the Brigade are keen about it and we are having applications for membership from officers of other units around Detroit. The cost for Cavalry officers is five dollars a month with an entrance fee of five dollars. This gives them all the privileges of the club and four Saturday rides in the equitation classes. We have been running now a little over two months and have in the neighborhood of fifty members. They are just eating it up. I think it ought to carry on. I am trying to make them independent of me and run it themselves so that it will not be influenced by changing Unit Instructors."

Leadership Test for National Guard Units

FOLLOWING along the lines of the Leadership Test For Small Units which has been carried on for a number of years in regular organizations, the 104th Cavalry, Pennsylvania National Guard, have instituted a test which will be held during the coming summer camp at Mt. Gretna. The value of such tests has been well demonstrated. The outline of the test as published by Headquarters 104th Cavalry is reproduced for such value as it may be to other organizations contemplating such a test:

Platoon Leadership Test, 104th Cavalry

Section I

1. **TIME.** It is planned to hold the Platoon Leadership Test, 104th Cavalry at Mt. Gretna, Pa., on July 28, 1930.

2. **OBJECTIVE TEST.** The test is designed primarily to encourage the training of individuals and to test the combat efficiency of the Cavalry platoon.

3. **THE TEST.** The test shall be divided into two phases:

(1) **A. Use of Weapons Phase.** based upon official records of qualification in specified tests held as part of the regular training of the regiment.

(2) **A. Leadership Phase,** based upon a march of a platoon under simulated war time conditions.

4. **ELIGIBILITY.** (a) Only one rifle platoon, war strength, accompanied by its machine rifle squad for each troop of the 104th Cavalry.

(b) The platoon selected to represent a troop may be composed of any regularly assigned mounts and individuals of the troop, irrespective of previous platoon assignment, so long as men are of the appropriate rank and grade as hereinafter provided. Troop commanders shall, upon the day preceding the leadership phase, submit to regimental headquarters a roster of the platoon that is to represent their respective troops. After the submission of this list no substitutions will be permitted.

(c) Headquarters Troop and Machine Gun Troop are eligible for this test, but they shall each be represented by a Cavalry rifle platoon constituted as hereinafter provided. Machine rifles and packs will be provided these two organizations by regimental headquarters. The tactical employment of machine rifles will not constitute an important part of the test.

(d) Platoons will consist of platoon headquarters, three (3) rifle squads, and a machine rifle squad; *i. e.*, one (1) lieutenant, two (2) sergeants, four (4) corporals and twenty-seven (27) privates first class and privates. Totals: one (1) officer and thirty-three (33) enlisted men.

5. **WINNER.** The platoon scoring the highest total number of points in both phases shall be the winner.

6. **PRIZE.** A cup, to be known as the Williamson Trophy, to have the designation of the winning platoon inscribed thereon and to remain the property of the winning platoon until the next succeeding test.

Section II

Use of Weapons Phase

7. **RIFLE.** The official record for qualification in rifle marksmanship made during the current training year by each individual of a competing platoon will be accredited to the platoon. Where a member of a competing platoon for any reason whatsoever fails to qualify as rifle marksman or better his score shall be zero. Official records for qualification with the machine gun by representatives of Machine Gun Troop who do not fire the qualification course in rifle marksmanship will be substituted for qualification in rifle marksmanship.

8. **PISTOL AND SABER.** The official record for qualification made on the combined pistol and saber course by each individual of a competing platoon will be accredited to the platoon. Where a member of a competing platoon for any reason whatsoever fails to run the combined pistol and saber course for record, his score shall be zero. Official record for qualification made in pistol dismounted by representatives of Machine Gun Troop will be substituted for qualification in combined pistol and saber.

9. **PLATOON COMBAT PROBLEM.** The score made by the platoon in the Platoon Combat Problem on the combat range shall count in this contest. The individuals who compose the platoon in the Leadership Phase must be the same as those who compose the platoon in the Platoon Combat Problem on the combat range, except that where a troop has more than one lieutenant, a different lieutenant shall command the platoon in the combat firing problem from the one commanding the platoon in the leadership test. The score of the Machine Gun Troop on the 1,000-inch range shall be substituted for the combat firing problem.

Section III

The Leadership Phase

10. **GENERAL.** (a) This phase will consist of a march of not to exceed fifteen (15) miles. Competing platoons shall be required to perform over the same terrain and under the same judges.

(b) Platoons will march at one half (1/2) hour intervals, the order of departure being determined by lot. Objectives and missions will be assigned in orders given platoon leaders prior to departure. Platoons will be rated on the following points: adjustment of equipment, preparation of march table, accurate adherence to prescribed rate of march, tactical solution of situations encountered, conditions

of animals on arrival in camp, care of animals by competing platoons during and after march, soundness of animals on morning following the march.

(c) Umpires will be stationed at various control points en route. They will comply with the special instructions given them, assuming control of the situation during their particular phase. Umpires will wear a white band on the hat and arm.

11. **HORSES.** A maximum of thirty-five (35) horses will be allowed.

12. **EQUIPMENT.** Full field equipment and one (1) cooked meal will be carried by each man and one (1) feed of grain will be carried for each horse. There will be no transportation with the platoon. Equipment will be checked by an umpire after the march. Shortages will operate as penalties against the platoon.

13. **AMMUNITION.** No ammunition will be carried. Platoon leaders are responsible for the enforcement of this provision and violations thereof will penalize the platoon.

14. **REPRESENTATION OF ENEMY.** All troops wearing denims with white arm bands will be considered hostile. White flags will be used to designate enemy vehicles and troops.

15. **COMMUNICATIONS.** (a) Messages and orders, arriving for platoons, will be given them by umpires.

(b) All communications (reports, messages, etc.) originating within the platoon during the test, will be shown to the umpire at the control point before sending.

16. **CONDUCT OF PLATOONS.** (a) From the beginning of the test until its end, each platoon leader will assume the tactical situation to be as described in the orders and situations given him. He and his platoon will be judged by their actions and by any orders given by them during that time, and by the condition of animals at the completion of the test.

(b) In situations requiring investigations of localities, combat, etc., platoons will avoid trespassing on private property, except when authorized by umpires to do so.

(c) For the purpose of obtaining enemy information at points being investigated, platoons will either go as a unit or send a smaller patrol actually to the point in question. Umpires will give the information which would normally be given by the residents of the locality.

(d) Inquiries may be made of civilians as to routes, but other aid will not be solicited or accepted of civilian persons or property. Contestants will be regarded as being on their honor to accept no unauthorized assistance.

(e) Platoon leaders will so conduct their march as to touch at all control points marked on the maps given them. Failure to check in at all control points shall cause elimination.

(f) All concerned are especially cautioned against telling an umpire "I would not do so and so" or, "I would do this or that." The situation will be given. Each platoon leader will have his platoon. Let him act and let the umpire judge this action. Conversation between platoon leaders and umpires in these situations is unnecessary, renders the situation unrealistic and is not desired. Provision will be made to permit those not engaged in the test to observe at certain prescribed points.

Section IV

General Scoring System and Weights of Use of Weapons and Leadership Phases

17. Platoons will be scored on the use of Weapons and Leadership Phases. The maximum score for the entire test will be one hundred (100). Values in terms of percentages will be assigned the various phases of the test as indicated in the following table:

(a) Use of Weapons Phase	30
(1) Rifle	10
(2) Pistol & Saber	10
(3) Platoon Combat Problem	10
(b) Leadership Officers & NCO's Phase	70
Total	100

A Simple Efficient Manger

UNTIL recently at Fort Stotsenburg the horses of the 26th Cavalry and the 24th Field Artillery (both Philippine Scout regiments) were fed hay from the usual wooden type of "sheep" manger, consisting of vertical slats with spaces between them, and grain from the issue metal feed box, either nailed or fitted into a slide in the manger.

Concurrently with other more extensive improvements in the stables, the mangers were remodeled and the feed boxes eliminated entirely. The vertical wooden slats of the mangers were closed in and the spaces done away with, making the mangers solid, except for a vertical sliding panel between each two mangers which could be raised to clean the bottom. Horizontal slats about one and one-half feet apart were nailed across the top of the mangers. Hay and grain

were then fed together in the same manger and resulted in a much more satisfactory method of feeding.

The horse now feeds with his nose close to the ground in his natural grazing position; he cannot bolt his grain which is mixed with the hay; there is no wastage of grain or flowers of hay from the solid bottom of the manger, and the horizontal slats prevent most of the wastage due to tossing hay out of the top of the manger.

There are no feed boxes to clean or for impatient horses to rattle at feeding time. Horses eat more quietly and there is a much simpler installation to keep in repair. A little care in keeping tie-ropes adjusted to the proper length prevents the horses from stealing each other's feed.

Trefoil Hanger for Water Bags

MAJOR M. L. Todd, Medical Corps, has submitted the accompanying photos of a trefoil hanger for the bag, water, sterilized for use in the field. Major Todd writes as follows:

"In 1922, this trefoil hanger for bag, water, sterilizing was approved by the Technical committee, Quartermaster General's Office. It has been issued for use, but no one is using it because it was never



Trefoil Hanger for Water Sterilizing Bag

fastened to the Lyster Bag and I failed to invite attention to its merit. I am now attempting to rectify my error by writing this same article to the Service journals most likely to be interested, so that this very

practical method of suspending the Lyster bag may be used by troops in the field."

This simple device facilitating the use of the bag was developed by Major Todd.

New Armored Cars

TROOP A, 2d Armored Car Squadron, is now at Camp Holabird awaiting the completion of their armored cars before going to Fort Riley for permanent station. They will be equipped with thirteen experimental vehicles. Two of these are trucks, with a 95-horsepower Franklin engine and a low gear ratio which, together with dual tires in the rear and a high clearance, gives a most remarkable performance. The body on these trucks has approximately ten per cent more floor surface than the old escort wagon which, together with six inches more height below the wagon bows will permit the carrying of enough bulk to give the trucks about the same or a little greater capacity than the escort wagon. Six of the armored cars are being constructed on the same truck chassis. The short wheel base, 106 inches, has proved invaluable in the preliminary cross-country tests which have been made. Two cars will carry one .50 calibre water-cooled gun as main armament together with two Lewis Guns carried inside the car for use on anti-aircraft brackets outside the car when it is stationary. Two other cars are identical except that in place of the .50 calibre gun, a Lewis Gun is carried on the tourelle mount in the turrets which were constructed by the Ordnance Department at Watertown. The remaining two cars of this series are armed with the Browning machine rifle in place of the Lewis Gun. The five little cars are constructed on commercial chassis: three of them on Whippet, one on Chevrolet and one Plymouth chassis. All are equipped with turrets and carry one .30 calibre tank machine gun as armament. The larger armored cars have dual 32x6 tires in rear and two of them carry dual tires in front. The front tires are also 32x6's except that the outside tire is slightly smaller in diameter and does not come into full bearing until the vehicle enters on soft going. The smaller cars have their normal tires except that one Whippet carries hard rubber flanges mounted on an exterior drum to give not only increased bearing surface on soft going but also additional traction. This troop will take station at Fort Riley, where a series of tests will be made by the Cavalry Board, from the result of which, together with the experience gained from the 1st Armored Car Squadron at Fort Bliss, it is hoped that a satisfactory type of car can be evolved for adoption as the armored car of the American Cavalry.

New Table of Basic Allowances

HAVING been approved by the War Department, the Table of Basic Allowances for Cavalry have been issued in mimeographed form to organizations. This table rescinds all War Department Circulars, Tables of Basic Allowances and Table of Equipment heretofore published insofar as they pertain to the allowances of equipment for cavalry troops.

Notes From the Cavalry Board

Test of Thompson Sub-Machine Guns

FOUR Thompson Sub-Machine Guns, Navy Model 1928, have been sent to the Cavalry Board for test to determine if it has a tactical application with the ordinary rifle troop for the use of outposts, patrols, etc., and also the desirability of its adoption as an emergency arm for the close defense of armored cars. This is the old Thompson machine gun with certain modifications and improvements. It has gained considerable favorable comment from the Marines who have used it in Nicaragua and Haiti.

Modification of 37 mm. Guns

The Cavalry Board has completed its report on the 37 mm. gun and mount. By shortening the trail and adding a new traversing device and by separating the barrel from the cradle in packing, it has been possible to transport this gun successfully on two pack horses, together with a limited amount of ammunition. Great credit is due the Board for its work on this project. Advance reports indicate that it has successfully met the preliminary tests. It will now undergo a service test at Fort Riley, at the conclusion of which it is hoped that three definite questions will be answered:

1. Is the Model 1916 37 mm. Gun the one which is desired for adoption by the Cavalry as an anti-tank weapon?

2. Does the mount as altered with its rapid traversing device meet the needs of the Cavalry?

3. Does the test show that the method of packing is satisfactory?

If these questions are answered in the affirmative the Ordnance will undertake the alteration of sufficient mounts to equip the active regiments.

An alternative method of adopting the gun, developed by Captain T. J. Heavey, 2d Cavalry, is also being examined by the board. In this method the length of the trail is decreased by about one half, and the

gun complete is carried on one pack animal, with another animal carrying 96 rounds of ammunition.

Sabre on the Modified Saddle

A method of carrying the sabre on the modified McClellan saddle has been developed and will shortly be published to the service. No special attachments are necessary other than a small "D" ring sewed on the forward edge of the cinch which permits the use of sabre straps. The sabre will be carried on the pommel to balance the weight of the rifle. No special sabre carrier is necessary.

Experimental Horse Boots

The experimental horse boots designed by the Chemical Warfare Service for the protection of the feet and legs of horses in gas-infected areas have been tested and reported unfavorably. To protect the sole of the horse's foot, which appears is one of the vulnerable places, the boot required that the horse be shod with a special pad of gas-resisting material covered with a steel plate. While the boots did not produce any chafing, they did open at the rear in a manner which would permit the entrance of gas.



ORGANIZATION ACTIVITIES

1st Cavalry, Fort D. A. Russel, Texas

DURING the period March 29, 1930, the Brigade Commander, General Hamilton S. Hawkins, conducted his annual tactical inspection of the regiment. On the last day of the tactical inspection the regiment made a short march without wheel transportation and camped overnight. The 2d Pack Train transported all forage used during this march and the troops carried necessary rations on the Phillips Packs.

April 17, Colonel Alberto Pliego of the Mexican army visited the post to extend an invitation to the officers of the 1st Cavalry to attend a Polo Tournament to be held in Mexico City on the 16th of September this year and to discuss with the Commanding Officer arrangements for the visit of a polo team from the Mexican army to Fort D. A. Russell to play in our Polo Tournament which will be held at this post from the 7th to the 10th of July, 1930. During Colonel Pliego's visit he was tendered a review by the regiment and witnessed an exhibition of jumping by the Olympic prospects now in training.

During the month of May each Squadron of the regiment accompanied by a platoon and one squad of the 37 mm. Gun Section, Machine Gun Troop, and by communication and engineer detachments from Headquarters Troop, made a ten day march and a reconnaissance of the sector of the Big Bend of Texas assigned to the 1st Cavalry. This march and reconnaissance was made as a part of the troop tests to determine the relative standing of troops of the regiment in competition for the Curtis Cup.

During the period from April 1st to May 30th the Regimental Commander and Executive officer conducted tests of all squads and platoons of the regiment to determine the squad and platoon of the regiment most proficient at drill, the use of their weapons and in tactical exercises. A squad from Troop B commanded by Corporal William Doernbach won the Squad Training Test. A platoon from Headquarters Troop commanded by Sergeant Leslie H. Hedglin won the Platoon Training Test.

The troop test for proficiency in leaving the barracks fully equipped for the field and in making and breaking camp was won by Troop E, commanded by Captain Donald R. Dunkle. Troop E

pitched camp and displayed all equipment for inspection in forty-seven minutes and fifteen seconds, then broke camp, forming in column ready to march in twenty-four minutes and fifty-three seconds. This troop has been awarded the Curtis Cup and Guidon for the troop having attained the highest general military proficiency for the training year ending May 31, 1930.

Good progress is being made in the construction by post labor of a new turf polo field at Fort D. A. Russell. The field has been laid out in the area north of the Officers Club and east of the swimming pool in a natural amphitheatre and a half mile race track constructed around the polo field. The side boards for the polo field were donated by the Marfa Chamber of Commerce and Rotary Club. Water for irrigation of the polo field will be obtained by draining the post swimming pool.

4th Cavalry, Fort Meade, S. D.

A "Skeet" range, for trap shooting has been completed and is used by members of the Post Gun Club every Sunday morning. The novelty of this class of shooting has aroused considerable interest and local civilian enthusiasts often participate as guests of Gun Club members.

The first Post Ride of the season took place Sunday morning, April 6, when about a score of officers and ladies of the garrison, together with a few civilians as guests, spent an hour or so on the bridle paths of the reservation. These rides are held every other Sunday throughout the summer, weather permitting, and are followed by a club breakfast at the Officers' Club.

Organization of a planning committee to make the preliminary arrangements for the 1930 annual Sturgis-Fort Meade Horse Show has been completed.

Under the direction of Major Jack W. Heard, the Post Golf Course has been placed in condition for summer play. A number of civilians from Sturgis have accepted membership in the club.

The funeral of "Deadwood Dick" (Richard W. Clark), nationally known character, and one of the last pioneer settlers of the Black Hills, took place at sunset on May 11, at Deadwood, S. D. The Fourth Cavalry Band, a firing squad from Troop F and a selected squad of buglers, assisted at the funeral ceremonies at the request of a delegation of citizens of Deadwood.

Troop A gave a farewell party on Tuesday evening May 13, in honor of the retirement from active service of Master Sergeant Thomas Fallon, for more than a quarter century a member of the troop, and for about fifteen years the Troop's First Sergeant.

The following named officers have been relieved from assignment to the regiment and will leave in the near future to assume their new duties: Captains H. H. Cameron and C. C. Strawn to the Cavalry School, as students 1930-31 Advanced Course; Second Lieutenant John G. Merrick, to the Cavalry School, as student 1930-31 Troop Officers' Course; Major Sidney V. Bigham to duty in the Office of the Chief of Cavalry, Washington, D. C.; Major Jack W. Heard as student Army War College, 1930-31 Course; Captain Solon B. Renshaw, V. C., as student Army Veterinary School, Army Medical Center, Washington, D. C.

The following named officers have been assigned to the regiment by recent orders from the War Department: Captain Hans E. Kloepper, upon completion of his present duty at the Command and General Staff School Fort Leavenworth, Kansas; Captain John H. Healy, upon completion of the present course of instructions at the Q. M. C. School (Motor Transport) Holabird, Maryland; Major Edward F. Shaifer, upon completion of his present tour of foreign service; Captain William T. Bauskett, Jr., upon termination of leave of absence, from Fort Riley, Kansas; First Lieutenant Harold E. Walker, upon completion of his present course of instruction at the Cavalry School, Fort Riley, Kansas.

5th Cavalry, Fort Clark, Texas

On April 27th, 1930, the regiment (less detachments) consisting of 23 officers and 411 enlisted men left Fort Clark to march on Encinal, the concentration point of the reinforced Cavalry brigade Commanded by Brigadier General H. S. Hawkins, for maneuvers.

Owing to unusually heavy rains in and adjacent to the maneuver area which resulted in the Neuces River being at flood height and making various fords in the area impassable, the original concentration plans were somewhat changed and the brigade was ordered to concentrate in the vicinity of Cotulla where the regiment arrived on May 5th.

On the afternoon of May 6th the regiment with the 1st Squadron of the 12th Cavalry, one platoon of machine guns, one 4.2" Stokes Mortar and radio pack set attached established an outpost about eight and one-half miles east of Cotulla on the Cotulla-Fowlerton road at the crossing of the Charco Morano Creek where by excellently concealing itself in the mesquite, it remained unobserved by the enemy airplanes for a period of thirty hours.

During the period of the maneuvers which continued until 6:00 o'clock on the morning of May 10th when they were stopped by the

Corps Area Commander the regiment was successfully engaged in the mission of delaying the enemy in his advance first to the crossing of the Frio River and again at Los Angeles. Upon the completion of the maneuvers the regiment returned to Fort Clark where it arrived on May 17th.

A few days after returning to the Post, target practice was resumed and will be continued until September 15th.

The R.O.T.C. Unit from Texas A & M College consisting of 38 students arrived at Fort Clark on June 1st to remain until July 12th for training under the direction of Major Wheeler, Captain Walker and Captain Gibson, Cavalry D.O.L.

First Lieutenant J. K. Sells has recently joined the regiment after his tour of duty in the Philippine Islands and has been assigned to the Machine Gun Troop.

The regimental baseball team opened the season on June 7th and defeated the Kelly Field Flyers by a score of 2-0 in a very well contested game. The second game played on the 8th resulted in a 6-4 victory for the Kelly Field Flyers.

6th Cavalry, Fort Oglethorpe, Ga.

As a fitting climax to the series of weekly horse shows held during the month of March, a two-day show was held on April 11-12, for the benefit of the Army Relief Association. Entry lists ran very high including many civilians from nearby cities. The showing made by Olympic prospects under training in the regiment was very gratifying.

On April 16th the regiment departed for Atlanta, Georgia, on the annual practice march, returning to home station on May 2d. The march to and from Atlanta, and camp while in Atlanta, was made under ideal weather conditions. While in Atlanta personnel of the regiment participated in the horse show of the Atlanta Horse Show Association, held at Piedmont Park, adjacent to camp site of the regiment. The hospitality extended members of the command while on the march and in Atlanta is worthy of note. Captain J. T. Godfrey, Assistant Military Attaché, British Embassy, accompanied the regiment on the last day's return march.

The 69th Anniversary of the regiment was celebrated with befitting ceremonies on May 5th, May 4th falling on Sunday.

Troops A, B, and F completed target practice at Catoosa Range on May 29th. All range firing including pistol and saber has been completed with exception of machine gun firing.

Our companions-in-arms, the 3d Battalion, 22d Infantry, departed for Fort McClellan, Alabama, May 23d, for summer training.

Troop E, 6th Cavalry, departed for Camp Knox, Ky., on June 2d, for summer training.

Fire of unknown origin destroyed one of the Machine Gun Troop stables on May 15th.

Three excellent fight cards have been held during the past three months, the last two being held in open riding pen drew attendance of approximately 750 and 1100 for each card.

The Reserve Officers Sunday Riding Class, sponsored by the 63d Cavalry Division, terminated the season with a horse show held in the post ring on McDonald Field on Sunday, May 25th. The progress in equitation made by members of this class is very noticeable.

Polo has been very active since April. The regimental team recently participated in tournaments at Fort McPherson, Georgia. It is sad to relate that Fort Benning defeated the 6th Cavalry in two very close and hotly contested games. The 6th Cavalry defeated Fort McPherson in the consolation game of the Southern Circuit.

Activities at this time are centered on the preparation for the reception, instruction and training of about 900 C. M. T. Camp Trainees, 65 R. O. T. Camp Students, 125 Reserve Officers, and the National Guard Cavalry units of the States of Tennessee, Georgia, North Carolina, Alabama and Louisiana. The summer camps will be in operation from June 13th to August 17th.

7th Cavalry, Fort Bliss, Texas

The movement of the Seventh Cavalry to the target range at Dona Ana took place about June 5th. At the time of the publication of this Journal the Garry Owens will have been dodging mirages and baking in the desert sun at the range for nearly a month. The popular saying is "A Marksman at Dona Ana is an Expert anywhere else."

At the Horse Matinees the Garry Owens have taken many prizes and developed some splendidly schooled horses. The outstanding horse at the matinee held May 21 was *Lone Star* ridden by Sergeant Witaski. This horse took the blue ribbon with high scores both in the Schooling Class and in the Open Jumping.

In polo the Garry Owens have been very active considering that this is the off season. A strong team from New Mexico Military Institute was defeated at Fort Bliss by the 7th Cavalry Senior Team in a fast game the latter part of April. On May 17, the Garry Owens Juniors defeated a civilian team composed of Mr. Alex Dickey, Mr. Ham, Mr. J. Floyd, and Mr. McGraw from Abeline, Texas. The Fort Bliss picked team that went to Roswell, New Mexico, to play the Military Institute team at its graduation exercises had on it two

Garry Owens, Captain Voigt and Lieutenant Harkins. Our string of new remounts are coming 'round rapidly. We expect some fast polo next fall.

A very enthusiastic enlisted personnel has followed the Intra-Regimental Baseball season to see the League cup won by Troop A. The Garry Owens are now holding their own very well in the Fort Bliss Post League.

On May 13, Colonel and Mrs. Martin gave a dinner, reception and dance in honor of the regiment's new brides, Mrs. Harry C. Mewshaw and Mrs. W. H. Greear.

The following changes in the officer personnel has taken place during this quarter: Chaplain (Major) Thomas E. Swan has arrived to take the place of Chaplain (Major) De Barteleben as Regimental Chaplain. Chaplain De Barteleben having gone on leave previous to new assignment. Major R. W. Strong has gone to Washington for duty in the Office of the Chief of Cavalry. Major Joseph L. Phillips has gone on leave prior to his new assignment with the Faculty at Fort Riley, Kansas, and Captain Robert P. McComb has taken four months' leave, after which he will go to the Army Medical Center at Washington, D. C. Captain R. P. Gerfen has taken leave prior to duty at the Cavalry School at Fort Riley, Kansas. Second Lieutenant John P. Breden has gone on leave, after which he will attend school at the Massachusetts Institute of Technology on detail with the Ordnance Department.

8th Cavalry, Fort Bliss, Texas

During the month of March the regiment was busily engaged in regimental tactical and field exercises and participated in field and tactical exercises conducted by brigade and division. Commencing March 17th the regiment was engaged in preparatory training for range practice.

The prescribed rifle, machine rifle and machine gun courses were fired at the Fort Bliss Target Range between May 6th and May 30th. The following regimental averages were obtained: Rifle Course "A" 99.72%; Rifle Course "D": 90.32%; Machine Rifle Course "A" 100%; Machine Gun Course: 100% qualified.

In the regular monthly Horse Matinees held at this post the regiment won the following places:

March	Points
Officers' Chargers—first and second place	8
Remount Jumpers—first place	5

Novice Jumpers—first place	5
4 feet 6 inches Open Jumping—first and second place	8
4 feet 9 inches Open Jumping—first and third place	6
Ladies Jumping	3

Total points	35
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April

Officers' Chargers—first and third place	6
Remount Jumpers—first and third places	6
Novice Jumpers—first, second and third places	9
Ladies' Jumpers—second place	3
4 feet 6 inches Open Jumping—first place	5
4 feet 9 inches Open Jumping—first and third places	6

Total points	35
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Due to range practice the regiment was not represented in the Matinee held in May.

The regimental baseball team has won three and lost no games in the Fort Bliss mid-summer league.

The regiment has been constituted as the parent organization for C. M. T. C. and R. O. T. C. training camps during the month of June and to July 19. Mounted pistol and saber practice in small groups will be the rules for the regiment during the training camp period.

The following officers have been transferred: Captain V. L. Padgett and 1st Lieutenant J. K. Baker to the Cavalry School; Captain T. W. Herren to the 6th Cavalry, Fort Oglethorpe, Ga.; Major J. C. F. Tillson, Jr. to the War College, Washington, D. C.; Major Harold Thompson to the Command and General Staff School; 2d Lieutenant D. G. Ludlam, O. D., to Aberdeen Proving Ground, Md.; First Sergeant Frank Hirsch, Troop B, was retired May 6, 1930. Master Sergeant Charles A. Thompson Headquarters Troop, was retired June 6, 1930.

9th Cavalry, Fort Riley, Kansas

The Regimental Commander, Lieutenant Colonel R. M. Campbell, Cavalry, left June 2, 1930, en route to Walter Reed General Hospital, Washington, D. C., for observation and treatment. Major H. J. M. Smith, 9th Cavalry, assumed command of the regiment June 2d, and has been detailed as acting executive officer, The Cavalry School, during the temporary absence of Lieutenant Colonel Campbell, Cavalry.

War Department orders have been received affecting the personnel of this regiment as follows:

First Lieutenant Clovis E. Byers has been assigned to the regi-

ment, effective on or about August 20, 1930, upon his relief from assignment and duties at the United States Military Academy, West Point, New York. Lieutenant Byers will be a student in the 1930-31 Special Advanced Course, The Cavalry School.

Captain E. M. Burnett, Cavalry, has been assigned to the regiment, at the expiration of the present course at the Cavalry School.

Captain James T. Menzie is relieved from assignment to the regiment, effective on or about June 20, 1930, and is assigned to the 3d Cavalry, Fort Myer, Va.

First Lieutenant Francis P. Tompkins, 10th Cavalry, is relieved from assignment to that organization and from further duty at Fort Huachuca, Arizona, effective on or about June 20, 1930, is then assigned to the 9th Cavalry.

Captain Thomas Mc. F. Cockrill, Cavalry, who was assigned to the regiment, upon completion of duty as a student at the Command and General Staff School, has been promoted to the rank of major.

Captains Carleton Burgess, and Alexander B. MacNabb, are assigned to the regiment, upon completion of duty as students at the Cavalry School.

Orders assigning Captain Roy E. Blount, 11th Cavalry, to the regiment, effective on or about September 1, 1930, have been revoked.

Captain Wayland B. Augur, 13th Cavalry, who was relieved from assignment to that organization, and assigned to 9th Cavalry, joined on April 5, 1930. Captain Augur is attached to Headquarters and Service Troop, for duty, and has been detailed on special duty with the Academic Division, The Cavalry School, as instructor, in addition to his other duties.

Captains Orland S. Peabody and John C. Macdonald are relieved from assignment to the regiment, effective September 3, 1930, and are detailed as students in the 1930-31 advanced courses and special advanced equitation course, The Cavalry School, respectively.

Major Francis C. V. Crowley, is relieved from assignment to the regiment, and from further duty at Fort Riley, effective at such time as will enable him to report not later than September 10, 1930, to the commandant the Motor Transport School, Holabird quartermaster depot, Baltimore, Maryland, for duty as a student in the 1930-31 course.

Captain Harry A. Patterson, Cavalry, who was relieved from assignment and duty at the discharge and replacement depot, Brooklyn, New York, and assigned to the 9th Cavalry, effective on or about May 15, 1930, joined May 16th. Captain Patterson is commanding Headquarters and Service Troop, and has been detailed on special duty as Post Exchange Officer and Post School and Recreation Officer, in addition to his other duties.

Major H. J. M. Smith, is relieved from assignment to the regiment and duty at Fort Riley, effective August 22, 1930, and is detailed to pursue a course in instruction at the Quartermaster Corps Subsistence School, Chicago, Illinois.

Orders have been received from the War Department relieving Captain Paul H. Morris from assignment to the 9th Cavalry, and directing him to sail from New York City on the S. S. Republic July 26, 1930, for Bremen, Germany, and proceed to Hanover, Germany, for the purpose of pursuing a two years' course of instruction at the German Cavalry School.

Captain James V. V. Shufelt, Cavalry, has been assigned to regiment, effective upon completion of duty as student at the Air Corps Tactical School, Langley Field, Virginia.

Captain Murray H. Ellis, Cavalry, who is now pursuing a course of instruction at the Superior Riding School, Grudizeadz, Poland, is assigned to the regiment, effective September 10, 1930.

10th Cavalry, Fort Huachuca, Ariz.

The Post Repair Program started on January 1, 1930, has now been completed and all troops are concentrating on target practice. The 1st Squadron, Major W. H. W. Youngs, commanding, is now in camp on the target range and expects to complete its firing by June 15th. The 2d Squadron, Major B. L. Burch, commanding, will then move to the range.

The Arizona State Rifle Association matches were held on the Fort Huachuca target range on Saturday and Sunday, May 3d and 4th. Many civilians and National Guard officers participated in these matches, which were most successful and enjoyed by every one. The Post welcomes this opportunity to renew its friendship, each year, with the representative marksmen of Arizona.

A Post horseshow consisting of fifteen classes, was held on May 7. This show was the first of a series of monthly horse shows. The novelty jumping class was of special interest. Eight horses were entered in this class but only one, *Trinidad* ridden by Second Lieutenant R. W. Curtis, was able to finish the course. Captain W. R. Irvin on duty at the University of Arizona was senior judge for the show.

The training of horses for the 1932 Olympic Games is being continued under the direction of 1st Lieut. F. P. Tompkins, and satisfactory progress is being made. Lieut. Tompkins, however, is under orders to leave for Fort Riley, Kansas, the latter part of June and his loss will be keenly felt.

Forty-four remounts from Fort Robinson have been received and



A Troop of the 10th Cavalry Attacks

are at present in quarantine. They are a fine looking lot of animals and great results are expected from them.

The baseball season has started in earnest at this post. Games are held every Wednesday and Saturday afternoons and many fine players are being developed. There are five teams participating in a series at present being played. The team composed of players from Companies L and M, 25th Infantry is at present leading the league with Headquarters and Machine Gun Troops, 10th Cavalry a close second.

Talking pictures have at last come to Fort Huachuca and the Post Theatre has been crowded for each show. The pictures have been splendid and the sound apparatus is excellent, the equal or superior to any found in nearby cities. The whole post welcomes "the talkies" and is grateful to the U.S.A.M.P. Service for installing them so promptly and efficiently.

Representatives from the Fox Movietone Newsreel spent several days on the post during May taking "talkies" of various post and regimental activities. The whole post entered into the spirit of the movies and we are all anticipating seeing the results.

12th Cavalry, Fort Brown, Texas

Emerging victorious from the battles on the Frio River, Colonel Daniel Van Voorhis' 12th Cavalry is nearing home on its long march along the Rio Grande.

With orders to "delay and harass" the Blue army, four times its strength, the White force including the 5th and 12th Cavalry, not only delayed but actually stopped the "enemy," and when the chief umpire called off the maneuver, was so disposed as to easily cut the Blue communications as well as delay their further advance.

The maneuvers were replete with brilliant actions among the most noteworthy were the long night march of the 12th Cavalry followed by an attack on the hostile flank and the defense of the Frio River line by the same regiment the following day.

It would take many pages to detail the individual and troop exploits. In general very high praise was given the commander and all officers and men of the 12th Cavalry. Individual exploits by Captain Shoemaker's, Lieutenant Palmer's and Lieutenant Finnegan's patrols in rear of the enemy's lines sound like fiction; the excellent handling of machine guns and rifles by the Cavalry was a source of wonder to the Infantry, the way in which the horsemen eluded the vigilant eye of the air observers surprised all; but most of all, the speed with which the Cavalry disappeared and then appeared miles away kept the Blues in a constant state of fear and hesitation and brought the greatest praise from neutral observers.

The 12th Cavalry finished the maneuvers in excellent condition and health and with the highest morale. It was the first time in many years that the regiment has been all together. The return march brings the Fort Ringgold troops home on the 20th and the Fort Brown command on the 26th of May.

13th Cavalry, Fort Riley, Kansas

On May 19th the entire regiment took the field for a six days' practice march and maneuver. For march and maneuver purposes, the regiment was daily turned over to the student body for school training. Camps were established at Chapman, Herington, Council Grove, and Brown's Ranch near Dwight. At Herington, Troop E was detached and marched to Brown's Ranch as a reconnaissance troop; from there, it covered the advance of the remainder of the regiment toward Fort Riley. The maneuver against the opposing forces to the north, commenced at 6:00 A. M., May 22d. At Council Grove and Brown's Ranch, the troops bivouacked and sought concealment from airplane observation. Night marches were made northward from Council Grove and Brown's Ranch. At day-break, May 24th, a feint-crossing of the Kansas River was made near the Engineer Bridge simultaneously with a main effort to force a crossing from the wooded peninsula west of Marshall Field. Troops, in accordance with the decision, were ferried across the Kansas River in pontoon boats. A short dismounted advance was then made toward Reservoir Hill.

A review of the regiment was held on May 29th in honor of Master Sergeant Elmer C. Opdahl, 13th Cavalry, who retired on May 26, 1930. An announcement of Sergeant Opdahl's retirement was

published in a regimental general order giving a resume of his services. All of Sergeant Opdahl's discharges bear the notation "Character Excellent." He has had over sixteen years' service in the Cavalry, all except three years having been with this regiment. During the Spanish-American War he served in Porto Rico, and during the World War in France with the 15th Cavalry. On May 30, the Headquarters Troop tendered a farewell dinner in honor of Sergeant Opdahl.

Organization Day was celebrated on May 1, 1930, by the regiment enjoying a complete holiday, all drills having been suspended for the occasion. To usher in the holiday in an appropriate manner, a regimental enlisted man's hop was held on April 30th, all officers of the regiment attending in the early part of the evening.

The loss of officers by transfer this summer is, as usual, heavy. In addition to those changes published in the last issue, the following officers will leave the regiment in the near future: Captains H. C. Holdridge, R. P. Gerfen and F. T. Murphy to the Cavalry School as students, Advanced Class; 1st Lieutenants W. C. Scott and L. M. Grener, 2d Lieutenants C. S. Babcock, Jr., H. M. Forde, T. C. Wenzlaff, G. V. Ehrhardt to the Cavalry School as students, Troop Officers' Class; 1st Lieutenant J. C. Hamilton to the Tank School as student. Officers joining the regiment this summer are: Major N. M. Imboden, from duty as student, the Infantry School; Captains N. W. Lisle, from R.O.T.C. duty at San Francisco, California; H. H. Baird, from duty as student, the Tank School; H. W. Worcester, from R.O.T.C. duty at Tucson, Arizona; C. E. Dissinger, from foreign service, Philippine Department; 1st Lieutenants E. N. Schjerven, from duty as student, the Signal School; L. E. Schick from the U.S.M.A.; A. L. Fulton and 2d Lieutenants A. M. Miller, Jr., from the 6th Cavalry; R. T. Garver, D. E. Bradford and R. A. Browne, from duty as students, The Cavalry School.

1st Squadron, 14th Cavalry, Fort Sheridan, Ill.

Troop B 14th Cavalry, on Sunday, May 25, 1930, won the Foreman five man pistol Team Match at the rifle range at Fort Sheridan. They competed with civilian teams of five men each and beat their nearest rival by 114 points. This is the sixth time this match has taken place annually and the first time that a service team has won it. The Colonel Milton J. Foreman Trophy which is an equestrian statue of considerable dimensions will be in the custody of Troop B for one year.

The first squadron 14th Cavalry is and has been for the past

month in a state of preparation for the Military Tournament and Exposition to be held at Soldiers Field, Chicago, from June 21 to 29, inclusive. And which will be participated in by all Regular Army units from this vicinity and also from Michigan and Jefferson Barracks, Missouri. Troop A will put on Monkey drill twice a day at the stadium for nine days and Troop B will do a fancy riding drill and the fire hurdle. In addition to this the squadron is charged with the Cavalry exhibit, as part of the exhibition of the tournament.

Both troops of the squadron finished with a high percentage on the rifle range this spring. Troop B qualifying 100 per cent and the Squadron losing only six out of a total of nearly 200 men. Range work was completed at an early date for this climate as every one was off the range by May 1, 1930.

The Fort Sheridan Horse Show association contemplates sending a team of officers from this post to represent them in the several horse shows of the Lake Shore circuit this summer. As usual most of the horses and all of the officers sent will be from the first squadron, 14th Cavalry. It is contemplated sending 22 horses by truck to the Oconomowoc Horse Show, a distance of 95 miles which is held on June 27 and 28, 1930. At none of the five shows besides our own show will we have a representation of less than 12 horses and four officers or other riders.

The following officers are leaving the First Squadron, 14th Cavalry in the near future or have already left, and are going to the places set opposite their names. Captain T. W. Ligon, to Fort Meyer, Virginia, for service with the Third Cavalry. His orders read as of June 20, 1930. Captain James S. Rodwell, to service at the Infantry School, Fort Benning, Georgia, as a student. His orders read as of September 4, 1930.

Among the new officers who have arrived or will arrive shortly are: Captain W. O. Johnson, from D.O.L. at Fond du Lac, Wisconsin, and Major C. C. Smith, from duty at Fort Riley, Kansas.

26th Cavalry, Fort Stotsenburg, P. I.

The annual Fort Stotsenburg Horse Show, Race Meet and Polo Tournament was held during the week commencing March 15, 1930, and continued for a period of ten days. Two of the days were devoted to the Horse Show, one day to the race meet and the balance of the time to the polo tournament.

The horse show program of events had listed the usual military show jumping classes, best turned out trooper, etc., and in addition had two children classes and two ladies classes, including a saddle

class and a jumping class. The competitors were from the 26th Cavalry, the 24th Field Artillery, officers and civilians from Manila.

Captain Carl J. Rohsenberger's two hunters, *Moonshine*, and *Sunshine*, both recently arrived from the States were easily outstanding in the jumping classes, both winning many ribbons. *Apollo*, a beautiful bay of the heavyweight polo type, owned by Lt. V. Z. Gomez, 24th F.A., was high point winner due to his wins in the purely saddle classes and polo pony bending race. Civilian ponies from Manila owned by the Elizalde Brothers won the lion's share of the polo pony classes.

The riding of the soldiers in both the horse show and the race meet was particularly good and their performances were excellent.

Two polo tournaments were conducted concurrently between the horse show and the race meet days by Capt. G. S. Finley of the 26th Cavalry. Both tournaments were well played and the game between the 26th Cavalry and the Manila Polo Club was real "big league" polo. This was the final game of the "A" tournament and resulted in a victory for the civilians, due to their better mounts and more accurate hitting. The "B" tournament was won by the 26th Cavalry.

305th Cavalry, Philadelphia, Pa.

The 305th Cavalry are now occupying their new headquarters in Room 1010 Gimbel Bldg., Philadelphia, Pa. However, due to increased training activities, it was found necessary to retain their former office at 1010 Franklin Trust Bldg. for a conference room.

