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The following Cavalry notes are published for the information of all concerned.

[300.6 A. G. O.]

BY ORDER OF THE SECRETARY OF WAR:

TASKER H. BLISS,
Major General, Acting Chief of Staff.

Official:

H. P. McCAIN,
The Adjutant General.

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INSTRUCTIONS ON THE USE OF CAVALRY IN BATTLE.

DECEMBER, 1916.

Translated from the French
at the Army War College
May, 1917.

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I.

INSTRUCTION ON THE USE OF CAVALRY IN BATTLE.

INTRODUCTION.

Appendix No. 4, of the note of January 16, 1916, on the object and the conditions of a combined offensive, and the instruction of June 8, 1916, on the use of large Cavalry units in offensive action have defined in general terms the rôle of the Cavalry in combat. These two memoranda have not shown the technical rules for the use of this arm. It is even more necessary to fill this gap, as the extension of dismounted action calls for more accurate regulation on this type of action, which has become as important as mounted action. It is also more convenient to include in one document everything pertaining to the tactics and use of this arm. These are the reasons for publishing the present instructions which replace previous instructions by completing detailed regulations concerning the employment of the units of this arm, particularly in dismounted action.

The provisions of the regulations for maneuvers, May 14, 1912, are still in force in matters of instruction, evolutions, and mounted Cavalry action. The practical instruction on the service of Cavalry in campaign is also in force in its entirety.

Appendix No. 4 to the memorandum of January 16, 1916, defines the rôle of Cavalry in action as follows:

"The employment of Cavalry can be considered only when an opening to the terrain in rear has been made."

Its rôle is then *to follow up the success obtained by the other arms.* It must prevent the beaten enemy from reorganizing; or halting to form face to the front, and must seek to transform the retreat into a rout.

The Cavalry will not be able to fulfill this rôle unless its methods of combat are adapted to modern warfare, which is characterized by fire action.

Rapidity, mobility, and the capacity to maneuver remain the distinctive qualities of this arm so long as its operations are only marching and maneuvering.

But to reach the objectives assigned to it, to carry out its various missions the Cavalry will always be called to fight. In the majority of cases it will be dismounted action, as no large unit of German Cavalry remains in the western theater of the war. Mounted action can only be used against Cavalry mounted, against Infantry when surprised or demoralized, against Artillery engaged in changing position, and, even in these cases it must employ its most effective fire action.

The object of the present instructions is to determine the general conditions for the employment of Cavalry in offensive action and to give in detail the methods of combat in dismounted action of small and large units.

It is divided into four parts—

(1) Rôle of Cavalry in battle, characteristics of its organization, and new armament;

(2) Methods of employment of Cavalry in battle, divisional Cavalry, corps Cavalry, large units of Cavalry;

(3) Conduct of Cavalry action;

(4) Management of Cavalry corps.

PART I.

RÔLE OF CAVALRY IN BATTLE, CHARACTERISTICS OF ITS ORGANIZATION, AND NEW ARMAMENT.

CHAPTER I.

RÔLE OF CAVALRY IN BATTLE.

The mission of Cavalry is divided into two classes:

(1) The immediate following up of a success in connection with one or more of the attacking armies.

(2) Distant operation for whose execution the large Cavalry units can count on their own strength alone.

The following duties come under the first category:

Immediate following up of a success in battle by pursuing and attempting to disorganize the units of the beaten enemy.

Reconnaissance and attack on the reinforcements which the enemy endeavors to bring up.

Reconnaissance and attack of a line occupied by the enemy in order to cover his retreat (attack on the rear guard).

Enlarging the breach by enveloping attacks upon such enemy's forces as still resist in proximity to the breach.

Organization and occupation of a defensive position while waiting for the Infantry.

In this same general class come operations of limited extent requiring in general only small numbers (they come under the head of divisional or corps Cavalry), such as the taking of batteries, various destructions near the field of battle, etc.

In the second category of duties come all the operations on a large scale which may be undertaken at a distance, inside the enemy lines.

It is the duty of the commander in chief to anticipate operations of this nature and of the commanders of the large Cavalry units to study them in advance and to prepare for their execution.

The effecting of a breach in the enemy's lines permits the Cavalry divisions to reach those regions where they can carry out very extended operations of destruction and disorganization.

The only conditions of success are to profit immediately by the breach, and to penetrate into the open zone situated at 25, 30, or 60 miles in rear of the battle field, without considering whether they will eventually be supported or withdrawn.

These operations constitute veritable raids where the Cavalry units use their horses' mobility to the maximum. They can produce incalculable results by the moral and material reverses they cause the enemy. They must often allow for a total loss of the strength and matériel assigned to them. But it is a sacrifice that they must be ready to make because of the importance of the end in view.

CHAPTER II.

CHARACTERISTICS OF THE ORGANIZATION AND THE NEW ARMAMENT OF THE CAVALRY.

From the beginning of the campaign the Cavalry has had great changes in the organization and armament of its units.

The table below shows these changes:

	At start of campaign.	At present.
Carbine	Without bayonet	With bayonet.
Cartridges	90	168 or 225, according to orders.
Grenades	None	1 or 2 to each man.
Tools	1 to each sapper	1 to each man.
Machine gun	1 section to a brigade.	2 sections to a regiment (4 times as much as formerly).
Automatic rifle	None	1 or 2 to a platoon.
Mounted light gun, mounted machine gun (auto).	None	2 battalions to a division of cavalry; 6 guns; 12 machine guns.
Traction-drawn artillery	None	Included under artillery of cavalry division.
Infantry units at disposal of cavalry division.	1 cycle detachment of 400 rifles.	1 light regiment of 3 battalions, 3 companies of machine guns, 1 cycle detachment (220 rifles).

In addition, the new organization of the squadron into three platoons gives a better distribution of the armaments and new appliances with the squadron. It gives to each platoon an organization and strength that enable it to engage dismounted in a difficult action of some duration.

CHARACTERISTICS OF THE ARMAMENT AND NEW APPLIANCES OF THE CAVALRY.

New armament.

Automatic rifle.

Extreme mobility.

Assured accuracy for short ranges (the fire is automatically low).

Certain accuracy at mid ranges. Flexibility, sweeping fire, easily executed change of objectives.

Possibility of firing while advancing, keeping down the enemy's fire until the assault.

Automatic rifle fires individual shots as well as bursts of four or five rounds or by continuous firing. (The gunner takes aim after each burst.) Continuous firing should only be resorted to in critical circumstances on a very vulnerable and fleeting objective.

The class of fire ordinarily used in action is the fire by bursts.

The automatic rifle is the arm especially adaptable to the Cavalry. It facilitates the advance, but it gives its maximum of efficiency in counter attacks because of the density of its fire, which can be used instantly.

The proper action of the automatic rifle depends above all on the training of the gun crew and the care with which it is maintained. It is necessary to put a noncommissioned officer in charge of every two crews.

HAND GRENADES.

When Cavalry comes into close action, hand grenades make it possible to reach the sheltered defender who has escaped the artillery fire. It is an excellent weapon for clearing a point d'appui, occupied areas, trenches, communication trenches, and torn up terrain. It is the principal arm for surprise attacks. On the defensive or to repel a counter attack it can be used to form a barrage at a short distance. It gives opportunity particularly to several well-trained and well-supplied bombers to form posts of resistance which are difficult to destroy.

All the troopers, except the unskillful ones, should be able to form a barrage 25 yards to the front, one man every 10 yards.

Each detachment of picked bombers in the first two squads of each platoon form a group especially trained in grenade fighting.

V. B. GRENADES (VIVEN BESSIERES).

The V. B. grenade insures the action of hand grenades by being able to reach a good distance over the enemy terrain.

In the offensive, during numerous local actions when it is impossible to obtain artillery support, the V. B.'s fill the place of this support by bombarding with accuracy the enemy's strong points.

They isolate the enemy's detachments which are attacked by hand grenades by cutting off their retreat and preventing the arrival of reinforcements.

On the defensive or to repel counter attacks nine "tromblons" of a squadron can discharge 90 grenades a minute at a range varying from 90 to 200 yards, forming an impenetrable barrage.

It is always advisable to use a concentrated fire with these appliances.

AUTO-MOUNTED LIGHT GUN AND AUTO-MOUNTED MACHINE GUNS.

In addition to the special properties of machine guns, these appliances are characterized by—

Their mobility, by which the effect of surprise can be carried to the extreme.

Practically complete protection against infantry bullets and shrapnel fire.