The inactive duty training of the regiment which started in October is still in full swing. The riding classes are being continued under the direction of Major L. C. Bell, Cav.-Res. and 1st Lieut. Edward A. Town, Cav.-Res. Lieut. Town is a graduate of the Riley Reserve Officers class and, although assigned to the 2d U. S. Cavalry, is still keenly interested in the work of the regiment. In former years the equitation classes were discontinued after the regimental ride on Regimental Day, April 17th. However, at the request of members of both classes, they are being continued as a part of the schedule preparatory to active duty training in August with the 3d Cavalry. The average weekly attendance for the two classes has been 27 officers.

The conferences in preparation for the Corps Area Command Post Exercise are being conducted by Major Charles L. Clifford, Cavalry, Unit Instructor, during the noon hours twice weekly. Conferences are also being conducted for the officers of the regiment preparatory to the active duty training at Fort Myer with the 3d Cav-

alry. It is expected the regiment will send its full authorized quota for this training.

Several of the Reserve Officers have taken advantage of the opportunity to assist in the Cavalry instruction of cadets at the Pennsylvania Military College at Chester, Pa. Universal Films are now showing a very interesting film on the crossing of a large stream near Chester.

A monthly conference in addition to the bi-weekly conferences is also held at 1st City Troop Armory after the regular Wednesday ride on date scheduled. The attendance at all conferences is very gratifying and the interest shown is keen.

On April 17th, the annual Regimental Day exercises were held by the regiment and proved to be the most successful of any of the previous celebrations in the history of the regiment. Many distinguished guests were present and over fifty officers of the regiment. The graduation ride of the regimental riding class was highly complimented by all who witnessed it. The white halters, tie ropes, and boots on the well groomed horses showed great attention had been given to all details by Major L. C. Bell who was mainly responsible for the fine performance. Upon completion of the ride the annual dinner at the Racquet Club was held. All present enjoyed the splendid talks given by invited guests.

In the course of the talk by Colonel George T. Bowman, our popular Chief of Staff, he announced the promotion to Captain of 1st Lieut. Lucullus N. D. Mitchell, effective on Regimental Day.

At the recent Philadelphia Indoor Show the regiment was represented by a team composed of Captain L. N. D. Mitchell, 1st Lieut. E. A. Town, 2d Lieuts. George B. Knabb and L. P. Stradley, and Corporal E. L. White. Lieut. Town received the cup which went with the blue ribbon in the Military Class.

The 305th Cavalry is represented this year at the Devon Horse Show with entries by Captain Max Livingston and Captain William S. Brogden.

306th Cavalry (less 2d Squadron) Baltimore, Md.

The personnel of the 306th Cavalry has been very busy preparing for the C. M. T. Camp and the Third Corps Area Command Post Exercise. It was found necessary to increase the number of conferences of both groups to one each week, and the officers have responded well and are generously giving a great deal of their time to this work.

Major Wm. H. Skinner will be in command of the reserve officers

who will train the students at the Cavalry C. M. T. Camp at Fort Myer, Va., July 5th to 18th, 1930, and the seventeen reserve officers who will assist him have been selected about equally from the Washington and Baltimore personnel. These officers will act as instructors for the first half of the camp and officers from the 307th Cavalry will handle the training for the remainder of the period.

At the Third Corps Area Command Post Exercise, to be held at Fort George G. Mead in July, 1930, our regimental commander Colonel John Phillip Hill, will command the 154th Cavalry Brigade, and our executive officer, Lieutenant Colonel Matthew F. James, will act as chief of staff of the 62d Cavalry Division. Other officers will act on the division and 154th Cavalry Brigade.

Through the courtesy of the Commanding General, Fort Hoyle, Md., and the Sixth Field Artillery (Horse), a class in equitation has been started at Fort Hoyle, Md., for the reserve personnel of the Baltimore Units. Sessions are held on alternate Sundays.

2d Squadron, 306th Cavalry, Washington, D. C.

Active duty training for the officers of this squadron will be very diversified during the summer and the officers have been very busily engaged in preparing themselves for this work.

Major Geary F. Eppley, Cav-Res., the squadron commander, and several other officers of the squadron, will attend the Command Post Exercise at Fort George G. Meade, Md., July 6 to 19, 1930.

A number of the officers of the squadron have been selected for active duty training at Fort Myer, Va., July 5 to 18, 1930, in connection with the training of the C.M.T.C.

Other officers of the squadron, not attending camps as referred to above, have been given an opportunity to attend camp with the 305th and 308th Cavalry, Fort Myer, Va., August 10 to 23, 1930.

Regular courses of inactive instruction are being conducted for those officers who are to attend the Command Post Exercise and for those to attend the C.M.T.C. at Fort Myer, Va., as instructors. In addition to this instruction, regular monthly conferences are held, and equitation classes conducted each Sunday morning at Fort Myer, Va.

307th Cavalry (less 3d Squadron and Mg. Troop) Richmond, Va.

The 307th Cavalry Association composed of prominent men throughout the Commonwealth of Virginia is a going organization. To date over forty gentlemen widely known for their active interest in the horse have accepted membership. The list includes West-

moreland Davis, former governor of the State, more recently President of the Virginia Horse Breeders Association, as well as the Masters of all Hunt Clubs in the State.

The object of the Association is to stimulate the interest of the officers assigned to the 307th Cavalry, in their obligations as reserve officers and thus raise the standard of the regiment. It is thought that the great interest displayed by these gentlemen who are the heart and soul of all activities connected with horses in the State will be an inspiration to the active members of the regiment.

The full quota (eighteen officers) for the training of the C.M.T.C. at Fort Myer, Virginia, July 18th to July 31st has been obtained. Those officers not ordered to active duty for the foregoing period and who desire training this summer will be ordered to active duty for the period August 10th to August 23d at Fort Myer, Virginia.

Lieutenant Colonel R. B. H. Begg, Cav-Res., 307th Cavalry has been designated to command during the period July 18th to July 31st.

Lieutenant Colonel W. H. Clifford, Cav-Res., commanding the 307th Cavalry, has been detailed as G-4 on the staff of the 62d Cavalry Division during the CPX at Fort Meade, Maryland, July 6th to 19th.

3d Squadron, 307th Cavalry, Norfolk, Virginia

Active duty training for the officers of this squadron, will be very diversified during the summer and the officers have been busily engaged in preparing themselves for this work.

Major James R. Mullen, the Commanding Officer has been selected as a member of the Special Staff of the 62d Cavalry Division for the Command Post Exercise to be held at Fort George G. Meade, July 6 to 19.

Lieutenants L. L. Montague and W. L. Renn, Jr., have been selected as instructors at the Citizens' Military Training Camp, Fort Myer, Va., for the period July 17 to 31st.

Other officers of the squadron will receive active duty training at Fort Myer, Va., with the 305th and 308th Cavalry during the period August 10 to 23. The officers attending this camp will receive tactical training with the 3d Cavalry, which will prove most instructive and interesting.

308th Cavalry, Pittsburgh, Pa.

Polo was added to the activities of the 308th Cavalry, Pittsburgh, early this spring. Through an arrangement with the 107th Field Artillery, a number of thoroughbred polo ponies were purchased and made available to teams of both regiments.

Out of three games played so far this season, the team won all three, defeating both Shadyside Academy and the 107th Field Artillery, the latter twice.

Major A. H. Truxes and Sergeant Bliss Flaccus as No. 1's, Lieut. U. S. Madden, as No. 2, and Lieut. Paul Mazuzan, as No. 3, have carried the honors, playing a fast open and hard-hitting game.

In addition to the regular polo ponies a number of second-string mounts have been obtained, making it possible for every officer in the regiment, so inclined, to participate in this sport. Practice is held twice weekly at the 107th Field Artillery Armory. Lack of an outdoor field has confined the game indoor this spring, but an outdoor field now in course of construction will be ready before the beginning of another season.

The regiment is preparing for active duty training at Fort Myer, Virginia, August 10 to August 23d, 1930. The following field officers are going to the Corps Area Command Post Exercise in July: Lieut. Colonel George H. Cherrington as G-3; Major John H. Shenkel as G-2 and Major Basil H. Minnich as Aide and Assistant General Staff Officer.

The strength of the 308th Cavalry shows a gain in spite of inactive reappointments which will be few from now on.

Last year the officers earned over 3700 credit hours and this year it will be even greater.

862d Field Artillery, Horse, Baltimore, Md.

Inactive training in this regiment has now been definitely transferred to the Unit Commander and to his officers who are taking up their new responsibilities with commendable earnestness and much success.

Special instruction is being given to the regimental staff, to prepare it to function at the Command Post Exercise to be held in this Corps Area in July. The time available for this instruction—fifteen meetings of two hours each—is sufficient to develop the more important principles and to lead the group to a point where the members will be able to derive the maximum benefit from the instruction and experience to be received at the Exercise.

66th Cavalry Division, Fort Omaha, Nebraska

The inactive duty training period during the past year, has been the most successful in the history of the division. Regular classes have been held in Kansas City, Md.; Topeka, Kan.; Des Moines, Ia.; Minneapolis, Minn.; St. Joseph, Mo.; and St. Louis, Mo.; all of which

were well attended by the Cavalry Reserve officers of each locality. The number of officers taking Army Extension Courses has increased nearly fifty per cent over the preceding year.

Riding and equitation classes are a weekly occurrence in Kansas City, Des Moines, and St. Louis, and these are a big factor in building up the spirit and enthusiasm which are necessary in order to hold the Reserve officers' interest.

Colonel C. S. Babcock, Unit Instructor, and Major D. G. Richart, Asst. Unit Instructor, 322d Cavalry, Kansas City have done much to arouse the interest and boost the morale of the division officers in that section and this has resulted in a considerable increase in new officers.

Great credit is due Major D. C. Smith, Cav-Res., St. Louis, Mo. The hard and painstaking work of this enthusiastic officer has produced a real cavalry unit in and around St. Louis. He has conducted conference classes, instructed in small arms firing, and made an excellent reputation for the Cavalry Reserve officers' pistol team in local competitions. On Sunday mornings Major Smith acts as instructor for the Reserve Officers' riding class at Jefferson Barracks.

The Cavalry Reserve Officers Association of St. Louis is an enthusiastic and helpful organization and the work of these officers under the leadership of Major Smith is a credit to the Cavalry service.

The division (less 162d Brigade) will go to summer training camp at Fort Riley, Kan., July 6 to 19, under command of Colonel J. E. Gaujot, Chief of Staff who also will be Executive Officer of the entire Organized Reserves Camp for the above period.

Capt. C. O. Griffin Adjutant General, 66th Cavalry Division, will be Camp Adjutant, Major Harding Polk, Assistant Instructor of Cavalry and First Lieutenant James Y. Le Gette, Instructor of Field Artillery.

The following units which come under the jurisdiction of the 66th Cavalry Division Headquarters, also will be ordered to active duty at Fort Riley, 2d Cavalry Division, 3d Cavalry Division, and 15th Cavalry.

The CAVALRY JOURNAL

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

Editor
Major O. L. HAINES, Cavalry

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2. The By-Laws provide that dues (including subscription to the Journal) are payable annually in advance.

3. Under above provisions the Secretary can not continue sending the Journal to members whose dues have lapsed, except in the case of those who have submitted a request to be listed as continuous members, *i. e.*, signified their desire to have the Journal sent and obligating themselves to pay the dues annually until notification is received of resignation.

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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.

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The CAVALRY JOURNAL

VOL. XXXIX

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No. 161

Cavalry in Modern Combat

By GENERAL C. P. SUMMERALL, *Chief of Staff*

DUE to the lack of transportation it was impossible for our Army to avail itself overseas of the services of its excellent cavalry during the World War. As a result much misunderstanding has existed as to the value of cavalry. The principles governing the mission and the employment of an arm are unchanging. Campaigns may have excluded or limited the services of one arm or another due to conditions of terrain, supply, availability, etc., but military men are not misled by exceptional results.

American cavalry has always combined mobility and fighting power to an extraordinary degree. The presence of a Cavalry corps with the American troops on the Western Front would have enabled it to expedite decisions and change the course of battles. After the stabilized warfare ended in July, 1918, it could have taken its place on the battlefield in accordance with its traditional performances. There is no doubt that after the fourth day of battle at Soissons it could have penetrated the disorganized enemy's lines and by attacking him in rear might have saved great losses in the advance which followed. A large cavalry force well led could easily have penetrated the enemy's reorganized positions on the second day of the St. Mihiel. In the last phase of the Meuse-Argonne campaign cavalry could have crossed the Meuse River and forced a decision even had the Armistice not intervened.

Our Army is maintained for purely defensive purposes. Any campaign along our borders or in continental United States would peculiarly favor the extensive use of cavalry. The great area of territory to be covered, the general absence of roads in any theatre of operations, and the necessity to cover the organization and deployment of any considerable force of the other arms would call for the immediate advance of mounted troops in mobile warfare. Its mission of seizing important advanced positions, maintaining contact with the enemy, screening the movements of our forces, executing enveloping or turning operations or constituting a highly mobile reserve would constantly be required. Modern inventions and new arms

have the same value to the cavalry as to the other combat branches. Aviation enables it to direct its efforts with a maximum of information of the enemy and may aid it in combat. Armored cars increase the radius of its patrols and effect a great saving in the exhausting efforts of horses and men on such duty. They may even overcome resistance in defiles that would seriously delay the advance elements. Motor transportation can insure its supply along axial roads, thus prolonging its independent existence. Machine guns have immensely increased its fire power and, combined with armored cars and tanks, give it approximately the power of infantry in dismounted action. The accompanying horse artillery affords it the support which it requires in offensive and defensive operations. Should aviation be available cavalry combat, however distant from the main forces, will have substantially the power of the normal infantry action.

While it is more vulnerable than infantry to attack by aviation, it must rely upon its anti-aircraft weapons as well as its normal arms and upon dispersion when it cannot find concealment. No arm is exempt from losses in battle, but there is no reason to assume that cavalry cannot develop tactics and methods which will enable it to preserve its fighting efficiency to a degree comparable to that of infantry.

In time of peace its organization and training must fit it for immediate employment on mobilization. Within the regiment the troops must form a well-trained nucleus for expansion even while engaged with the enemy. For this arm there can be no delay in appearing at the point of contact. All of the pride and confidence and traditions of sacrifice and fortitude that have been characteristic of this arm must be fostered as an asset for combat and for infusing the spirit of the cavalry into great numbers of replacements. Daring leadership in all echelons of command have been conspicuous in the arm and it should be woven into the character of the mounted officer by habit and service.

The organization into the higher units is indispensable for success. Thus formations into divisions and into a cavalry corps have been adopted in peace to be ready for immediate execution. The motorcycle and automobile should practically replace the horse for many details formerly assigned to cavalry at various headquarters.

The cavalry should be subjected to as few detached details as possible and its entire strength should be available for employment in large units and for mass action. However great the front covered or the distances to objectives may be, the division or the corps should act as a unit.

The power of cavalry to operate independently and at considerable distance from the main mass is its most valuable characteristic. The commander who can employ it aggressively and in sufficient force will gain an advantage that will vindicate its enduring place in campaign and in battle.

It is often a distinct advantage to transport horses as well as men by trucks, but it is doubtful whether large movements by this method will be practicable. The marching ability of the horses and the men must still be regarded as the normal measure of time and space factors in great operations in the presence of the enemy. Truck movements should, however, be practiced and they should be adopted wherever appropriate and within the limits of the capacity of motor transportation.

During my inspections I have visited nearly all of the cavalry regiments. I have been impressed by the soldierly spirit, excellent discipline and high character of the personnel. Both the official and social atmosphere are worthy of the best customs of the arm and the Army. The skill in horsemanship undoubtedly surpasses any standard heretofore known in our service. At no time has the efficiency of the arm been higher than it is at present.

It is a privilege for me to record in this brief contribution to THE CAVALRY JOURNAL a message of appreciation to the officers who have been instrumental in the attainment of this condition and to the soldiers who by their response and loyal performances of duty have made the realization possible. One cannot witness the performance of the troops and of the Cavalry School without a sense of pride in the noble arm which they represent and in the state of preparedness that is found to exist. I would enjoin an earnest adherence to the basic doctrines developed by American campaigns and to the cultivation of the pride, the fortitude, and the standards of honor inherited from the men whose names have reflected glory on the arm and whose achievements in it have filled so many of the brightest pages of our Country's history.

National Defense and the Educated Man

GENERAL C. P. SUMMERALL

A PRIME purpose of higher education is to train men for positions of leadership and responsibility. A broad well-balanced education fits a man to fill efficiently positions of responsibility, both public and private, in war as well as in peace. We might compare the untrained child to iron ore and the college graduate to a finished tool. The grade schools convert the iron ore into iron; the high schools and preparatory schools change the iron to steel; the colleges take this steel, refine, shape, and temper it, and give it a fine working edge. Consequently, the War and Navy Departments look to the colleges of America to fill a large portion of the positions of leadership and varied responsibility in the event of a major national emergency.

The country expects the college man to become a leader in business, statecraft, the ministry, the professions, and in the sciences and arts. The nation has the right to expect him to accept the responsibilities of citizenship and leadership when the clouds of war loom darkly on the horizon. Our past history shows ample evidence that the trust placed in our college man has not been in vain—he has always been among the first to volunteer his services and he has borne the responsibilities placed on him cheerfully and well, in peace and in war. Success in a crisis does not come by inspiration. It comes as a result of preparation and capacity carefully developed by experience and habit. The college man has a decided advantage over the uneducated man because of the broader vision, wider perspective, and greater adaptability which he derives from his studies and experience; and as a result of his opportunities, more is demanded of him, and rightly so.

The rank of the United States among the great powers of the world, her wealth, strategic position, and commercial expansion, have increased her international contacts and consequently have increased her opportunities for misunderstandings and even for conflicts in foreign policies. It is a well recognized principle of international law that the right of self preservation is the first law of nations, just as it is of individuals. A government unable to repel aggression from without or to suppress rebellion from within, fails in its principal duty to the members of the commonwealth which it represents.

In the light of recorded human experience, it is manifestly our

duty to support at all times a military establishment commensurate with our risks. As a nation we are traditionally opposed to preparedness for aggression. George Washington and the statesmen who have succeeded him have strongly advocated a policy of preparedness—not *for*, but *against* aggression. They realized that the diplomat who represents his country in intergovernmental controversies is impotent unless his nation is sufficiently powerful in a military way to make it hazardous for others to depart from the normal and peaceful method of international intercourse.

During the Civil War, France, realizing that we were engaged in a bloody struggle to preserve our union, and expecting no embarrassment on account of the Monroe Doctrine, placed Maximilian on a throne in Mexico and backed him with her troops. Polite diplomatic notes of protest produced nothing but evasive and equally polite replies for several years—then, after the close of the Civil War, Mr. Seward sent to France a note demanding the withdrawal of the French armies from Mexico. To make this demand more than a "*brau geste*," General Sheridan was sent into Texas with an army of 50,000 veteran troops. The French government clearly understood that note and promptly withdrew its armies from Mexico. Without firing a single shot—merely by backing a diplomatic note with adequate force—the United States kept the Monroe Doctrine intact and made possible the downfall of a regime on her borders which might easily have become a breeder of innumerable hatreds and incessant wars in the Western Continent. Our ability to back up the just demands of those charged with our foreign affairs enabled them to achieve our legitimate political ends without resort to war.

Fifty years later the absence of that backing forced us into war. From 1914 to 1917 our government uttered protest after protest; in our comparatively unarmed condition on land our words were unheeded. The belligerents were evenly matched. It was believed then, and it appears certain now, that if we had had an efficient army of adequate size to back up our efficient naval force, our country would have been the arbiter of peace without the shedding of a single drop of blood. Our reputation was that of weakness; we were looked upon by those who did not know us as a people who worshiped the dollar. These impressions gave the Central Powers more confidence and increased the arrogant and dictatorial tone of their notes. As a result we were morally and physically forced into the World War and sacrificed 244,082 men in killed and wounded in convincing the enemy that we were a power to be reckoned with—a people who held honor as their most precious possession.

The declaration of war in April, 1917, found us almost unpre-

pared to wage war on the scale it had assumed in France. Slowly but surely we expanded our Army to four million men. It was comparatively easy to get the men, but in order to convert them into an effective combat force we had to procure and train more than 180,000 officers. The experience gained in producing those officers convinced Congress that in the college men lies the source of supply of leaders able and willing to shoulder the manifold responsibilities that fall to the lot of one who commands men and is charged with their training and welfare.

As a consequence, the National Defense Act of 1920 provided for the Reserve Officers' Training Corps. That Act recognized the fact that adequate national preparedness must be undertaken seriously along sound lines, and that it can never be improvised or procured in a hurry. The colleges, through the Reserve Officers' Training Corps, are furnishing excellent officers to the three components of the Army of the United States—the Regular Army, the National Guard, and the Organized Reserves.

The profession of arms demands men tempered by education and training. They must be readily adaptable to new conditions and have minds that are trained to grasp new ideas quickly and accurately. During the World War it took us a year and a half to put an American Army in the field. In war the most precious thing is time. The time element can neither be eliminated nor improvised; but we can eliminate wasted effort, and speed up the training of the great body of citizens which will be called to the colors, by training in time of peace the best available officer material. We have in our schools and colleges a body of potential officers second to none in the world. Were the Government to fail to provide these men with a broad education which will fit them for their duties in both peace and in war, it would be remiss in its duty to the people; it would be guilty of failing to carry out the things for which the Constitution was established and ordained—to provide for the common defense, to promote the general welfare, to insure domestic tranquility, and to secure the blessings of liberty to ourselves and our posterity.

Some may ask: If our country is never forced into war, what value has the R. O. T. C.? President Richards of Lehigh University, and former Dean of Engineering at the University of Illinois, answered that question when he said to a committee of Congress: "I consider military training a particularly good thing for engineering students. It is recognized by many of the outstanding engineering colleges of America. The engineer needs to have this military training just as much as he needs trigonometry, calculus, or other sub-

jects." Dean Lord of the College of Business Administration of Boston University said: "The business man needs to know how to lead as well as how to follow. The R. O. T. C. gives practical occasion for both leading and following. Scores of young men become non-commissioned or cadet commissioned officers and learn to carry the responsibility of leadership. We consider it fully as important as English and mathematics and economics and foreign language and history."

It is possible to quote from leading educators in every state in the Union opinions fully as illuminating as these. Suffice it to say that the physical training, the poise of body and mind, the habits of discipline, courtesy, and respect for constituted authority, obtained in the Reserve Officers' Training Corps more than compensate for the money, time, and effort devoted to this form of military training. Health, good habits, clear and logical thinking, industry, organizing ability, and success come from such physical and mental discipline. The true spirit of national service manifests itself in the Reserve Officers' Training Corps—a corps whose members accept and train for the obligations of citizenship. As long as this spirit prevails, we can feel sure that the blessings of liberty for which our forefathers fought will be jealously guarded. The students of today hold in their hands the future welfare and security of our country.



Packs and Leading

By COL. DANIEL VAN VOORHIS, 12th Cavalry

WHEN the 1st Cavalry Brigade left the concentration camp at Cotulla, Texas, in May, 1930, with a maneuver mission of harassing and delaying the 2d Division, each troop took a light wagon and each regiment an escort wagon. The remainder of the trains were left in camp. The plan contemplated rapid movement of the combat troops and supply by night by means of the most readily available transportation from the base to caches determined as a result of the day's action.

With combat and field trains cut to almost nothing, pack loads naturally assume great importance. The number of packs in a cavalry regiment is astounding when compared with the days of relatively small fire power. The 12th Cavalry at the strength with which it entered the maneuvers had approximately 330 riding horses and 80 pack horses, counting officers' second mounts, or 60 counting only combat packs. For comparative purposes I will explain that the rifle troops include four machine rifles, the machine gun troop eight machine guns, and the headquarters troop two radio sections and the pioneer and demolition section. Each troop carried kitchen, ration and picket line packs. The latter pack load was made up of extra oats since no picket lines are used in the combat area. The 37 mm. guns were mounted on wheels.

Although the number of pack animals per regiment will vary somewhat in each situation, the percentage will seldom be less than 20 per cent. It requires no study to see at once that the pack element of the command is of the greatest importance in all cavalry operations. It includes the bulk of the fire power with its ammunition, the signal communications, demolitions and messing facilities. Without its packs Cavalry would be reduced to approximately the power it had at the end of the Civil War and would be out of place in modern combat.

Thanks to the efficient pack saddle Cavalry has been able to add modern equipment without appreciably decreasing its mobility or power to execute missions appropriate to "light" Cavalry. However, the pack load presents a problem in transportation which differs from the "transportation" of the cavalryman and requires special consideration when the riding horse and pack horse are both included in a tactical unit.

When the end of the day's march finds the troop commander inspecting his animals invariably the pack animals give him the most

concern. Our heaviest pack loads but slightly exceed 200 pounds. Their dead weight, however, causes more difficulty than the considerably greater combined dead and live load of the rifleman. From the time the horse is packed until the day's work is over, he is seldom relieved of any of his load except in combat. Pack animals cannot be expected to carry their loads more than seven hours a day during long periods and should not carry them more than five hours.

Since field service generally involves much marching and relatively little combat and since marching is the most difficult of cavalry functions, we will consider what effect the addition of a large number of pack animals has on the conduct of cavalry marches. The Cavalry Field Manual states "The average march varies from 3½ to 6 miles per hour. This rate is maintained by means of the usual marching gaits—the walk and the trot—combined with frequent periods of leading." Again, "In deciding upon the rate of march, a commander bears in mind that the shorter the time animals are kept under the saddle, provided the rate is not too great, the better will be their condition." And again: "Care is taken to relieve cavalry horses as much as possible of some of the great weight they are called upon to carry in the field. To this end, frequent periods of leading during the progress of a march prove beneficial. When horses are out of condition for any reason the periods of leading must be lengthened, and the rate of march decreased.

"The amount of leading is decided after considering the situation, the necessity for speed and the condition under which the march is made."

These statements are fundamental principles of cavalry marches that have been tried and accepted for many years. Does the addition of pack animals necessitate a revision of these principles? The experience of the 12th Cavalry in the Maneuvers of 1930 indicates that a new principle may well be added which should state: "The pack animal is the deciding factor in the conduct of marches." This statement agrees wholly with the one quoted above that the shorter time animals are kept under the saddle (principally the pack saddle), the better will be their condition. On the other hand, it does not follow that frequent periods of leading during the progress of a march prove beneficial. Leading does not benefit the pack animal. In fact, it does positive harm in so far as it increases the time that he carries his load.

As a result of these conclusions the 12th Cavalry adopted the policy of leading only in exceptional circumstances. The regiment marched almost 700 miles during a period of about five weeks, in connection with the Nueces River Maneuvers in the spring of 1930.

Marches varied from 14 to 32 miles a day except that twice the regiment marched 50 miles in twenty-four hours. The only case in which leading was done occurred on the last day of the march. The circumstances were exceptional. After a 25-mile night march the regiment went into camp. There had been heavy rain the previous day and rain started again at noon, becoming so heavy that by late afternoon it was apparent that the command would secure no rest. Therefore the regiment saddled and moved out on the last 25 miles to Fort Brown. The road was frequently knee deep in water and the mud made a gait faster than a walk impossible. Part of the road was paved, making good footing for leading. Rain fell in torrents. Men and horses were tired. The night was pitch dark. A few periods of leading were obviously appropriate to keep men awake, stretch their legs, stiff from constant riding at a walk, and to improve the morale. Under these circumstances leading did not increase the time the packs were on the horses' backs, but, on the other hand, offered many advantages. There will be, of course, other exceptions, such as very rough country, but these only go to prove the rule that the pack load is the deciding factor and the sooner it is off the horse's back, the better.

The experience of the 12th Cavalry under conditions believed to be typical of field service leads to the conclusion that our present cavalry organization and equipment throws a new light on our old ideas of leading; that, today, we should consider leading the exception certainly not to be omitted when the occasion demands but, on the other hand, not to be rigidly adhered to as a prescribed form of marching for so many minutes per hour. And we may accept as basic those principles quoted above: "The shorter the time animals are kept under the saddle, provided the rate of march is not too great, the better will be their condition" and "The amount of leading is decided after considering the situation," to which we may well add "The pack animal is the deciding factor in the conduct of cavalry marches." Basing the conduct of his march on these three principles the cavalry commander will lead but little—the exceptions are obvious—and he will make shorter, faster marches with men and animals in better condition.

The Development of Rifle Anti-Aircraft Training

By MAJ. LEONARD R. BOYD, *Infantry*,

and

1ST. LIEUT. JOSEPH I. GREENE, *24th Infantry*

TR 300-5, "Antiaircraft Combat, Basic, for all arms except Antiaircraft Artillery" has reached the final revision stage and will soon be published in tentative form. The development of these regulations has been largely in the hands of the Department of Experiment, The Infantry School. The authors have been closely connected with the development of the regulations as Test Officers of the Department. In the following article they point out some of the steps taken during the development of the Training Regulation and the reasons why many apparently workable ideas concerning methods of target operation were not incorporated into these very new regulations on such a very new subject.—EDITOR.

IN discussions of antiaircraft range construction, several writers have suggested suspending the parallel moving target on elevated cables and moving it suspended in the air so as to provide a more realistic aerial target. The Department of Experiment tried this in the first stages of the development work on rifle antiaircraft training methods, and later substituted for it the type of parallel target prescribed in the tentative regulations. The main reasons for this substitution were.

- a. The range with elevated cables was difficult to build and keep in operating order.
- b. Considerable time was consumed in climbing the supports for the cables in order to mark and change targets.
- c. A very light target carrier was sufficient to cause the cables to sag, thus making it difficult to maintain uniform direction of movement and uniform speed.
- d. Cables and trolleys were frequently injured, especially when caliber .30 ammunition was used. Although no caliber .30 firing is prescribed for rifle antiaircraft training, it is found necessary at most posts to use the same moving target for both rifle and machine gun antiaircraft training. This double use of range equipment should be considered in the construction of the rifle antiaircraft range.

It has also been suggested from a number of sources that cables be used instead of tracks for the parallel target. The same objections obtain in this case also.

Range Materiel

Extended firing tests have clearly indicated that the three by five foot machine gun target frame is the most desirable recording medium

for rifle antiaircraft firing. A carrier to hold this frame to the moving vehicle must be substantial and therefore of considerable weight in order to withstand hard usage. A sturdy target carrier mounted on a four-wheeled machine gun 1000-inch truck can be built without materially affecting ease of operation. Such a moving target range is simple to construct. Material is already available at every post that has a 1000-inch machine gun range. Furthermore, the danger space for waste fire can be limited to the immediate area of the range.

Target Elevation

There has been some question about the relative training value of firing at parallel moving targets at low and high elevations. It is certainly true that an elevated course more nearly approximates towed target and combat firing conditions; yet the basic purpose of the parallel target firing is to teach leading methods. It is believed that if the firer can make hits on the parallel target at low elevations he will be able to make about the same number of hits at higher elevations, as the method of leading is identical. In addition, at most army posts suitable terrain can be found for the target carrier track to be elevated above the firing point. Thus, the advantages of firing at a high-angle target can be secured without difficulty at most posts.

Target Background

Another suggestion is to have the 1000-inch targets consist of a simple silhouette, such as a cardboard or tin representation of the towed target or airplane, instead of the paper silhouette attached to the three by five foot machine gun target frame. The chief criticisms appear to be that the silhouette on a paper background does not have the appearance of an actual target in the sky and that firers frequently pick out a point on the frame as a reference point instead of leading by the "following through" method.

It is a well established principle in rifle marksmanship training that the value of all firing, except combat exercises, is greatly enhanced by the recording of shots that miss the bull's-eye. The factors of target size and speed in 1000-inch firing do not permit the actual representation of more than one or possibly two target-length leads. But two or more leads must be fired and recorded in front of the target. A recording background is therefore necessary to show whether the firer has taken the proper lead and to show the errors of elevation in such leading. A moving silhouette, by itself, permits a much lighter target construction and prevents an auxiliary aiming point being taken, and these factors have sufficient value to suggest

such an arrangement for indoor gallery firing and possibly for the final test of firing on completion of the training course as prescribed in the tentative regulations.

Moving Target Suggestions

A large number of moving target ideas have been presented. Among them are sleeve targets towed by automotive means from target butts, rockets, trench mortar shells, and meteorological balloons.

Most of these proposals were tested and rejected during the formulation of the tentative training course, for one or more of the following reasons:

1. The target speed was much slower than that of either the towed target or the combat target.
2. Little or no lead was required to make hits on the target.
3. The absence of a recording background limited the training value of the firing.
4. It is frequently difficult or impossible to keep the target within the prescribed safety limits of fire. (Balloons).
5. The movement of the target did not simulate that of either a towed or a combat target.

Target Speeds

Most of the above objections are self evident. However, the reduced speed element may well be discussed at greater length. Airplane towed targets vary in speed from 75 to 115 miles per hour with the present towing equipment. At slant ranges in excess of 100 yards the lead varies from one target length (15 feet) upwards, depending upon the elements of speed of the target, range, and angle of approach. Now it is difficult to imagine any system whereby automotive towed targets could be towed much faster than 30 miles per hour, unless very special and costly equipment were available. At such a target speed very little lead is required, hence it would be impossible to hold training in the use of two or three target-length leads or more, and still make hits. It is rather apparent that the ideal training system would require the rifleman actually to move his rifle at the speed he will use in following the towed or combat target. The 1000-inch firing system embodied in TR 300-5 is based on the fact that the shorter the range to the represented target the less actual speed is required to simulate a given speed at a fixed range. Thus, a target moving in parallel flight at a speed of 92.5 miles per hour and at a range of 1025 feet can be represented by a target speed of approximately 11 feet per second at 1000 inches. And this same speed can be

represented at 250 inches by a target speed of approximately 2 feet per second. In either case the firer, in following the represented target, must move his rifle laterally at the same rate as in following the actual target. This system also permits considerable variation in the range and speed factors of the actual target. A reduction in the size of the represented target and a corresponding reduction in the speed of movement at 1000 inches permits an unlimited simulation of increased range to the actual target.

The Vertical Moving Target

The training value of the vertical moving target has been both criticized and praised. Several writers believe the system faulty in that the target is not visible to the firer when the shot is fired. A close study of the mechanics of leading a target which is approaching straight overhead, shows that if the sights are aligned ahead of the target the front sight stud and the barrel will hide the towed target as the shot is fired. This undesirable feature will not obtain in combat firing as the wings of the airplane will be visible to the firer, except when it is a very long range. However, until some modification of the rear sight is made, or it is replaced by a combined aerial and ground target sight, this condition will exist when firing at towed targets. With this as premise it is believed that a sound method of leading is bound to be very similar to that included in the tentative regulations.

Suggestions have been made to have the vertical target move from the horizontal to a position directly over the firer's head so that the actual movement of the towed and combat target would be represented. A moving target that embodied these features was built and operated by the Department of Experiment and was discarded. It was found to be difficult to construct and keep in operating order and thus did not lend itself to multiple construction for the training of large units. On the other hand, the target which moved straight upward required the firer to use the correct leading methods and closely approximated the initial and mid-portions of the overhead flight. An additional factor in favor of this target is its simplicity of construction.

Tactical Value of the Vertical Target

We should not overlook the tactical use of the vertical target training in designing a firing course. Recommendations have been made to abolish the vertical firing instruction, but to do this is to overlook what might be termed the "normal" aerial combat target. Most aerial targets will be low-flying attack planes moving toward

the head or the rear of a column, and then down its length. The latest school of thought on defense against such attacks believes in a very limited deployment of the troops off of the road—just far enough to allow the full use of all caliber .30 weapons. Most of the men so deployed will see the target approaching them and appearing very similar to the vertical target. Hence it seems apparent that the most essential element of anti-aircraft training is that of vertical firing.

The Scoring System

Almost every unit that has tested the training system of TR 300-5 has had recommendations for changing the scoring system, the size and shape of the silhouettes, and the methods of attaching the silhouettes and scoring sheets to the target frame. Many of these ideas are improvements on the tentative course, while some few appear to advantage due to peculiar local conditions.

The Effect of Infantry Anti-Aircraft Fire

Some writers appear to be in doubt as to the ability of troops armed with caliber .30 weapons to bring down hostile aircraft at "safe" distances; i.e., before the planes can release bombs on the leading elements of a column. There is some difference of opinion as to the effect of the caliber .30 bullet on aircraft engines. In this conflict of theories there appears a hopeful field of development—the semi-automatic 37-mm. gun with shells fitted with supersensitive detonators. The possibilities of such a weapon for infantry use are now being studied and, from a theoretical standpoint, seem to warrant further research and firing tests.*

Shotgun Methods

The question of the training value of shotgun trap shooting as an aid to anti-aircraft firing is frequently mentioned. The Department of Experiment considered such a training scheme and discarded it for the following reasons:

- a. It was not considered suitable for basic training, in that practically no lead is required to hit the target.
- b. There is no method whereby the misses may be recorded in respect to the degree of error of the miss, hence no training value, or very little, can be secured from any but the hits that destroy the target.

*A War Department Board consisting of two infantry officers, two air corps officers, and one ordnance officer is now engaged in testing the actual effect of all standard types of infantry combat ammunition upon the attack airplane. This board is working with ammunition up to and including the 37-mm. shell.

c. The shot pattern obtained in firing the shotgun does not simulate closely enough the conditions of antiaircraft rifle firing in which shots are fired singly.

It was realized that shotgun trap-shooting would develop the ability to follow a fast-moving target, and this fact has probably influenced many to favor its inclusion in the tentative regulations.*

The idea of throwing clay pigeons or blocks of wood from the trap machines and firing at them with the caliber .22 rifle has been suggested and appears to possess considerable merit. It has the same training limitation as shotgun shooting in that the misses have no training value, but the fact that a rifle is used and that there is a close similarity between such shooting and antiaircraft firing seems to give it some training value. It is believed that such a phase of training, to be fired after the completion of the regular course, would add a desirable sporting element to the course.

Types of Cal. .22 Ammunition

Various organizations have had difficulty in finding range facilities adequate for the waste fire of the caliber .22 long rifle ammunition and have favored the caliber .22 short instead. Some of the advantages and disadvantages of both types of ammunition will be set forth

Caliber .22 Long Rifle Ammunition. a. This is now standard for the caliber .22 gallery rifle as issued, and the latter is chambered for this type of ammunition only.

b. By utilizing the rifles and ammunition that are now a part of organizational equipment the difficulty of supply is materially lessened.

Caliber .22 Short Ammunition. a. It can be used indoors and at posts where waste fire of the more powerful ammunition prohibits its use.

b. The time of flight of the bullet being materially less than the caliber .22 long rifle bullet, more lead can be used without increasing the speed of the target, and the bullet will still hit the silhouette.

Tracers

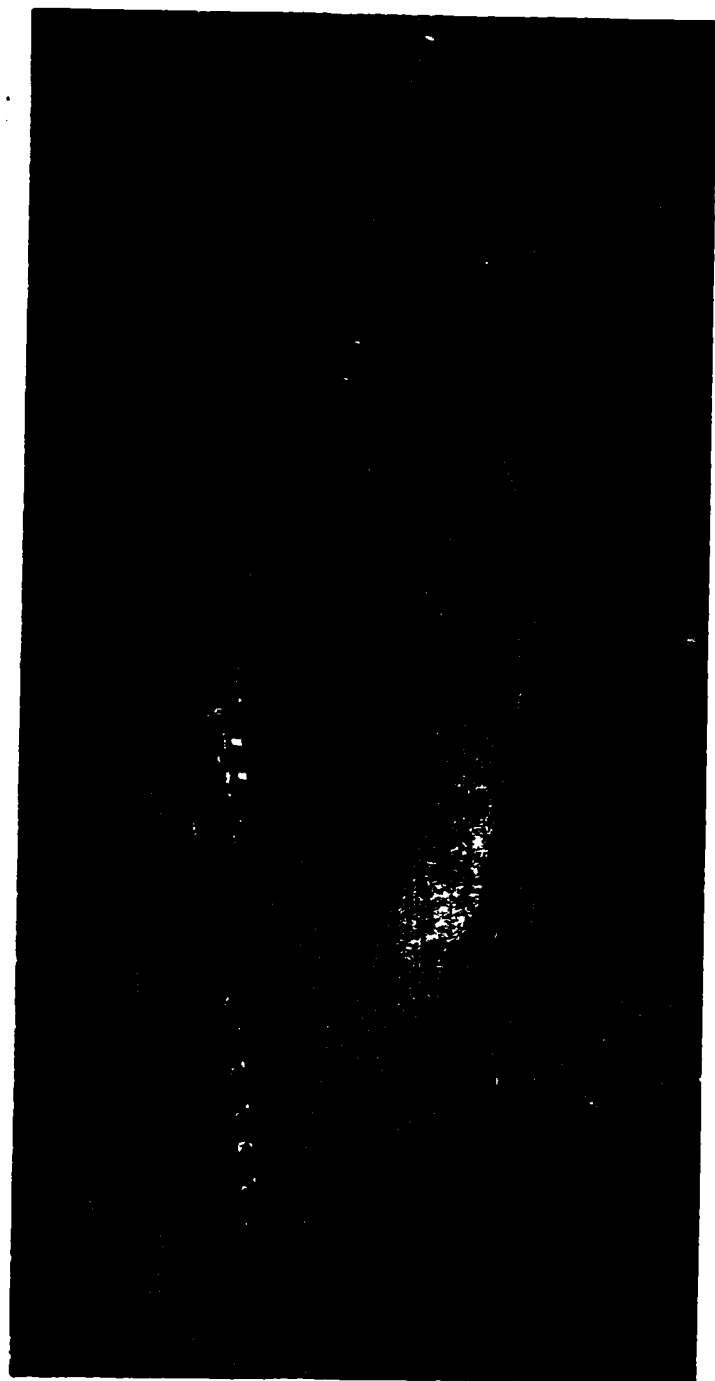
The adjustment of rifle antiaircraft fire by observation of tracer bullets is frequently urged as an addition to the towed-target methods now prescribed. This idea was tested in 1926 and at intervals since, and has always proved to be basically unsound. One of the principal

*A second and more comprehensive test is now being conducted by the Department of Experiment to determine the value of shotgun trap-shooting in antiaircraft training.

difficulties in adjustment of fire (either rifle or machine gun) by means of tracer bullets is encountered in the well known optical illusion of "curve" as the bullet is passing near the moving target. There is a wide variation in this "curve," depending on the speed of the moving plane, the range to the target, the position of the observer, and the background against which the tracer bullet is seen. When the target is close to the firer most of the tracer flight is seen after the bullet has passed the target, whereas at the longer ranges (800 to 1000 yards) the tracer burns out soon after passing the target. In each instance the amount of "curve" varies, and no definite rule can be prescribed for the proper location of the tracer as it passes the target. No two individuals see the tracer alike, unless their eyesight is identical, and the exact point where the red streak of the bullet passes the vertical plane of the target is solely a matter of the observer's judgment. In addition, an observer who is but a few feet to either side or in the rear of the firer sees the tracer at a different angle from the firer and cannot be certain that he has a true picture of the meeting point of the two objects moving toward each other at such high speed. Finally, it has been fairly conclusively proven that an individual firing with a squad or larger unit has great difficulty in picking up his tracer from those fired by his comrades. Even when firing alone the individual must raise his head immediately after firing in order to have the line of vision entirely unobscured by the sights.