The accuracy of fire and the relative power of the auto-mounted light gun completes the action of the mounted machine guns.

The cast-iron shell with a percussion fuze easily starts fires, penetrates roofs of houses, light shelters, and breaks into numerous and deadly fragments.

The steel shell with a base fuze causes considerable damage to armored caissons, slightly protected observation posts, and light masonry, etc.

Auto-mounted light guns are especially adapted for the destruction of enemy machine guns by direct fire.

On the other hand, auto-mounted light guns and auto-mounted machine guns have the following disadvantages:

Their general inability to leave roads.

Their great visibility due to their size and the dust raised in dry weather.

The difficulty of protecting them without either Infantry or Cavalry support.

Their difficulty of marching in column.

In general, auto-mounted light guns and auto-mounted machine guns should not be held as a reserve, as it is difficult then to employ them advantageously.

To sum up, the modifications applied to the Cavalry's armament and organization make it possible to develop a considerable amount of fire.

It possesses to-day the means of fighting dismounted under the conditions of present warfare.

PART II.

METHODS OF EMPLOYING CAVALRY IN BATTLE.

CHAPTER I.

DIVISIONAL OR CORPS CAVALRY.

The Cavalry accompanies the Infantry. It must be the first in action as soon as the friendly Infantry advances without meeting any continuous obstacles. This Cavalry goes into action with the attacking Infantry of the division. It has for its first objectives the forcing back in disorder of the enemy Infantry and Artillery. It operates mounted and with fire (rifles, automatic rifles, machine guns, grenades).

When mounted, to cut down the fugitives and the gunners—bringing in their pieces, to capture a point d'appui, or an important passage.

By fire, to mow down the reserves or retreating columns, to take in reverse isolated detachments of the enemy, to attack batteries in position, and to hold a point d'appui until the Infantry comes up.

In addition divisional or corps Cavalry can be given reconnoitering duties. It assumes then, though less extended, the rôle it should fill in open warfare. It is usually employed in small units, such as platoons, squadrons, half regiments, but always in tactical units.

CHAPTER II.

LARGE CAVALRY UNITS.

CAVALRY DIVISIONS—CAVALRY CORPS.

The large Cavalry units come into action when a breach has been made in the enemy's defenses, or if the enemy gives battle while retreating on a wide front. Information is furnished by the corps Cavalry and corroborated by all means at hand—aircraft, prisoners, etc.

It is not necessary to know the size of a breach that a Cavalry division can get through; the more audacious the commander the smaller the breach required, while the pursuit can be taken up more rapidly.

The Cavalry operates in the pursuit by using to the maximum its mobility and its maneuvering qualities. It must prevent the enemy from breaking contact and from reaching his position, often prepared in advance, where he hopes to check the pursuit.

The Cavalry's duty is to maneuver so as to engage the rear guard of the enemy, to reach and outflank the main body in order to advance beyond the position where it is intended to make a stand.

No definite methods can be laid down. Initiative and the experience of each commander shows him the line to follow. Mounted action against disorganized units, without tactical direction, sudden attacks on points of passage which the enemy disputes, slower and more organized attacks against the rear guard that attempts an organized and prolonged resistance.

In all cases it is by the spirit of attack, energetic action, and skill that the enemy's lines are penetrated and a retreat changed to a rout.

PLAN OF PURSUIT.

The pursuit is the offensive action par excellence. It is carried out after a plan previously made out, communicated in advance to the commanders of the units designated to take part.

The general in command of the army designates the general or particular duties—fixes the objectives.

The general commanding the Cavalry corps divides the objectives, assigns missions, and coordinates the actions of the Cavalry divisions. He follows up their success with the troops that he has held in reserve.

The general commanding a Cavalry division organizes his detachments for pursuit, gives them the direction of their mission, on the enemy and the various maneuvers under consideration. He determines the proportion and nature of the troops that he keeps in hand to rapidly follow up an advantage.

The main idea that must be the basis of all plans for pursuit and that must guide those executing them, is to penetrate as rapidly and as deeply as possible into the enemy's lines in order to hasten his disorganization.

The pursuit should always be undertaken on a wide front. It is carried on directly by continually harassing the enemy's retreating elements—indirectly by flanking and reverse action—which are possible because of the Cavalry's mobility.

The successive phases of a successful Cavalry operation are:

Preparatory assemblage and piercing of the lines;

Execution of the pursuit;

The engagement.