The group leader, however, can make good use of his observation of the collective fire of the unit. He is able to judge the size of the cone of fire and its general relation to the target. Frequently, also, he can detect individuals who are making major errors of leading.

This article has dealt with but few of the good ideas that have been brought out in service tests of this regulation. The final revision of TR 300-5, with the necessary changes and additions, will be accomplished by the usual revision agencies.



Fort Brown, Texas
of Brownsville

To the extreme left and right the winding Rio Grande is seen; the horseshoe-shaped lake is "The Resaca." In the background is seen the

Border Cavalry Stations

On his recent inspection of border stations, the Chief of Staff was very pleasantly surprised with the improvements which have been effected in living conditions at these posts. On his return General Summerall wrote to the Chief of Cavalry: "I think the border posts would become more popular if some officer at each one would write a letter to the CAVALRY JOURNAL stating the present living conditions." The following descriptive article was so prepared at General Henry's request.

In many ways the border posts are becoming recognized as the most desirable cavalry stations under present conditions. It is hoped these short descriptions will be of interest and assistance to officers contemplating border service.—E. H. R.

Fort Brown, Brownsville, Texas

NOT many years ago the dense mesquite-covered Lower Rio Grande Valley was broken only by a few scattered patches of corn and cotton. Large cattle ranches, American owned but largely Mexican-American operated, stretched from the Gulf many days' march to the west. Citrus development with irrigation started early in the century, but advanced slowly until after the war when along with truck gardening it had a new birth and the Magic Valley grew by leaps and bounds until today it is one vast garden.

Fort Brown is a name intimately associated through pioneer days, international and civil wars and prosperous modern times, with the growth and development of the Valley. Lying within two blocks of the center of Brownsville's business district, the reservation is bounded on three sides by the winding Rio Grande. The "Gateway Bridge" connecting Brownsville with Matamoros passes over the corner of the reservation within a stone's throw of Post Headquarters.

Brownsville, a rapidly growing city of 25,000, offers every convenience, including good grade and high schools and a junior college. Located about twenty miles from the Gulf coast, a cool breeze and cool nights make otherwise hot summers very pleasant. The broad porches on the officers' and non-commissioned officers' quarters facing on the *Resaca* are favored with a constant breeze. Frost is rare and few days out of the year are unpleasant.

The country is a sportsman's paradise. Hunting of ducks, geese, deer, turkey and other game on both the American and Mexican sides of the river is almost perfect. Sea fishing in the Gulf of Mexico is excellent. Officers and men with their families are seen frequently surf bathing on the beach. International polo and baseball with the Mexican garrison maintains good sportsmanship on both sides of the border.

The climate permits field training the year around. Although somewhat isolated for combined training with larger units or other arms, occasional maneuvers with troops from Forts Sam Houston,

McIntosh and Ringgold make it practicable for Fort Brown troops to maintain a high standard in the combined training of the higher echelons.

The ladies delight in the grapefruit and oranges from trees in their own yards, in the poinsettias and roses in full bloom at Christmas time, and in the abundance of fresh vegetables afforded at all times of year at the market. The climate, the living conditions, the professional life and the sports all combine to accentuate the old Mexican adage, "He who has tasted the waters of the Rio Grande will always return."

Fort Brown is garrisoned by the 12th Cavalry, less 2d Squadron.

Fort Ringgold, Texas

While hardly any post can supply everything that we dream about, Fort Ringgold quarters have been modernized to an extent unequalled by many urban residences. They are equipped with everything that the most exacting housewife can desire in the way of kitchen conveniences: electric refrigerators, electric ranges and hot water heaters. The refrigerator is of a type recommended by *Good Housekeeping* and has proved very satisfactory in refrigeration and



Fort Ringgold, Texas

Upper: Post Hospital. Lower: Post Headquarters with part of the officers' line on the right



Fort Ringgold, Texas

Left: Commanding Officer's quarters. Right: Part of the officers' line

ice making for the household. The electric ranges are heat and time operated so that coffee, put on the night before, is ready when required by "Hubby" just before rushing for drill formation the next morning. Food can be put in the oven and be ready for dinner after an afternoon of bridge. The water heaters require a minimum of care to furnish all the hot water desired.

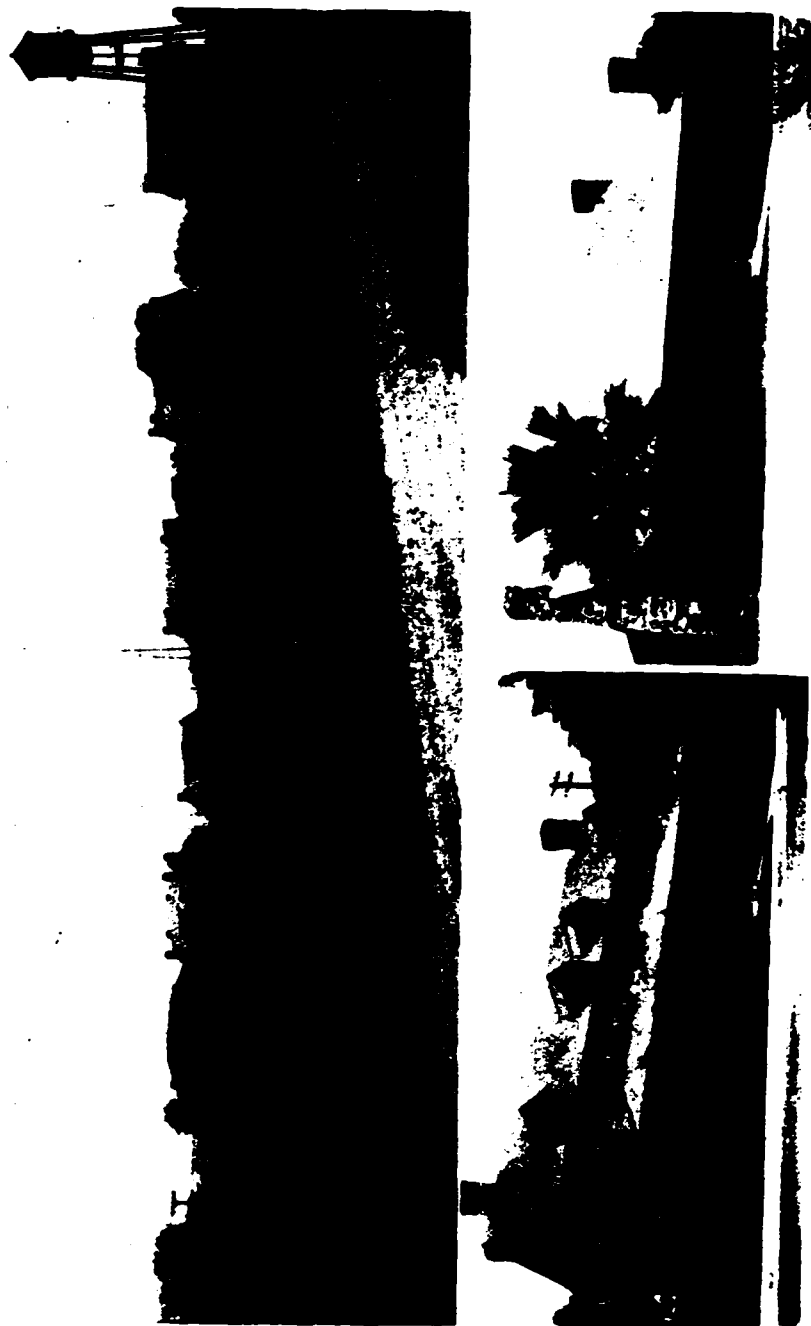
The quarters situation is excellent as to quantity: two field officer's sets (single quarters), eight sets (double) with three small bungalows and three large ones. All quarters have the same kitchen equipment and five of them have the new mahogany furniture. All quarters have sleeping porches, which needless to say, are much enjoyed.

Living at this post is cheap; in fact it is said to be one of the cheapest places in the United States to live. Mexican servants can be easily obtained at from \$4.00 to \$6.00 per week.

While it gets warm down here, no one has ever heard of a heat prostration or sun stroke, in contrast to the heat of the Middle West and East in summer. The nights are cool with a good breeze.

Our post being small, we have a very good garrison life. Bridge parties, post dinners and occasional hops with the Fort Brown orchestra supplying the music vary the entertainment.

Many recreational activities are available. This is, of course, a Cavalry post and riding enters largely into our scheme of life. There is a fine enclosed jumping park. Most conveniently located near the stables there are a large sand ring (as large as those at Fort Riley), a properly made Hitchcock pen and a polo cage. Our swimming pool is a great feature, not only for sport, but also serves as a social center, officers and their families meeting there daily during the summer from six to seven in the evening. The swimming season lasts from April to October. A concrete tennis court is always available for



Fort Clark, Texas
Upper: Part of the officers' line, from the parade ground. Lower: Stone officers' quarters

devotees of this sport. Our athletic field is entirely enclosed by a solid board fence. This contains a half-mile track with a polo field in the center. There is a covered grand stand on the western side. Every meet held here has been a financial success. Then we have the "talkies." Three shows a week, two performances each of these nights. The acoustics are very good in the theatre and having good operators, the shows are as well run as any in the country. Admission is twenty-five cents.

Anyone who is fond of hunting will like Fort Ringgold as there is good white wing, duck and pigeon shooting. These are easy to obtain, but the quail, while present, take some work to get. The deer shooting is a gamble, but they are all around and some good heads have been obtained. One was shot last winter with twenty-five points.

This is a squadron post, garrisoned by the 2d Squadron of the 12th Cavalry, with the rest of the regiment stationed at Fort Brown, 108 miles away. The troops from Fort Brown visit here every year for target practice and the garrisons visit back and forth whenever either post puts on a horse show, baseball, football or polo game. The road between the posts, which runs through one of the finest citrus fruit belts of the United States, is hard surfaced all the way.

Fort McIntosh, an engineer post, is about 114 miles to northwest. The connecting road is being improved all the time with most of the arroyos, and all of the bad ones, bridged. We exchange visits with the 8th Engineers frequently, the troops from each garrison having made practice marches to the other posts. Interchange of baseball and basketball games have been very pleasant.

San Antonio is only a day's drive away by motor or an overnight trip by train. The post air field is modern and the "powers that be" at Kelly Field are most accommodating in supplying transportation when necessity therefor exists.

Mexico is just across the Rio Grande. There is one bridge at Roma, fourteen miles west, and one at Hidalgo, forty-one miles east of here. San Pedro and Reynosa are the Mexican towns opposite these places.

Fort Clark, Texas

Along the old stage road, now the border highway (U. S. 90), stretching west from San Antonio, there existed in the early days a line of forts or camps. As the settlers pushed out from the towns new posts were established only later to be abandoned, so that of all of these many posts dotted through Texas as shown on the older maps, remains only Fort Clark.

To quote the historian "This historic post is situated in Kinney



Fort Clark, Texas
Upper: Sand ring in the trace near Las Moras Creek. Lower: The swimming pool, just below Las Moras Spring

County near Brackettville one hundred and forty miles west of San Antonio, ten miles from Spofford Junction on the Southern Pacific Railway, and twenty miles from the Rio Grande. Its altitude is eleven hundred and thirty feet above the Gulf of Mexico. The site was chosen in 1852 upon the mesa sixty feet above Las Moras Spring, giving a fine prospect of the almost limitless mesquite plains. Las Moras mountain is a conspicuous landmark to the northeast."

The reservation comprises 3693 acres. Inside its northern boundary is Las Moras Spring, flowing six million gallons every day and from the spring and the swimming pool (the summer play ground) next to it, Las Moras Creek flows east and south through the reservation giving fertile soil, maintaining a magnificent grove of pecan and oak trees along its boundaries, and furnishing ten miles of beautiful bridle paths.

South of the post proper is the drill field three quarters of a mile long by half a mile wide and beside the drill field is the landing field, the race track, and polo field, and beyond these, the target range. Outside the post proper the reservation is covered with high mesquite and oak and is all available for riding and training purposes.

Memories of the early days of Fort Clark are still in existence in the old loopholed wall about the corral, the two older cedar and adobe store houses and the old cemetery with its 102 unknown dead—killed by Indians.

Progress, however, has reached Fort Clark, and the frontier has gone. The best "talkies" are with us. Brackettville is incorporated and paved, the road to Spofford is hard surfaced, and all of the nearby roads are now either hard surfaced or gravel. To Del Rio, thirty miles, it takes only forty-five minutes to an hour, for shopping, golf or a visit to Mexico; Eagle Pass, fifty miles, an hour and a half with an excellent restaurant in Piedras Negras; to San Antonio, the road all hard surfaced but twenty miles, four hours.

The old post now the home of the First Cavalry Brigade Headquarters and the 5th Cavalry, has been rejuvenated; the 27 sets of stone quarters have all been placed in excellent repair. Electric ranges and electric refrigerators are in all the quarters and estimates are in to furnish all quarters and barracks with gas furnaces.

Roads are being paved and oiled, grass sown on the parade and trees planted, and the dust is conquered. The post has an excellent laundry, its own dairy and chicken farm and the Post Exchange includes an excellent meat market with fruits and vegetables, tailor and shoe repair shop, while the commissary has a new cold storage plant.

Children go to school by bus in Brackettville and a new thirty thousand dollar high school has just been completed.

The old garrison life still remains with its interests and pleasures. Activities center about the post club, and its entertainment committee keeps everybody occupied with the dances, rides, paper chases, tennis and other forms of amusement. Hunting still exists in the vicinity, and at times the officers join in a wolf hunt with one of our nearby ranch friends.

This is a good horse country and polo is being played in all the near-by towns to the north. Our polo field is being brought up to date. Horse shows are a frequent in the spring and fall, culminating annually in the 1st Cavalry Division Horse Show at Fort Bliss.

Distance has been annihilated by the good roads, motor cars, motor busses and trucks. It is a small matter now to ship a show team by motor 150 miles in two days; bus lines and motors have relegated the railroads to rare use except for Government supplies.

Summer comes early and Texas is rated—hot; yet compared with the country farther north we are quite content. During the hottest weather of this exceptionally hot year the thermometer registered 102 once, and over 100 only one other day, while every night the temperature drops to about 74.

On the hottest days the early mornings afford pleasant rides through the groves along Las Moras Creek and in the evenings a group is always found about the electric lighted tennis court. The climate is remarkably healthy, the most strenuous exercise in the hottest part of the day having no deleterious effects.

Roses bloom throughout the year plentifully, numerous fig trees on the post bear in profusion, and wherever a garden is started nature responds prodigally to your efforts.

The autumn, winter and spring are generally ideal. The coldest mornings are just snappy enough to make you watch your horse that you do not land in a cactus bed.

Of all the cavalry stations I know of, none are more favorably situated or offer more opportunity, with comfort, recreation and amusements, for real cavalry training than Fort Clark.

NOTE: Descriptions of Fort D. A. Russell, Fort Bliss and Fort Huachuca will follow in the January issue.—EDITOR.

The Outpost at Virton

By LIEUT.-COL. WARD L. SCHRAUTZ, 54th Infantry, Reserve

This article is based on information appearing in the book, "Virton," by Lt.-Col. A. Gasset of the French army. Reference has also been made, however, to General Palat's "War on the Western Front," and other books.—AUTHOR.

ON the evening of August 21, 1914, the 8th French Division, IV Corps, Third Army, billeted for the night in the area Virton-Dampicourt-Harnoncourt in southeastern Belgium after the advance guards had driven detachments of German Infantry and Cavalry from Virton to the east in the direction of Ethe.

Despite the contact with the enemy and despite the insistence of the inhabitants that the Germans were in the vicinity in force, the French, relying on information received from army and corps headquarters, believed that these were only screening detachments and that the German main bodies were still distant.

The headquarters of the French 16th Brigade was in Virton and the 115th Infantry regiment, under its orders, constituted the outpost. The 2d Battalion occupied the sector: road to Ethe, inclusive—road to Etalle, exclusive; the 3d Battalion the sector: road to Etalle, inclusive—Houdrigny, exclusive. The 1st Battalion was in general reserve west of Virton.

In the eastern sector the 6th Company formed the right support, being posted at the Ferme l'Empereur, 600 meters northeast of the eastern edge of Virton, on the Ethe road. It placed a picket of one platoon on a nose 300 meters farther to the east.

The 8th Company was the left support in this sector, and was posted on Hill 265 some 1100 meters north and a little east of the edge of the town. Two of its four platoons were used to constitute six outguards about 400 yards further to the north and east, near the edge of the forest.

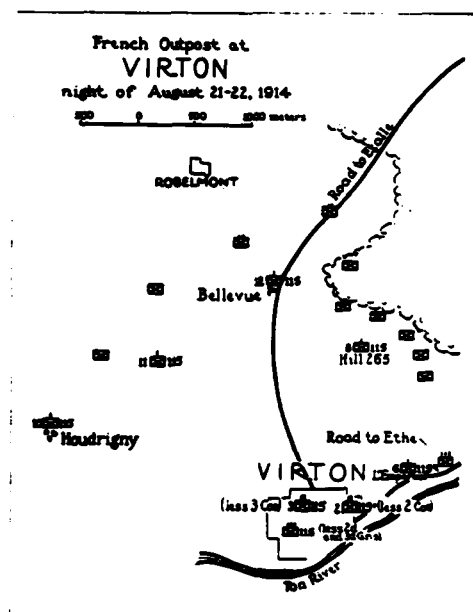
The 5th and 7th Companies were held in local reserve at the eastern edge of Virton.

In the western sector there were three supports. The right one—the 12th Company—was placed at Bellevue farm on the Etalle road 1900 meters north and slightly west of Virton. It posted a picket of a half platoon 600 meters to the northeast on the Etalle road, and a picket of a half platoon on the road to Robelmont to the northwest. The center support was the 11th Company, in the head of a stream valley 2,000 meters northwest of Virton; and the left support—the 10th Company—was at Houdrigny where it established contact with the troops of the II Corps. Both the center and left supports covered

their fronts with various outguards. The 9th Company was in sector reserve at the northern edge of Virton.

In cases of attack the line of supports was to be held.

The French opinion that the enemy was distant was an error. Screened from observation by the woods, the German V Corps, a part of the German Fifth Army, was in the vicinity of Etalle some 12 kilometers northeast of Virton. At midnight, August 21-22, the 9th Ger-



Dispositions of the French Outpost

man Division was ordered to march on Virton at 1:00 A. M. to secure the high ground north of the town. A squadron of Uhlans, accompanied by detachments of Infantry in requisitioned vehicles, was pushed ahead at once and by one o'clock was at the edge of the woods 1500 meters northeast of Bellevue farm.

Uhlans patrols moving down the Virton road were fired upon by sentries from the outguard northeast of Bellevue farm. Attempting to advance at other points they drew fire from other sentries. Leaving vedettes in contact with the outguards of the northern portion of each of the outpost sectors, the Uhlans withdrew to the woods where the Infantry that had accompanied them was busy preparing trenches to delay any possible French advance. Plans were made to ambush and capture the reconnaissance patrols that the French were expected

to send out immediately from the outpost, but when no such patrols appeared a half platoon of German Infantry deployed and moved down the road at 3:40 A. M. to clarify the situation. The French outguard was alert and prepared for resistance.

At the French challenge the Germans opened fire. The outguard replied, both sides firing by guess in the dark. One French soldier was killed. The German advance was halted, but as soon as the firing ceased the outguard fell back on the support at Bellevue farm, reporting the enemy in force.

The support commander prepared for a determined defense and sent word to the sector commander of the situation. When his message reached the latter officer at Virton he immediately took the battalion machine gun section and three of the four platoons of the 9th Company, which was in local reserve, and hurried in person to Bellevue, where he extended the line of the support to the east. No patrols were sent out. A heavy fog prevailed.

Meanwhile the French main body had prepared to march on Etalle. At 5:30 A. M. the point of the advance guard Cavalry passed through the deployed Infantry on the outpost line. The sector commander warned the officer in charge that the Germans were near but the point trotted out to clear up the situation and reached a point near the edge of the woods before establishing contact. Here they saw trenches and heard voices in German cautioning the soldiers not to fire until ordered. Wheeling back into the fog the cavalymen returned and reported to the commander of the advance guard Cavalry. He scoffed at the idea that the enemy was in force and ordered the point to resume its march. The Cavalry commander did not question the commander of the outpost sector, nor did this officer try to further advise the Cavalry, contenting himself with holding his line in readiness for action in case the enemy should appear.

In point of fact the Germans had now deployed their leading battalions and at six o'clock started their advance through the fog, the 1st Battalion, 7th Grenadiers, moving down astride the Virton-Etalle road, with the 3d Battalion deployed on its left. The Cavalry collided with this advance some distance outside the outpost line. There was a great burst of enemy rifle fire and the Cavalry stampeded back through the 9th Company, partially disorganizing that unit. A few moments later the German assault hit the outpost line of resistance. A violent combat in the fog ensued. Within a few moments the support commander and the commander of the 9th Company were killed, the 9th Company was almost entirely destroyed, and the 12th Company suffered almost fifty per cent casualties. The machine gun section and the survivors of the 12th Company were driven into Belle-

vue farm, which they defended tenaciously, while the German attack which had been by now extended to the east by the 154th Prussian Infantry with two battalions in line and one in reserve, poured through the gap and struck the undeployed and unprepared advance guard.

In the eastern outpost sector the outguards of the 8th Company, the left support, were driven in, and the support retired foot by foot before the 154th's attack, finally abandoning Hill 265. The right support, down on the Ette road, was confronted only by patrols, and held its line. The sector commander held his two reserve companies at the eastern edge of Virton, ready to assist either of the supports but unable to tell in the fog and confusion just where aid was needed.

It was now seven o'clock. In the western sector the defenders of Bellevue farm, now only about 100 in number, had repulsed the enemy's effort to capture the farm, but seeing themselves too weak to resist another attack withdrew to the west, where they joined the French II Corps which was advancing. It was eight o'clock before the Germans attacked the empty Bellevue farm and occupied it. The center and left supports of the western outpost sector had not been attacked; they held their positions until masked by the advancing II Corps, and then returned to Virton and joined the reserve battalion of their regiment.

At eight o'clock in the eastern sector the two reserve companies were pushed north to aid the support retiring from Hill 265, and the three were able to hold firm. Many other French troops were now engaged and the outpost phase of the battle of Virton, which finally ended in a French withdrawal, was definitely over.

Comments

The missions of a force on outpost duty include security, reconnaissance, and counter-reconnaissance. It protects the main body from annoyance and, in the event of a major attack, resists long enough to enable the main body to prepare for action; by patrols it clears up the situation to its front and gains information of the enemy; so far as it can, it prevents the enemy's patrols from securing of information.

The complete lack of knowledge of the enemy's major forces before the clash at Virton, and the failure of higher authority to attach Cavalry to the outpost were matters beyond the control of the outpost troops or commander, and there is no need to comment on them here. However, every combat has its lessons and it might be worthwhile for those who may some day themselves be concerned with outposts in war to reflect on the outpost at Virton and to consider whether, so

far as lay within its power, it did all that might have been done to fulfill its mission.

As regards dispositions, it would seem that the areas allotted the two supports in the eastern sector were too dissimilar. The mission of the right support seems to have been primarily to hold the Ette road, the supposed danger spot, and the actual frontage that it could cover, so far as available information indicates, was not much more than 400 meters. The left support had a frontage of about 1600 meters, which included two minor roads. In the western sector three supports were used, with average frontages of about 800 meters each. Had three companies instead of two been used as supports in the eastern sector, the point where the Germans penetrated would have been somewhat more securely held.

As regards reconnaissance and counter-reconnaissance, it may fairly be said that the outpost was gravely at fault. In the eastern sector the outpost apparently knew nothing of the presence of German Infantry until struck by the hostile assault. In the western sector the hostile foot troops were discovered only when the strong enemy patrol ran into the outguard on the Ette road. German cavalry patrols were little hampered and were able not only to report the exact French outpost line but to mark it on the ground by vedettes.

As regards resistance offered by the supports, there may be room for difference of opinion as to whether that of the left support of the eastern sector was what it should have been. Instead of fighting in place it engaged in a delaying action, and every step in retirement opened wider the gap through which the Germans were pouring to the west. Yet it was attacked by overwhelming odds and would certainly have been quickly destroyed if it had stood fast, thus it is quite possible that the action it took may have gained the maximum delay under the circumstances.

Concerning the use of reserves, the failure to reinforce the danger point in the eastern sector earlier was due to the commander's lack of knowledge of the situation on his front. In the western sector the prompt reinforcement of the Bellevue farm support had an important effect in injuring and delaying the enemy. The use of the general reserve in the outpost action was probably not feasible, the advance guard already being in front of it before the hostile attack came.

The outpost at Virton was, by the very nature of events placed in a bad situation. Aggressive reconnaissance might have done much to make this situation better. The action is a reminder of the truth of the following sentence in the American field service regulations:

"The effectiveness of security measures rests largely upon the timeliness, accuracy and completeness of information."

Evacuation of Cavalry Wounded

By MAJOR R. P. WILLIAMS, *Medical Corps*

DURING the World War, Cavalry was used extensively by both sides under a great variety of conditions. from the close terrain of Belgium which had been under intensive cultivation for generations, to the deep sand of the Sinai desert; and from the parching heat of a summer in the Jordan valley, 1200 feet below sea-level, to the penetrating cold of the rains in the Judean mountains.

Under all of these conditions the cavalry forces suffered casualties and their medical troops faced the problem of the evacuation of wounded. The medical problem was complicated not only by the wide range of climate and terrain, but by the characteristics of cavalry tactics—highly mobile operations on extended fronts and at considerable distances from the main friendly forces.

American participation in the World War did not include the use of Cavalry as such. It is probably for that reason that the problem of the evacuation of cavalry wounded has not received the consideration in our service which it merits.

On the other hand, in future wars the belligerents will endeavor to gain a prompt and decisive victory in open warfare, using every effort to prevent being drawn into stabilized conditions. It is therefore to be expected that Cavalry will be more extensively employed and the evacuation of wounded from Cavalry will assume the proportions of a major problem for the medical services.

The German Advance Through Belgium, 1914

The advance of the German armies through Belgium, marking the beginning of the war, was covered by nine cavalry divisions. In addition, five cavalry divisions screened the advance of the armies south of Luxemburg.

The country covered, consisting of small farms with innumerable hedges, many canals and rivers, did not lend itself to the mounted action, which the Uhlans always sought, and the engagements were a series of dismounted attacks. Serious opposition was not encountered, and the wounded were surprisingly few and the armies followed closely on the heels of the Cavalry. All of these conditions lessened the evacuation problem.

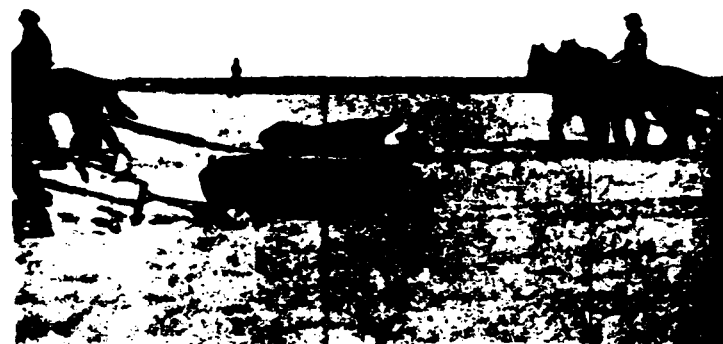
Regimental medical officers and their detachments were mounted and accompanied the Cavalry into action. Engagements were small and did not cover extended fronts, so that the wounded were collected

by the regimental medical personnel during and immediately after combat and taken over promptly by evacuation units sent forward from the armies.

Sinai, Palestine and Syria, 1916-1918

In the British operations against the Turks during the advance from the Suez Canal, Cavalry assumed the major role. The Desert Mounted Corps, of three cavalry divisions and a separate cavalry brigade, comprised about one-third of General Allenby's Egyptian Expeditionary Force, and he believed in using his Cavalry.

On the Sinai Peninsula vast deserts of deep sand were encountered where neither motor nor horsed ambulances could be used. The problems of collection and evacuation appeared almost insuperable.



Reproduced from "Official History of Australia in the War of 1914-1918"

Sand Sledges Used for Evacuation in Palestine

but the Anzac Mounted Division solved them by improvising sand carts and sand sledges. The carts were light, two-wheeled affairs and were provided with awnings. In the deepest sand even these could make no headway and sledges were devised consisting simply of sheets of galvanized iron, turned up at the front. They were drawn by two horses, one being ridden by the driver, and gave safe and comfortable transportation to two recumbent cases. These carts and sledges were used between the front and the tents of the field ambulances.

Throughout the campaign, resort was had to a means of transportation dating back hundreds of years, the camel cacolet—a pair of chairs or canvas hammocks stiffened with bamboo poles, balanced

by being slung, one on each side of the camel. In sand this proved a means of efficient transportation, but the suffering of the wounded was frightful. Patients were loaded into the cacolet while the camel kneeled. "When the animal, having received its double burden, rose with its peculiar forward jerk, it nearly pitched the patients out. Thereafter, each lurching step of the long, agonizing march stretched the unhappy victims upon a species of rack comparable to that of the



Reproduced from "Official History of Australia in the War of 1914-1918"

Camel Cacolets Used In Palestine for Evacuation of Wounded

medieval torture chamber."* When the British evacuated Es Salt they had many wounded in the hospital there. A large proportion of these were sent out ahead of the retiring troops in camel cacolets. The route was through the mountains, along a partially opened trail and down into the valley of the Jordan. There were no roads. It had been raining for days, and the trail was very slippery. That night must have been ghastly for the wounded, for camels are not fashioned for either mountainous or muddy going. When they could be forced to move at all they were constantly falling and they averaged a half mile an hour for the trip.

It is no wonder that the wounded cavalryman came to fear the cacolet and preferred to ride his own horse. This has always been a favorite method of evacuation, but has usually been considered as suitable only for the slightly wounded. However, in the evacuation of Es Salt the situation was pressing. It was necessary to bring all the wounded out that night, for the Australians had an unwritten law: "Leave no wounded on the field." Two with fractured thighs rode

*Desert Mounted Corps, Lt. Col. R. M. P. Preston, D. S. O., page 151.

for seven miles; one survived. But a better means was improvised. Beds of great-coats were built up on the horses, the seriously wounded were placed face down with their heads toward the horses' tails, hands were tied under the flanks and feet secured in nose-bags at the front. In this manner they were borne twelve miles and stood the trip remarkably well. The convoy of wounded was attacked by irregulars and had to fight its way through. Once Bedouins stampeded the horses. As day broke they came out into the open valley and were met by a salvo from the Turkish guns. The convoy was then galloped four miles in extended order through this fire.

In the battle at Ballin the Turkish Cavalry counter-attacked in the direction of a British regimental dressing station. All the wounded were put on horses. Seriously wounded either rode, their horses being led by the slightly wounded, or were carried on the pommel. All galloped two miles to safety.

The Anzac Light Horse used mounted litter bearers with the regiments, the bearers dismounting in action, their horses being with the led horses of the dismounted pivot of maneuver. This mounting of bearers was contrary to the British tradition, and it was only after several small cavalry operations had thoroughly demonstrated the impossibility of dismounted bearers maintaining contact with the fast moving troops, that G. H. Q. became converted to the innovation.

A new type of cavalry litter was developed. It was made by the regimental saddlers and consisted of two bamboo poles four feet long, joined by a piece of canvas three feet by nineteen inches. It proved invaluable when full-sized litters were not available.

Vittorio Veneto, October-November 1918

After defending for several months along the Piave River, the Italian Infantry forced a crossing, and advancing, produced a gap in the Austro-Hungarian lines. Four divisions of Cavalry were thrown into the breach. They fought their way through the scattered Austrians and, reaching the plain behind, took up positions across the lines of retreat, prevented the hostile troops from reforming, and materially hastened their collapse. Some of the Cavalry penetrated, in the course of seven days, to a depth of 168 miles.

Very little has been written on the medical service with this Cavalry, but it is probable that it functioned according to plans made prior to the pursuit. The exploitation of the gap in the enemy's line was a bold stroke, in which everything was risked in the hope of attaining a decisive victory. Medical plans were drawn accordingly. No arrangements were made for the evacuation of wounded occur-

ring in the breach. There, the safety of the Cavalry depended on speed alone. Regimental medical detachments and animal-drawn ambulances were ordered to follow the Cavalry, conforming to its gaits, and under no circumstances to stop until the final objective was reached. At this point the Cavalry assumed the offensive-defense and the accompanying medical troops operated as under similar circumstances elsewhere, that is, collected and treated the wounded. Evacuation had to wait until the following Infantry reached the Cavalry. In a successful exploitation, as on the Piave, this happens very soon; in the unsuccessful maneuver, the enemy closes the gap, the Cavalry is surrounded, and Cavalry medical troops and wounded thus trapped behind the enemy lines, are captured.

Medical Service With Cavalry. United States Army, 1930

The employment of the medical service with Cavalry is based upon the organization, tactics and technique of the Cavalry. The same general principles of evacuation apply to Cavalry as apply to the other branches. But the characteristics of Cavalry call for resourcefulness, ingenuity and initiative in the application of these principles. It is even more essential here than with the other arms that the medical officer thoroughly understand the nature of the operation of Cavalry and actually be a part of the Cavalry.

Due to the rapidity of movement of cavalry commands and the small personnel serving with them, all medical echelons should bear the following in mind:

Medical personnel and units accompany at all times the organization to which they pertain.

The tendency to disperse medical personnel by attaching undue numbers to detached cavalry units must be avoided. Medical personnel so dispersed is much less effective than if held in hand for use as required.

The mobility of medical units must be maintained. Supplies and equipment carried should be limited to those strictly necessary to the moment, placing reliance upon rapid and systematic replenishment. The efficiency of units will be greatly increased by training in horsemanship and in the care of mounts.

Casualties in all echelons should be rapidly concentrated at collecting points on the axes of advance, from which they can be taken over by supporting medical units in the rear.

Measures for the temporary care of casualties, pending their evacuation, must be improvised by all units.

It is often necessary to send casualties to the rear on their own mounts or on improvised transportation.

The evacuation from cavalry commands requires the close support of medical units operating from the rear in order that the command may not be burdened with casualties for the care of which but few means exist. Army units are utilized to furnish this support.

Medical establishments are set up for operation only as the situation demands or to meet contingencies of the immediate future. Establishments not required for such purposes are held in mobile reserve where they will be readily available to meet emergencies as they arise.

In the execution of evacuation, the demands of the military situation are paramount, and the basis of decision as to details of operation is the greatest good to the greatest number.

The medical detachment with a cavalry regiment consists of:

7 officers

35 enlisted men

They are permanently attached to the regiment they serve, and are mounted either on riding animals or on vehicles.

For tactical purposes they may be divided as follows:

A headquarters section:

1 Major, Medical Corps, the regimental surgeon

1 Lieutenant, Dental Corps

1 Technical Sergeant, the detachment First Sergeant

5 Privates first class or privates

1 motorcycle with side car

1 escort wagon, 4 mule, part of the regimental field train

1 wagon, spring, 2 horse, carrying the regimental aid station

Three squadron sections, each:

1 Captain or Lieutenant, Medical Corps, the squadron Surgeon

1 Sergeant or acting non-commissioned officer

4 Privates first class or privates

1 wagon, spring, 2 horse, carrying the squadron aid station

A veterinary detachment:

2 veterinary officers

14 veterinary enlisted men

In combat the headquarters medical section usually accompanies the regimental reserve. This allows the regimental surgeon to keep in close contact with the regimental commander and the military situation, adapting his medical dispositions to fit the operations of the Cavalry. He establishes the regimental aid station if it is necessary as a link in the chain of evacuation or for the care of casualties

occurring locally. More often he will hold his section as a medical reserve to reinforce, and, to a limited extent, supply the squadron medical sections. If numerous casualties are expected and the medical personnel with the regiment will apparently be inadequate, the regimental surgeon must use the band as a part of his medical detachment. Such procedure is unsatisfactory but is preferable to the detail of cavalymen trained for combat.

Squadron surgeons have the same relation to their squadrons and squadron commanders as the regimental surgeon has to the regiment. Each squadron surgeon has practically the same amount of equipment, transportation and personnel as has the headquarters medical section. His personnel is barely sufficient to man a small aid station, leaving no men available for litter bearer or troop aid squads. These latter duties, in our present organization, can only be performed by the detail of the cavalry bandmen to the surgeon. The squadron surgeon maintains the closest liaison with his squadron commander. His medical section goes into action with or near the squadron reserve. His aid station is not established while the Cavalry is in movement. It is established only when and where the grouping of the casualties indicates its need and even then a high degree of mobility should be maintained. During movement, wounded can only be dressed, collected into groups and left, with or without attendants, to be picked up later by supporting medical troops. As a last resort casualties may be left in the care of local inhabitants. Humanitarian interests, hope of reward or fear of punishment will usually insure the local care of such casualties as cannot be evacuated. But it must be the aim of the medical service to keep such cases to the minimum. The British in Palestine adopted as their standard: "Leave no wounded on the field," and obtained remarkable efficiency in their evacuation.

When a single troop of Cavalry is detached, the squadron surgeon should attach one or more enlisted men, with suitable supplies, from his medical section.

Each cavalry division has a medical squadron as an integral part of the division. This squadron is the counterpart of the medical regiment in the infantry division, but is much smaller. It operates under the same general principles as the medical regiment, but the details of its employment, being dependent on the characteristics of Cavalry, are often very different.

The medical squadron is composed of headquarters, one collecting group, one ambulance troop, one hospital troop and one veterinary troop. Each troop has two officers (except the hospital troop

with five) and fifty enlisted men. The ambulance troop operates ten animal-drawn and ten motor ambulances.

All personnel are mounted so that they can maintain contact with the Cavalry. Each troop is partly motorized and partly animal-drawn, allowing it to operate under any road conditions, and each is so organized and equipped that it may establish two small stations if necessary.

The location of stations is similar to that in the medical regiment. The stations are smaller, more mobile and the equipment often improvised. Every effort must be made to avoid the premature establishment of stations, for the mobility of the medical squadron is as important as the mobility of the Cavalry. Due to the small size of the squadron and the frequent wide dispersion of the Cavalry, the problem is a difficult one. Fortunately the casualties in mounted action are fewer than when dismounted, nevertheless evacuation can be effective only by the use of great resourcefulness and many improvised means. Half of the wounded can be evacuated on their own mounts. Maximum use should be made of all empty vehicles returning to the rear. The medical squadron must be closely supported by medical units of the army, which should be available to evacuate quickly the hospital station, to take over the care of the patients collected there or to clear the field of wounded in case the medical squadron accompanies the Cavalry in a further advance.

When practicable, elements of the medical squadrons are placed in echelon behind the pivot of maneuver and along the main axis of advance of the Cavalry. Frequently, however, the pivot of maneuver is at such a distance from the maneuvering force that an evacuation line must be established from each.

The collecting troop has all its bearers mounted. Its equipment is carried on a truck, an escort wagon and a spring wagon. In action, the bulk of the troop follows the pivot of maneuver, while one platoon follows the maneuvering force, which may be expected to produce most of the casualties. If the number of wounded justifies, each part of the troop will establish a small collecting station, from which the litter bearers push forward and gain contact with the regimental and squadron aid stations. From these stations and from the field, they evacuate casualties to the collecting stations or to collecting points. All wounded, whose condition allows, will be evacuated on their own mounts. At the collecting stations, dressings are readjusted and temporary care given. As rapidly as possible all cases are evacuated to the hospital station.

The ambulance troop is purely a transportation unit. Like the collecting troop, it is divided between the pivot of maneuver and the

maneuvering force. Its chief function is to transport patients from the collecting stations, collecting points or even regimental and squadron aid stations, to the hospital station. Motor ambulances are used for the long hauls, animal-drawn ambulances for short hauls or across country. Ambulances operating in front of the collecting stations usually convey casualties to these stations, where treatment is received in the ambulance and without unloading. The cases are then taken on back to the hospital station. However, if the road net, distances or military situation demand it, these cases may be transported direct to the hospital from the field without going through the collecting station. First importance is attached to the rapid and efficient primary collection so that no wounded are left unattended or in small scattered groups.

Detachments from the medical squadron operating with the maneuvering force should remain under divisional control and should not be attached to that force. This is to prevent interference with the mobility of combat troops. If, however, the maneuvering force is operating at a great distance from the remainder of the division, or if its mission is not closely related to the main force, evacuation units should be attached to it.