(1) PREPARATORY FORMATION AND PIERCING OF THE LINES.[1]

These operations are carried out according to a plan called "Plan of approach" which is subordinated to the plan of pursuit.

The plan of approach is determined after successive reconnaissance by the general and staff officers, completed by the examination of the battle maps and photographs. It determines—

The preparatory arrangements.
The mission.
The formation of the command, distances, intervals.
The section assigned to each subordinate unit.
The distribution of troops at the close of the movement.
The hourly movements, if they can be determined.
The place of the commanding officer.

(a) PREPARATORY ASSEMBLAGE.

It should be made as close to the front as possible, sheltered from sight and beyond any communicating road.

In carrying out a pursuit the elements ordered to march together are formed near one another. In each of these groups the units are in open formation. *Close formations are absolutely forbidden.*

The cycle units are held near the road and the battalions of the light regiment in such formation that they may be quickly carried forward by motors[2] or follow in the Cavalry's tracks.

(b) PIERCING THE LINES.

Each detachment commander receives an itinerary which he must study and prepare for. His attention is given principally to the means of crossing the line of trenches, communicating trenches, and on instructing the men who are to guide the units by day and night.

The march of approach should bring each of the pursuing elements opposite its first objective. They operate in such formations and under such cover as afford the best protection from the enemy's view. It is best to adopt the methods of a patrol or isolated detachment when crossing open ground. Large and shallow formations, thin lines, lines of squads or platoons on a wide front should be used on terrain under Artillery fire.

It is often necessary to lead horses over terrain demolished by shell fire.

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[1] The term "lines" is meant to designate the general position on which a battle is to be fought as well as the terrain broken up by projectiles.

[2] The foot elements should always be transported by motors when the roads are in good condition. In any case they should not cause the mounted elements to be held back.

(2) EXECUTION OF THE PURSUIT.

The large units operating in a pursuit are: Pursuit groups made up of mobile elements (regiments or brigades of Cavalry, supported by Horse Artillery, auto-mounted machine guns, and auto-mounted light guns, and if necessary cyclists), and units of maneuver and support making up the reserve (Cavalry and Artillery), and those also whose speed in marching prohibits them following the Cavalry immediately (a light regiment, Infantry in autos, A. L.).

The pursuit groups operate in their designated sectors, following precise orders. They seek to attack on the widest front possible and to overcome opposition by outflanking it. They should be sufficiently strong not to be stopped by the first obstacle. Their force should generally be a brigade or a regiment of Cavalry and usually supported by a platoon or a battery of Artillery.

The maneuvering and supporting units are used as reinforcements of the pursuit groups, either to follow up their success or to break, by a forcible attack, the resistance met with.

Wherever a breach is opened the unit that made it enters and tries to widen it by maneuvering and throwing forward its most mobile elements so as to accentuate the danger.

In these operations the Cavalry is exposed to partial checks, but the risk must be run, as a more cautious pursuit gives no result.

The elements other than the Cavalry are divided between the pursuing detachments and the supporting units on the following lines:

Artillery.—It is nearly always advantageous to assign Artillery to the pursuing detachments, but the division commander should reserve at least one battery to support the troops at his disposal.

Light regiment.—By reason of its speed in marching a light regiment should be one of the units kept in hand by the division commander for a maneuvering and supporting unit. This unit has great capacity for the offensive and it is best not to engage it until the Cavalry units have been stopped and can not overcome the resistance. Its action is most effective if it can follow the mounted troops closely. The army should plan to transport it by motor.

Infantry units are employed under the same conditions as the light regiment.

Cyclists.—The cyclist detachment may be assigned as a whole or in part to one or more of the pursuing detachments, or it may be held in reserve by the division commander. They are for especial use on the network of roads.

Auto-mounted light guns and auto-mounted machine guns may be divided between the pursuing detachments, the condition of the roads being taken into consideration, or held by the commander as supporting units.

Heavy artillery.—These batteries are held at the disposal of the division commander and follow the Cavalry division unit that is part of the supporting force.

Aviation.—One or more squadrons are placed at the disposal of each Cavalry corps, which makes an assignment to the Cavalry divisions according to their resources and needs.

The general commanding the Cavalry division is the actual leader of the pursuit, which often takes the form, particularly at the start, of continuous action, which he must continue to direct. He keeps in touch with his main body or goes to the place where he can see to the best advantage and takes charge and directs the action. He is generally mounted or, rarely, in a motor.

(3) THE ACTION.

The methods of fighting employed by small and large Cavalry units are shown in Part III.

PART III. CAVALRY IN ACTION.

CHAPTER I.

GENERAL REMARKS.

In carrying out the duties assigned to it, Cavalry will always be called upon to fight, either by attacking the enemy (to force a passage, to force the withdrawal of the rear guard, to secure his objectives, to harass columns, to destroy convoys, etc.), or to defend a position or to check the advance of the enemy or to render the enemy Cavalry useless.

The general rule of Cavalry action is always a combination of a frontal attack and a maneuver to gain the flank or the rear of the enemy. The methods by which the action is carried on vary with the circumstances.

SUDDEN ATTACK.

When the enemy is forced to abandon the battle field because he is beaten, he does not withdraw under the cover of a well ordered rear guard—maneuvering and engaging according to plan and orders issued in advance. The units that have suffered the least and are the most energetically commanded endeavor to resist and prevent the inroads of the victor. The Cavalry of the pursuit will fail in its duty if it does not force the withdrawal of these detachments without tactical unity or if they are held up by several shots fired from the edge of a wood or the outskirts of a village, etc.

Decisions must be made quickly and audacity used.

If it is impossible to get through mounted, the action must be begun immediately with fire.

The principles are the same for all the units from a squadron to a division.

To use the maximum of means and to operate on a sufficiently extended front in seeking to envelop the enemy's supporting point.

Not to hesitate to leave intervals between the squadrons and even the attacking platoons, keeping in mind that these intervals must be effectively covered by fire and watching for the security of the flank.

To make use of automatic rifles, machine guns, auto-mounted light guns, and auto-mounted machine guns, and to demand the rapid intervention of the artillery if it is in the vicinity.

To open from the beginning of the attack a very concentrated fire and to act with vigor from the very outset.

Always to hold a mounted reserve to accentuate the enveloping movement.

If the resistance ceases, pursuit by fire of all the slow-moving elements, auto-mounted light guns and auto-mounted machine guns, artillery, light regiment, and immediate mounted pursuit of all the other elements to prevent the enemy re-forming farther to the rear.

ATTACK OF SUPPORTING POINTS OR OF A LINE HELD BY THE ENEMY.

When a sudden attack has failed or when the commander finds the line still organized, he must proceed to a regular attack. Cavalry is able to do this.

But in this case it is necessary that the preparation and execution of the attack be carried out with more care and that all the means at its disposal are called upon.

The characteristic of this form of action is the duration resulting from the continuity of efforts and the time necessary to produce them.

The Cavalry must organize to hold out—its armament making it possible—and at the same time to conduct an offensive under the same hard and laborious conditions as the Infantry.

DEFENSIVE ACTION.

In this form of action the necessity for holding out appears again. It is no longer, or rarely, a question of retreating and seeking shelter.

The dismounted Cavalry hold their positions until the Infantry arrives. If the commander finds it necessary, they may be sacrificed. Any troops that give up ground are dishonored. The forms of action shown in the following chapters apply to general cases—without studying their application to a sudden or to a more carefully carried out attack. The chief makes the decision, according to the urgency of his mission and his knowledge of the situation, as to what extent he is justified in counterbalancing the incomplete coordinations of his forces with the violence put into their operations and by surprise.

The succeeding phases of offensive Cavalry action in the course of a pursuit are:

The advance to the combat position.

Gaining contact and the reconnaissance of the enemy forces over the greatest possible front.

The attack proper, executed with a view to breaking the enemy's line.

The following up of a success and the resumption of the pursuit or, if obliged to wait for the Infantry, the holding of the ground, and the adoption of a defensive attitude to ward off counter attacks.

CHAPTER II.

MOUNTED ADVANCE TO THE COMBAT POSITION.

The advance to the combat position is generally made over difficult terrain and under artillery fire. It is executed as rapidly as possible, avoiding surprises by fire, taking all measures for security, and using formations calculated to reduce loss.

The formations used are as follows:

At a distance from the enemy the platoon marches into action in column of fours or in line of squads. The squadron may in addition use column of platoon, the line of platoons in column of fours, the line of battle with or without intervals between the platoons.