The hospital troop establishes but one hospital station and that is based on the pivot of maneuver. It should be beyond the range of hostile light artillery. Casualties are brought to it by the ambulance troop. This station is a small one, with capacity for only about one hundred patients. To facilitate mobility it should utilize existing buildings where the wounded may be left in case the medical squadron moves on. The hospital station is evacuated by medical units from the army. Arrangements should be made to assure that this evacuation commence early, as it is not contemplated that cases will remain long in the hospital station or that the hospital troop become separated from the cavalry division. Alternate means of evacuating the hospital station must frequently be employed, particularly the use of empty supply vehicles returning to the army.

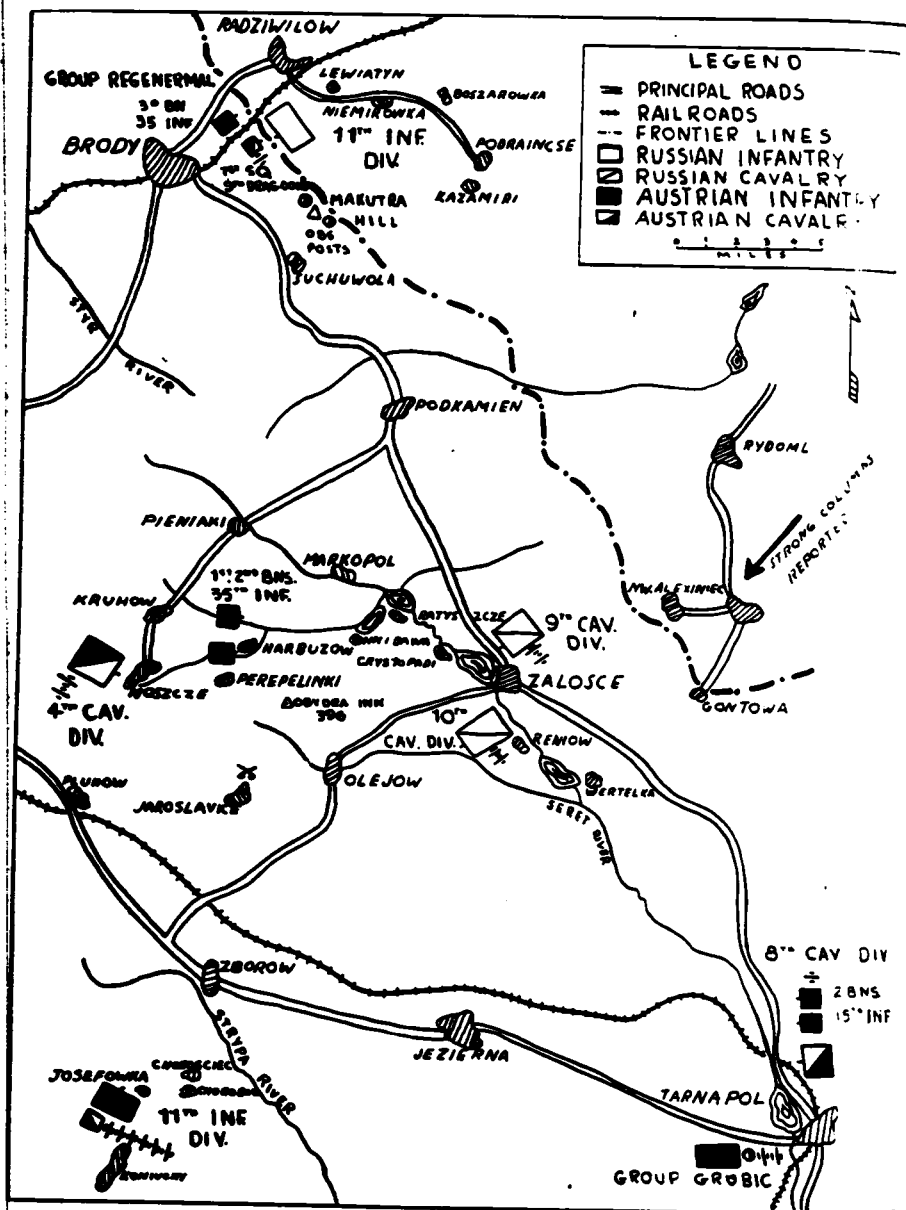
The above suggestions for the employment of the troops of the medical squadron and for the location of its stations are given merely as examples, but it must always be remembered that there is no routine method of using the squadron. One variation from the usual, the by-passing of the collecting station by ambulances carrying wounded from the field to the hospital station, is included to show that the employment is flexible, and necessarily so.

Another recent development in the evacuation of cavalry wounded is the airplane ambulance. This has received much more

attention in Europe than with us. Commercial airplanes can be quickly converted for this service. Airplane ambulances carrying from four to six patients and two medical attendants are now in use. Smaller planes, carrying one or two patients, can land as far forward even as the hospital station and carry cases direct to evacuation hospitals. Being relieved of the care of their seriously wounded would have a powerful moral effect on troops in the field and would facilitate the treatment of the slightly wounded—men who can soon be returned to duty with their units. The outlook for the patient is considerably improved because he receives definite treatment after a comfortable trip of only a few minutes as compared to hours or even days of jolting over the roads in an ambulance. Cases may be evacuated which have heretofore been considered non-transportable because of the severity of their wounds, since the use of the airplane ambulance involves little or no shock.

The Problem for the Future

In future conflicts it is probable that all belligerents will endeavor to avoid stabilized situations and rely on maneuver in the open to decide the issue. Under such conditions Cavalry will have an important role to perform, and commanders and the medical service will be faced by the problem of the evacuation of the cavalry wounded. This problem presents many complexities not found in connection with the less mobile arms. The solution will be found in a study of the results obtained in other armies and in the inclusion of the evacuation feature in our cavalry maneuvers. The problem of evacuating wounded from large cavalry commands, engaged in mobile warfare, should be recognized, studied and solved as an essential part of the peace-time training of our army. It is recommended that this problem be considered by the War Department General Staff, the Medical Department, the Cavalry and by commanders and staffs of cavalry units and of forces containing Cavalry.



Sketch No. 4. Situation in the Evening of August 20, 1914

The Cavalry Combat at Jaroslavice

By COLONEL EMIL VIDALE, RETIRED, *Austrian Army*

The first installment of this account, published in the July issue, describes the general dispositions of the Austrian frontier guards during the mobilization of the field armies on the Russian front. It follows the advance of the Russian 9th and 10th Cavalry Divisions across the border between Tarnopol and Brody and the orders and movements of the Austrian covering forces charged with the counterreconnaissance mission in this sector up to the night of August 20-21, 1914. The dispositions of the opposing forces during the night were as shown in Sketch No. 4.—EDITOR.

III. The Twenty-first of August. Situation in the Morning

AT daybreak the following groups were dispatched by the 4th Cavalry Division for reconnaissance:

One troop, 15th Dragoons, Lt. Baron Sardagna, by Kazi-miroka-Meteniow to Zborow.

Patrol Lt. Count Resseguier, 1st Uhans, by Obydra-Olejow-Zalosce.

Patrol Lt. de la Renotiere, 9th Dragoons, by Manajow-Crystopady to Zalosce.

The first rays of dawn of the 21st of August saw the regiments of the 4th Cavalry Division marching to the ordered assembly point at the southeast egress of Nuszcz. General von Zarembo at the advance guard gave the march order. According to the altered situation as it resulted from the order of the XI Corps (see page 382) he had abandoned the idea of advancing by the Obydra Inn toward Zalosce, and had resolved first to make for Hill 418 east of Wolczkowce and there to await developments. The two battalions of Infantry were expected to have reached the Obydra Inn in the meantime. To them was sent Lt. dell Adami of the staff with the order: "The 1st and 2d Battalions of the 35th Landwehr Infantry will march to the Hill 416 (Jamny) and hold it against hostile attacks from Zalosce or from south. . . The 4th Cavalry Division will arrive on Hill 418 at 5:30."

The terrain in this vicinity is one of low rolling hills separated by marshy streams which often present considerable obstacles and can be crossed, apart from at bridges, only by infrequent fords and then only with great caution. The poor villages lie in the low land for protection from the icy winter winds. At this time the corn was entirely cut, leaving the ground open and bare. Over this type of country the Austrian cavalry officers had maneuvered in peace time and had become confirmed in the love for mounted action even in cases where sober consideration, based on the recent experiences of war, pointed to the more prosaic solution of dismounted combat.

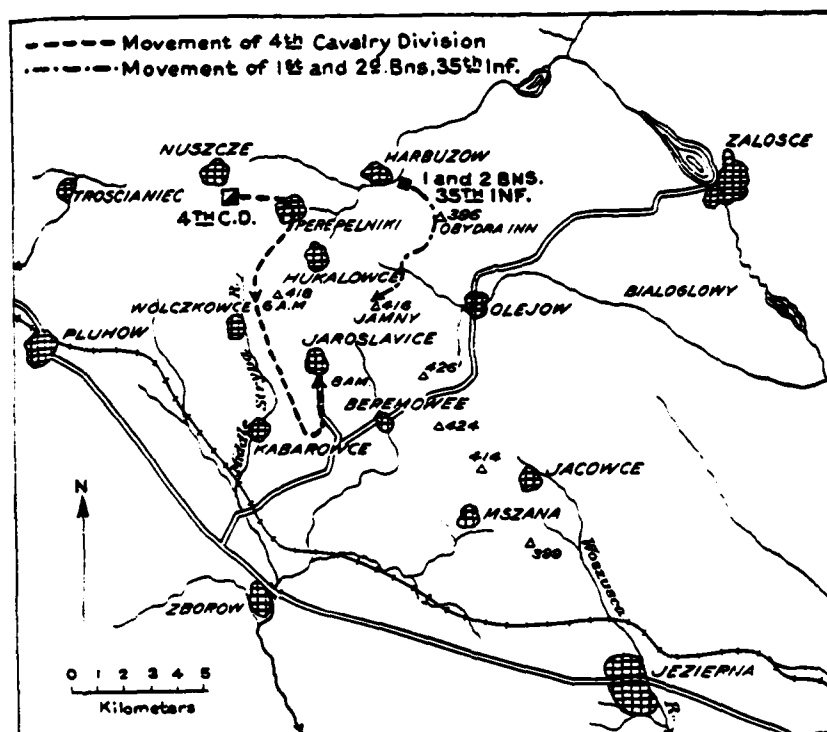
The night had been cool. So everyone felt cheerful, when the

morning sun of the 21st dispersed the little clouds and agreeably warmed riders and horses. Moving across Perepelniki we were informed by the inhabitants that Russian cavalry had roamed through the environs; a fact, however, that was known by our own reconnaissance. Hill 418 was reached without incident and the division was put behind it in fighting order. As is known, General von Zarembo intended to await here the results of the reconnaissance. No news had arrived from the patrols up to this time, as the patrols had been dispatched only a short time before the start of the division from its quarters. It was now about 6:00 A. M. At the very best, news about the enemy could be expected between 8:00 and 9:00 A. M. if he had not yet passed west of the road Zalosce-Olejow-Zborow. In this case, however, the extensive outlook from Hill 418 guaranteed that he would be discovered in time. There was no reason to change the first resolution, namely, to await further knowledge of the situation and of the intentions of the 11th Infantry Division, as until this time there had not been sufficient information to form a basis for a plan.

Shortly after six o'clock it seemed as if the thunder of cannons could be heard from afar. Maj. Gen. von Zarembo resolved to start the division toward Zborow. He himself in an article which appeared in the "Oestereichische Wehrzeitung" has denoted this resolution as a mistaken one and says: "The course of the whole action was disadvantageously influenced by the premature start from Hill 418, caused by the order of the XI Corps. In spite of this order I had better have hesitated and waited for a longer time."

This to-the-point self-criticism of the General may be agreed with or not. But there are surely weighty arguments to justify the march toward Zborow, especially the above mentioned order of the XI Corps. This order speaks of an enemy advancing "by Olejow toward Zborow" and gives instructions to the 4th Cavalry Division to operate in the enemy's rear by rushing forward to Zborow. According to the same order, the 11th Infantry Division was supposed to be in Zborow, or at least not far from it. If the division lingered longer on Hill 418 it was possible that it would come too late to engage in the combat of the 11th Infantry Division and that the long desired opportunity to collar the enemy would be missed. So the division was put in motion at 6:30 A. M. and the two battalions of Infantry were ordered to continue their march from Hill 416 (Jamny) toward Zborow. When the division reached the line Beremowce-Kabarowce, news arrived from the patrols as follows: "At Zborow neither our own nor hostile troops; enemy Cavalry at Olejow."

Thus the original idea, to seek for the enemy between Zalosce and



Sketch No. 5. First Movements of the 4th Cavalry Division on the Morning of August 21

Olejow had been right; therefore, the march from Hill 418 to the south had been aimless. From the line Beremowce-Kabarowce it was impossible to operate in the enemy's flank and rear as ordered. The commander resolved to perform an about-face and to go in the direction of Olejow.

About three kilometers southwest of Olejow, the Olejow-Zborow road crosses the ridge of hills that extends from Hukalowce through Hills 416, 426, 424, 414 and descends south of Jezierzna. From this ridge there is a wide view, not only over the ground on both sides of the road from Zalosce to Zborow, but also far southward over the railroad and highway, Pluhow-Zborow-Jezierzna. The dry ground increased the dust that betrays movements of Cavalry. A movement of troops out of sight of the adversary was therefore only possible along the bottom of the valleys or under cover of woods. The region near Olejow is not wooded except for two small copses southwest of Olejow. When the commander of the 4th Cavalry Division learned that strong enemy Cavalry was at Olejow, there were two possible ways

for him to act, in accordance with his task. The more cautious was to guide the division back to the position on Hill 418 which it had left in the morning, and to draw the two battalions of Infantry nearer to it. It was possible to withdraw from a closer contact with the enemy until the 11th Infantry Division approached or, in case a keen rush of the enemy made the combat inevitable earlier, to fight under rather favorable circumstances. In this way the initiative would remain in our hands.

The second possibility was, after turning about, to push forward in one rush on Olejow, for the purpose of seizing the most prominent height (Hill 426); a very risky enterprise, for, if the enemy reported at Olejow also approached Hill 426 (as he did, in fact) he could reach it sooner than our own division. Hence there would follow for the latter the awkward situation of an attack uphill against an enemy that surveyed the movements of our troops as though on a war game map, but could keep his own arrangements out of our sight. On the other hand, in this case it was probable that the two battalions of Infantry approaching from Hill 416 would enter the fight and, by engaging a part of the enemy's forces, would influence the events in our favor.

Only these two courses offered a chance of success. Perhaps earlier in the morning it would still have been practicable to "hesitate and wait," as General von Zarembo writes. It was not so now. The 4th Cavalry Division had temporarily given the tactical lead to the enemy by its march to the south. Now there was the question of regaining this lead. It was absolutely necessary either to reach Hill 418 or Hill 426 in one rush and thus regain control of the situation. The solution now chosen, however, did not meet either of the two eventualities. The division proceeded, without especial haste to Jaroslavice, where at 8:00 A. M. it was placed in the formation shown in Sketch No. 6. So there was adopted a middle course between the energetic rush toward Olejow and the cautious occupying of a lurking position on Hill 418. It bore in itself the seeds of failure, as do most middle courses in war.

At this time two battalions of the 15th Infantry (attached to the 8th Cavalry Division) which had started under command of Col. Rudel at 6:00 A. M. from Tarnopol, had made about half of the distance from this place to Jezierna. The 8th Cavalry Division, with ten squadrons and one battery, was just leaving Zagrobella for the same destination. The 11th Infantry Division remained in its quarters.

Both the Russian divisions had passed the night, as is known, in and near Zalosce. On the 20th they had pushed their reconnoitering

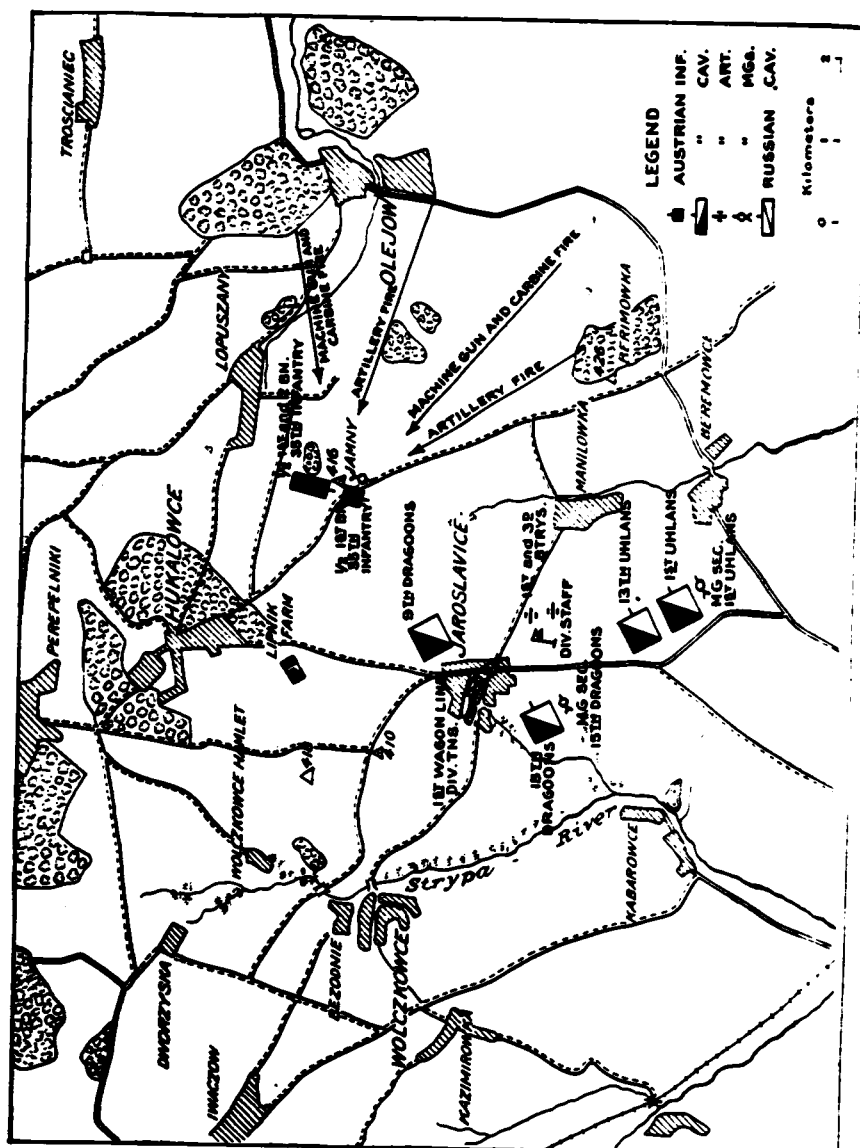
patrols forward as far as the railway line Pluhow-Jezierna. On the 21st of August, their 9th Cavalry Division was to advance in the direction of Zloczow, the 10th to Zborow. The commander of the 10th Cavalry Division, Lt. Gen. Count Keller, had started his units at 7:00 A. M. Strong Austrian Cavalry was known to be in the environs, but the Russian reconnaissance had failed to learn its position. The regiment of Cossacks formed the advance guard. The rest of the division followed, formed in one column. The Cossacks had reached the Beremowce Inn shortly after eight o'clock when an officer sent by a reconnoitering detachment arrived with the report: "Strong enemy Cavalry advancing from the direction of Zloczow reached Jaroslavice at 7:30 A. M." Count Keller considered it probable that the Austrian Cavalry would meet with the Russian 9th Cavalry Division marching to Zloczow, and resolved to take part in the prospective combat. He ordered the Orenburg Cossacks to march in a northwesterly direction, and had his two batteries put in position on Hill 426. Two squadrons had been dispatched in the morning for reconnoitering and had got the order to secure the left flank of the division.

IV. The Twenty-first of August. First Phase of the Combat

As we know, the two battalions of Lt. Col. Reichelt had been ordered, early in the morning, to move from Obydra Inn to Hill 416. Leaving the 4th Company behind as an escort for the first wagon line* in Hukalowce, they reached the Hill Jamny without disturbance on the part of the enemy. Lt. Col. Reichelt had done his utmost, to make up for the lack of Cavalry by despatching infantry patrols, but of course he could not arrange an extensive reconnaissance in this way. However, he was informed by them that Troscianiec was free from the enemy, but Olejow strongly occupied. From his own observations he had made out enemy patrols descending from the hills south of Troscianiec and had resolved to advance in that direction in fighting order. At this moment—it may have been 6:45 A. M.—the order reached him to proceed toward Zborow without delay. He ordered half of the 1st Battalion with the Machine Gun Section, under the command of Maj. von Eccher, as advance guard. The main body was to follow at a distance of 1000 paces. One company was sent out as a left flank guard; the first wagon line directed by Kudobince to Zborow. The men had rested and laid aside their knapsacks. The order was given to prepare to march.

At this moment, approximately at nine o'clock, thunder of cannons sounded nearby. A whizzing overhead, twelve sharp crashes

**Kampf Train Staffel.* The part of the train, which included the wagons, loaded with ammunition, the rolling kitchens, etc.



Sketch No. 6. Situation When the Russians Opened Fire

and a hail of shrapnel bullets poured upon the two battalions just forming for march. Unfortunately, Lt. Col. Reichelt's horse was mortally hit. It fell and buried its rider under its body. A second volley of the hostile artillery followed immediately.

If here on Jamny hill the 35th Landwehr Infantry Regiment showed a moment of weakness, it amended this fault afterwards in a great many battles and fights. Like thunderbolts the Russian shrapnel struck into the ranks of the completely surprised men. Several officers and non-commissioned officers were killed or wounded; the commander lay on the ground apparently dead. A wild panic took possession of the leaderless troops. They hastened downhill toward the west in complete disorder, pursued by the enemy fire. But the panic had seized only the main body, which had not yet formed ranks. The half battalion of the advance guard remained firmly in the hands of its commander. It had been just about to continue the march and was therefore already in a state of readiness. Unhesitatingly the two companies followed the order of their leaders, and formed in skirmish line on the hill. Upon this little force now poured the hail of shrapnel, fired by four batteries.* Lt. Gen. Count Keller then ordered the regiment of Cossacks to charge against the still desperately opposing remnants of the half battalion. The Orenburg Cossacks gave the expiring adversary the *coup de grace*. Those of the foot soldiers who had been spared by the fire fell now under the sabers and pikes of the Cossacks. Some were taken prisoners; only a few succeeded in escaping into the woods of Hukalowce.

The Russian leader thus had annihilated one quarter of his Austrian adversary's Infantry and had put the rest of it to flight. Doing so, he had turned the first phase of the combat in his favor and had obtained an advantage that he was determined to hold firmly.

V. The Twenty-first of August. Second Phase of the Combat

Maj. Gen. von Zarembo had, through a scout group, received the confirmation of the above-mentioned report about the presence of strong enemy Cavalry in the region between Olejow and Hill 426. After arriving in the position at Jaroslavice, he and his staff dismounted and joined the batteries that stood ready to fire on the crest just southeast of the village.

From the divisional staff one of the assistant adjutants had been sent forward to reconnoiter the ground. Now he returned at a gallop and reported enemy artillery placed on Hill 426. He added that it would probably begin to fire at once. It seemed this might become

*The batteries of the Russian 9th Cavalry Division took part, too.

rather uncomfortable. The division stood as if on a platter, exposed to full view from the hill behind whose slopes and groves something mysterious was apparently happening. The brigade commanders ordered some little displacements for the purpose of gaining better cover in the undulations of the ground.

Suddenly the thunder of guns was heard from the northeast. Our Infantry appeared first singly, then in swarms, hastening from the Jamny hill downwards toward the Hukalowce wood and the village of Jaroslavice. A great many had cast away their knapsacks, some even their rifles. Suddenly we came under shrapnel fire. One of the first projectiles knocked down some of our gunners; another exploded in the midst of the divisional first wagon line about to leave Jaroslavice and killed the commander of the field ambulance. The next shrapnel hit the Machine Gun Section of the 1st Uhlans. Some pack horses broke loose and ran into the squadron columns of the regiment, throwing the Uhlans into disorder. The regiment set about finding cover, at first at a walk, then at a trot. It has never been made certain who gave the order for this movement. The trot became a gallop, the gallop full speed. From the western edge of Jaroslavice extends a deep ditch to the Strypa. It did not stop the course of the rushing regiment. Many of the tired, heavily laden horses plunged into it; other fell over them. Only on the west side did the officers and non-commissioned officers succeed in restoring order. The further movement of the regiment was executed at a slow pace and without trouble.

Major General von Zarembo had not ordered this displacement. Therefore he was most disagreeably surprised to see the retreat of the 1st Uhlans somewhat in dissolution, in a northwesterly direction, followed by the 13th Uhlans in perfect order and calm, however. The commander of the 13th Uhlans, Colonel Count Spanochi, was standing at the opening of the fire with his field officers a little to the east of his regiment, in order to observe the situation with his own eyes. When he saw the regiment in motion he galloped quickly after it, anxious to learn by whose order this had happened. The only answer he received was that someone (probably from the 1st Uhlans) had called out that an order for retreat had been given by the command of the division or of the brigade, and the regiment therefore had followed the 1st Uhlans. In the meantime, General von Zarembo had perceived that a longer stay of the division at Jaroslavice in full sight of the enemy and in perfect range of his artillery was absolutely impossible. Therefore he gave the order: "The 35th Landwehr Infantry will rally at Wolczkowce, all four horse regiments will be placed be-

hind Hill 418, the batteries cease fire one by one and follow the Cavalry." Thus the retreat of the 1st and 13th Uhlans was, so to speak, subsequently sanctioned.

Our regiment (13th Uhlans) crossed the difficult ditch at a practicable place and therefore without accidents. We saw the 9th Dragoons coming from the western road out of Jaroslavice at a rather quick pace. But here also there had been no panic. The 13th Uhlans moved at a quiet trot to the west. Still the shrapnel howled. In a moment it seemed that our pace would increase to an undesirable speed. The trot became faster, some horses began to canter. At this point, the Colonel gave the command: "Walk," and held the regiment marching at this gait until complete calm had been restored.

One of the two batteries (No. 1, Capt. von Stepski), had not yet opened fire. It withdrew without difficulty from the combat and followed the division. It was more difficult for the other battery (No. 3, Capt. Taufar) to limber up. This battery, after the first two shots, mistakenly discharged at our own retreating Infantry, had directed its fire against Russian batteries and thus attracted their fire upon itself. The approaching limbers were caught by some volleys of shrapnel. Several horses were killed or wounded, others broke loose and ran neighing and snorting across the field. The batteries had remained in the position near Jaroslavice longer than the cavalry regiments. When Col. Count Spanochi, marching with the 13th Uhlans in the direction of Wolczkowce, heard that a battery was still in the rear, he ordered the regiment to form into line of squadron columns facing east, and resolved not to continue the march until the Artillery should be in safety. Only when he got information to this effect did he continue the march in the former direction. Thus it happened that the 13th Uhlans, which had begun to retreat from Jaroslavice as the second regiment, was now placed at the end of the division, and was the last to reach the hollow southeast of Wolczkowce, where the other regiments and both batteries had arrived already.

It proved that the losses of the four horse regiments did not amount to much and combat power was scarcely diminished. Worse were the losses of the Artillery. It had lost many horses, so that the gunners were compelled to mount the limbers. They now stood firing on the Russian Artillery which still occupied Hill 426 and shot shrapnel continually. The Russian fire effected no impression upon our men, principally due to the high burst of the shrapnel. General von Zarembo had resolved, as we know, to put the division behind Hill 418, ready for a new advance. The two battalions of Infantry, that is, the remnants left after the extermination of its advance guard,

were streaming back in disorder from the Jamny Hill to the Strypa. If this precious fighting force were not finally to be abandoned to its fate, a support had to be prepared, in order to make possible its rally. The scattered groups had retreated partly across the Hukalowiec woods, partly north of Jaroslavice, and partly through the village itself. From time to time they had tried to make a stand and had exchanged some shots with the enemy. The last mentioned groups had settled themselves on the eastern border of Jaroslavice and retarded the advance of the Cossacks by their fire. In the low ground of the Strypa the exhausted men could now breathe again. The arriving officers caught up with the fugitives; Lt. Col. Reichelt, who had mounted another horse after his accident, arrived also. The reorganizing of the units was begun. General von Zarembo, it therefore appears, persisted in his first plan to remain east of the Strypa and to reach Hill 418.

The Cossacks had brought about seventy prisoners from the 35th Landwehr Infantry to their commander, Lt. Gen. Count Keller. From them he learned our strength and organization. He had smashed our Infantry in the first onset. He had forced in the second phase the main body of the Austrian division to retreat. The game had begun for him auspiciously, though the high trumps had not been played.

The 8th Cavalry Division was marching on the road to Jezierna. It had sent out a great many reconnoitering patrols in the region between the Seret and the highroad Zborow-Tarnopol, as far as the road Zalosce-Zborow. It had not yet received any reports from them. It was nearly ten o'clock.

VI. The Twenty-first of August. Third Phase of the Combat

General von Zarembo's plan was not finished with the displacement to the west of Hill 418. He now intended making use of this hill as a springboard to push forward by the farm Lipnik, and so to force the encounter with the enemy.

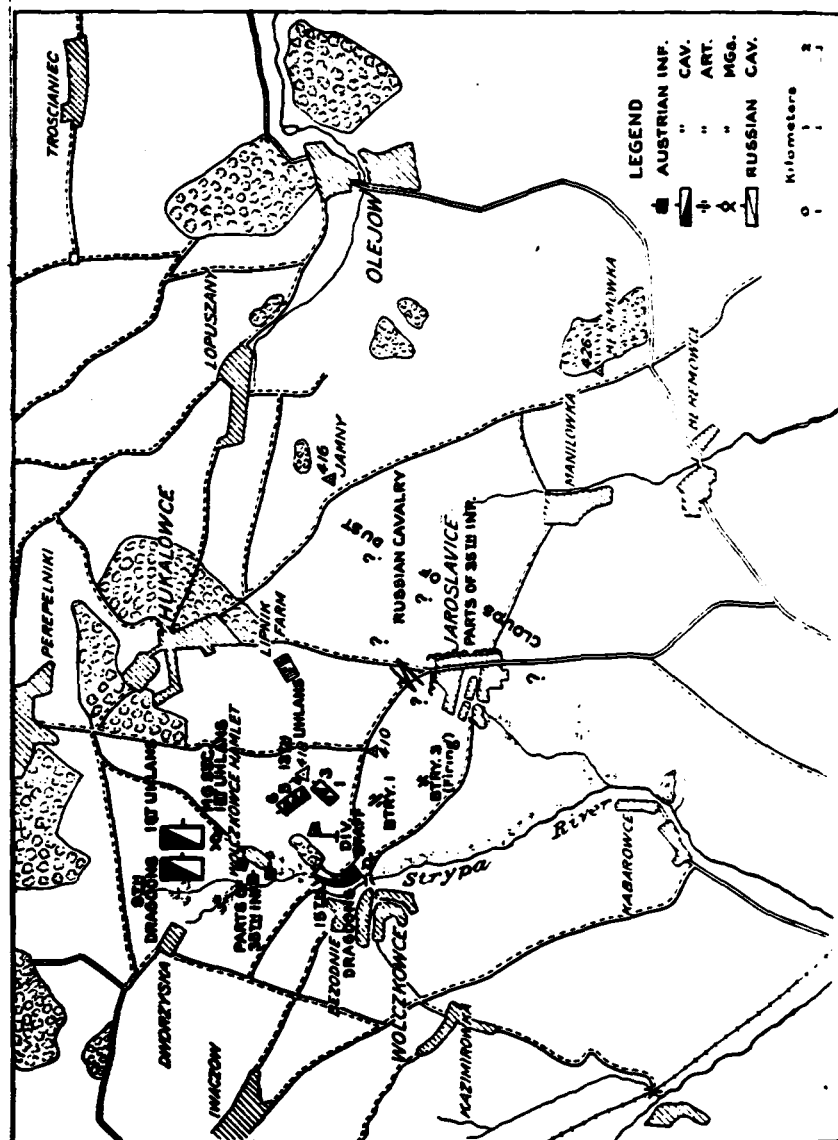
In consequence of this resolution the Artillery was ordered to stop fire successively by batteries, to wait for the arrival of the Brigade Ruiz (15th Dragoons and 13th Uhlans) on Hill 418, and then to follow to that place. Not an easy matter under heavy fire. The four cavalry regiments were ordered to begin the movement north along the bottom of the Strypa valley, covered by its slopes from enemy sight and fire. They set out marching in the sequence: 1st Uhlans, 9th Dragoons, 15th Dragoons, 13th Uhlans. In regard to the

enemy this movement represents a flanking march. It is a striking fact that it was not protected by a flank guard toward the east, but the space that had to be covered amounted to only two kilometers. The Russians had last been seen at Olejow; they had up to this time evaded every encounter and nobody thought that they would seek one now.

The order of the division commander had not come to the regiments in time, or probably had reached them in an incomplete or altered form. I did not succeed in finding out the reason for this. In fact, the march did not ensue in a formation fit for combat nor in a united march formation, but each regiment pursued for itself the way to the new rendezvous. The 1st Uhlans marched along the eastern bank of the Strypa as far as the hamlet Wolczkowce (about one kilometer north of the Bezodnie farm). There the regiment formed line of columns facing east. The 9th Dragoons crossed the Strypa on the bridge in the village and marched thus along the western bank of the river, crossed it again at a practicable place, and then formed mass* behind the 1st Uhlans. It stood, therefore, with its rear directly on the border of the swamp. Both regiments were here completely hidden from the enemy's sight, but the view toward the east was limited to a few hundred meters. The 15th Dragoons had followed the 1st Uhlans only after a delay of some minutes. According to the dispositions of the divisional command it presumed the 9th Dragoons to be ranged before it. The regiment moved toilsomely between the small grove about 400 meters north of the farm Bezodnie and the swampy bed of the river. The 13th Uhlans had followed the 15th Dragoons closely until Count Spanochi perceived the uncomfortable passage between the wood and the marsh, when he resolved to lead the regiment east around the wood. Thus it got upon the broad ridge that slopes steeply from Hill 418 west to the Strypa, gently flattening toward the village Jaroslavice and Manilowka. At the hamlet Wolczkowce we saw a body of Cavalry. These were the 1st Uhlans and 9th Dragoons, already placed in the above mentioned concentrated formation.

The 13th Uhlans marched at a walk in regimental column, the second half-regiment (the 6th, 5th and 4th squadrons) under command of Maj. Count Rummerskirch, leading, then the first half-regiment (the 3d and 1st squadrons) under my command.* The colonel was riding ahead of the leading squadron on the side toward the enemy. The staff of the division stood about eight paces east of the small wood, expecting the 1st Dragoons to come forth from the defile.

*Mass. The squadrons formed in column are placed in line side by side, with ten paces interval between them.



Sketch No. 7. Situation at the Moment of the Charge by the 1st and 3d Squadrons, 13th Uhlans

Both commanders of the brigades, Maj. Gen. de Ruiz and Col. Count Huyn with their staffs, stood close by. We (13th Uhlans) were just about to descend from the ridge at Hill 418 and to join the regiments at the hamlet Wolczkowce. The head of the regiment had almost reached the low ground, the tail was already a little below the crest. I was riding at the right of my two squadrons. At this moment I heard from the rear the call: "Major, Major!" Looking back I saw Lt. von Kochanloski, the file-closer officer of the last (tail) squadron galloping up to me. I turned my horse and rode up to him. He pointed with his arm to the right: "The Russians!" I galloped a few paces back and there finally I saw what we all had longed for, but would not have desired just at this moment—the enemy. (See Sketch No. 7.)

A broad front whose flanks I could not make out was moving against us, behind it clouds of dust, probably reserves following. The whole Cavalry body advanced at a moderate trot, the distance between it and us probably about 1400 to 1600 paces. There was no more time to deliberate about the enemy's strength and grouping. One thought flashed through my mind: "If the Russians succeed in reaching the crest of the ridge, our division, which is just rallying in the low ground, not expecting an attack, is lost. No time for the division to form in fighting order; it will be forced into the swamp. Therefore, a stumbling block must be put in the enemy's way to stop him until the division is ready to fight."

I resolved to attack. The commander of my regiment was more than 500 paces distant from me (five squadron columns length). I should have liked to send him a message, but it was too late. If my resolution was to effect its purpose to stop the enemy attack it had to be performed at once. Some forty or fifty paces below me I saw a group of riders; among them I recognized the commander of our brigade, Maj. Gen. de Ruiz. To him I called: "The Russians have come; I shall attack them; please support me." The general waved his hand. "Good luck" it probably meant, and I cantered down to my squadrons which were already descending from the crest.

"Right wheel into line!" Precisely as on the drill ground the troops wheeled from column into line. There was an instant's halt; the squadron leaders gave the order to draw swords and fix the sword knots round the wrist. No more time for inflaming allocutions.

*Each Cavalry regiment was divided into two half-regiments (corresponding to the battalions in the Infantry); each half-regiment had three squadrons. The second squadron of the first half-regiment was detached. Besides six squadrons each regiment had also a pioneer troop.

"Lada, we shall charge," I called, and with thundering "Hurrah," the Uhlans answered, waving their swords.

I command "Trot." We reach the crest. "Gallop." Now the enemy has perceived us. Through its wide-extended, brown-yellowish line, from which the pikes tower steeply, goes a movement. Trumpet signals sound across to us; the enemy has set into a gallop, too. Still some seconds and we are at a hundred paces from them. "Charge." The "Hurrah" of our Uhlans is drowned by the "Urta" of the much more numerous Russians, and now we are in the midst of them.

Riding, as prescribed, in front of the base squadron. I was ten paces in front of our line. Now my horse, a young but vigorous half-bred which carried less weight and was more rested than the horses of the troopers, carried me at full speed into the Russian ranks. We had encountered the Nowgorod Dragoons, which—four squadrons in number—formed the right wing of the Russian first attacking line. We had been taught from descriptions of former charges, and had seen for ourselves on the drill ground, that after the command "Charge," the line passes over in a number of wedges whose points are formed by the most intrepid riders on the fastest horses. Practically it was not quite so. At the command "Charge," given at eighty to a hundred paces from the enemy, equal velocity on both sides presumed, there remain hardly five seconds until the collision. The cavalry horse, loaded with an average weight of 135 kilograms, and tired by preceding efforts, has not much more velocity to add when it moves from a gallop into full speed. At least a superiority of speed will not have a remarkable effect in this short time. So I remember the Russian line as a very softly undulated one and I believe ours was not much different.

The touch of the Russians was not so close as ours.* Only thus is it explicable that the Russian dragoons which I met in the moment of collision, apparently astonished at the strangely clad madman that rode wildly shouting against them, politely gave way instead of spitting me with their pikes.†

In an instant both fronts had dissolved in a number of groups in the midst of which wildly howling men with dust-blackened faces struck each other, while their entangled horses strove in vain to escape from this frightful throng. Between the groups were spaces enlivened by riderless horses trotting in nervously cadenced steps and horseless riders. We had always imagined the close fight of Cavalry

*In the Austrian Cavalry the touch (*Führung*) was prescribed to be half a hand-breadth between the riders, measured from one stirrup to the other.

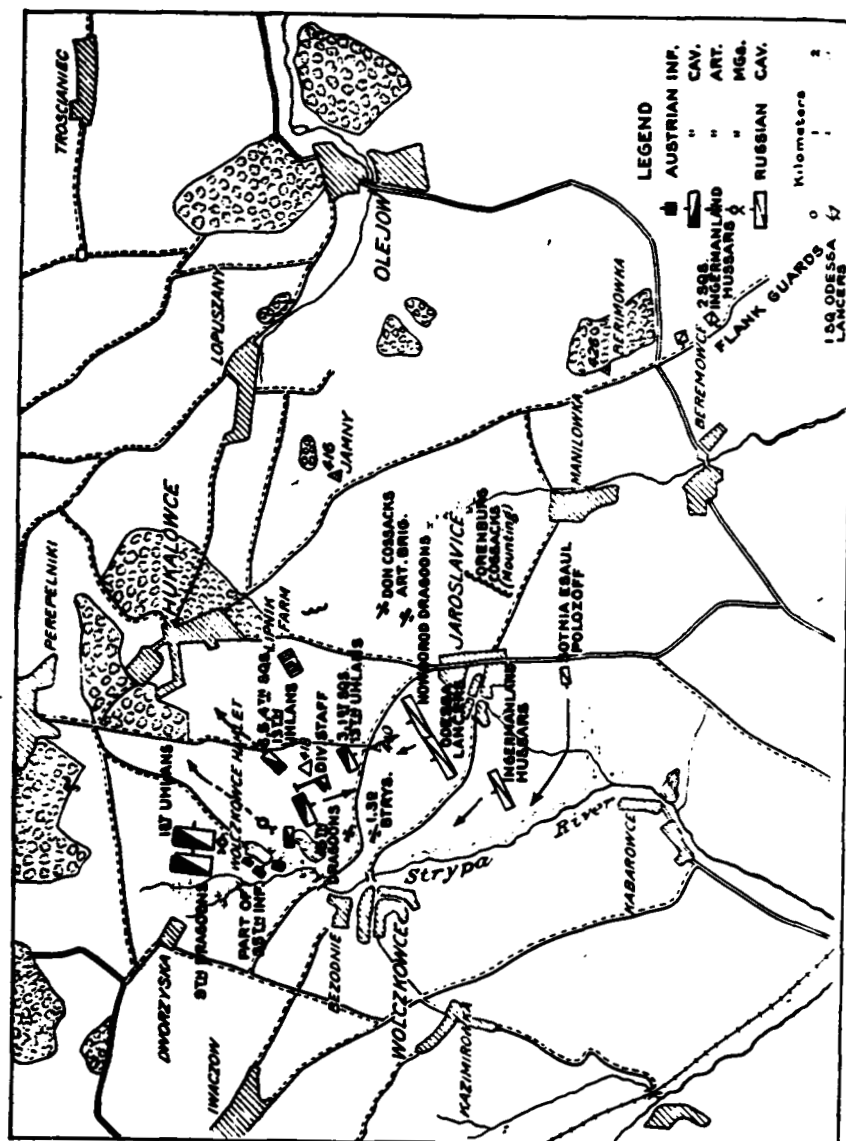
†All Russian Cavalry had lances.

as a combat that would be fought out with the bare sword. Now there was a cracking and slashing all round me—pistol shots discharged at closest range. I remember a Russian dragoon who, dismounted, fired at random into a fighting swarm, keeping his carbine half levelled at his hip.

It seemed almost that we should keep the upper hand, that the skill and the careful drill of the Austrian cavalryman for mounted combat would compensate for the inferiority in numbers. Though the Russian lances had emptied many a saddle of ours in the first impact, now, in the hand-to-hand fight, the Austrian sabre made good. Some of the earth-colored riders released themselves from the tangle and galloped away. One of them I wanted to overtake. He rode away loudly shouting and pushed against me with his pike. I felt a blow at my breast; I disregarded it. From the front and from both sides Russian riders galloped toward me. I was furious that they came in my way; I must strike this little rascal down from his horse. A burning pain in the right side of my breast made me shrink a moment, a grazing shot, as it proved afterwards. No matter, I almost had him within the reach of my saber. Then I felt a stab in my back so that I lost my breath and felt like a meal bag from the saddle. It was a saber thrust between my ribs which had pierced the lung. Lying on the ground I saw a line of Russian riders hurrying along. I drew the *furuhlanka** over my head, but they had already galloped over me without grazing me by a horse's hoof. Machine gun fire crackled all around me, over the space where I was lying. I saw the dusting of the projectiles on the dry ground just before me. Russian riders raced back in the direction from which they had come; swarms of my Uhlans hastened across the battlefield, now almost empty. The combat was finished, at least in this place. It is impossible for me to fix precisely its duration; it may have lasted about ten minutes. Shortly afterwards, as I still lay on the same spot, I was further attacked and wounded by Cossacks of the Orenburg regiment which had just arrived in the fighting zone. I lost consciousness and was picked up by a Russian sanitary patrol in the afternoon. Herewith I was eliminated from the events of the war, not only for this day, but also, to my greatest displeasure, for thirteen months longer, because I succeeded only in the autumn of 1915 in escaping from captivity and in returning to Austria.

My personal experiences in this scrimmage were that of a simple fighter in the front, for such is the leader of a cavalry unit from the

*The Austrian Cavalry had, besides a cloak, also a short furred frock coat which was worn hanging round the left shoulder; with the Uhlans it was called the *uhlanka*.



moment he has given the command "Charge." I have hoped by describing them to make the picture of a cavalry combat more vivid.

The combat had remained undecided on this northern wing. Neither adversary had succeeded in obtaining superiority; neither had held the fighting zone; neither had taken up the pursuit. Both retired in the direction from which they had come. The Austrian Uhlans had finally succumbed to the enemy's superior force. The Russians seemed to have been induced to retreat by the losses endured in the close fight and perhaps also by the vehement fire of the machine gun section of the 15th Dragoons. (Page 553.)

Let us now follow the action of the 15th Dragoons. The regiment had been hindered in its way through the wood-marsh defile by parts of the train of the 35th Landwehr Infantry which had retired thither. Arrived at the northern border of the grove, the re-establishing of the troop column was ordered. Maj. Gen. von Zarembo with his staff was at this instant on the right and ahead of the first troops that were just leaving the defile.

This was the moment when I called to Gen. de Ruiz that the Russians were advancing and that I was going to attack them. At the staff of the division one saw squadrons wheeling into line and starting toward the east. The commander of the Artillery came along at a gallop and shouted: "My batteries are attacked!" On the crest appeared Capt. Baron Schwarz of the divisional staff, who had been sent forward for reconnoitering. He signalled: "The Enemy." These occurrences probably came to pass instantaneously. They informed the commander of the division that the enemy was near. Indeed there already appeared at a distance of about seven hundred paces a line of earth-colored riders, the left wing of the Russian attacking front.

General von Zarembo ordered the staff trumpeter to sound "Charge." He himself drew his sword and rushed in among the enemy. His whole staff and the staffs of both brigades followed him. That was the conduct of a valiant soldier, but not that of a leader. As we shall see, two and a half or at least two completely intact regiments were at the disposal of the divisional command. It was the task of the commander-in-chief to direct them so that every saber would be brought to bear on the enemy. At any rate, it was an emergency when at least a part of the staff should have been detached, either by order or by its own initiative, for the purpose of preserving the continuity of command. Nothing of this sort happened. Both commanders of the brigades followed the example of their martial chief. (See Sketch No. 8.)

The 15th Dragoons was commanded by Lt. Col. von Brosch, sub-

stituting for the colonel. To him Maj. Gen. de Ruiz gave the signal: "Draw swords," and immediately afterwards the brief order: "Attack the Russian Cavalry." Lt. Col. von Brosch made the regiment form line to the front without even seeing his adversary. Only three squadrons and half* had formed in line when he perceived the Russians on the right, before him, coming from the southeast. Two squadrons had not yet finished the ordered movement and therefore, in consequence of the lengthy deployment from the defile, had not yet joined the regimental front; they were in echelon position behind the wings of the regiment at this moment. Lt. Col. von Brosch did not await their coming up but attacked at once with the first mentioned three and a half squadrons. They met at first with hostile forces of about equal strength, four squadrons of the Odessa Lancers. This regiment was moving in column as the 15th Dragoons were about to charge. The Lancers wheeled into line at once, but the Austrian Dragoons were already in line and so had the advantage. Fiercely the regiment rushed against the enemy. In a trice they were in the *melée* and tightly entangled. The fighting crowd of riders turned about, a shapeless mass comparable to a bee swarm. In the midst of this struggle the Austrian commander, General von Zarembo, fought with Russian lancers. The chief of his staff was heavily wounded: a captain of the staff, Baron Szysztie, mortally hit, fell from his saddle.

Here in the midst of the fighting front the combat ended with a definite success for the Austrian arms. In this connection Colonel Sliwinski, at that time Lt. Gen. Count Keller's chief of staff, writes as follows:

"Very soon this whole mass of horsemen (the *melée* of the Austrian 15th Dragoons and the Russian Odessa Lancers) began to waver, took the shape of an arch curved toward our side, and started moving in our direction in zigzags, first slowly, afterwards quicker and quicker. Still a moment later the greyish-yellow uniforms became less numerous in the center. The dragoons and the lancers gave way and a squadron of the second line of the Austrians, formed in a troop column, wedged itself into this interval thus opened. Past the divisional staff, to its right and left, single cavalymen and mixed groups made up of Russians and Austrians were galloping at full speed to the rear. At this critical moment General Count Keller showed the greatest presence of mind; without the slightest hesitation he commanded: "Staff and escort charge." The chief of the escort, Lt. Penzin, drew his revolver, took aim and fired near my ear; the commander of the Austrian squadron galloping in front of it fell from

*Half a squadron was detached as escort of the Machine Gun Section, 15th Dragoon.

his horse. The squadron did not withstand our charge. It veered to the left and went away from the battlefield. It was followed by disorderly groups and single horsemen."

Thus the Russian center had been pierced by an Austrian squadron and forced to give way. Lt. Penzin's shot, which caused the death of a gallant Austrian soldier, Captain Count Trautmannsdorf, probably saved the life of a not less gallant Russian soldier, Lt. Gen. Count Keller. At all events, it settled the affair here in favor of the Russians.

But meanwhile the southern wing decided the result. Here the Russian reserve, two squadrons of the Ingermanland Hussars, under command of Capt. Barbovich, had entered the fight. It has been stated that the combat had remained undecided on the northern wing and had brought the Austrians success in the center. The latter circumstance might be attributed to the action of a squadron of 15th Dragoons (Capt. Malburg), which had been echeloned at the left and behind its regiment and had attacked the left wing of the Odessa Lancers. Against this squadron Capt. Barbovich now deployed his hussars. Perhaps it would be more exact to say that he had already pushed with them into the *melée*. This push put in motion the swarm in which the fighting groups whirled about. The whole mass that already had begun to move eastward and northeastward began now to yield in the direction of the new thrust. On the backs of the Austrian dragoons rained the cuts and stabs of the Russian hussars. The dragoons who had just obtained the upper hand after a hard and wearisome fight could no longer stand out against this new assault. Single riders at first, then groups, tore themselves away, drawing with them the others that had held their ground, first northward and then to the Strypa. It was the crisis.

A round of shrapnel fired by the Russian batteries at random into the westward moving clouds of dust accelerated the falling back of the Austrian riders, that now flowed down to the Strypa, mingled with Russians. Nevertheless, further to the north there were groups of the 15th Dragoons that could be brought back from the pursuit of the enemy only by repeated orders.

We have left the 1st and 2d Batteries of the Horse Artillery Division at the moment when the Battery Stepski (1st Battery) was about to perform the ordered change of position. Just as the Battery Stepski was going to limber up there appeared an officer from the staff, Lt. dell Adami, who delivered the order to take up a position northeast of the grove. While changing position, Lt. Col. Dobringer saw

the charge of the 13th Uhlans and ordered the battery to go into position on the crest not far from Hill 418 and support the charge. He personally led the two nearest guns toward the crest. At this moment the two squadrons of the 13th Uhlans had already broken into the enemy. The 15th Dragoons were about to charge. The two guns had not yet climbed the crest when single Russian riders passed by them at a quick pace. One of the guns unlimbered. Its limber and the next following gun were carried downhill by a swarm of riders, probably the first of the 13th Uhlans to withdraw from the hand-to-hand fight. Crashingly, the two six-horse teams with the limbers and the gun tumbled over and rolled down the steep slope, burying their drivers under them, whereat one of the guns automatically unlimbered. Thus but one gun reached the crest. This gun began to fire at Russian riders who, arrived at a short distance, immediately attacked at a gallop. They reached the gun in an instant and cut down the crew. In the low ground close to the small wood there were now three cannons. Also the one that had capsized had been made ready for fire with the aid of the other gun-teams. The Russians now attacked these guns in a loose line.* The firing of canister caused them to scatter. But in the haste to bring the limbers to a covered place only a few cases of ammunition had remained with the guns. Soon the last shot had been fired. This encouraged the Russians who had attempted to avoid the fire by turning aside, to renew the attack. The imperturbable gunners now defended their cannons with their pistols and forced their assailants to retreat. At that time the die had been cast on the southern wing. The 15th Dragoons were already in retreat across the Strypa. Capt. von Stepski had gained the impression that the charge had ended unfavorably for our Cavalry and decided to withdraw to save his guns. The captain hurried down to the southern corner of the grove to fetch the limbers, but on arrival found the horses and men destroyed by Orenburg Cossacks. This regiment had subdued the last weak resistance which the scattered men of the 35th Landwehr Infantry had continued to make in the houses and the streets of Jaroslavice, and was just going to clean the village of the remainder of this unhappy organization when the charge took place. Esaul Polozkoff hastened to the battlefield with his sotnia, not waiting till his regiment had mounted again as a whole. Although he did not arrive in time to take part in the Cavalry fight, he succeeded in reaching the bridge across the Strypa in the village of Wolczkowce and in cutting off the retreat of all those who attempted

*According to Captain Barbovich's report these riders were hussars of his two squadrons who had been pursuing parts of the 15th Dragoons at first and now turned against our Artillery.

to save themselves by crossing the river at this place. The battery was lost. So Capt. von Stepski galloped back to his guns, ordered the removal of the locks, and turned with the few men that remained toward the Strypa. Following the course of the river he found a practicable passage and finally joined the division which was just rallying on the western bank.

Capt. Taufar, commander of Battery No. 3, had been watching the attack against his colleague's battery (Battery No. 1). He had seen that the mass of our Cavalry was retreating across the river. It was obvious that the division had been defeated. He had still some limbers and tried to bring the cannons to the western bank by means of them. In the marshy ground the exhausted horses failed. The guns sank in. Only a few horses got across the marsh.

When the Russian approach had been ascertained, the commander of the Machine Gun Section of the 15th Dragoons, by his own initiative, had resolved to take up a position on the northern wing. He led his machine guns at a gallop up a hill northwest of Hill 418, escorted by half a squadron of the 15th Dragoons; here they opened fire. They grazed efficiently the right wing of the enemy. It is probable that the skillful and resolute conduct of this section prevented a pursuit on horseback and allowed parts of the 4th Cavalry Division to retreat undisturbed across the Strypa, as we shall see in the following paragraphs.

So the third and deciding phase of the combat had ended with a victory for the Russian 10th Cavalry Division. With ten squadrons Lt. Gen. Count Keller had defeated the seven and a half Austrian squadrons which had coped with him and had thereby caused the retreat of the other fifteen which had not been engaged in the combat. As is obvious from a talk the General had in the afternoon with one of our wounded officers, Lt. von Kochanowski, he was firmly convinced that the whole 4th Cavalry Division had attacked him. He was therefore highly surprised to hear that only two squadrons of the 13th Uhlans and the 15th Dragoon regiment had taken part in the charge.

The 9th Dragoons, 1st Uhlans and half of the 13th Uhlans had not entered into the combat on horseback. Two and a half crack regiments, in closest touch with the greatest cavalry duel of the war, had failed to engage themselves in it, and in this way forfeited the chance to gain a victory for our army and glory for the history of the Austrian Cavalry.

Returning to the moment when I led my half-regiment of the 13th Uhlans into the charge, we saw that the regiment was just descending

from Hill 418. Colonel Count Spanochi shortly perceived the advance of the enemy. Deeming the terrain disadvantageous at this point to attack, being up hill, he decided to move northeast along the contour line until he reached the gentle slope northeast of Hill 418, then wheel into line and attack. He put the regiment into the gallop in this direction, therefore, and not knowing that I had started to charge, believed the whole regiment behind him. He rode a little forward and on the side of the column toward the enemy. Count Rummerskirch rode at the head of the column, now consisting only of his half-regiment and the Pioneer Troop, with the three squadron commanders at the side of their units. When the colonel judged that the time to wheel and charge arrived, he gave the command orally and signalled with his sabre. But only two troops saw the signal through the dust and wheeled to charge with the colonel; the remainder of the column galloped on. The adjutant and regimental trumpeter were unable to catch up with the column. The colonel with the two troops which had wheeled came under the fire of our machine guns; trying to escape from it they were swallowed up in the flood of retreating dragoons and Uhlans of my half regiment and were swept to the west bank of the river, there to rejoin the division. The remainder of my two squadrons arrived about the same time; the half regiment of Major Count Rummerskirch a little later.

The above described mischance arose through the officers with the column directing their attention to their troops rather than toward their commander and the enemy. This was caused by the experience earlier of seeing troops get out of hand; we wanted by "sticking with the column" to maintain absolutely our personal control and keep the men firmly in hand for the sake of preventing similar occurrences in our regiment. I must charge myself with the same fault. As I clearly remember, I was wholly occupied with my squadrons when Lt. Kochanowski's warning of the enemy reached me, and only due to his watchfulness or perhaps to the chance that I was able to catch sight of the enemy in time, was I enabled to attack.

During the above recounted actions, the 9th Dragoons and 1st Uhlans remained at the hamlet Wolczkowce, hidden from the enemy and likewise unable to see the fighting. The colonels remained near their regiments, awaiting further orders. Colonel Kopecek of the 9th Dragoons, hearing the sound of battle and knowing General von Zeremba's intention to advance toward the east, started moving without orders toward the east past the 1st Uhlans. But before reaching the crest he received an order from the brigade to retreat to Iwaczow. This order he carried out at a walk, followed by the 1st Uhlans who

received the order shortly thereafter. Both regiments crossed the Strypa without interference from the enemy.

We have left the 35th Landwehr Infantry at the moment when the surprise fire of the Russians had broken it up. Parts attempted to obtain a footing in Jaroslavice and had skirmished there with the pursuing Cossacks. But the greater part streamed back to the Strypa. There Lt. Col. Reichelt having obtained a new mount, caught up with and started to reorganize the retreating mass, when it was overrun and swept by the retreating Cavalry. Only late in the afternoon did he find the remnants of the regiment at Troscianiec, where six weak companies were formed from the crowd of exhausted and dejected men.

As the staffs of the division and both brigades had taken part in the charge, no orders had been given during the critical period. Only at Dworzyska did General von Zarembo free himself from the turmoil. Here he sounded "Rally."*

All the scattered remnants quickly answered the call, even riderless horses. Lt. Col. von Maxon the Chief of Staff, having been killed, Captain Baron Lauer took charge of his functions. He doubted the wisdom of rallying so close to the enemy, and suggested retiring with one rush to Iwaczow where cover was provided. He was right.

As we know, the Russians did not pursue mounted, but their batteries now opened fire on the division gathering before their very eyes. The dense columns formed a perfect target. The effect was disastrous. The fire effected dissolution. The regiments stampeded and only at the woods of Troscianiec could the commanders rally parts of their units and change the flight into a retreat. But definite reorganization was not accomplished until they reached the region about fifteen kilometers farther northwest.

After two days recuperation the division was again fit for combat. It proved in the immediately following actions included under the name "The First Battle of Lemberg" that its spirit and military value had not been decreased by the disaster at Jaroslavice.

VII. The Twenty-first of August. Actions of the 8th Cavalry Division and the 11th Infantry Division

During the morning the 8th Cavalry Division had moved west to Jezierna, without receiving news from its patrols of the enemy. Apprised by an intercepted dispatch carrier from a patrol to the 11th Infantry Division that enemy were moving from Bialoglów to

*The signal for rallying and for feeding was the same. So the horses were accustomed to run to the place where it was sounded by themselves.

Mszana, (see sketch No. 5). the commander decided to move northwest, east of the Woszuska River. He sent a message to the 11th Division to this effect. Making a slow advance, nothing was heard during the afternoon from the 11th Division nor of the enemy. Failing to get information by nightfall the division went into billets in the neighborhood of Jacowce. Here for the first time the commander got into touch with the 11th Division and learned of the happenings of the day, and the defeat of the 4th Cavalry Division.

The 11th Infantry division meanwhile had delayed starting from cantonments until 10:45 A. M. Then it moved to Zborow. The divisional artillery commander, riding far ahead, arrived there in time to see the retreat of the 4th Cavalry Division. The division skirmished northeast of Zborow with small cavalry forces (left flank guard of the 10th Russian Cavalry Division) until 6:00 P. M., when the fighting abated. The division billeted in the vicinity of Zborow for the night. During the day the commander had received rather satisfactory news of the enemy's position, but no permanent or reliable communication was had with the cooperating groups: the 4th Cavalry Division and the 8th Cavalry Division. In the evening of this day the commander of the 8th Cavalry Division proposed to General Pokorny, commanding the 11th Division, that they continue their joint operation in the direction of Olejow the next day. The latter refused, saying his division was unfit to advance further due to transport difficulties. The commander of the 8th Cavalry Division resolved to return to his proper sub-sector around Tarnapol on receiving this answer.

During the action of the day the 9th Russian Cavalry Division had remained inactive near Olejow, while its artillery took part in the firing on the 35th Landwehr Infantry. It then moved west and at the time of the charge its advance guard was in Perepelniki. The division was therefore on the flank, even almost in rear of the Austrians. Its commander knew of Count Keller's intention to attack the Austrian 4th Cavalry Division. If this Russian division had resolutely entered the combat the defeat of the Austrians would probably have ended in annihilation. So Lieutenant General Prince Begildejew left the laurels of victory undiminished to his daring colleague, Count Keller, and appeared only in the afternoon on the battlefield.

The victorious 10th Russian Cavalry Division advanced to Wolezkowce. Its left flank guard was having the above mentioned skirmishes with the Austrian 11th Division in the afternoon. The Russian Third Army Commander could be well satisfied with the action of his cavalry in this region. Two divisions, reduced to three-fourths of

their normal size by detachments, had broken through our frontier guards and had not only frustrated the surrounding maneuver intended by the Austrian generals for their destruction, but had also struck a heavy blow against one part of their far more numerous foes. The result was that the passages of the Seret on both sides of Zalosce remained in the hands of the Russian Cavalry and enabled their Infantry to cross without disturbance. So a most promising introduction was given to the combats which began soon after, culminating in the first battle of Lemberg.

VIII. Casualties

The Russian success was obtained with heavy damage to our forces and relatively small losses of their own.

I am sorry that I cannot give a precise statement of the losses on both sides, as no reports of the 1st Uhlans about the fight were to be found in the military archives and Lt. Gen. Count Golovine gives only a summary of the casualties of the Russian 10th Cavalry Division and does not mention the 9th Cavalry Division at all. It is also impossible to bring forward a statement distinguishing dead, wounded, missing or captured, since on the Austrian side our commanders had knowledge only of the wounded who were saved by our own troops; the remainder remained in the hands of the enemy and their fate was unknown. So I must restrict myself in the following table to alleging the casualties that I can state as reliable. I can add that I met in captivity only one man of my regiment who had been taken prisoner unwounded.

AUSTRIAN LOSSES

	Officers	NCOs and Privates	Remarks
Staff	4	3	
9th Dragoons		23	
15th Dragoons	7	132	
1st Uhlans	2	?	
13th Uhlans	7	139	
11th H. A. Div.	2	58	and 8 guns
35th Landwehr Inf.	19	448	
Total	39	803	8 guns

The description of the course of this combat shows the reasons for the issue. The military reader can criticize for himself the mistakes committed, by the consideration of these reasons.

The brave regiments of the 4th Cavalry Division did not find

further opportunity to obliterate the defeat at Jaroslavice by combat on horseback. So it was for the last time on the 21st of August, 1914, that Austrian Cavalry coped with an enemy in combat with the sabre. The Uhlans of the 13th Regiment and the White Dragoons who took part in the actual fighting with their old accustomed weapon, may stand comparison with their great predecessors. Fighting and even succumbing, they had proved that they had preserved that spirit which once animated Count Pappenheim's Cuirassiers, which made the "Blanch becs" victorious at Kolin and gave the shining example of highest martial qualities in the charge of the Trani Uhlans at Custoza: the spirit of old Austria's Cavalry!



The Equestrian Championship, 1932 Olympics

MAJOR W. M. GRIMES, *Cavalry*

IN the April issue of THE CAVALRY JOURNAL there appeared an article devoted to the *schooling* competitions comprising the equestrian events of the Olympic Games. Two competitions were mentioned and discussed—one the *Individual Training Competition* or *Dressage*, devoted entirely to schooling; the other a competition consisting of three separate phases of mounted endeavor, an endurance, a jumping, and a schooling phase.

The official title of this latter competition is the "*Concours Complet D'Equitation*," known in our service as the "Equestrian Championship" or "Three-Day Event."

Regulations for the Equestrian Championship

This article deals with the Equestrian Championship, discussing and setting forth the conditions of the competition as prescribed in the 1930 Provisional Regulations of the International Equestrian Federation.*

In this connection, it is expected that the provisional regulations will receive formal ratification by the Congress of the International Equestrian Federation, meeting this summer at Lucerne, Switzerland. While there may be changes in the general regulations governing the Olympic equestrian events, still it is felt that, in the main, the conditions of the Equestrian Championship will undergo little, if any, modification.

Changes in the 1932 Equestrian Championship

The 1930 provisional regulations of the International Equestrian Federation which will govern the event at the 1932 Olympic Games contemplate a few changes in the Equestrian Championship. The principal differences in the 1932 event as compared with the 1928 event follow:

a. Comparison of coefficients and allotment of marks:

*The UNITED STATES CAVALRY ASSOCIATION is the organization officially holding membership in the International Equestrian Federation as representing horsemen of the United States. During the year of the Olympic Games the president of the Association in the host nation is ex-officio president of the Federation. The president of THE CAVALRY ASSOCIATION in 1932 will therefore become president of the Federation.—EDITOR.

Event	Coefficient		Allotment of Marks	
	1928	1932	1928	1932
Dressage	15	20*	300	400
Cross-country	35	35	700	700
Steeplechase	25	25	500	500
Jumping	15	15	300	300
Road test	10	5	200	100
	100	100	2000	2000

*The essential change is in the schooling, the value of which has been increased 100 points, with a corresponding decrease in the value allotted the road test.

b. A competitor is eliminated from the remaining two phases of the Equestrian Championship, if at the completion of the first test Dressage—his score is not at least 150 points.

Equestrian Championship

In order to give the reader a general idea of the three phases of this event, a complete translation of the rules and regulations governing it appears herewith. The translation was made by First Lieutenant J. C. Hamilton, 13th Cavalry, and checked by Lieutenant Colonel W. W. West, Jr., and Major Harold M. Rayner, Cavalry.

Article 1

Special Provisions on the all-around Equestrian Competition.

The All-Around Championship comprises three distinct tests which are held on three consecutive days:

First day: A test of training (dressage)

Second day: An endurance test

Third day: A jumping test

The value of each test is shown by the following coefficients:

Dressage	20
Cross-country	35
Steeplechase	25
Jumping	15
Road test	5

Throughout the entire test, it is forbidden to have recourse to or to accept any outside help, to cross obstacles in pairs, to be given a lead by a companion, to ride over the course on horseback prior to the tests. Premeditated breaking of this rule results in disqualification.

Before the schooling test and before the jumping test, the horses

will be examined in hand by an international commission composed of three members: President, a senior officer or a competent civilian belonging to the organizing country; two members drawn by lot, from among the team captains.

This Commission will also include a military veterinarian belonging to the organizing country, for advisory purposes only.

It will stop, on its own responsibility and without appeal, and prevent from taking part in a competition or the last test:

1. Horses unquestionably exhausted.

2. Horses becoming seriously lame for any cause whatsoever.

All others will continue and finish the test at the option of their riders provided that they are not eliminated on the road test and they will be classified.

Article 2

1. The purpose of this test is to prove the suppleness of the horse and his obedience to the aides of the rider (horse responsive to the legs, light on the hand).

2. The rules for the tests of dressage in the General Regulations of the F. E. I. apply to this test.

3. Each competitor is allowed eleven minutes to complete the test.

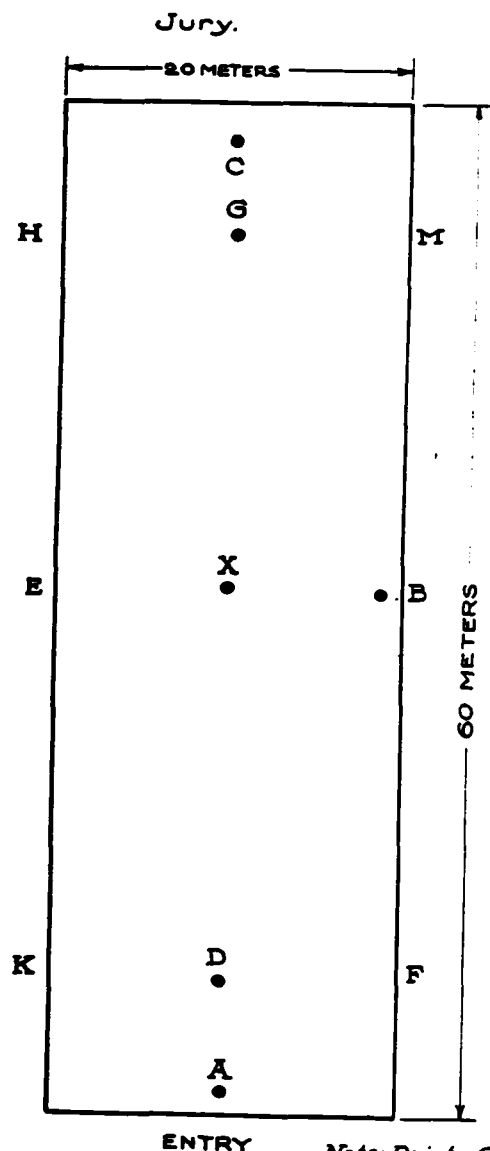
4. The judges' score card is arranged in such a way as to arrive at a total of 400 points which total corresponds to the possible 20 points allotted to the test of dressage.

If a competitor does not finish with at least a score of one hundred and fifty points, he is disqualified from the remainder of the competition.

Article 3

Schooling Test of Equestrian Championship.

Enter at the gallop.		
A to G	Halt. Horse immobile. Salute	5
move forward at a free walk		
A to C	Track to the right and	
Re m		
M to K	Change hands	15
A to K	Collected walk	15
A to A	Column left and	
O to B	Two track	15
B to G	Two track	15
A to G	Posting trot	10
A to C	Track to left	
B to H	Change hands	
Both at the maximum extended trot (posting)		15
H to M	Track	
M to K	Ordinary trot (sitting trot)	10
K to M	Change hands	
Both at the maximum extended trot (posting)		15
M to H	Track	



Plan of Schooling Track

Note: Points G, H, M, K, D and F are 8 meters distant from the short side.

H to H	Collected trot (sitting)	
At A	Column left	
From		
D to E	Two track	15
From		
E to G	Two track	15
At C	Track to the right	
At B	Halt. Back 4 steps. move forward at the collected trot	15
At E	Circle to the right with 3m radius at the trot and take up the gallop right upon returning to point E	10
At B	Circle with 3m radius at the gallop. coming to the collected trot upon returning to point B	10
At A	Take up gallop right	10
From		
E to F	Extended gallop	15
At F	Collected gallop	10
At A	Column right and	
At X	Eight mile trot sitting	10
At C	Track to left	
At E	Circle with 3m radius at the trot. and take up the gallop left upon returning to Point E	10
At B	Circle with 3m radius at the gallop and collected trot upon returning to point B	10
At C	Take up gallop left	10
From		
E to H	Extended gallop	15
At H	Halt. Take up gallop right	10
At E	Column left and	
At X	Halt. Take up gallop on right lead	10
At B	Track to the right	
At A	Halt. Back 4 steps. take up the gallop right	15
At E	Column right	
At X	Halt. Take up the gallop left	10
At B	Track to the left	
At C	Halt. Back 4 steps. take up gallop left	15
At A	Column left	
A G	Halt. Immobile. Salute. Dress. Position. Seat. and control of horse	15
		<hr/> 400

Article 4

SECOND DAY: ENDURANCE TEST

The purpose of this test is to prove the degree of endurance of a truly good charger or hunter, when he is well trained and brought to the maximum of condition. It brings out at the same time, the rider's knowledge of pace and control of his horse.

The test covers a course of 36 kilometers *from start to finish*: part on roads or paths, part across country, part on the steeplechase course of a hippodrome—the total in 2 hours, 2 minutes, 6 seconds.

It is generally subdivided as follows:

a. On the road or paths about 7 kilometers (4 1/3 miles) executed at a rate of 240 meters per minutes, or in 29 minutes, 10 seconds.

b. Steeplechase of about 4000 meters executed at a rate of 600 meters per minute, or in 6 minutes, 40 seconds.

c. On the road or paths about 15 kilometers executed at a rate of 240 meters per minute, or in 1 hour, 2 minutes, 30 seconds.

d. Across country with thirty to thirty-five obstacles, about 8000 meters executed at a rate of 450 meters per minute, or in 17 minutes, 46 seconds.

e. On the flat, 2000 meters: to be made at the gallop at a rate of 333 meters per minute, or in 6 minutes.

If, by reason of the terrain, it is necessary to rearrange the order of the different endurance tests, the rates and the distances stated above remain none the less final and obligatory, and none of the above phases of the competition may be omitted.

Two minutes are allowed each competitor in which to proceed from the finish of the first 7 kilometers phase to the start of the steeplechase. This time does not count against his score.

Similarly one minute of time out is allowed at the finish of the steeplechase in order to proceed to the starting point of the 15 kilometers.

These minutes are counted from the instant when the horse passes the flag at the finish point.

The time-schedule of startings of each part of the test is determined in advance by established lists. Each competitor is considered as having started according to this time schedule, even if he starts late.

5. Each competitor will receive, the night before, a map showing the route of the course, which will be marked out by horsemen or by flags very visibly placed and by arrows or papers.

Normally the cross-country course will be shown the competitors on foot this same day (day prior to the test.)

6. The guide flags (red-white) mark turns, and also mark the ends of the obstacles. They are so placed that the rider has at all times the red flag to his right and the white flag to his left.

He must *comply with this rule* and pass between, under penalty of elimination.

7. The direction flags (orange) mark the route to be followed and assist the rider to keep on his course. The rider may pass on either side of the direction flags.

Guide flags and direction flags should always be large and conspicuously placed.

The obstacles, to the number of 30 to 35, will be cleared between the two flags; they will be natural: hedges, ditches, farm gates, brooks, streamlets in and out crossing a road, etc. Those having height will have a maximum height of 1 meter 15; those having width a maximum width of 4 meters.

Article 5

RULES FOR THE TEST

The courses on the different parts of the test are scored by the time consumed and by the faults at the obstacles. Exceeding the time allowed is penalized: the time gained is rewarded by points according to the following tables which already contain the coefficients corresponding to the different parts of the test.

TABLES OF TIME PENALIZATION

(In the deductions of which are contained the coefficients 25 or 35)

Road March			
(A) 7 kilometers in 29' 10" time taken	(C) 15 kilometers in 1 h. 2' 30" time taken	(E) 2 kilometers in 6' time taken	Loss in points
29' 15"	1 h. 2' 35"	6' 05"	2½
29' 20"	1 h. 2' 40"	6' 10"	5
29' 25"	1 h. 2' 45"	6' 15"	7½
29' 30"	1 h. 2' 50"	6' 20"	10
29' 35"	1 h. 2' 55"	6' 25"	12½
29' 40"	1 h. 3'	6' 30"	15
29' 45"	1 h. 3' 05"	6' 35"	17½
29' 50"	1 h. 3' 10"	6' 40"	20
29' 55"	1 h. 3' 15"	6' 45"	22½
30'	1 h. 3' 20"	6' 50"	25
30' 05"	1 h. 3' 25"	6' 55"	27½

Steeplechase		Cross-country	
4,000 m. in 6' 40" time taken	Loss in points	8,000 m. in 17' time taken	Loss in points
6' 45"	12 points ½	17' 51"	17 points ½
6' 50"	25 —	17' 56"	35 —
6' 55"	37 — ½	18' 01"	52 — ½
7'	50 —	18' 06"	70 —
7' 05"	62 — ½	18' 11"	87 — ½
7' 10"	75 —	18' 16"	105 —

TABLE OF FAULTS AT THE OBSTACLES

	Steeplechase	Cross-Country
A. First refusal or run out	25	35 points
B. Second refusal or run out at the same obstacle	50	70 "
C. Fall of the horse at the obstacle	50	70 "

- D. Fall of the rider alone at the obstacle 100 140 points
 E. Third refusal or run out at the same obstacle Elimination.

Defenses on the part of the horses, circlings, coming to the trot and the retaking of the course at the point lost, do not enter into the scoring and are automatically penalized by the time element.

The omission of an obstacle or failure to pass between flags causes elimination.

TABLE OF BONUS

In the allowance of which are contained the coefficients 25 or 35.

(a) <i>Steeplechase</i>		(b) <i>Cross-country</i>	
Time taken	Gain coefficient included	Time taken	Gain coefficient included
6' 40"	0	17' 46"	0
25"	2	16' 46"	2
20"	4	36"	4
15"	6	26"	6
10"	8	16"	8
05"	10	06"	10
00"	12	15' 56"	12
5' 55"	14	46"	14
50"	16	36"	16
45"	18	26"	18
40"	20	16"	20
From here on nothing further		06"	22
		14' 56"	24
		46"	26
		36"	28
		26"	30
		16"	32
		06"	34
		13' 56"	36
		46"	38
		36"	40
		26"	42
		16"	44
		From here on nothing further.	

Article 6

THIRD DAY: OBSTACLE JUMPING CONTEST

Course of Obstacles

1. This third part is not an ordinary horse show contest or a contest of manners or of power. It is designed to show simply that the horses shown retain, on the day following a great effort, the suppleness

and energy indispensable to any good charger or hunter in order to continue his service.

2. For this test all the rules given for obstacle jumping competitions in the General Rules of the F. E. I. are applicable, except the table of faults which is modified.

3. The obstacles, to the number of 12, will be sufficiently separated, capable of being knocked down, closed, massive, imposing by their form and their width approaching solid jumps without being absolutely so, and resembling as far as possible, obstacles encountered in the field.

They will include obligatorily:—

An in and out across a road.

Four obstacles having a height of exactly 1 meter (3 feet 10 inches) 1; if possible, a ditch, with straight sides, 3 meters 50 wide. Six obstacles (open ditch, brook, bar on mound, double-oxer with wall between bars bank, etc.) at the discretion of the organizers.

The straight up obstacles will have a minimum height of 1 meter 10 and a maximum height of 1 meter 16; they will be chosen from among those indicated above (the width of the open ditch will not exceed 2 meters, that of the stream 3 meters 50 of water). The course will be laid out so as to present difficulty in control necessitating, if necessary, a halt or an about.

4. The speed required is the gallop at 375 meters per minute. Higher speeds will not be given credit, and any exceeding the time limit will be penalized a quarter of a point per second lost.

Faults at the obstacles are scored according to the following table in whose reckoning the coefficient 15: is included.*

1st Refusal	7½
Hind knock-down	
Broad jump not cleared, hind	
Coming to the trot except at angles	15
Error of course—rectified	
2d Refusal	
1st Disobedience	22½
Front knock-downs	
Broad Jump not cleared front	30
Fall of horse and of rider	
2d Disobedience	60
Fall of rider alone	45
3d Refusal or 3d Disobedience	Eliminated

*Note these figures are given provisionally simply as an example and will be discussed at Lucerne. Those accepted in October are incomplete, inexact and in contradiction with established principles.

Article 7

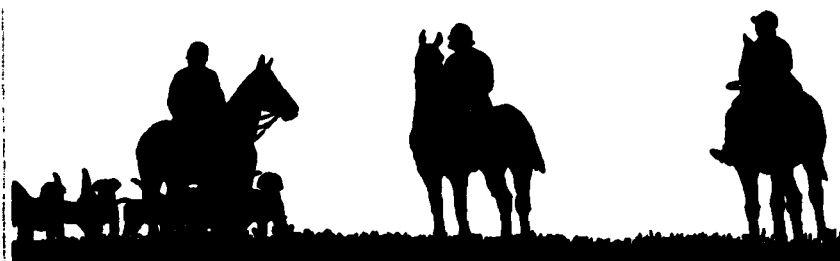
CLASSIFICATION IN THE ALL-AROUND EQUESTRIAN COMPETITION

Elimination in one of the tests carries with it elimination for classification in the All-Around Equestrian Championship.

Classification is made by totalling, for each competitor all the penalties incurred in the different tests, and by subtracting from the total all bonuses, if any, gained in the steeplechase and cross-country.

In dressage where the marks are given on the scale of 0 to 10, then multiplied by the coefficient assigned to each movement, the total obtained is subtracted from 400.

In this way is determined the total of penalties which are to be added to the penalties of the other tests.



Raising the Siege in the Boer War

(French's Dash On Kimberley)

By LIEUT.-COL. WILLIAM WALLER EDWARDS, *Cavalry*

WHEN on the 10th of January, 1900, "Little Bobs" (Lord Roberts) landed at Cape Town, South Africa, to take command of the British forces in the Boer War, he found himself suddenly confronted with a rare and complex problem. The two forces were facing one another on the Modder River. The long frontier of Cape Colony, separating Dutch and British territory, was but weakly guarded by a handful of British troops, and the attitude of a portion of the Colonists bordering the Orange Free State was in some cases doubtful, and in others downright disloyal.

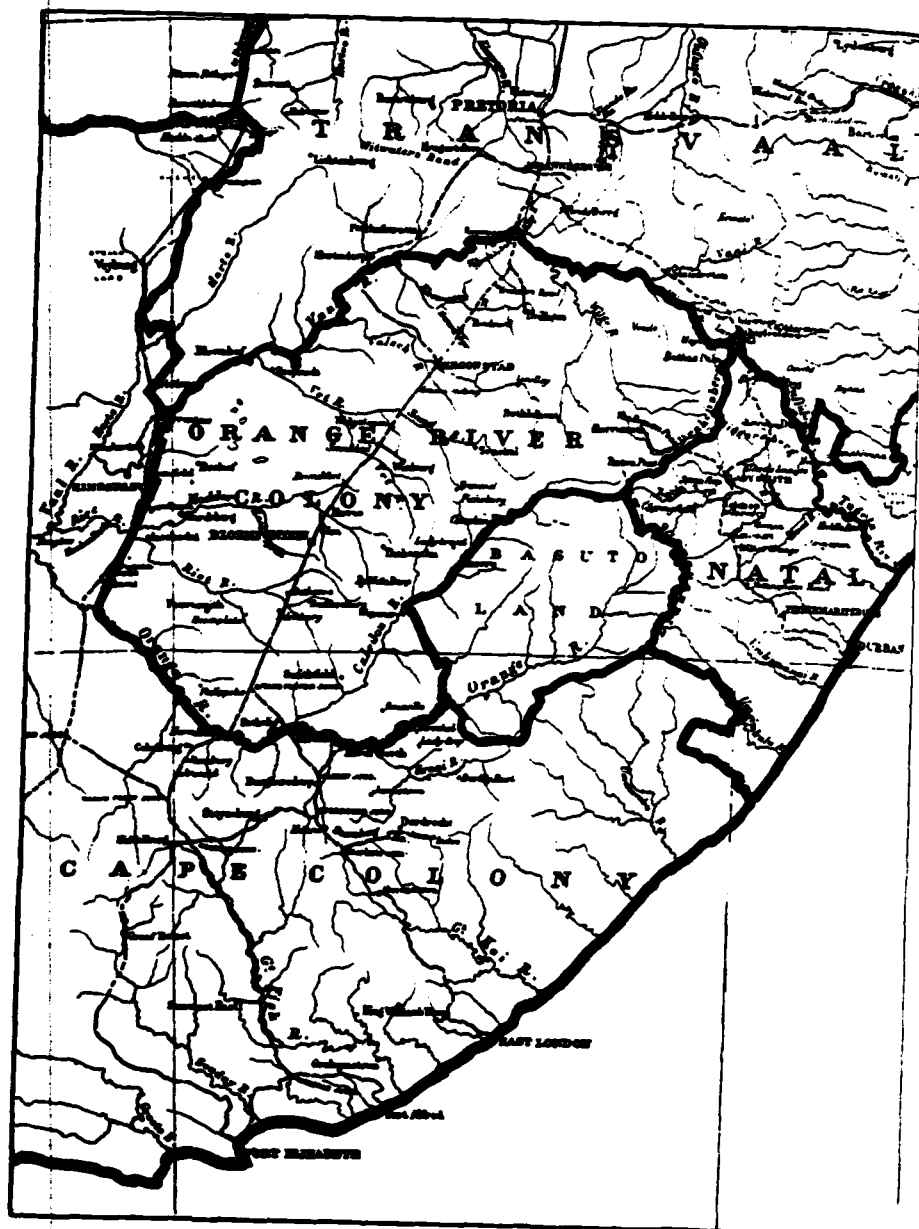
The British forces in South Africa were meager—a few troops hastily collected when the outbreak of hostilities appeared inevitable from Egypt, from Indian and from the Mediterranean garrisons.

The British cities of Kimberley, Pretoria, Bloemfontein, Mafeking and Ladysmith in the interior lay helpless.

General French (the hero of this sketch) had himself escaped from Ladysmith to Capetown, where he assumed command of a Cavalry Division.

Buller, the British Commander, had diverted the bulk of his Army in Natal, surrendering the initiative to the Boers, and had dispersed his forces for many weary months in a fruitless endeavor to penetrate the mountain barrier lying between himself and the beleaguered British forces to the north. An endeavor had been made by Lord Methuen to advance on Kimberley by way of Belmont, but it had been unsuccessful. The Boers, being apprised of his plans through the London papers, and operating on interior lines, were able to concentrate very rapidly on any threatened point. Mobile Boer Commandoes fighting before Ladysmith were engaged a few days later at Kimberley. Capetown was in imminent danger of being overrun by Boer Commandoes which were concentrating at Naawport and Colenso. Indeed, if the Boer Army had been from the start a co-ordinated fighting machine instead of a collection of Commandoes and laagers composed of hunter-farmers, each pursuing pretty much its own way, there seems to have been no good reason to prevent their sweeping down on Capetown before a single British soldier could have been landed from England.

On Lord Roberts' arrival at Capetown he summoned General French from Colesberg where with his Cavalry he had at least



Map No. 1. General Map of the Portion of South Africa in which the Relief of Kimberley Was Organized and Carried Out

temporarily checked the Boer ambition to descend upon the Southern part of the Colony.

Lord Roberts' active military service of forty years in India had not only made him the idol of his soldiers but had preserved for him (although he was in the latter sixties) the energy and spirit of youth. He decided at once upon an aggressive campaign. His far-reaching and original plan was based upon his knowledge that the Boers imagined the British forces could not separate themselves from the railroad.

At this time the Boers, as has already been stated, were in force at Colesberg. They were also very strong under their able and popular General Cronje (two years Lord Roberts junior in age) at Magersfontein where they were being held by General Methuen. Methuen, however, had not stirred from the Modder River for several months.

As a stepping stone to his main objective, Bloemfontein, Roberts purposed to relieve Kimberley with forces of Cavalry followed by Infantry. He decided first to mystify the enemy by making a feint in the direction of the Modder River while actually arranging to strike for Kimberley and Bloemfontein by a bold march across the barren and forbidding veldt.

Kimberley, the key to Bloemfontein and Ladysmith, was already clamoring for help. The discovery of the diamond mines had made Kimberley. It had fallen under the dominating influence of the dynamic Cecil Rhodes, who had devoted his whole attention to furthering and extending British imperialism in South Africa.

The position of Kimberley was unique. It was undoubtedly the center of the richest tract of land for its size in the entire world. Its loss would have been a heavy blow to the British. Cecil Rhodes himself was a member of the beleaguered garrison. Only a small regular force was at Kimberley and heliographic signals told daily that it was in danger of surrender. The messages contained the repeated information that it could not hold out longer than the 15th of February.

It was Lord Roberts' belief that the advance on Kimberley would cause Cronje to quit his position in front of Methuen's force, and it was the intention of "Little Bobs" to attack him as soon as he came out of his intrenchments.

Lord Roberts found in French's Cavalry the weapon he needed. The South African country was fashioned above every country on earth for defensive warfare. To assault the Boers in their carefully selected and prepared positions with Infantry would have been costly in the extreme. To turn them would have taken too much precious

time. The rapid movements of Cavalry were needed and its achievement in this instance will take its place in military annals among the most notable achievements of which Cavalry can boast—an achievement, moreover, which it is capable of repeating over again at any time when the emergency demands it.

The Cavalry and Horse Artillery selected by General French for the relief of Kimberley were taken from forces with which he had recently engaged the enemy in the neighborhood of Colesberg.

It was a task of the greatest difficulty to withdraw these troops without betraying Lord Roberts' plan to the Boers. The withdrawal was made possible only by the audacity with which the small body left to watch the extended British position before Colesberg was handled, and by a feint attack of a small infantry force on February 4th to seize Koodoes Drift, thus hinting at a movement directly upon Bloemfontein.

In order to draw the Boer attention away from the thunderbolt which French was about to hurl at the left flank, a strong demonstration ending in a brisk action was made early in February upon the extreme right of Cronje's position.

Four regiments—all the Infantry of Methuen's force—advanced on Koodoes Drift. Establishing themselves strongly upon the kopjes, on the south bank of the Modder, they began such a spirited attack upon the Boer position on the crest, with a seven-pounder mountain gun and rifle fire, supported by a cavalry brigade moving on the north bank, that the Boers were found on February 8th to have retreated. They were unpursued, since the British forces, their mission accomplished, were recalled the same day, being needed for the greater operations which were pending.

On February 8th, the reorganization of the cavalry division under General French was made in three brigades, with that of the accompanying mounted Infantry in two. This was the largest mounted British division which had ever worked together. By that time the situation at Kimberley had become well nigh desperate. Lord Roberts' personal message to French was: "The Cavalry must relieve Kimberley at all costs." Within another twenty-four hours the cavalry concentration was completed.

The Cavalry which had come under French's command at Kohlersberg had already reached the rendezvous, Belmont, traveling rapidly by road and train. The force consisted of the Carabineers, New South Wales Lancers, the Inniskillings, a composite regiment of the household Cavalry, the 10th Hussars, with some mounted Infantry and two batteries of horse artillery. To this was added the 9th and 10th Lancers from the Modder River, the 16th Lancers from

India, the Scots Greys, which had been patrolling the Orange River from the beginning of the war. Rimington's Guides and two brigades of mounted Infantry. Five other batteries of Horse Artillery were added to the force, making seven in all, with a pontoon section of Royal Engineers. The total number of mounted men was about five thousand.

The new force which had been created contained brigadiers who were strangers to their commands and the commands themselves were new, as well as the staffs.

The organization was as follows: The First Brigade under Colonel Porter consisted of the 6th Dragoon Guards, 2d Dragoons (Scots Greys), 6th Dragoons, 14th Hussars and New South Wales Lancers. The Second Brigade under Colonel Broadwood consisted of the Household Cavalry, 10th Hussars and 12th Lancers. The Third Brigade under Colonel Gordon consisted of the 9th Lancers and 16th Lancers. The total strength of the cavalry division was 2754 officers and men, and 2871 horses. Attached were the six batteries of Royal Horse Artillery with two ammunition columns—total 1321 officers and men, with 1401 horses; the Mounted Infantry Division consisting of the 1st Brigade (Colonel Ridley) consisting of the 3d, 5th and 7th Regiments; the 2d Brigade (Colonel Hannay) of 2d, 4th, 6th and 8th Regiments; and in addition a field troop and a pontoon troop of Royal Engineers.

By night of Sunday, February 11, 1900, this formidable mounted force had concentrated at Ramdam, about twenty miles northeast of Belmont, and at two o'clock the next morning, to the music of twenty thousand hoof beats, the clank of steel and the rumble of gun wheels, the long sinuous columns of riders moved off like shadows across the mysterious veldt. Broadwood's column led, with Porter on his left and Gordon on the left of Porter, each with fifty yards interval. The supplies were six day's rations for the men, five for the animals, and these were carried partly on the supply column and partly by the more simple and expeditious method of being loaded on man and horse. Arrangements, it must be remembered, had to be made for feeding four thousand men and horses marching through a bare and waterless country. A heavily laden supply train would have robbed French's column of the mobility which was its most valuable asset; it was therefore necessary to reduce the burden upon the supply train to the minimum.

Two rivers, the Riet and the Modder, lay within the uncertain miles which intervened between French and Kimberley.

Rimington's Guides, composed of trained scouts, reconnoitering ahead, reported that the country to the Riet was clear. For an hour

and a half the three brigades marched steadily in a north-northeastly direction and then the inky darkness forced a two-hours' halt which was broken when the first light of the gray dawn beckoned them to continue their advance.

The advanced patrols of a two-squadron advance guard, as they approached the river, were met by heavy fire from some kopjes on the near bank just above Waterval Drift. (See Sketch Number 2.)

The Third Brigade and a battery of Horse Artillery were rushed to their assistance and a well directed fire from the guns was opened on the Boer position. This body of Boers had come from Jacobsdal, and having succeeded by the favorable nature of the country in masking its strength from British reconnaissance, proved much larger than was at first supposed. Covered by the guns, however, French moved up the rest of his force and took ground among some hills bordering the river. The Third Brigade, which had first made the attack upon the Boer position, being now able to withdraw, made a feint at crossing at Waterval Drift, and the Boers being deceived by the maneuver, withdrew across the river downstream to oppose the crossing.

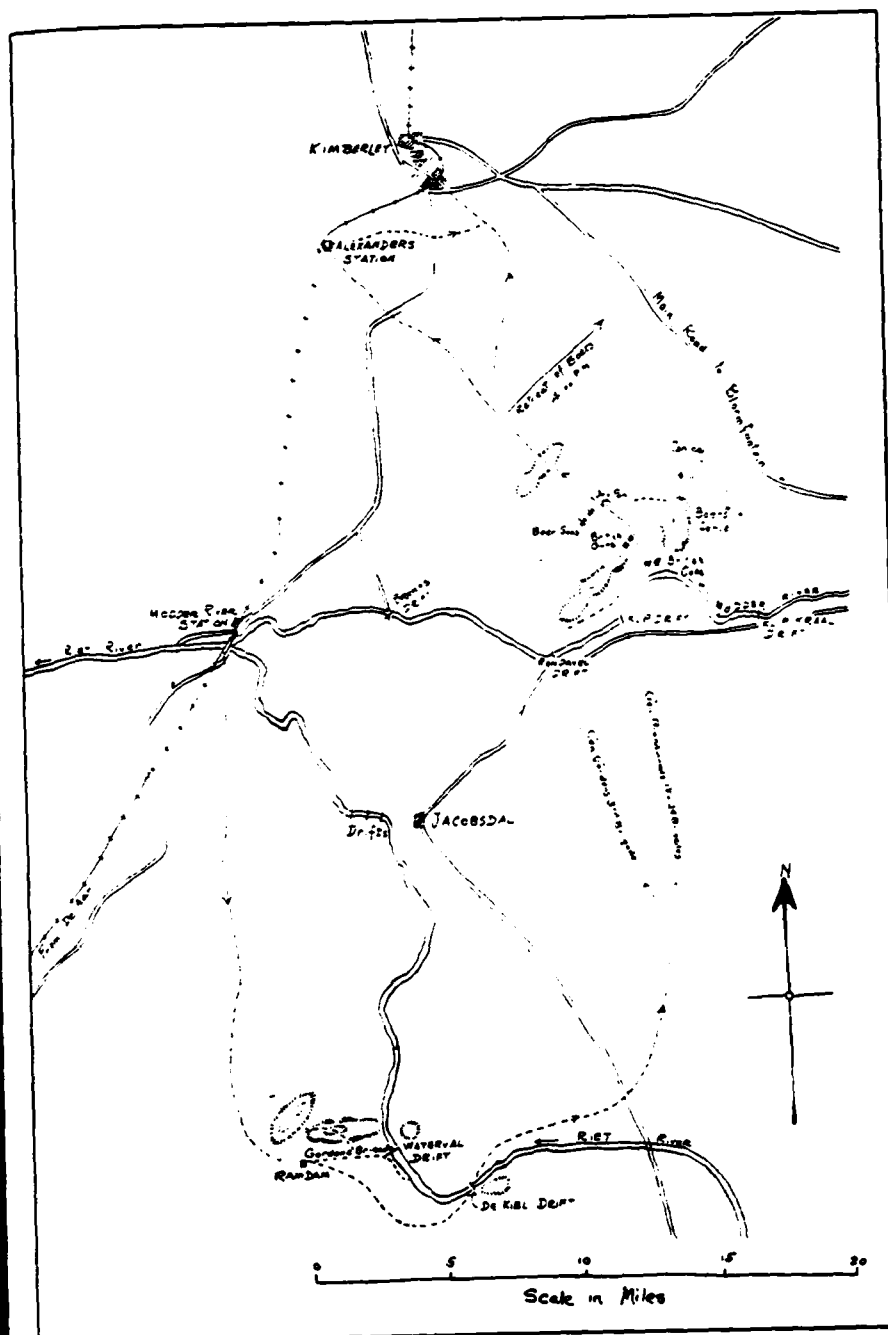
General French, upon whom pressed the necessity of quickly crossing the river, took instant advantage of this successful deception and with the First Brigade of Mounted Infantry made at once for De Kiel Drift. At noon, the Boers being outmaneuvered, the Drift was seized. A track—the mere semblance of a road—being followed, a fordable place was found between the steep banks of the river, but although French held both banks of the ford, it was not until after midnight that the whole of the long British column was brought safely across and into bivouac on the northern side.

The desultory firing of the Boers from Waterval Drift was at length silenced and at half past ten on the morning of February 13th, French's Division, in line of brigade masses with guns on the right, marched forward unopposed.

The supply column was left at De Kiel Drift on the south side of Riet.

A forced march of thirty miles lay before them to the Modder. Supplies were carried by each trooper and on each led horse: this was all they had.

French's mounts were drawn from all quarters of the world. There were, besides Argentine ponies which generally "had no heart" and could not stand the strain, Australian horses which showed signs of the courage which was never more greatly needed, but were mostly deficient in weight-carrying power; American horses, which being of the wrong sort, were unfit for work under the saddle and nearly help-



Sketch No. 2. Movements of French's Relief Force

less in the broken ground of South Africa; Bombay ponies from India, which were entirely too light for cavalry work; and Canadian horses which were out of condition when the crucial test came. Those which showed to best advantage were the small well bred English horses, that by hard regular work under the saddle had their muscles fully developed for this supreme test.

In the winter months in South Africa the grass of the veldt dries up entirely and the animals of French's army during this portion of his march were dependent solely on the fodder they were able to carry as an additional load on their backs, in improvised bags. The emergency now demanded the pressing use of all available time, and the column therefore dared for the first time the terrible heat of the South African day.

The sun beat from an unclouded sky—the only available shade was the dust cloud in which they rode. The broad arid plain before them formed a typical Boer landscape. In the extreme distance mounted figures moved back and forth here and there under the vast expanse. They were Boer Scouts who were watching closely a sight they had never expected to see—the advance of the greatest body of Cavalry in modern times.

The regiments moved two abreast, in extended order, on a front of nearly two miles, the men and horses dripping with the heat. Sometimes the detached Boer Scouts gathered together and then a spurt of rifle fire burst upon the British flank.

The Boers, taking advantage continually of the irregularities of the ground, appeared from nowhere, the British guns being unlimbered drove them away, but no sooner was the march resumed than they were again observed hanging doggedly on the British flank and moving parallel to the line of march.

General Gordon's brigade led the advance, General Broadwood's was deployed to the right, General Alexander's followed in rear. In this order they rode on through the hot day. Almost straight north in the line of French's march was Rondevaal Drift, the most western of the fords across the Modder. Three miles east upstream was Klip Drift and the Klip Krall Drift was almost eight miles east of Rondevaal Drift.

Pursuing a maneuver used by Frederick the Great, French ordered the First and Second Brigades to change their course abruptly to the northeast, so taking a direct line for Klipkrall Drift, the Third Brigade to continue its march northward towards Rondevaal Drift. After steadily keeping to his new course for about one and a half hours, French suddenly swung to the left and moved on his original

objective, directing his brigadiers, Broadwood and Gordon, to make for Klip and Rondevaal Drifts as fast as their all but exhausted horses could be urged.

The Boers, bewildered by these tactics, planted themselves on a wide outer circle, instead of placing a wedge between the British Cavalry and the river—their best and in fact only means of preventing the crossing.

The heat and swelter of the sun had become almost unbearable, some of the horses, like somber shadows, had already fallen, and were too weak to rise. But heat and lack of water were not sufficient deterrents for French to change the direction of his march. His men patiently silent and grimly cheerful, strained their eyes to pierce the mirage which receded before them and to catch, through a rift in it, the first strained glimpse of the Modder.

As the westerling sun finally began to sink, the expected line of green at last came to view, thin yet distinct, upon the horizon. With singing hearts, they urged their haggard horses to renewed effort toward the bushes which hid the drift which was their goal.

Major Rimington's Scouts saw over the trackless plain that the mark which was aimed at had been struck, albeit the trail behind them was marked with dead and dying horses.

The main essential had been speed, speed alone, speed at any sacrifice. The avowed object was to reach each succeeding drift before the enemy could concentrate to oppose them.

So quickly were French's preparations and movements made that Cronje assumed simply a Cavalry raid across his communications. He patrolled the drifts (crossings) and sent reinforcements from Jacobsdal to oppose French's Riet crossing and thought by that he had taken ample precautions.

It was not until two days later, when with the relief of Kimberley French was ready to proceed against Bloemfontein, that the full import of the situation appears to have broken suddenly on the slow mind of General Cronje.

Although it was evident that the Boers had knowledge of the British advance, at the Modder French completely outwitted them.

From a little stone-covered knoll on the green banks of the coveted river, the General and his staff had the satisfaction of seeing a crowd of Boers hastening across the drift at Klip Kraal, indicating unmistakably that his feint had proved a success.

French promptly turned the First and Second Brigades again facing the northwest, straight in the direction of Klip Drift, while the Third (Gordon) was directed to continue its advance on Rondevaal

Drift. The object of this maneuver was to reach and force the Drift before the enemy had time to defend it.

Gordon and Broadwood pushed on their jaded horses, took the enemy by surprise, reached Rondevaal Drift, and after a smart shelling, crossed the river and seized the kopjes on the west. Broadwood, with the 12th Lancers in advance, rushed Klip Drift, pursued the surprised Boers whom they found there over some kopjes and into the plain until met by a heavy fire from a large Boer laager five miles from the river in the direction of Jacobsdall. The pursuit was thus abandoned, and the entire brigade that night with most of the guns held the north bank of the Modder and the adjacent kopjes.

The First and Second Brigades were present on the right bank of the river, Gordon's brigade at Rondevaal Drift, while the mounted Infantry remained on the left bank of the river in position to occupy the heights and to command the drift in case of attack.

The passage of the Modder was at last in British hands. French's advance had now placed the Boer force at Magersfontein in a very uncomfortable position, while the Boer main line of retreat into Bloemfontein was actually in British hands.

Wire communication having failed, despatches detailing their successful operations thus far were sent to Lord Roberts by two plucky riders who volunteered their services.

While French waited at the Modder for the Infantry which Lord Roberts was pushing on as fast as possible, Kimberley was enduring all the hardships and uncertainties of a siege. Kimberley was defended by her citizenry, the Imperial troops there being only a small part of the defensive forces. The head and heart of the citizen activity was Cecil Rhodes. Nothing was too big for Rhodes; he overlooked nothing, he failed in nothing; his tremendous force, his ability to command, his huge operations (to which Kimberley indeed owed its very existence) made him the moving spirit of the defense, impatient of delay and contemptuous of impediment. His soul was ever absorbed throughout his entire wonderful career in what he thought was for the good of the British Empire.

The garrison of Kimberley, civilian and military together, approached four thousand; the perimeter of the defense was about eight miles. The natural fortifications of the great mounds of earth thrown out of the silver mines inclosed three sides of the town. These were a three-fold safeguard. Communication with Cape Town by both wire and rail had been unmolested at the outbreak of hostilities and providentially, just before the siege commenced, a special train had arrived from the Cape with tons of food supplies. The feverish little city, whose entire existence had been flushed with the excitement which

is known only to mining towns in our own West, now had a new experience—that of being placed under martial law.

The problem of food supply was an ever present one. Thousands of blacks employed in the diamond mines had to be fed. Twice they were released and marched through the gates that they might return to their distant homes and each time they were turned back by the crafty Boers. A large gun of the Boers being the source of much terror, death and destruction, a sortie was made to capture it which not proving successful a twenty-eight pounder with ammunition was made at one of Rhodes' workshops and christened by the townspeople "Long Cecil" in his honor, though even this was not able to counteract the terror and damage of the Boer shells from without.

The houses of the solid sort offered but slender defense against these one hundred pound shells of the Boers, which seemed to seek out the homes particularly which contained only women and children. "Splinter proofs" were prepared in yards and gardens like the dugouts later in the World War.

The town was perforce put upon rations and Christmas, with its terrible privations, was like the siege of Paris. There came a time a few days toward the end of the siege when Mr. Rhodes invited all the women and children to seek shelter in the diamond mines, into the gem-encrusted caverns of which they were soon crowded like rats and in these strange refuges fought gnawing hunger on tinned soups and cornbread fried in lubricating oil—the best rations then available. After many all but starving weeks they had learned of the bloody repulse of the British at Magersfontein which meant that help was once more indefinitely postponed.

The siege, which had lasted about four months, had at length settled down to a monotonous record of decreasing rations and deferred hope. Heliographic signals told daily that it was in danger of surrender and the message was often repeated that it could not possibly hold out longer than the 15th of February.

On the 14th, French remained in his position on the Modder. Vexatious at the necessary halt but certain that he could not launch a premature advance of his Cavalry before the Infantry following in rear had come up to hold the crossings because such a procedure would at once leave Cronje with an open road to Bloemfontein and make it necessary, as further progress was made, to move across his communications.

The Infantry advance, in accordance with the plan of Lord Roberts, followed the Cavalry step by step and established in reality a line of garrison positions. As one column moved forward another was ready to drop into its place.

In pursuance to Lord Roberts' orders, the 6th Infantry Division with Hannay's Mounted Infantry marched on the 13th of February nine miles from Ramdam to Waterval Drift. At 1:00 A. M. on the 14th, the 6th Division and the 4th and 5th Regiments of Mounted Infantry set out from Waterval Drift. Slowly and with careful reconnaissance the troops moved forward, a staff officer being sent forward to report on General French's situation. Upon his return, it being learned that a Boer force was present to thwart French's line of advance on Kimberley and to threaten his flank, it was decided at French's earnest request and by the cooperation of General Kitchener, Lord Roberts' Chief of Staff who was on the ground, to move it up the same night.

Emulating the spirit of the Cavalry in disregarding their previous long and fatiguing tramp the British infantry marched off again across the veldt in dense darkness and through a drenching rain and reached the Drift on the Modder, where the Cavalry were waiting at 1:00 A. M., February 15th, covering twenty-seven miles in twenty-three hours.

The cavalry baggage train had arrived at four o'clock in the afternoon and preparations had already been begun for the final dash on Kimberley. The ever recurring problem of supplies was again most difficult. In the rush of the cavalry mobilization many of the regiments had no corn bags, and it was necessary to stuff saddle bags and nose bags full of grain and even to load sacks of oats on any gaunt spare horses available. Many of these horses being too heavily laden could not accomplish the journey, and the precious corn as well as the precious horses had to be abandoned on the veldt.

Of all the horses in the command exhausted by this long, terrible, waterless march, the artillery horses were in the most piteable condition, and efficient teams in many instances could only be made by borrowing from the supply teams many wagons of which on this account had to be left at the river, chances being taken upon the need of food rather than that of artillery. And when, in the darkness of the night, General Kelly-Kennys Infantry Division (the Sixth), after its long, hard march, providentially began to arrive at the Modder, French's Cavalry was at last set free to carry out the main object of its mission, namely, the final dash upon Kimberley, which proved in its accomplishment to be undoubtedly one of the most daring and spectacular feats of the Boer War.

There were even at that time, particularly in England, certain influential military writers who were prone to draw conclusions adverse to the future employment of Cavalry armed with the sabre or the lance. They were so sarcastic as to say that these weapons were

as obsolete as those of the Crusaders and that they should share the same fate and be relegated to the museum with other weapons of antiquity.

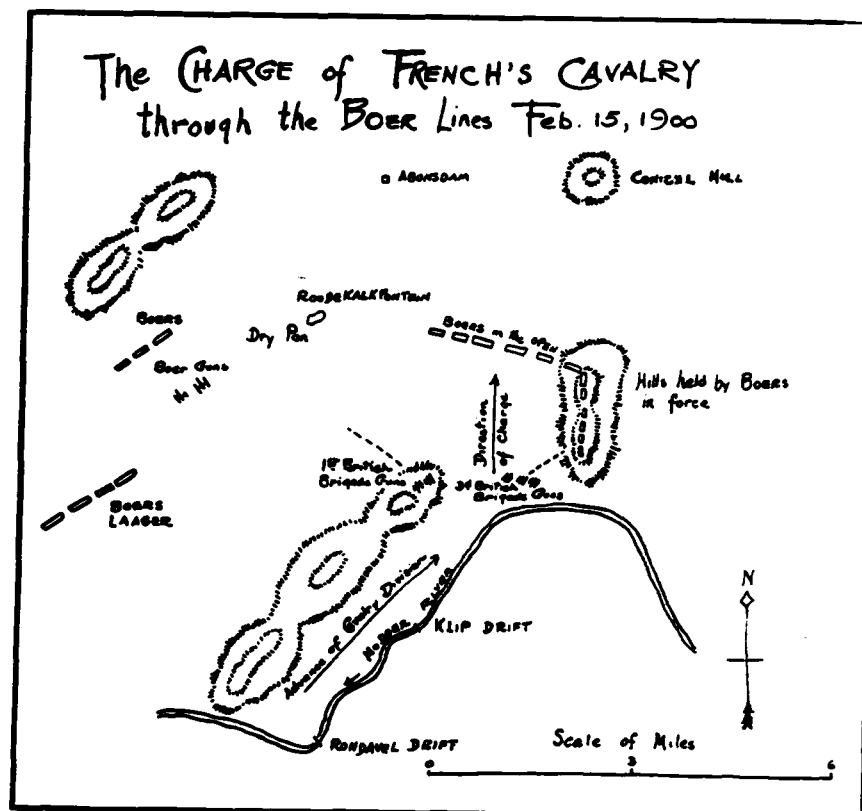
The mobility of French's Cavalry, without which it would have been impossible to seize the glorious opportunity he was presently to find, had up to this time been practically unimpeded, as the enemy he had met were dispersed and demoralized both by his numbers and the rapidity of his march.

At nine-thirty on the morning of the 15th of February, French's Division marched out of its bivouac on the Modder River in a formation of brigade masses in the following order: Third Brigade (Colonel Gordon) less one regiment as advance guard; First Brigade (Colonel Parter); Second Brigade (Colonel Broadwood); Mounted Infantry.

Having been formerly so successful in misleading the Boers, French was tempted to still resort to the same idea. Having made three miles in the direction of Bloemfontein, the advance guard was held up by a hot Boer fire in front from a low ridge along the river, while some Boer guns simultaneously opened up from a hill to the northwest. This fire quite satisfactorily unmasked the Boer position which was so placed as to block the road to Bloemfontein, on the right and to prevent a northwest passage around the flank and rear of Magersfontein. It also made the road to Kimberley exposed to their cross fire. Under this severe fire the Third British Brigade in the lead was forced to make rapid dispositions. Holding the enemy in front, Colonel Gordon pushed a squadron of his brigade out to the left to prevent the Boers under cover of the convenient bushes from moving around to enfilade his flank and sent twelve guns into the open to deliver an attack upon a hill which the Boers occupied above the river. The guns of the First Brigade, eighteen in number, had by this time gotten into position and from the extreme end of a row of hills adjacent to the British camp shelled the Boer position to the northwest.

Notwithstanding the Boer artillery with wonderful accuracy made a fierce and determined effort to sweep these batteries off the hill, they doggedly held their ground. It was evident that the Boers in their desire to protect Bloemfontein and Magersfontein had failed to gauge the real intention of French to relieve Kimberley.

During the diversion which has just been described, the British column was steadily heading towards a rising plain two and one half miles wide separating a ridge running from north to south from a hill rising from their left. The Boers held both the ridge and the



Sketch No. 3. The Charge

hill—the ridge with skirmishers, the hill with two guns—and their line extended in a semi-circle over the plain.

The Third Brigade, under Colonel Gordon, was already under a hot fire to their left and front. There was indeed no time to hesitate. It was a difficult decision to make, but Kimberley *must* be reached that night or the horses breaking under heat and thirst must inevitably give way. The crisis of the Expedition was plainly at hand.

The enemy was in front and both flanks, occupying a rising piece of ground with riflemen and guns. The enemy sharpshooters were literally strewn along the edge of the plateau, confident that their dispositions would effectually bar the road to Kimberley and showing confidence that they were absolutely secure from a frontal attack. A forward movement under these conditions appeared the height of madness. A more cautious commander would have preferred to have committed himself to a slow dismounted engagement with uncertain

hopes of results, but General French was not of that stamp. In the very security of the Boers, as a cavalry commander, he saw his opportunity and crystalized it in the courageous and skillful decision to charge across the plain straight through the Boer position. Summoning his three brigadiers, he informed them of his plan. The eyes of the Sixth Infantry Division in rear were treated unexpectedly to a magnificent spectacle. Supported by the Mounted Infantry, who by British regulations could only fight dismounted, the First Brigade (Colonel Porter) continued to engage the enemy from their position on the left, while the guns of the Third Brigade, having been left to keep down the Boer fire on the east line of the ridge, Colonel Gordon with the 9th and 16th Lancers was straightway sent (mounted) to the north in two lines with intervals of about five yards between troopers. These regiments dashed forward and upward over the rising ground (though at a speed greatly impaired by the condition of the horses) and disappeared into a cloud of dust at a steady gallop straight into the enemy's fire. The Infantry in rear held their breath in intense anxiety over the fate of their comrades. Would the adventure end with the complete destruction of the mass?

General French, who had taken his position upon a high eminence, was more sanguine. Out of the dust emerged what appeared to be an uncertain group of horsemen, one moment hard pressed and faltering, and then moving forward and deploying towards the Boer flanks. As this spectacle, after a short, though anxious period of suspense, broke upon the Commander-in-Chief, he himself at the head of the Second Brigade galloped forward in support of the wavering Third Brigade, whose faltering movements were to be explained by the fact that the charge had been met by a withering Boer fire, but the Boers, seeing their fire had not taken effect, did not wait to receive the onset of British horse and steel, but had sprung to their ponies and scattered in flight. Many made their escape through the gaps in the charging cavalry line, moving beyond the flanks.

Before the spectators had had time to fully grasp the gravity of the situation, the clouds of dust had subsided sufficiently to disclose three British cavalry brigades reforming twelve hundred yards on the other side of the enemy position. French's Division was almost without injury, the strikingly small loss characteristic of surprise cavalry actions amounting to only about sixteen dead and wounded, including one officer, and thirty disabled horses—these falling almost exclusively on the first line. It is difficult to say which were more surprised—the British infantry who were watching or the Boers who were attacked.

The excitement of those Boer marksmen who stood firm caused

them to shoot too high. A common Boer tactical error was also disclosed in that they had taken their position not at the foot of the heights but on the summit. The excellent marksmanship of the Boer riflemen from their long hunters' experience had been put to naught, owing to the enveloping clouds of dust which hid the cavalry onset. Though the exhaustion on the part of the British, because of their trying march across the veldt, precluded their stopping Boer fugitives fleeing upon the ponies the way to Kimberley was nevertheless open.

After the brigades had assembled and reformed which was shortly before noon, and a short halt for water had been made at Abons Dam where a scanty spring gave an insufficient supply for the sorely tried men and horses, they were forced to again take up their weary way unrefreshed. But their spirits were amply cheered for their goal was almost in sight.

Pushing on six miles northward a halt was again called to obtain heliographic communication from a ridge by the roadside with Kimberley. Although General French himself succeeded in establishing communication, the suspicious town insisted upon taking him for the enemy and it had to be given up. It was only when he rode forward with his staff (the last Boer laager being taken) and was met by an envoy from the besieged town, that he was recognized. The population then assembled to watch another cloud of dust which arose along the southeastern horizon. When the dust cloud grew nearer there emerged from it a host of horsemen somber and grim, and in the extended far flung ranks there was the glint of spearheads and the gleam of scabbards, while the distant banks on either flank marked the position of whirling guns.

Wearied and spent, the dusty riders and the panting, dripping horses took fresh heart as they saw the broad city before them and swept with martial rattle and jungle toward the cheering crowds.

General French's first act was to send a heliograph message to Lord Roberts that his promise had been fulfilled and Kimberley relieved.

Had the Boers a single Cavalry division among the besiegers of Kimberley (instead of being only mounted Infantry) that promise of General French might not have been so promptly met.

Leadership Test for National Guard Units

CAPT. R. E. S. WILLIAMSON, *Cavalry D. O. L.*

THE July issue of THE CAVALRY JOURNAL (page 443) published conditions of a leadership test for cavalry platoons of the National Guard. This test, which was an adaptation of the "Leadership Test for Small Units" of the regular army, was held at Colebrook, Pa., for the 104th Cavalry, P.N.G., on July 28, 1930.

At retreat on the day preceding, each of the platoon leaders representing the nine rifle troops of the regiment received the following general and special situations:

General Situation

- a. Geological Survey Map 1 62500; Middletown quadrangle.
- b. The Susquehanna River forms the boundary between two states, Blue (east) and Red (west), which have recently declared war. An invasion of Blue territory is expected, but to date Blues have been able to hold all bridges across the Susquehanna.

Special Situation

- a. The 28th Division is completing its mobilization at Lebanon. The 104th Cavalry, Colonel Stackpole commanding, was attached to the 28th Division. The regiment went into bivouac at Colebrook at 5:00 P. M., July 27, after a march of 25 miles from its home station via Lebanon.

After supper July 27, the following special situation was issued:

Special Situation (Blue), Continued

- a. At 6:00 P. M., the following message was received by the C. O. 104th Cavalry from the C. G. 28th Division:

"Army Air Corps reports pontoon bridge being constructed near FALMOUTH by Red engineers at 5:00 P. M. today. Hostile troops all arms observed on roads leading to YORKHAVEN. This Division marches tomorrow on UPPER LAWN. You will march to FALMOUTH tomorrow and delay any advance of Red troops.

"Presence or absence of hostile troops east of the SUSQUEHANNA RIVER will be reported. Identifications desired. Division Air Corps will cooperate with your regiment.

"PRICE, Major General."

b. At 6:30 P. M. at his command post, Colonel Stackpole issues a verbal warning order in the presence of his staff, squadron and special unit commanders.

c. At this time he directed Major Blank to have Captain Blank of his squadron report for instructions at regimental headquarters 7:00 P. M. with an especially selected lieutenant for patrol duty.

At 7:00 P. M. July 27th, platoon leaders were given the following final instructions:

a. You are the lieutenant selected by your troop commander for patrol duty. With him you report at 7:00 P. M. to the regimental commander.

b. Colonel Stackpole shows you the message from the Commanding General 28th Division and indicates the various places on the map. He then tells you that the regiment will march at 5:30 A. M. tomorrow on FALMOUTH over the same route that will be designated for your patrol. He then turns to Captain Blank and directs that Captain Blank will provide you with a well mounted war strength platoon with machine rifle squad attached. Colonel Stackpole then says to you: "Here is a map and your written instructions. Read them now and ask about anything that you do not understand."

104th Cav.

COLEBROOK, PA.

27 July 30, 7:00 P. M.

Field Orders

No. 2

Maps: Geological Survey Map 1/62500; Middletown quadrangle.

1. Information of enemy and our troops, as given verbally.

2. Mission of this regiment as given verbally.

3. a. Your patrol will move out at 2:00 A. M. July 28 and reconnoiter the vicinity of FALMOUTH. Rate of march, 4 miles per hour.

(NOTE: Due to exigencies of the test, your time of departure will be that drawn by you.)

b. General route: RJ 1-3 mile southwest RJ 530—UPPER LAWN—RJ 440—CR 476—RJ 453—MAPLE DALE SCHOOL—CR 440—RJ 432—CR 410—RJ 385—RJ 362—CR 522—RJ 484—FALMOUTH.

c. The following information is particularly desired:

(1) Are there any hostile forces this side of the SUSQUEHANNA?

(2) If so, what troops are they (identification), what is their strength and composition, and by what route or routes are they marching?

d. Positive or negative information will be reported upon your arrival at FALMOUTH.

e. You will remain in the vicinity of FALMOUTH until the arrival of the regiment.

4. Full pack, cooked rations and grain for one day will be carried. If further supply is required, obtain same from the inhabitants and furnish receipt.

5. Messages as follows:

a. Here until 5:30 A. M. tomorrow.

b. Thereafter to head of main body on your route of march.

STACKPOLE, Col.

c. Upon being dismissed by Colonel Stackpole, your troop commander directs you to issue in his name such orders as are necessary to prepare your patrol.

Requirement

a. Submit to the judge at the starting point a paper stating your actions and orders from the time you are dismissed by Colonel Stackpole (7:30 P. M.) until your patrol moves out from the picket line in the morning.

Note: Ordinarily your troop commander would issue orders for and supervise the preparation connected with departure of this patrol, but for purpose of this test, it is assumed he delegates the authority to you.

b. Perform your mission.

Platoons left stables at half hour intervals in order determined by lot. The first platoon to leave moved out at 6:30 A. M., July 28th. At the start an umpire called the roll of each platoon and collected the platoon leader's solution of his actions and orders since he received his mission from the regimental commander on the night before. At the same time another umpire inspected and graded the platoon on adjustment of equipment.

Solutions to Requirements

Following is considered a satisfactory statement of what a platoon leader would do on the night preceding such a march.

a. At 7:30 P. M., upon being dismissed by the regimental commander, the platoon leader assembles his patrol, looks them over carefully to determine if any are unfit for patrol duty, and issues the following verbal warning order:

"This platoon goes with me on patrol tomorrow. We leave at 2:00 A. M. Equipment full pack. At call to quarters tonight, the mess sergeant will issue you one cooked ration which you will carry in your

saddlebags. Pack your saddles and fill your canteens with coffee tonight. Get to bed early. You will be called at 1:15 A.M. Report to me at the picket line at 1:30 A.M. ready to saddle. I will issue further orders in the morning. Are there any questions?"

b. At 7:45 P.M. he inspects the horses of the platoon. Any horse found unsuitable for patrolling is exchanged. Horses needing shoeing are sent to the horseshoer at once. While at the picket line, he directs the picket line guard to water and feed the horses of his patrol at 12:45 A.M.

c. At 8:10 P.M. he checks his own equipment to see that he has message blanks, pencils, compass, watch, field glass, and maps. On his map, he marks the route he is to follow and prepares a tracing of this route for the platoon sergeant. He then sees that his saddle is packed and that his canteen is filled.

d. At 1:15 A.M., July 28, upon being awakened by the guard, he sees that his patrol is being awakened.

e. At 1:20 A.M. he proceeds to the picket line where he is met by members of his patrol. He directs them to brush off their horses and saddle. He informs them that he will issue orders in twenty-five minutes.

The umpire at the start then noted the time and directed the platoon leader to issue verbally his march order to the platoon. The order of Lieutenant W. A. E. Leitzinger, Tr. A, 104th Cavalry, is considered satisfactory, and appears below.

"We have information that at 5:00 P.M. yesterday an enemy force of all arms was marching on roads leading to YORKHAVEN and was constructing a pontoon bridge near FALMOUTH. Our regiment marches at 5:30 this morning on FALMOUTH.

This platoon moves out at 2:00 A.M. to reconnoiter the vicinity of FALMOUTH via this route, (pointing out route on map) RJ 1 3 mile southwest RJ 530—UPPER LAWN—RJ 440—CR 476—RJ 453—MAPLE DALE SCHOOL—CR 446—RJ 385—RJ 362—CR 522—RJ 484—FALMOUTH. Rate of march four miles per hour. We are instructed to find out if there are any hostile forces this side of the Susquehanna, and if so to get their identification, strength, composition, and what routes they are marching on.

"Sergeant Gearhart you take 4 men from the first squad and act as point when we pass the line of outguards. You will precede the main body by two hundred yards. Cole and Gilles act as air scouts. Sergeant Shull will be second in command and ride in the rear.

"I will ride at the head of the main body.

"First objective: UPPER LAWN, Assembly point: Line of outguards. Are there any questions?"

After leaving stables, the platoon crossed the line of outguards, where an umpire representing the outpost commander inspecting Outguard No. 2, graded the platoon as to whether its leader asked for latest information of the enemy, and as to whether a patrol formation was taken. If questioned, the outpost commander replied: "There is no new information of the enemy. Everything has been quiet in front of all our outguards."

At this point an umpire joined and rode for a mile with the platoon, assigning a grade based on march discipline, gaits and movement by bounds of the point.

The platoon's first contact with the enemy was the capture of a mounted scout whose insignia provided an identification, but a search and interrogation of whom failed to disclose other information. The enemy trooper displayed commendable patriotism by steadfastly declining to answer questions even in the face of threats of death at the hands of several bloodthirsty platoon leaders. Where proper vigilance was not maintained, the prisoner would make a break for freedom. An accepted solution of this situation was for the platoon leader to tie the prisoner to his horse and send him back to the regimental command post under guard of two mounted messengers.

Further along the road the point of the patrol was attacked mounted by a squad of enemy Cavalry, which then retreated to the northwest. The platoon was graded on its action in mounted combat, as to whether the platoon leader was diverted from his original mission by the retreat of this small enemy force, and as to whether a rear guard was dropped off to protect the platoon from this new threat in its rear.

An enemy trooper was severely wounded during the melee. He weakly gave information as to the destination and mission of his patrol. His insignia provided identification. The platoon leader was graded upon his search, interrogation, and message based upon this wounded enemy and the encounter with the hostile patrol. In addition it was considered that first aid should have been rendered and the dying man carried to a nearby farm house and left in the hands of the civilian residents. Platoon leaders showed diverse humanitarian instincts in this situation.

The last situation encountered was the arrival of a mounted messenger who gave the platoon leader the following message from the C. O. 104th Cavalry:

"Mission of regiment changed. Return to COLEBROOK, without delay. Will await your arrival.

STACKPOLE.
Col."

At the same time, the messenger informed the platoon leader:

"The route over which you have come is covered by strong led patrols. The route to the east is clear.

"Blue planes destroyed the pontoon bridge at FALMOUTH by bombing, but the Reds have forced a crossing at HARRISBURG, and our regiment has been ordered there.

"My buddy was killed by a Red patrol shortly after we left COLE-BROOK."

This caused the platoon to return to camp by a parallel route, leaving the road clear for oncoming platoons.

On arrival at stables, the platoon was graded by a veterinarian on the condition of animals and on the care of animals after the march. Another umpire noted time of arrival and whether platoons dismounted and led into camp. The platoon was inspected for faulty adjustment and shortages of equipment.

Upon compilation of scores in the various situations of the Leadership Phase, together with those in the Use of Weapons Phase, the results of the Test were as follows:

1st Lieut. W. A. E. Leitzinger, Tr. A, 104th Cav., first.

2nd Lieut. H. C. McNew, Tr. E, 104th Cav., second.

2nd Lieut. W. W. Hensel, Tr. K, 104th Cav., third.

This test was considered of such interest and value* that on August 11th, 1930, it was given, under practically the same conditions, to platoons representing the nine line troops of the 103rd Cavalry, with results as follows:

2nd Lieut. J. Boylan, Tr. B, 103rd Cav., first.

2nd Lieut. K. J. Hafer, Tr. E, 103rd Cav., second.

2nd Lieut. C. W. Roberts, Tr. L, 103rd Cav., third.

*Colonel Stackpole writes:

"The reaction from the participants was uniformly favorable. In fact, the majority of the officers who took part, and their troop and squadron commanders, stated that this test was the outstanding success, from a training standpoint, of the encampment. The 103rd Cavalry, which followed us in camp, was so impressed with the value of this form of training, that they requested Captain Williamson to conduct the same test for their outfits."—Editor.

SPORTS

Unique Horse Show Event

By CAPT. W. B. BRADFORD, *Cavalry*

EXHIBITORS at the recent Bryn Mawr Horse Show were treated to a very welcome surprise this year in the class known as the Melbrook Trophy. The purpose of the class was to test the manners, ability and courage of hunters and jumpers. It was conducted over an unknown outside course about one half mile long, consisting of sixteen jumps, all different, but copied from those actually found in the hunting field, or employed in the National Horse Show. Mr. Brooks Parker of Strafford, Pa., was the originator of the idea, and he is sure to be copied by other progressive shows, as the class met with instant popular approval and was a great success.

Quoting from the prize list: "Open to all. To be shown over a special outside course simulating principally actual jumps in the Radnor Hunting country, but including also others used in the National Horse Show."

"Maximum number of jumps, 16. Maximum height of any one jump, 4 feet 6 inches; maximum width of any one jump, 10 feet."

"Performance only to count. Penalty only on knock downs, run-outs, refusals and fall of horse and/or rider, but in order that a steady—even though slow—hunting pace may be encouraged, completion of the course within a time limit will be required, with penalty for each ten seconds or part thereof overtime."

"The purpose of the class is to encourage the showing of experienced hunters, the testing of the show jumper under hunting conditions, and is intended to put a premium on manners, willingness and courage of the entries."

The Melbrook Trophy was scheduled for Saturday afternoon, the last day of the show. The sporting blood of Bryn Mawr exhibitors was evidenced by the large list of fifty-two entries. The horsemanship of the contestants and the calibre of their mounts was shown by the exceedingly good performances of the majority over this course, the most difficult and interesting ever presented at an American show.

Shortly prior to the hour for the class, further information was

vouchsafed in the form of attractive leaflets describing the conditions and obstacles as follows:

"—simulating principally actual jumps in the Radnor Hunting country."

"1. Horse Show Jump. Four feet of brush with wings."

"2. Over the three-foot chicken coop, out of the Goshen Road, south of Fairy Hill."—Jump attractively built, with fence and all, like the offsets from a road in hunting country.

"3. Out of the ring, over the hedge, without wings."

"4. Eight feet of Ridley Creek."—A good eight feet of water, with the usual take off hedge missing.

"5. Up the hill towards Mrs. Pratt's woods, over a three-foot fence."—This fence was in the middle of the steep rise going onto the Bryn Mawr polo field, making it at least four feet from the take off, and requiring a bold horse. The fence was long, but had no wings.

"6. Horse Show Jump over the four-foot hedge, with bar one foot from the ground, three feet in front."

"7. Wheat jump at Delchester. The contestants may not trespass on theoretical wheat thirty feet from the four-foot fence they first jump, and must immediately jump out (to the left) over a four-foot fence." This was very clever. The edge of the wheat field was indicated by a line drawn on the ground. The effect was that of a pen jump in which the rider must turn and jump out at right angles to the direction of his entry. To override into the wheat resulted in a penalty; to pull up and then turn to the left meant the loss of seconds, and these were precious in this course—one half mile over fourteen jumps, and only two and a quarter minutes allowed.

"8. Gate opposite the entrance of Silver Spring Farm, four feet three inches, leaning towards the take off." A very difficult jump, as the gate was leaning towards the rider at an angle of about twenty-five degrees.

"9. Horse Show double oxer. Two four-foot panels, four feet apart, with four-foot three-inch hedge between." Considerably more difficult than the oxer in the Olympia Course, as it was higher and there was only a single rail on each side.

"10. The narrow seventeen-foot lane in Yarnell's Woods. Near fence three feet, far fence three feet six inches." For most horses, this meant a second jump from the point of landing over the first rail, as time had always to be considered, and not much of a check in pace could be made.

"11. Over the blind wall on Green Bank Farm, four feet three inches, with sumac on near side." The wall was beautifully done.

The sumac varied in different places from about four feet six to a good six feet six. A good rider could choose the place most favorable for his jump.

"12. Down the hill from Mrs. Pratt's woods, over the three-foot fence."

"13. Over the bar beyond the stream, behind the barn on Hughes' place." This was the most difficult jump on the course—a stream of water about five feet wide, and immediately beyond, so close as to necessitate a jump from the point of landing, a single rail about three feet six. The best performers checked their speed and collected their horses during the approach. They took the stream from a canter and then popped over the fence. Others waded the stream, which was permissible, but they lost valuable time while walking through the water, and most often, their horses could not jump the bar from a walk, from the narrow strip of land serving as a take off.

"14. Into the ring over the hedge."

The horses performed wonderfully well. Though the Army entry *Suzanne* registered the only perfect performance, there were others that were almost equally good. Mr. Joseph N. Pew Jr.'s *Grey Dawn* fenced without fault, but was penalized one point for a run out and finished second. The Army's *Miss America* and Mr. Van Duzer Burton's *Golden Eagle* both finished within the ribbons, with only a fraction more scored against them. *The Duke of Bulgaria*, *Dick Waring*, *Parson*, *Gypsy Girl*, *Lord Irish*, *Kettle Drum*, *Galaway King*, *Wave* and *Avocat* all turned in excellent scores.

The course and conditions constituted a real text for horse and rider and compared favorably with the most difficult European courses. The class was popular, great to watch and real sport to ride. It is a new idea, fittingly fostered in one of our greatest horse countries, and is sure to find favor and to grow both at Bryn Mawr and other shows where real horses and good sportsmen are found.

Army Horse Show Team in Fall Shows

THE year's activities of the Army Horse Show will culminate in the international competitions at the great fall horse shows at Boston and New York.

The Boston show takes place October 28-November 1, closely followed by the New York National November 6-12. An agreement has been entered into between the two shows whereby there will be close cooperation in bearing the expenses involved in securing the presence of the foreign teams. Teams of army officers representing



The Army Polo Team Representing the United States in Argentina
 Left to right: Lt. M. McD. Jones, Cav.; Capt. C. A. Wilkinson, Cav.; Capt. P. Rodes, Field Artillery; Major C. C. Smith, Cav.;
 Lt. Homer Kiefer, Field Artillery; Col. W. V. Morris, Cavalry; and Capt. C. A. Wilkinson, Cav., who was the team manager in July, 1930.

Canada, Germany, Hungary, Irish Free State and Sweden will compete in addition to the United States team.

The United States Army team will be composed of Major H. D. Chamberlin, Team Captain, W. B. Bradford, Captain J. T. Cole, Lieutenants J. W. Wofford, G. B. Rogers, and E. F. Thompson, all Cavalry.

The more important international events at the show are as follows:

Boston: "Championship International Military Stake," open to all the officers of all nations; "Pairs of International Officers Jumpers;" "International Military Trophy," for teams of three officers from each country, performance only to count, best team aggregate score to win, officers to jump individually.

New York: "The Jan Ciechanowski Challenge Cup," to be won three times by one officer. Won last year by Captain Bradford on *Joe Aleshire*. "International Military Stake," won last year by Canada; "Pair of International Jumpers," horses to be ridden abreast; won last year by the United States Army team, Captains Bradford and Watkins on *Proctor* and *George Williams*. "International Military Trophy," one team of three officers from each country, competitors to jump individually and performance only to count; best aggregate score to win, with the limit beyond which penalties scored; won last year by the Polish team. "International Individual Military Championship Challenge Cup," open to officers who have competed for International Military Trophy; each nation may enter three horses, each ridden by a different officer; won last year by Lieutenant E. F. Thompson, Cavalry, on *Tanbark*.

Army Polo Team in Argentina

ON September 30 the United States Army polo team arrived in Buenos Aires, Argentina, to participate in the international polo tournament at that place. The playing members of the team are Major C. C. Smith, Cavalry; Capt. C. A. Wilkinson, Cavalry; Capt. P. Rodes, Field Artillery; Lieut. M. McD. Jones, Cavalry, and Lieut. Homer Kiefer, Field Artillery. Col. W. V. Morris, Cavalry, is in charge of the team.

The team will be mounted by Argentine poloists. This being the same team that won the Junior Championship in July of this year, the United States Army is sure of being ably represented in this, the first appearance of an army team in South America.

TOPICS OF THE DAY

General Summerall Completes Tour as Chief of Staff

NOVEMBER 20, 1930, marks the end of the tour of duty of General C. P. Summerall as Chief of Staff. Through four years he has guided the army through the difficult adjustment to changing technical, economic and personnel requirements of the modern peacetime national defense.

Steadfastly through his labors he has kept the welfare of the officers and men whose life is the army ever in mind. The progressive amelioration of living conditions has been one of his chief concerns. The far-reaching effect of an increased ration allowance is an instance of his efforts. These and many other things have touched our personal lives and bring our gratitude. The Cavalry will always look to General Summerall as one of the outstanding officers of our army and can never forget the staunch support to the branch which he has unfailingly given during his tour of duty as Chief of Staff.

On behalf of the cavalry officers and men of the army, the CAVALRY JOURNAL offers its best wishes to General Summerall in whatever endeavor he may devote himself to on terminating his active service with the army.

French Autumn Maneuvers

THE most important French maneuvers of the year took place in Lorraine September 5th to 10th. According to the newspaper announcements of the maneuver, General Brécard, Inspector General of Cavalry, and member of the Superior War Council, directed the operations of the opposing forces, totaling 50,000 men. Units were completed to war strength for the period by calling up reservists on August 21 for a three-weeks' period of instruction. The theatre of operations were limited on the south by the Meurthe and on the north by the Sarre, following the axis Luneville-Metz.

In the maneuver the available troops were divided into two forces directed toward each other and divided by some fifty kilometers at the start. Each was charged with a covering mission requiring a rapid advance to seize an advantageous river line (the Sanon). The northern force (Red) was provided with the command and staff of the 20th

Army Corps while the southern (Blue) force was under the command of the 7th Army Corps. Four infantry divisions and two cavalry divisions participated, together with numerous corps troops, tanks, heavy artillery, engineers, signal troops, aviation, etc. Of the two cavalry divisions participating, the 2d was drawn on to provide corps and divisional reconnaissance groups, while the 5th acted as a unit as a part of the Blue force. As a result of its advantage in Cavalry, the Blue force, according to General Hellot in the *Figaro*, gained the initial advantage. The 5th Cavalry Division moved rapidly forward and forced the river line after a thirty-five kilometer night march and held the north bank of the Sanon. The northern force, though separated only by twelve kilometers from the Sanon, due to the lack of Cavalry, lost this crucial line, only a few light elements having arrived to oppose the Blues. The Reds held on a prepared line of resistance in rear of the river line; the Blues prepared an attack on this line the following night when the first phase was halted. General Hellot remarks that the regiment of "dragoons portées" of the 5th Cavalry Division, due to failure of the manufacturer to deliver the track-laying vehicles with which they were to be provided, were carried in trucks. He notes the presence of new equipment in a squadron of eighty side cars, a squadron of machine guns and of 75's carried on track-laying vehicles, and of a new radio apparatus of a very portable type.

Basic Cavalry R. O. T. C. Manual

IN order to fill the need of R. O. T. C. Cavalry units for a basic cavalry text covering the subject matter of the courses required by War Department Regulations, the firm which has published the Infantry Drill Regulations, Infantry Basic and Advanced Courses, Engineer Basic, Coast Artillery Basic and Advanced Courses and other texts, has published for the Cavalry Association the Basic Cavalry R. O. T. C. Manual. The subject matter of the book has been carefully reviewed by cavalry officers on duty in the office of the Chief of Cavalry and presents the latest available material. New and specially made cuts illustrate the text. It is hoped that this text will prove of real assistance to officers on duty with R. O. T. C. units by placing together in one volume the authentic material pertaining to the basic instruction of their students.

It is the intention of the publishers to go over this text annually to bring it up to date with current changes in Regulations. This text will not only prove of value in the instruction of R. O. T. C. units, but

will also be a handy reference text for Organized Reserve and Regular units.

The text may be obtained through the Cavalry Association. (See notice in advertising section of this issue).

Students at the Cavalry School

Following is a roster of students at the Cavalry School for the 1930-31 courses:

Advanced Class: Majors James E. Slack and Arthur H. Truxes; Captains Sexton Berg, Charles J. Booth, Henry H. Cameron, Roye P. Gerfen, George A. Goodyear, William R. Hamby, Catesby ap C. Jones, Frederick T. Murphy, Vernon L. Padgett, Orland S. Peabody, Christopher C. Strawn and John W. Weeks.

Advanced Equitation Class: Captains Fred W. Koester, John C. Macdonald, George I. Smith and James W. Younger (Q. M. C.); First Lieutenants Joseph K. Baker, Clovis E. Byers, Peter C. Hains III, Robert L. Howze, Cary B. Hutchinson, Frank DeK. Huyler, Jr. (Cav. Res.), Laurence K. Ladue, George E. Mitchell, Jr. (F. A.), Jose F. Morilla (Cuban Army), Carl W. A. Raguse, Thomas Robinson, Clark L. Ruffner and John H. Stadler, Jr.; Second Lieutenant Charles H. Valentine.

Troop Officers' Class: Captains John W. Blue (Inf.), Walter W. Boon, Frank C. Hershberger (V. C.), Joseph A. Nichols (Inf.) and Maurice Rose; First Lieutenants Comila G. Chavez (Cuban Army), Harrison W. Davison, Mario Fernandez (Cuban Army), Viconte Gallinal (Cuban Army), Leslie M. Groner, Paul G. Kendall, Raymond D. Palmer and Winfield C. Scott; Second Lieutenants C. Stanton Babcock, Wallace H. Barnes, George V. Ehrhardt, August W. Farwick, Harold M. Forde, Malcolm D. Jones, Jr., Rufus L. Land, Milo H. Mateson, John G. Merrick, Basil L. Riggs, John L. Ryan, Jr., Charles A. Sheldon, Egon R. Tausch, Theodore C. Wenzlaff, Grant A. Williams and Norman N. Winn.

Correction

THE author of the article "What One Horse Did," published in the July issue, has called our attention to an error which we are glad to correct. On page 409, in speaking of the estimated effect of unnatural footing, the figure 47,000 as given should have been 4,700 miles.

Give Us Changes of Address

WITH the small personnel available to keep the records of the Association, it is practically impossible to keep the addresses of members up to date from War Department orders. Officers on temporary duty, leave and other movements often cause non-delivery of the JOURNAL by neglecting to notify us of such changes. We therefore urge members to send in change of address on change of station or in case of long leave or temporary duty away from their regular station.

National Rifle Matches

On September 13 the 1930 National Rifle Matches closed with the shooting of the principal event, the National Rifle Team Match. One hundred and eight teams of ten shooting members each took part. The scores of the first ten teams were as follows:

1. U. S. Marine Corps Team.....	2,805
2. U. S. Infantry Team.....	2,799
3. U. S. Navy Team.....	2,793
4. U. S. Cavalry Team.....	2,777
5. Oregon National Guard Team.....	2,773
6. U. S. Coast Guard Team.....	2,756
7. U. S. Engineer Team.....	2,754
8. Massachusetts National Guard Team.....	2,745
9. Washington National Guard Team.....	2,721
10. Ohio National Guard Team.....	2,720

The Cavalry Team, selected after the preliminary tryouts, was composed of 1st Lieut. G. A. Rehm, 3d Cav., Team Captain; 1st Lieut. C. A. Burcham, 7th Cav., Team Coach, and the following shooting members: Sgt. J. B. Jensen, 7th Cav.; Sgt. Floyd Barrett, 2d Cav.; Sgt. W. D. Reynolds, 2d Cav.; 1st Lieut. R. D. Palmer, 12th Cav.; Sgt. R. V. Wilzewski, 8th Cav.; Sgt. L. J. Hedglin, 1st Cav.; Sgt. Jim Adams, 12th Cav.; Sgt. Stanley Blazevski, 3d Cav.; Cpl. Holger Christensen, 2d Cav., and Staff Sgt. Henry Ehardt, 12th Cav. Sgts. R. G. Kirby and R. R. Grider both 14th Cav., were alternates.

PROGRESS AND DISCUSSION

This section of the JOURNAL has been instituted for the purpose of recording the state of development of various items of material in which the Cavalry is particularly interested, progress in technique or tactics and also to encourage discussion of matters of general professional interest to cavalry officers. Suggestions concerning new methods developed and discussions or constructive criticisms of present methods, equipment, etc., are invited. It is believed that there are many practical ideas and improvements which officers are using in their organizations which may be of benefit to others in solving similar problems. If you have an idea or suggestion, along the lines indicated, send it in. It will be welcomed.

Machine Guns Replace Machine Rifles

ON the recommendations of Major General Guy V. Henry, Chief of Cavalry, the War Department has approved replacement of the machine rifles now carried by line troops by air-cooled machine guns. The weapon to be issued is an adaptation of the air-cooled tank machine gun. To adapt it to the needs of the Cavalry, alterations are being made in the sights and in the emergency tripod. Experimental work has been carried out in the 1st Cavalry Division in developing these modifications.

The only change in the machine rifle pack needed to adapt it to carrying the air-cooled machine gun is alteration of the off hanger of the gun pack. Suitably altered hangers will be issued with the machine guns by the Ordnance. The simplicity of the required changes in the materiel is such that it is hoped to complete equipping regular organizations shortly after the first of the year and it is considered certain that all organizations will receive the machine guns in time for the 1931 target season.

The substitution of machine guns for the machine rifles now carried, without increase of personnel or pack animals, will greatly increase the fire power of the cavalry regiment. Each war strength regiment will have available for dismounted action 16 water-cooled machine guns and 48 air-cooled machine guns, all .30 calibre, or a total of 64 machine guns, plus the fire of 624 rifles.

Has the Army Gone to the Dogs?

By MAJOR PAUL R. DAVISON, G. S. C.

(One time Second Lieutenant, 3rd U. S. Cavalry)

WHAT is wrong with the Army?

Education? Decidedly not wanting.

Loyalty to the Service? Present and accounted for.

Military Education? Sufficient and well served.

Training? Plenty and correct.

All of the above have never been better, in fact, never in former years has there been even an approach to our present striving toward perfection in the matter of education, loyalty and training.

What is wrong? Esprit de Corps? Decidedly yes—yes, in capital letters.

As the army is now organized, an officer will serve one year of command duty with the 1st Cavalry, the next tour with the 3rd Cavalry and the subsequent tours with other regiments. While this scheme gives the officer a knowledge of his branch as whole, it does not associate him definitely with any one of the particular regiments. An officer may think that he has his regiment at heart, and may do his level best to foster esprit by training his outfit well and coaxing it into being the "best regiment in the army", but his heart is not entirely with his regiment, squadron or troop. Deep down inside of him there is the sure feeling that the —th Cavalry or Troop X of the —th Cavalry was the only outfit on the face of the earth. In other words, every officer in the army has his "Alma Mater".

You cannot listen in on the conversation between two old timers but that you eventually hear one say, "What was your outfit"? Without hesitation, old timer No. 2 answers, "the old Xth Cavalry, and some regiment she was too". Probably the old Xth Cavalry was a drinking, domineered and howling mob, not one tenth as fine an organization as the regiment Old Timer No. 2 is now commanding, but to him it was just what he said it was—some outfit.

To the soldier, and especially the noncommissioned officer, who, when all is said and done, is actually the fiber and tendon of the army, the situation is unbearable. No sooner do the solidiers get to know and respect their officers and to settle down to a life of good clean living, hard willing training, than the scene changes and these officers pop off to school, staff duty or what not, possibly never again to be associated with the regiment they leave. The noncommissioned officers get discouraged and shift. They hear that a neighboring regi-

ment is better, therefore they give up chevrons and hard-earned prestige in hopes of finding better conditions. They shift and roam from one outfit to another, often changing branch of service. The old "Top" with solid yellow hash marks from cuff to elbow is a thing of the past.

"Well, what of it?", you say. "What do you propose to do about it? You know that there are many more officers in every grade than there are vacancies with the regiments. They all cannot serve out their service in a regiment."

But I say they can and they should. It is a simple solution which I offer. I would give every officer in the army, not a permanent staff branch officer, an Alma Mater—a basic regiment. An outfit he could swear by, drink his lemonade to, wear the coat of arms of, and last, but most important, serve in when he was fortunate enough to do his duty with troops.

As this is written, there is before me the March 1, 1930, Army List and Directory. It shows the following cavalry officers:

Colonels	81
Lieutenant Colonels	80
Majors	184
Captains	318
First Lieutenants	198
Second Lieutenants	120

Total 981

There are 14 regiments of cavalry to each of which could be permanently assigned approximately the following:

Colonels	6
Lieutenant Colonels	6
Majors	13
Captains	23
First Lieutenants	14
Second Lieutenants	9

Total 71

The present regiment of cavalry can function comfortably with 22 assorted officers. It is plainly evident that 22 or more of the 71 officers, assigned permanently to the —th Cavalry, could be on duty with that regiment at all times. Assign the officers away as now: schools, staff, National Guard, Reserve Officers Training Corps; anything. When one of these officers is due to go back to serve with a regiment send him to his very own, dearly beloved, regiment. Assign the incoming second lieutenants to regiments and let them under-

stand that they will remain in that regiment, no matter where they ~~are~~, until death do part them.

When this scheme has been put into effect, the regiments will take care of their absent ones. They will keep them posted on baseball scores, regimental gossip, polo, and everything connected with the old outfit. The soldiers will know all of their officers and will welcome them back home. The non-commissioned officer will stick to his chevrons and his troop.

The simple scheme so lengthily outlined, will take but little effect on the part of the War Department and will not be felt in the matter of money. Two years should iron out the situation and then when the question is asked—"What is the matter with the army?" The prompt and vociferous answer will be—"Nothing, by the gods of war! We are the finest army the world has known".

A Field Burnishing Machine

By CAPTAIN JAMES M. ADAMSON, JR., 12th Cavalry

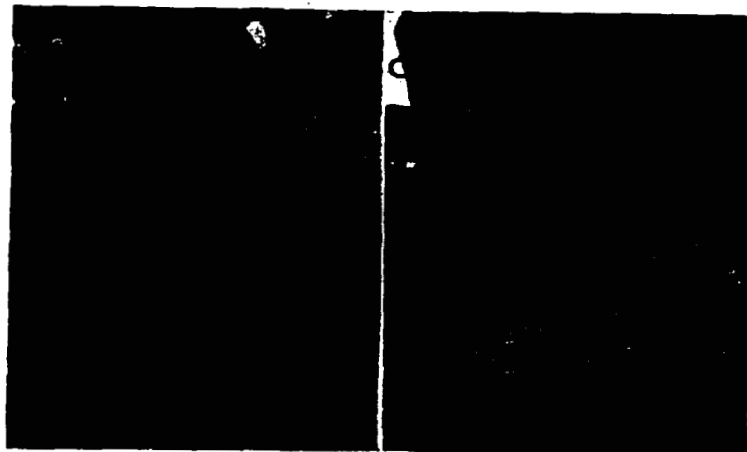
IN keeping with the present day standard of "polish and shine," all the 12th Cavalry troops are equipped in garrison with electrically driven burnishing machines for the upkeep of all metal parts of horse and transportation equipment. Experiment indicate that an oak barrel best serves the purpose. It has further been found that the addition of small leather scraps hastens the process more than any of the other commonly used materials such as sand, paper or any fine grit material.

Prior to taking the field for the recent maneuvers, with a view to maintaining the standard of equipment, the Commanding Officer devised a means to this end which proved a great success. The object was twofold, first the upkeep of garrison standards, and second, the utilization of available power. The materials required are procurable anywhere and consist of the following:

- 1—Eight-gallon oak barrel.
- 1—Square link binder chain.
- 2—Sprockets (standard parts of several different farm machines).
- 2—Pieces of two-inch galvanized pipe.
- 2—Pieces of two-inch strap iron four feet long.

The first three items were purchased at a total cost of \$12.00 to organization funds. The machine can be installed by the average troop horseshoer or mechanic, with the tools furnished by the regimental wheelwright.

While the accompanying illustrations show the construction in general, some details are worthy of note. The barrel must be rein-



Left: Rear View; Right: Side View, showing method of attachment of burnisher to escort wagon.

forced on the ends to which the shaft is bolted by metal braces inside and outside, these braces being at right angles to each other and bolted through to the end plate, to which the shaft is attached. To facilitate the removal of the rear wheel of the wagon and to maintain the proper chain adjustment, the addition of an idler was found to be essential. This consists of a piece of strap iron bolted to the bed of the wagon, to which by means of two bolts is attached a similar strap of iron carrying a roller the width of the drive chain. The sprockets on the shaft and the wheel are five and ten inches respectively and this gear ratio has been found to be the most effective.

The door cut in the keg or barrel should be the width of two staves and the wood cut out should be used for the door, these pieces being plated together and two ordinary strap hinges attached. Some troops installed grease cups on the hangers to reduce the friction of the shaft with the bearings formed by the hangers.

In attaching the sprocket to the wheel it was found that three bolts were sufficient, but these must go through both the inner and outer flanges of the hub.

Prior to taking the field each teamster was equipped with a complete extra set of chains, seventeen in all, for four line harness and escort wagon. It was found that eight or ten miles on the road was all that was required thoroughly to polish one complete set. The machine is large enough to accommodate one set, so that in the average day's march at least two sets can be put in excellent condition.

If, while in the field a tactical situation arises in which the polishing of metal is not desired and a dull effect is wanted, the sim-

plest way to accomplish this is to place the articles in a wood fire for a few minutes. Two hours burnishing in the above described barrel will restore a silver like brilliancy. This machine was put to a thorough and rigorous test during maneuvers involving marches totaling 650 miles and on no occasion did it fail to function, or did it give any trouble. The soldier's typical skepticism of any new device was fast removed, and a high standard was maintained under field conditions with the expenditure of very little effort.

An Interesting Experiment

COL. R. J. FLEMING, commanding the 28th Cavalry, has received instructions from the Philippine Division Commander, Gen. Paul B. Malone, to concentrate upon machine gun training in all troops of the regiment. Accordingly the regiment will effect a tentative reorganization of each rifle troop which will hereafter consist of two rifle platoons and one machine gun platoon. A machine gun school for all officers and non-commissioned officers of the regiment has been organized.

General Malone has stated as a principle that the maximum fire power of all arms must be delivered if the Division is effectively to carry out its primary mission of defending the beaches against all landing parties. The substitution of machine guns for machine rifles in the rifle troops is expected to prove of particular advantage under conditions in the Philippine Islands as the primary mission is a defensive one and it is improbable that the regiment would ever be opposed by mounted troops.

The tentative plans for the division maneuvers to be held in February, 1931, provide for the movement of all machine guns to the theatre of action by motor truck, the led horses of the regiment following. This will enable the machine guns to get into defensive positions in the shortest possible time in order to deliver their maximum fire power against landing parties. The led horses following will enable the regiment to transform at need back to the normal cavalry regiment, capable of maneuvering and retaining its usual mobility over all terrain.

This experiment will be watched with great interest by all cavalry officers, for doubtless under certain conditions this method of maneuvering the bulk of the fire power of the regiment in order to seize and hold specific points may prove advantageous.

It is interesting to note that the Philippine command has independently arrived at the same result as the War Department in

substituting machine guns for the machine rifles of the line troops as described elsewhere in this issue.

Troop A, 2d Armored Car Squadron

THE Army Relief Carnival at Washington Barracks, September 25, marked the first public appearance of the newly organized and equipped Troop A, 2d Armored Car Squadron. This unit has been organized and is commanded by Captain C. H. Unger and consists of two lieutenants, 1st Sergeant, Staff Sergeant, Mess, Supply and six line sergeants, four corporals and forty privates 1st Class and privates.

The equipment of the troop consists of varied materiel of experimental design. The 1st Platoon is equipped with five two-wheel drive light cars built of commercial chassis as follows: 1 Chevrolet, 1 Plymouth and 3 Whippets. Auxiliary wheels are furnished to take the load in case of puncture of a tire, to gain greater traction on cross-country driving and to give greater flotation in soft terrain. The turret of the light car is capable of 360 degrees traverse and contains one .30 calibre Browning Tank Machine Gun. Armor is 3/16 inch plate proof against .30 calibre fire (except close range normal impact) with 1/4 inch armor in the turret. The weight of the car is approximately 3,300 pounds loaded with crew. The radius of action on one fill of gasoline is 200 miles. The commercial chassis have been altered as little as possible to test their suitability for mass production. The only alterations necessary are a larger radiator, lowering of steering wheel and column, raising the muffler and adjusting the length of foot pedals. The crew consists of three men.

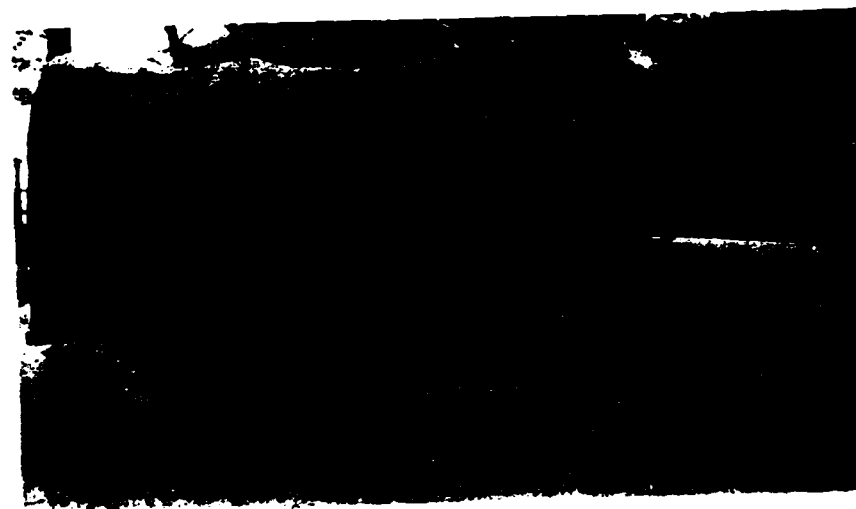
The 2d Platoon is equipped with six four-wheel drive cars carry-



Light Armored Car. (Chevrolet Chassis). In action the hinged plates at sides and front of driver's compartment completely enclose the compartment.



Medium Armored Car. The .50 Calibre Machine Gun in the turret is capable of elevation for anti-aircraft fire. Brackets on sides of car provide for ground and anti-aircraft .30 calibre fire when stationary.



Troop Transport Truck. The machine gun mounted on the bracket is capable of elevation and traverse for anti-aircraft protection. When stationary the gunner dismounts to deliver anti-aircraft fire.



The complete materiel of Troop A, 2d Armored Car Squadron

ing a crew of four men and weigh loaded, with crew, approximately 7,000 pounds. They are powered with a 95-h.p. Franklin 6-cylinder air-cooled motor. They have eight speeds forward and two reverse. On tests they have attained over 60 miles per hour and climbed 65 per cent grades. The cruising radius is 200 miles on one fill of gasoline. Dual tires can be used on front wheels as well as rear for cross-country driving. They are completely armored with 1/4 inch armor plate, giving protection against small arms fire. The armament consists of one .50 calibre Browning Machine gun and two .30 calibre tank machine guns, air cooled. The .50 calibre fires at a rate of 400 rounds per minute and the .30 calibre at 500 to 600 rounds per minute. One of the four-wheel drive cars is equipped for rear steering. These cars are designed with special attention to short wheel base, high clearance and ample motor power to gain maximum cross-country ability.

Two trucks on the same chassis as the cars of the 2d Platoon form the transport of the troop. In action one of the 2d Platoon cars is used as the command car of the troop. Radio equipment is to be installed. On the march a Ford touring car is provided for the troop commander.

ORGANIZATION ACTIVITIES

1st Cavalry, Ft. D. A. Russell, Texas

General Charles P. Summerall, Chief of Staff, made a visit of inspection to Fort D. A. Russell, July 11, 1930. The following is an extract from a letter to the 8th Corps Area Commander pertaining to the visit of the Chief of Staff:

"The 1st Cavalry has made this post conspicuous by its thorough police, the beautification of the grounds and the care and preservation of the buildings. The escort squadron (2nd Squadron, commanded by Major A. T. Lacey) was a handsome body and its bearing most impressive. Every element showed attention to detail and a great deal of labour on the part of the officers and men concerned."

Brigadier General Walter C. Short visited the Post August 21 on a tour of inspection of Olympic prospects. Captain Frank Nelson, in charge of training of Olympic prospects, showed his squad over the complete Olympic course and General Short selected six horses as worthy of further training: *Columbine, Kitty, Tyrol, Ansonia, Hazel Gloaming and Dark Rosaleen.*

The 1st Cavalry completed its 1930 Target Season on August 15th. The Machine Gun Troop qualified 100% of its men in all arms. Troop E qualified 100% with the rifle. All troops qualified more than the required 85% in all arms.

Troop B, 1st Cavalry, is to send one platoon to participate in the San Angelo State Fair from September 22-27. This platoon will take with it several jumping horses and give daily exhibitions in front of the grand stand of jumping and fancy drills.

Lieut. John G. Minniece, with a party of officers of the Border Patrol Service, made a trip of exploration through the Grand Canyon of Santa Helena on July 24th and 25th. This section of the Rio Grande is impassable for any sort of boat and the party traveled for five or six miles through the canyon by wading and swimming and climbing over rocks.

The 1st Cavalry started the second period of the training year on August 15. The troops are engaged in intensive training of squads. Each week the Squadrons hold a tactical exercise and every other week a ceremony. The squadron tactical exercises are in preparation for regimental tactical exercises on the 1st and 3rd Wednesday of



Lt. J. G. Minniece, 1st Cav., with party of Border Patrol Officers on completion of trip through Santa Helena Canon.

each month, and so far have included mounted and dismounted attacks against an indicated objective.

The following officers have reported at this station during the past three months: Lieut. Col. Joseph C. King, Lieut. Col. Charles W. McClure, Q.M.C., Major Arthur T. Lacey, Captain Gersum Cronander, 1st Lieut. Arthur N. Willis, 1st Lieut. Edwin P. Crandell, 1st Lieut. Logan C. Berry, and 2nd Lieut. Harvey R. Ellis, Vet. Corps.

Seventy-six recruits have been assigned to the 1st Cavalry during the past two months and are now undergoing a three month period of intensive recruit instruction.

2d Cavalry, Fort Riley, Kansas

The 2d Cavalry completed its known distance firing August 30th. with what is believed will prove, when the figures are completed, a substantial improvement over the 92.6 per cent qualified in 1929. During the period the Second was firing on the range mornings, the afternoons were devoted to completion of the saber and mounted and dismounted pistol record courses, with gratifying results.

Throughout the summer both the 2d and 13th Cavalry regiments assisted the Organized Reserve and the National Guard regiments with mounts and demonstrations during their encampments. The

2d Cavalry provided mounts for the officers of the 322nd Cavalry, the 66th Cavalry Division Quartermaster Trains, the 2d and 3d Cavalry Divisions, and the 15th Cavalry during the period July 6-19, 300 horses and 48 mules to the 60th Field Artillery Brigade July 27-August 10, and 200 horses and 48 mules to the State Staff and Detachments, the Headquarters and Headquarters Company, 69th Infantry Brigade, and the 114th Cavalry, all Kansas National Guard. The Kansas Guard camps were especially well attended, the 114th Cavalry bringing 415 enlisted men to camp and the 60th Field Artillery Brigade, 1095.

Commencing September 27 the 2d Cavalry, Colonel A. M. Miller Commanding, is scheduled to start on a 351-mile march to Talmage, Nebraska, and return. En route the regiment will assist in the 51st County Fair at Pawnee City, Nebraska, October 2, 3, 4. The Second is scheduled to return to Fort Riley October 21st.

Troop E, Captain R. M. Graham, has been designated to participate in the Goodrich Trophy Training Test.

3rd Cavalry (less 1st Squadron), Fort Myer, Va.

The training of 288 Cavalry C.M.T.C. students was the major task of the summer training camp at Fort Myer, commanded by Colonel Harry N. Cootes, 3d Cavalry. Assisting the members of the regiment in the student instruction, were officers of the 306th Reserve Cavalry, who attended camp from July 5th to 18th, and officers of the 307th Reserve Cavalry, who were on active duty for the two weeks ending with the close of camp on July 31st.

Running concurrently with the C.M.T.C. for part of the summer, was the Reserve Officers Training Corps camp, composed of the Virginia Military Institute unit and attached students from Culver and New York Military Academy. A large part of the training of this group was conducted in the field.

The 3d Cavalry Polo Team has had a most successful season. The team, composed of Captain Mark A. Devine, Lieutenant Thomas A. Robinson, Lieutenant F. W. Makinney, and Lieutenant C. H. Noble, climaxed its string of victories by winning the southeastern circuit in a game against the Philadelphia City Club at Philadelphia. Following this a trip was made to the Point Judith Polo Club, Narragansett Pier in an unsuccessful try for the inter-circuit championship of the eastern division, which was won by the Chagrin Valley Team.

August 30th, the Squadron made a two-day trip by truck and marching to Baltimore to take part in a parade in connection with the encampment of the Veterans of Foreign Wars. As on previous



The Honorable H. L. Stimson, Secretary of State (Brig. Gen. Aux. Res.) reviews the 3d Cavalry C.M.T.C., Colonel H. N. Cootes, commanding.

years the model camp of the regulars was one of the points of interest to those present. The parade over, Troop E advanced its training for the Goodrich Trophy Test, by marching to Hanover, Pennsylvania, where it took part in the Hanover Fair. A total of ten days was spent on the road.

4th Cavalry, Ft. Meade, S. D.

On July 6th, twenty-two reserve officers reported at Fort Meade for active duty. Three days later the 4th Cavalry, with its attached reserve officers, left the Post for a two weeks' practice march. In selecting a route for the annual march of the 4th Cavalry, for the training of the officers of the 324th Cavalry this year, considerable effort was made to have this march follow as near as possible the route of "The General George A. Custer Expedition of 1874 into the Black Hills," a march of about 250 miles. This march took the troops over roads greatly traveled by tourists and through the scenic portions of the Black Hills. Ample opportunity was had for swimming and fishing. In spite of the hot weather, the trip was enjoyed by all, and both horses and men finished the march in excellent condition. Five

reserve officers overstayed their period of active duty in order to complete the march with the troops.

During the past three months, forty-four remounts have been turned to duty showing results of excellent training. Lieutenant Feagin has been in charge of the remount training.

The Fort Meade-Sturgis Horse Show was held on August 23rd and 24th. There were 23 classes and nine races. All events were very creditable and were witnessed by a large gathering. The result of the two-day show gave the Regimental Trophy (for the greatest number of points won), to Headquarters Troop. Lieutenant Claude W. Feagin, closely followed by Captain W. T. Bauskett, was heavy winner among the officers, with three first, two seconds, three thirds and one fourth. Among the ladies the heavy winner was Mrs. H. E. Walker, a post lady, with three first and one second.

5th Cavalry, Ft. Clark, Texas

As usual during the summer months at Fort Clark, the major portion of the work done by the troops was on the target range. In addition to the regular activities, the R. O. T. C. Cavalry unit of the A. and M. College of Texas, consisting of 38 students, trained at Fort Clark from June 1st to July 12th, while 40 reserve officers, members of the 156th Cavalry Brigade under the command of Lieutenant Colonel Rhoades, trained from July 20th to August 2nd.

Following the close of the local league, the Fort Clark champions, Headquarters Troop, 5th Cavalry, made a trip to Marfa where they played Troop B, 1st Cavalry, winners of the Marfa League, for the Brigade Championship. A very decisive victory of 15 to 2, brought to Fort Clark the silver trophy.

The regimental baseball team recently made a trip to Rosita, Mexico, where they met the local team and divided the series by winning one game and losing one.

Shortly after the return of the regiment from the Spring maneuvers, the Horse Show Team was organized and work has been going on regularly during the summer months. The stable at present consists of private and public mounts, including candidates for the Olympic tryouts in the Equestrian Championship and Prix De Nation event to be competed for at the 1st Cavalry Division Horse Show in October.

July 4th was the occasion for the town of Bracketville and Fort Clark joining forces in an all-day celebration which consisted of a barbecue and horse show at Los Moras Park and a Rodeo in the afternoon at Fort Clark race track.

During the summer the polo activities have been confined to developing new ponies.

6th Cavalry, Ft. Oglethorpe, Ga.

Troops of the command are getting down to intensive training following very successful summer camps.

The Sixth Cavalry, less Troop E and Machine Gun Troop, spent the month of September at the Catoosa range engaging in annual target practice. The 3d Battalion, 22d Infantry, and Troop E, 6th Cavalry, will be on the range in October. The 3d Battalion, 22d Infantry, returned to the Post on July 29, 1930, from summer training at Fort McClellan, Alabama. Troop E, 6th Cavalry, returned to the Post on August 28, 1930, from summer training at Camp Knox, Kentucky.

The Sixth Cavalry is expected to make practice march to Nashville, Tennessee, in October, and while there will engage in horse show and Armistice Day ceremonies, popularizing the Army with the civilians of that locality. The regiment expects to march to Fort Benning, Georgia, April, 1931, there to engage in maneuvers and tactical exercises conducted by the corps area commander.

The Colonel Perry Fyffe Memorial swimming pool was formally turned over to the post commander on July 26th, 1930, by a committee of citizens of Chattanooga. Formal dedication of this pool will be held at a later date.

The following officers have joined in the past three months:

Lieut. Col. R. McC. Beck, Lieut. Col. Troup Miller, Captain T. W. Herren, Captain E. H. de Saussure, Captain R. Engels, Q.M.C., Captain R. C. Gibbs, First Lieut. G. R. McElroy, First Lieut. W. J. Bradley, Second Lieut. W. H. Wood, and Second Lieut. R. M. Barton.

The following officers will join during the months of September and October: Captain W. V. Ochs, and Second Lieut. W. F. Grisham, 6th Cavalry.

The following officers have been relieved: Captain George A. Goodyear, to Cavalry School, Advanced Course; Captain E. J. Glynn, to Q. M. School; First Lieut. Alan Fulton, to 13th Cavalry; First Lieut. Douglas Cameron, to 12 Cavalry; Second Lieut. A. M. Miller, Jr., to 13th Cavalry; Second Lieut. J. L. Ryan, Jr., to Cavalry School, and Second Lieut. Roy Guertler, to Air Corps.

7th Cavalry, Ft. Bliss, Texas

This is the time of the year for expressing regrets and extending welcomes. The Garry Owens regret the departures of Captain W. W. Boon, and Lieutenant Norman M. Winn, who have gone to Fort Riley

to school. The regiment is glad to welcome Lieut. Col. Frank Keller, Major Cyrus Wilder, and Lieutenants J. A. Whelen, Jr., and D. M. Schorr. Major Wilder has been with the New Mexico Military Institute for the past four years. Lieutenant Schorr comes to us from an Air Corps detail at Brooks Field. Lieutenant Whelen is back again after two years in the Philippines.

The regiment spent the month of June at the Fort Bliss Target Range, Dona Ana, New Mexico. The results obtained were highly satisfactory. The regiment qualified all but one man with the rifle over the record course "A." The Machine Gun Troop under the guidance of Lieutenants Harry C. Mewshaw and Thomas Van Natta, made an enviable record when they qualified every man as expert. The individual average was 416.

The regiment qualified as follows:

Service Rifle: 99.68%, Machine Gun: 100%, Saber: 93.9%, Rifle, small bore: 99.45%, Pistol, dismounted: 90.00%, Machine Rifle: 100%. Private First Class Thomas H. Foster of Headquarters Troop, with a score of 335, had the highest individual score in the regiment.

July has been given over to the training of Reserve Officers of the 156th Cavalry Brigade, 66th Cavalry Division. The thirty-eight officers attached to the regiment have been through a strenuous two weeks training.

Captain T. E. Voigt and Lieutenant P. D. Harkins played with the First Cavalry polo team in their tournament with a strong team from the Mexican Army at Fort D. A. Russell, Texas, during July.

Intensive work is now under way in preparation for the coming fall Horseshow and Polo Tournament. Major John J. Bohn is in direct charge of training the jumpers. Lieutenants Frierson and Judge are his assistants.

8th Cavalry, Ft. Bliss, Texas

During June and July the prescribed course for Saber and Pistol was run, the regiment qualifying 100%. Out of 235 officers and enlisted men running the course, 226 qualified as Expert Swordsman, 6 as Excellent Swordsman, and 3 as Swordsman.

On July 14th, the Chief of Staff, General C. P. Summerall, inspected the post. On his departure we received the following extract of a letter written by him to the Corps Area Commander, concerning the regiment:

"The troops of the . . . 8th Cavalry, under command of Colonel Wm. R. Smedberg, Jr., . . . have maintained the high standards of training and deportment for which the Division is well known.

The 8th Cavalry, acting as escort, maintained the reputation of the regiment in the condition of the equipment and horses and the bearing of the men. . . . "

9th Cavalry, Ft. Riley, Kansas

Lieutenant Colonel R. M. Campbell, Cavalry, returned from sick leave August 31st, and assumed command of the regiment.

The Ninth Cavalry celebrated the 64th anniversary of its organization on July 28, 1930. The regiment was host to about 500 guests, which included the Commandant and prominent citizens of Junction City, Kansas. The acting Regimental Commander, Major H. J. M. Smith, gave a brief history of the regiment, and was followed by remarks by an old timer, William Wilkes, who was retired as Regimental Quartermaster Sergeant, 24th Infantry, in 1904. Dinner was served throughout the afternoon. During the afternoon the guests were entertained with a baseball game between the Colored Detachment of Fort Leavenworth and the Ninth Cavalry, and other athletic events. A dance at the Community House in Junction City, ended the festivities for the day.

Major Thomas McF. Cockrill and Captain J. V. V. Shufelt have joined.

Major H. J. M. Smith has reported at the Quartermaster Subsistence School, Chicago, Illinois, for a course of instruction.

Lieutenant Colonel Charles L. Scott was relieved from assignment to the regiment and was assigned to the Staff and Faculty, The Cavalry School, August 15th.

10th Cavalry, Ft. Huachuca, Ariz.

July 28, the birthday of the Regiment, was celebrated in the customary manner. The junior Lieutenant of the regiment, Second Lieutenant Chandler P. Robbins, delivered a short resume of the history of the 10th Cavalry; dinners that were real feasts were served at noon by each organization; in the evening the Organization Day Ball at the Buffalo Club drew the enlisted men, their families and friends. In addition to the above there was a field meet consisting of track events, greased pole climbing, catching the greased pig, centipede race and other events which offered much competition and amusement. Machine Gun Troop was again the winner, Troop A second. The Shipp Trophy, presented each Organization Day to the best soldier in the regiment, was won by First Sergeant John H. Allen, Troop B.

The change in officer personnel has not been as great this year as

usual. Captain R. C. Gibbs has been transferred to the 6th Cavalry. First Lieutenant F. P. Tompkins is with the 9th Cavalry. First Lieutenants H. F. Scherer and F. W. Drury have gone to West Point for duty with the Academic Department. First Lieutenant D. G. McBride is attending the Signal School, and Second Lieutenant W. H. Barnes is attending the Cavalry School. Those who have arrived are: Lieut. Colonel T. L. Sherburne, who is the new Commanding Officer. Lieut. Colonel D. A. Robinson, First Lieutenant Arthur K. Hammond and Second Lieutenants G. W. West and G. R. Sutherland.

The regiment, with Target Season out of the way and a good qualification record to look back on, is busily preparing for the Cavalry Division Horseshow and the Fall Maneuvers against the 25th Infantry. The regiment is planning to try out and develop several ideas in regard to Cavalry tactics, supply and packs.

The regiment now boasts of having several polo players of no small repute. For about two years there has been only a few polo players with the regiment, but now with something to work with. Colonel Sherburne has stated that polo will start as soon as maneuvers are over. A new turf field, yet but a dream, is foremost among the desires of everyone now that the Tom Thumb Golf Course is about to become a reality.

11th Cavalry, Presidio of Monterey, Calif.

The First Instruction Group, organized by the Ninth Corps Area, for Field Exercises and Maneuvers, has been occupying the entire attention of the Garrison of the Presidio of Monterey during the latter part of August, 1930.

This Instruction Group was made up of the 6th Infantry Brigade Headquarters, 11th Cavalry, 2d Battalion, 76th Field Artillery, 30th Infantry and 91st Observation Squadron, all of which were assembled at the Heating Station, Gigling Reservation at noon, August 25th, under the direction of Brigadier General Castner, commanding the 3d Division.

This was the first opportunity which the 11th Cavalry and the 2d Battalion, 76th Field Artillery have had for several years to engage in combined maneuvers with other arms of the service and the experience was thoroughly enjoyed by all who participated. In the low, rolling sandy hills of Gigling, covered with brush, the Cavalry succeeded in convincing, at least that part of the Infantry who were present, that the Cavalry was neither dead nor dying, but exceedingly active and capable in combat against numerically superior forces of opposing Infantry reinforced with Artillery.

At the conclusion of the maneuver August 29th, General Castner expressed himself as very well pleased with the performance of the Eleventh and the high standard of training that they had demonstrated.

The 11th Cavalry has had the usual number of changes of officer personnel this summer. The Garrison of the Presidio regret the losses of Majors T. A. Dobyns, O. B. Trigg and C. P. Stearns, Captains R. E. Blount, W. A. Falck, W. F. Safford and Lieutenants A. W. Farwick and J. L. Hines, Jr. While the losses are larger than the gains we are glad to welcome as members of the regiment Captains R. E. Larson and G. H. Shea and Lieutenant E. L. Harrison.

12th Cavalry (less 2nd Squadron) Fort Brown, Texas

After commanding the 12th Cavalry and Fort Brown for the past year, Colonel Daniel Van Voorhis has been given command of the Mechanized Force at Fort Eustis and left the post on September 9. The command has enjoyed an exceptionally instructive, pleasant and profitable year under Colonel Van Voorhis, who was able to have both the Fort Brown and Fort Ringgold elements of the 12th Cavalry under his command during the 1930 maneuvers.

Captain Benner B. Vail, reporting from Fort Riley, commands Troop A and Lieutenant Clyde Massey, also from the Cavalry School, is temporarily in command of the Machine Gun Troop.

Captain Vernon M. Shell has rejoined after a tour at the University of Georgia.

Lieutenant Colonel Stephen W. Winfree and Captain Darrow Menoher report for duty in October.

Troop A has been selected to compete for the Goodrich Trophy in November.

Full advantage has been taken of the high water in the Resaca during this summer and all horses of the command have been practiced in swimming across, a distance in excess of 100 yards. Also all men in the regiment who could not swim are receiving instruction in the pool.

The regiment has recently received the 2d Cavalry Division shoulder patch which adds a smart and distinctive touch to the uniform.

2d Squadron, 12th Cavalry, Fort Ringgold, Texas

This Squadron finished its rifle marksmanship record practice with an average of 99.1%, missing out on "the thrill that comes (generally) once in a lifetime" by the loss of one man. Troop F made

100% with the average score of 299.25. Troop E made 98.49% with the average score of 288.33%. The record practice with the Machine Rifle was equally successful, both troops qualifying 100%. The excellent showing made at known distance practice was reflected in our combat firing, wherein very satisfactory results were obtained.

After about two years duty with this Squadron, Major Taylor went on leave on June 1st and upon completion of his leave reported to the Cavalry School for duty. Our other losses have been: Captain Richmond to the Motor Transport School, Holabird, Md., and Lt. Palmer to Fort Riley for tryout with the Cavalry Rifle Team. Major Geoffrey Keyes, just back from Panama, is our new commanding officer and Lt. Bridgman, now on duty with the Cavalry Rifle Team will join upon completion of leave. Lt. DePew, 1930 Troop Officer's Class, Fort Riley, joined August 18, 1930, was assigned to Troop E.

13th Cavalry, Fort Riley, Kansas

Upon the close of the school term the regiment engaged in target practice. The regimental percentage with the rifle was 93.57; Troop E, attained the highest qualification, 97.75 per cent. All rifle troops qualified 100 per cent with the machine rifle and the Machine Gun Troop qualified all men with the machine gun. At this writing figures for pistol practice, dismounted and mounted pistol and saber are incomplete.

Several tests of equipment were held for the Cavalry Board. Major E. N. Hardy was designated by the regimental commander to conduct the anti-aircraft firing tests.

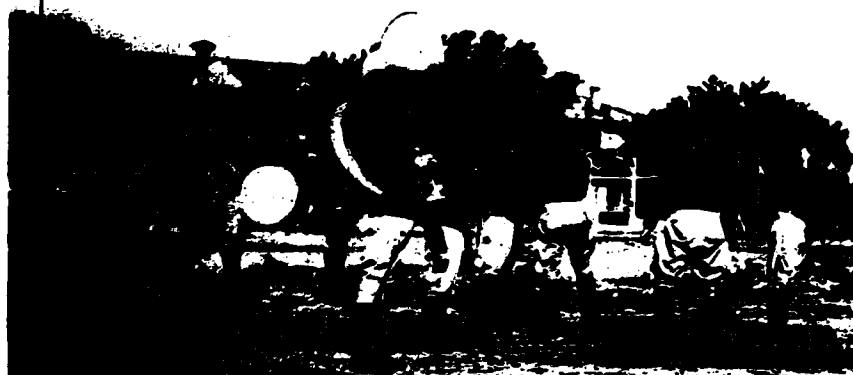
Troop E, has been designated for the Goodrich Trophy tests. A platoon of Troop B, Lieut. R. A. Browne in charge, was designated to enter the Cavalry Rifle Platoon Competition.

The band was made inactive and transferred to the Signal Corps on August 15th, and plans were made immediately for the organization of a "bigger and better" drum and bugle corps.

Colonel Grant has announced a series of seven regimental training days for specially planned exercises extending on into November. The situation will be a continuing one, staged in distinct phases, will be purely instructional and promises to add zest to the general training scheme.

The regiment assisted indirectly in the training of reserve units during the summer by furnishing horses and equipment in varying numbers to all units.

The regiment again sponsored the State Vigilante Shoot on Sep-



Colonel W. S. Grant, commanding the 13th Cavalry, bids goodbye to the personnel of the regimental band on the occasion of its being made inactive.

tember 22d and 23d. Capt. H. A. Myers, regimental S-3, was Executive Officer of the Shoot.

Twenty-two remounts from Fort Robinson have been received and are at present being trained by specially selected non-commissioned officers and privates under the supervision of Lieut. B. G. Thayer.

The following officers have been transferred: Captains Catesby C. Jones and Frederick T. Murphy; First Lieutenants Edwin C. Greiner, Paul G. Kendall and Winfield C. Scott; Second Lieutenants C. Stanton Babcock, George V. Ehrhart, Harold McC. Forde and Theodore C. Wenzlaff, as students to the Cavalry School.

Among new officers who have arrived or will arrive shortly are: First Lieutenant B. G. Thayer, Second Lieutenant P. M. Morton, Captain E. N. Schjerven, Captain H. H. Baird, First Lieutenant A. L. Fulton, Captain N. W. Lisle, Captain H. W. Worcester, Second Lieutenant A. M. Miller, Jr., and First Lieutenant L. E. Schick.

14th Cavalry (less 1st Squadron) Fort Des Moines, Ia.

During the month of July the regiment completed target season and made initial preparations for the arrival of the C. M. T. C. candidates. This year we had 990 candidates report. The camp this year was organized into a battalion of Infantry consisting of three rifle companies of approximately 180 men to a company and one machine gun company of 175 men. In addition, we had one troop of Cavalry of 93 candidates, and a battery of Field Artillery of 65 candidates. The band consisted of about 60 candidates. An excellent course of instruction in

firing all automatic arms was given to all eligible candidates this year with very satisfactory results.

The 14th Cavalry troops at this station will leave September 8th on a practice march and maneuver. Maneuvers will be held en route to Clear Lake, Iowa, from the 8th to the 13th. The troops will stay at Clear Lake during the third week in September, leaving Clear Lake on further maneuvers on September 22d, returning to Fort Des Moines on the 27th. This is the first maneuver we have had at this station since 1925, when the troops went to Omaha, Nebr.

There has been a number of personnel changes at this station this summer Major John D. Kelly, detailed to the Quartermaster Corps at Camp Holabird, Md.; Lieut.-Col. Aleshire has been assigned to duty as Post Quartermaster; Lieut.-Col. Thomas L. Ferenbaugh transferred; Capt. George A. King, joined from the Cavalry School at Fort Riley; Capt. Daniel Becker, joined and assigned to duty as Exchange Officer; Capt. L. N. Smith, joined and assigned to command Headquarters Troop; Lieut. F. C. Thomas, detailed to the Quartermaster Corps and acting Commissary Officer in the post; Lieut. F. de L. Comfort, joined and assigned to Headquarters Troop.

1st Squadron, 14th Cavalry, Fort Sheridan, Ill.

The squadron leaves on a two weeks' practice march to Lauderdale Lakes, Wis., on September 15, 1930. This will culminate the summer training and will come as a rest from the daily grind of C. M. T. Camps, R. O. T. Camps and Reserve Officers' Camps that have been the menu this summer since June 1, 1930.

Fort Sheridan Horse Show Association's Sixth Annual Show, held on July 18th and 19th, was a great success. Captain Rodwell and Captain Gatchell, as executive officers and secretary, were in great part responsible for its success.

- Major Chamberlin, Lieutenant Thompson and Lieutenant Rogers of the Army Horse Show Team performed creditably on both days of the Show in addition to taking first, second, and third places in the (\$350.00) jumpers' stake.

Active interest is taken in polo by the squadron officers, their number being one-half of the total post polo squad. Captain Gatchell, Captain Branson, Lieutenants Bethel, Yeomans, Burgess and Quill are all playing. Twenty-two selected polo remounts from Fort Robinson are in training under the direction of Captain Branson.

Major C. C. Smith who has been Post Polo Representative since June was recently sent to Mitchell Field to join the Army Polo Team which has gone to the Argentine.

The recent arrivals in the squadron are: Lieut.-Col. Thomas F. Van Natta from Fort Riley; Capt. G. Hanson from the Cavalry School, and Capt. Harry L. Branson from the Air Corps Tactical School.

Captain James S. Rodwell has left for a one year course at The Infantry School, Fort Benning, Ga.

26th Cavalry, Fort Stotsenburg, P. I.

The month of May brought to a close the 1930 target season which proved even more successful than that of last year. The regimental averages follow: Rifle, 96.3; Machine Rifle, 100.0; Machine Gun, 100.0; Pistol (dismounted), 86.44; Pistol (mounted), 93.66; Saber, 90.86.

All firing was done, as far as possible, in the early morning hours between 6 and 9 A. M. in order to escape the scorching heat of the tropical sun. The rifle range at Fort Stotsenburg is well equipped for firing and is one of the best in the service. All firing points are on the same line and through a system of concrete tunnels it is possible to go from the butts of any one range to another in perfect safety, thus making for smooth and efficient functioning of the personnel in the pits.

The annual running of the Andreas Stakes on Easter Sunday, April 20, this year brought forth a field of approximately fifty starters, both officers and ladies.

The event consisted of four phases as follows:

- a. A ride over the Cavalry Trail. Distance seven and a half miles, contestants being denied the use of watches. (40 per cent).
- b. Knocking a polo ball the length of the polo field and through the goal posts against time. (20 per cent).
- c. Three holes of golf for a low total score. (20 per cent).
- d. Ten rolls of the dice for a high total score. (20 per cent).

Entrants rode in pairs, an officer and a lady riding together. Where two officers rode together, due to a shortage of lady riders, one officer of the pair was required to knock the polo ball with his left hand.

At the conclusion of the events all contestants and spectators assembled at the Club for a breakfast served under the direction of the Club secretary. The winners of the ride, Lieut. J. P. Doyle, 26th Cavalry, and Mrs. Milton Potter, received handsome prizes as did the pairs finishing second and third, all prizes being donated by Major Harry F. Andreas, O. R. C. of San Fernando, P. I.

103d Cavalry, Pennsylvania N. C.

The 103d Cavalry enjoyed a very dusty but profitable period of encampment at Colebrook, Pa., camping alone this year, the 104th, having had their camp-period two weeks previous. Each regiment used the other's horses and in that way each was better mounted than when rented horses were used.

Stress was borne this year on saber qualifications and mounted pistol work more than before; practically all dismounted qualifications having been completed at the home stations. Troop C, commanded by Capt. L. L. Krentzlin, took first place in the only competitive problem issued by the 52d Cavalry Brigade, a war strength platoon in combat, with a score of 91.19, scoring 208 hits out of 524 rounds. Troop B, Commanded by Capt. J. Neill, won the regimental competition for platoons.

A three-day maneuver was dusty but helpful and instructive. It is the consensus of opinion of instructors and observers that the 103d Regiment is steadily improving from camp to camp. The increased enthusiasm and the improved character of the enlisted personnel shows that the Commissioned Officers are functioning properly.

The guidons of the 1st Squadron were decorated with the Streamer marked, "Prompt and Reckless," signifying the character of their method of going into action. The phrase being taken from a remark made on the maneuver last year.

The Regimental Standard was decorated by General Shannon with streamers for War service in the Civil and World's War.

104th Cavalry, Pennsylvania N. C.

Thirty-five non-commissioned officers have received "Certificates of Completion," making them eligible for commissions in the Reserve Corps to fill peace-time vacancies in the commissioned personnel of the regiment, and to partially prepare the regiment to take the field at war strength. These N.C.O's took a special course of instruction under Regular Army Instructors during the year 1930-1931. The subjects covered in the school included those listed in AR 140-24, for second lieutenants.

Officers of the Regimental Staff and the Communications Platoon of Headquarters Troop took part in the Command Post Exercise at Fort Meade, Md., during July, as part of the 52d Cavalry Brigade. The benefits from the special course of instruction on the preparation of programs and schedules, undertaken by the Regimental Staff during the past year, were apparent both at the C.P.X. and during the field training period.

The regiment spent two weeks in camp at Colebrook (Mt. Gretna) Pa., July 19 to August 2. Attendance of all ranks exceeded previous records, being 96 per cent of the total strength. In addition to the basic subjects, training activities included: Platoon Leadership Tests; Proficiency Tests for Individuals; Platoon Firing Problem for Line Troops and Machine Gun Troop; Special Schools of Instructions for Officers, Non-commissioned officers and Specialists; two separate night rides, one for officers and the other for non-commissioned officers; three-day maneuver involving a march of the regiment acting alone as in hostile territory.

The training culminated in a three-day march. Two separate bivouacs were established. On the last day of the three-day march camp was broken at 1:00 A. M. and a successful night march conducted, terminating in an attack against outlined enemy Infantry.

Qualifications in all forms for the current year totalled over 1100 for the regiment, an increase of more than 100 per cent over the 1929 totals.

110th Cavalry, Massachusetts N. G.

The ninth field training period of the regiment was held at Camp Devens, July 19 to August 2. Basic instruction for recruits and troop instruction in the service of security occupied the first week.

Monday of the second week the troops left Devens by different routes for a concentration march on Townsend Harbor, about 15 miles north of camp. The following two days the 1st and 2d Squadrons engaged in advance and rear guard problems returning to camp on Wednesday.

The regimental pistol team won a large silver trophy in the annual Cavalry Pistol Match at the United Services of New England competitions at Wakefield. The cup was donated in 1927 by the 158th M. G. Squadron, for competition among units armed with the pistol. Lieutenants E. F. Grigg, W. G. Regan, Sergeants G. E. Cobb, R. A. Benson, and Corporal B. L. Bassinor the Cavalry team scored 86.9 per cent; the 101st F. A. 85.8 per cent and the 102d F. A. 81.8 per cent.

On the range to date the five troops in the regiment have qualified 187 men with the rifle—21 experts, 40 sharpshooters, 126 marksmen; pistol qualifications total 158—23 experts, 50 sharpshooters and 85 marksmen.

An exhibition of Cavalry was presented by the regiment. Monday evening, Sept. 29, in connection with the national convention of the National Guard Association held in Boston.

115th Cavalry, Wyoming N. G.

Vast, rolling plains of Wyoming, contribute famously to romance—also to the military in time of peace and war. Thousands of sections of grazing land, home of finest polo ponies, cattle and sheep, furnish the bread and butter life of hundreds of enlisted men and officers of the 115th Cavalry regiment, Wyoming National Guard and from its broad expanse came many a hard-riding youth to the annual encampment just ended August 17.

Horsemen by virtue of having been born to the saddle, this regiment lives up to all expectations. Range horses, brones, or by whatever terms you know an untamed horse, always provide a refreshing thrill to the riders of the 115th. At the August camp, sixty head of "brones" were rented to fill up the animal quota; not enough wild horses to go around to eager riders of the Wyoming regiment, but enough action in this sixty head to entertain several rodeo audiences.

With a total of 509, the 1930 camp was the largest in history of the State. Subjected to adverse weather conditions of cloud bursts proportions and loaded with a training schedule designed to accomplish three months' work in two weeks (and the work was done) including firing on the range mounted and tismounted drill, 37-mile march, chemical warfare schools, combat firing, bivouac, the 115th experienced something like war conditions which were met with great dispatch.

The 115th mobilized at Fort Francis E. Warren, Cheyenne, Sunday, August 3, and was established in semi-permanent camp by noon and gave a band concert and formal guard mount in the afternoon. The business of settling was accomplished in as precise a manner as a regular Army regiment would have done upon returning after six months in the field. Firing on the range started immediately and 123 men were qualified out of 327 firing.

For the first week enlisted men were quartered in barracks of the 20th Infantry of Fort Warren, vacated by the doughboys who were at maneuver at Pole Mountain. Then the march was started in a drizzling rain. The hilly plains of Stone Ranch, west of Cheyenne, provided the place for bivouac the first night and the outfit received its initial, complete drenching by a furious wind-whipped rain.

The march, resumed early next morning, concluded at Pole Mountain military reservation, summer home in Sherman Mountains of the Wyoming National Guard, where semi-permanent camp was established.

Demobilization started Saturday, August 16, and all troops were returned to their home towns Sunday, completing the most success-



The 115th Cavalry arriving in camp at Stone Ranch, Wyoming, during the annual summer encampment, August, 1930.

ful camp from a military training standpoint that the Wyoming National Guard has ever had.

As a matter of experience it may be noted that while considerable truck transportation was available, the "wagon train" of 14 four-line teams proved ever dependable and, while sometimes late, never failed to arrive with the necessities of life that means so much to the soldier on the march.

124th Cavalry, Texas N. G.

The 124th Cavalry, Texas National Guard, arrived at Camp Wolters, Mineral Wells, Texas, at noon, July 5, 1930, for the annual period of field training. At retreat that same evening men and horses were comfortably settled in their respective areas.

July 6th and 7th were devoted to the preparation for a five-day continuous maneuver by the 56th Cavalry Brigade.

On the morning of July 8th the entire Brigade marched with advance guard, flank patrols and reconnaissance planes to solve the first day's problem prepared by the Senior Instructor and his assistants. A state of war existed throughout the entire period of maneuvers.

March discipline was closely supervised by all leaders and patrols, advance guards and outposts were at all times provided when the conditions of the problem so demanded.

The first two days were occupied in developing a situation which culminated in an attack against a force in position astride the route of march of the brigade. The attack was made by a dismounted force pushed to a conclusion by a mounted charge made by the 124th Cav-

alry under command of Col. L. S. Davidson. The remaining two days were devoted to a withdrawal from the captured position in the face of a superior force of all arms.

The brigade was supplied each day from Camp Wolters; supplies being carried for the succeeding day's march in escort wagons, one of which was issued to each troop.

The week of July 13-19 was devoted to troop combat problems. The regiment returned to home stations on July 19th.

Major J. R. Finley and Capt. F. H. Barnhart, Cavalry (D.O.L.), are the instructors on duty with this regiment.

305th Cavalry, Philadelphia, Pa.

The summer training of the 305th Cavalry was divided into two parts. Regimental Headquarters went to the C. P. X. at Fort Geo. G. Meade, Md., while at a later date the regiment underwent training at Fort Myer, Va.

At Fort Meade, the four officers who attended the problem constituted the Brigade Headquarters, 153d Cavalry Brigade.

The regiment, in command of Major Leslie C. Bell, went into camp at Fort Myer, Va., with 18 officers in attendance. The schedule included the mounted pistol and saber course, the dismounted pistol course, drilling with regular troops and a hike to Pohick Church, near Fort Humphreys, where the 305th and 308th Cavalry with the addition of regular troops held a three-day maneuver. In the pistol course, dismounted, only two officers failed to qualify.

One of the most interesting events of the whole tour of duty was the ride over the mile and one half course through the woods with pistol and saber.

It is hoped that the regiment will be able to arrange a pistol and saber course before next spring. Several farms have been put at its disposal and the committee appointed by Colonel Forbes is looking over the ground.

Cub hunting has started in this neighborhood and several officers have brought up their horses and are hard at work with them. Foxes are plentiful and despite the extreme heat of the past summer the ground is not too hard. The prospects for a successful season seem excellent.

The death on Sunday, August 30, of Col. John C. Groome, Cav.-Res., retired, was a great blow to the 305th Cavalry. Colonel Groome was the organizer of the regiment and commanded it all through the trying days of its inception. Four years ago he retired for age. For years, Colonel Groome commanded the First Troop, Philadelphia

City Cavalry. He formed the Pennsylvania State Police and later was warden of the State Penitentiary. During the World War, Colonel Groome organized and trained the military police, A. E. F., and later served as head of the Baltic States Mission. Not only the 305th Cavalry, but the entire State of Pennsylvania will miss the colonel. He was a fine soldier and a great citizen.

306th Cavalry, Baltimore, Md.

Seven officers of the 306th Cavalry were selected to participate in the Corps C. P. X. held in the vicinity of Fort George Meade, Md., July 6th to 18th.

After a very active, "inactive" training period, eighteen officers of the 306th Cavalry reported at Fort Myer, Va., on July 5th to undertake their part of the training of the students at the Citizens Military Training Camp being held there. Without undergoing a refresher course, we entered upon the duties we were to perform during the fourteen days of our tour.

This contact with these patriotic, enthusiastic, willing young men was intensely inspiring, and the training which a Reserve Officer gets at one of these camps is the kind that will be of inestimable benefit to him in case of an emergency.

We were enabled to lay a foundation for a regimental film library by the unanimous support given the project by our officers at this camp, and as the result we have some views of the activities of not only the 306th Cavalry Officers at work and during their lighter moments, but also of the C. M. T. C. students undergoing the various phases of their training.

2d Squadron, 306th Cavalry, Washington, D. C.

Headquarters of the Squadron moved to their new offices, 1734 New York Avenue, N. W., on July 1, 1930.

Except for Army Extension School work, no inactive training has been carried on since June 30, 1930. Eleven officers of the 306th Cavalry, from Washington, attended the Cavalry C. M. T. Camp at Fort Myer, Virginia, July 3d to July 16th.

307th Cavalry, Richmond, Va.

The regiment was well represented during the active duty training periods this summer. Lieut.-Col. W. H. Clifford, commanding the 307th Cavalry, with Majors Jacobs and Whaley, attended the C. P. X. at Fort Meade, Md.

Fifteen officers of the 307th Cavalry reported at Fort Myer, July 18th for duty as Instructors at the C. M. T. C.

Lieutenant Colonel R. B. H. Begg, 307th Cavalry, commanded the regiment during the period July 18th to 31st, in the absence of Colonel Clifford, at the Third Corps C. P. X. Upon completion of his tour at Camp Meade, Md., Colonel Clifford joined the regiment at Fort Myer.

An effort is being made to obtain 100% of enrollment in the Extension School courses for the year 1930-31. In addition to the conferences to be held, it is planned to conduct weekly pistol practice for the officers of the regiment living in Richmond and vicinity. Major Roland Liggan, Virginia National Guard, Commanding the "Richmond Howitzers," has very kindly given us the use of the Armory for this practice.

3d Squadron and Machine Gun Troop, 307th Cavalry, Norfolk, Va.

A very successful season of active duty training has just been completed by the officers of the above organizations. Unfortunately it was impossible for the officers to train as a unit but the diversified training given during the past summer was very instructive.

Major James R. Mullen was called for active duty to participate in the Command Post Exercise at Fort George G. Meade, Maryland, from July 6 to 19, 1930.

1st Lieut. Henry H. Page and 2nd Lieuts. L. L. Montague and W. L. Renn, Jr., together with other officers of the 307th Cavalry acted as instructors for the Cavalry C. M. T. C. units at Fort Myer, Va., during the period July 18-31, 1930.

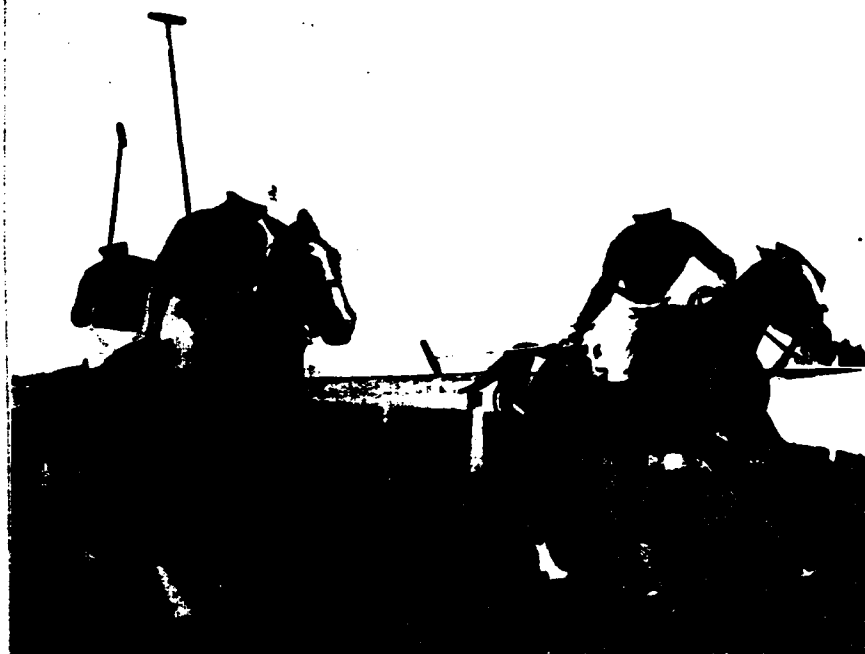
2nd Lieuts. Robert B. Batte, Oscar V. Sessoms, Jr., and S. W. Taylor attended the camp for reserve officers conducted at Fort Myer, Va., during the period August 17-30, 1930.

The inactive training period will start in October. Conferences and equitation classes are planned for this period.

308th Cavalry, Pittsburgh, Pa.

The quarter just passed marks a milestone in the history of the 308th Cavalry—the departure of Major A. H. Truxes for Fort Riley, where he will become a student in the advanced course, and the arrival of Major Eustis L. Hubbard, who will replace him as unit instructor. On August 8, the regiment tendered Major Truxes a farewell dinner.

Four of the officers of the regiments took part in the Command Post Exercises at Fort Meade in July: Lieut. Col. G. H. Cherrington,



308th Cavalry Polo Team in action: Lt. Mazuzan, Lt. Madden, Major Truxes (left to right).

Commanding Officer of the Regiment, Major J. H. Shenkel, Lieut. E. E. Perritt, and Lieut. S. C. Robinson.

Twenty-four officers of the Regiment spent their two-week tour of active duty at Fort Myer, Va., under command of Major B. H. Minnich. The first week of the period was devoted to basic training. The second week was occupied by a hike to Fort Humphreys, where the two regiments—305th and 308th—engaged in field maneuvers. Honors in the inter-regimental competition on the combined pistol and saber course, through the woods, came to the 308th.

The Regiment will again be active in polo this winter, opening the indoor season with two strong teams. Lieut. Madden, who led the scoring last season, will again be in the line-up, as will Lieut. Mazuzan. Although the team will miss Sergeant Flaccuss, his place will be taken by Lieut. Perritt, fresh from the polo team at Culver. Last season the team won every game it played by an easy margin.

310th Cavalry, Nashville, Tenn.

The 310th Cavalry has just completed a most successful year in

Army Extension Course work with a total of 150 completed sub-courses.

During the period August 2-16 such of the commissioned personnel as could be assembled participated in active duty training at Fort Oglethorpe, Georgia. The instruction, including the formulation of all problems was "put over" by the Reserve Officers themselves. The camp was terminated with a splendid regimental dinner at Signal Mountain Inn.

Action to provide Regimental insignias is to be undertaken in the near future.

The 862d Field Artillery (Horse), Baltimore, Md.

On Sunday, August third, this regiment returned to Fort Hoyle, Md., for the second period of active duty since its organization two years ago and, because its personnel is drawn exclusively from Maryland, found many friends, not only among the veterans, but among the newly appointed officers. This, in connection with the particularly cordial relations that have always existed with the Post authorities, insured a pleasant and profitable tour of duty.

This year the instructors assigned to us were Captain Henry Gantt and his assistant, Lieutenant Charles Dasher. Service practice was varied with class room conferences and with pistol practice.

The second week was spent, largely, in the saddle, much to the delight of some and to the dismay of others. In this period, also, we undertook two problems in Reconnaissance and Occupation of Position, the first, a battery problem, under Captain Merrill G. Perry, the second, involving the battalion, under Colonel Hartz, our regimental commander. On the pistol range, Lieutenant Harvey R. Clapp qualified as Sharpshooter and nine of the remaining ten members of the regiment came out as marksmen—a record of which the regiment is proud.

Although the schedule was very full, it was at no time oppressive. There was ample time, after working hours, to enjoy the advantages of the post. Swimming, visiting and even a drive in the evening were most popular. Fort Hoyle is well known for its excellent polo, offering splendid facilities to devotees of the sport. Captain Harry S. Middendorf and Lieutenants R. Lancaster Williams and Stewart S. Janney, Jr., took their mounts to camp and joined in several practice games with the local team.

BOOK REVIEWS

The Fellowship of the Horse. By LIEUT. COL. S. G. GOLDSCHMIDT. Illustrated by Charles Simpson. 196 pp. Charles Scribner's Sons, New York. \$5.00.

In his earlier books, "Bridlewise" and "Stablewise," Colonel Goldschmidt has taught us many lessons in horsemanship and horsemastership.

In this book he tells us the necessity for every horseman to acquire the "fellowship" of the horse in order that he may be truly "bridle wise" and "saddle wise." The definition of "fellowship" as given by the author is "to know not only how to make yourself understood, but also to understand what your horse wishes to convey to you."

Throughout the chapters we study the mental attitude of the horseman and the reactions of the horse, and learn the means of communication between horse and master. For without mutual understanding and co-operation we cannot hope to accomplish much. In the author's opinion the greatest instinct in the horse is that of self-preservation and accounts for most of his actions. In order to obtain true fellowship we must let reason and observation take the place of sentiment in our dealings with the horse.

There is a very instructive chapter on the choice of a horse, and the author emphasizes strongly the importance of choosing a horse of a type suited to the rider, and much thought should be given to the temperament of both man and horse. It must be remembered that from the point of view of fellowship, riding and breaking are inseparable.

In another chapter Colonel Goldschmidt gives us some interesting personal experiences of good and bad hunters which have come under his hand for breaking and training, and in which he found out that "experience is the best teacher."

The author writes in length on the subject of "Heredity and Conformation." He states that conformation is the main factor to be considered in breeding, and that environment and early training are next in importance in perfecting a good mount—whether polo pony, hunter or other type of saddle horse.

We next find a chapter on "Equestrian Tact" in which we are given methods of overcoming those difficulties which are at times so perplexing even to experienced horsemen, how to overcome shying; breaking a polo pony to stick and ball; changing lead; pulling up smoothly; curing the refuser, etc.

A subject which has long been discussed—the length of time required for a complete course of schooling—is taken up by Colonel Goldschmidt, and he again writes of personal experiences of schooling several horses, and emphasizes the fact that physical exercises as well as educational training are necessary.

The riding school or manège is an ever important factor in the training of both man and mount, and is the quickest and easiest way in which it can be accomplished. We learn how a school can be helpful in correcting faults and curing bad habits in a short time.

The use of the bit, whip and spur are often misinterpreted, and Colonel Goldschmidt has devoted some pages to their uses as well as their misuses. He explains the immense importance of selecting the correct bit, and gives us good advice as to whip and spur.

Whether women should ride astride or in side-saddle is discussed with impartiality, and many good points are brought out for both manners of riding. In the author's opinion the cross-saddle rider is preferable.

There follow chapters on the child's pony and the advisability of children starting to ride at an early age, in order that they may be better prepared for the hunting field. There is also good advice on purchasing children's ponies.