In the zone of artillery fire, the line of squadrons in column of ones or twos is alone used. They must be extended over the terrain as much as possible.

The formation in battle in one or two ranks can be used to cross over a crest all together. They may be rearranged afterwards.

The large units break up into squadrons or into half regiments in very open formation. The chiefs of the subordinate units choose for themselves the least vulnerable formation.

The division or brigade commander, the colonel, assigns to each their sector of advance and arranges the point of rendezvous or the objectives.

To sum up, a large Cavalry unit, such as a division, that formerly marched under the eye of its commander, must to-day, in the zone of possible artillery fire, be largely broken up and perform its evolutions in extended formations, for fear of being instantly put hors de combat.

CHAPTER III.

BATTLE RECONNAISSANCE.

All troops that are not in immediate contact with the enemy should be preceded by reconnaissances.

The platoon is the smallest reconnoitering unit. It is generally supported at a short distance by a squadron.

The squadron is the best adapted unit for reconnaissance, since alone it has sufficient strength to support an action, to carry out a maneuver, or to overcome resistance.

If the state of the roads permit, it is always well to support a reconnaissance by auto-mounted light guns and auto-mounted machine guns; also by cyclists who add considerably to the offensive.[1]

The reconnoitering platoon marches under the protection of patrols.

When these observe a suspected shelter, village, wood, etc., the reconnoitering party should explore it with all the means at its disposal. In this case the platoon chief immediately calls on his automatic rifles and places them in a position where they can overlook the shelter to be explored. They are ready to open fire dismounted.

When the patrols advance toward the cover to be explored the rest of the platoon remain near the automatic rifles.

The chief of the platoon, in addition to the ordinary methods of reconnoitering, does not hesitate to have the automatic rifles fire one or two clips. Fire drawing fire, the enemy is led to return and so disclose his presence.

According to the results the chief of platoon crosses or goes around the obstacle. If the obstacle is occupied and it is impossible to go around it, the platoon fights dismounted and the reconnaissance is continued by fighting.

CONDUCT OF A PLATOON IN RECONNAISSANCE.

Platoon acting alone.—A single platoon, minus its patrols of safety, has not sufficient means to carry on a real action. Its action consists generally of completing and verifying the information given by the mounted patrols. It operates the same as a strong patrol. When the chief of platoon has decided to continue the reconnaissance he orders the automatic rifles to dismount if this has not already been done. Under the protection of the automatic rifles and the patrols

[1] It should be understood that the presence of auto-mounted light guns, auto-mounted machine guns, or cyclists must in no way hold back a reconnaissance.

the remainder of the platoon dismounts under the shelter of the best cover. The troopers take their rifles and cartridges and put their tools in their belts.[1]

The platoon leader organizes his patrols, gives them their direction and mission, and throws them forward.

The platoon leader moves or holds his automatic rifles where they can support the patrols to the best advantage. He generally holds several men with him as well as the automatic riflemen.

If the enemy yields, the platoon leader occupies the supporting point, reorganizes his units, and continues the reconnaissance either mounted or dismounted.

If the enemy makes a stand, the platoon leader continues the fight either mounted or dismounted, according to the circumstances.

The advance guard platoon of a reconnoitering squadron.—In this case the platoon is only temporarily isolated. It is rejoined after a more or less short delay by the remainder of the squadron.

Unless the platoon meets with resistance that it can not overcome without assistance, it should attack without hesitation and notify the squadron commander. Its rôle is to prepare and cover the entrance into action of the force which supports it.

If it is necessary to continue the fight dismounted, the platoon leader orders the men to dismount, following the directions used for the platoon acting alone. He detaches for patrols only the number necessary for safety and to obtain desired information. The remainder of the platoon with the automatic rifles occupy one or more supporting points, which will be favorable to the squadron's next movement.

After this, the platoon leader receives orders from the captain. He seeks to benefit by surprise and at the same time to operate out of sight of the enemy.

SQUADRON ACTING ALONE IN RECONNAISSANCE.

The reconnoitering squadron marches in the trace of the platoon that it supports and under the protection of flank patrols.

When the chief of the advance guard platoon sends word that there is an obstacle apparently held by the enemy, and that he can not find a free passage, the captain in command of the squadron sends other patrols on the flanks to increase the field of investigation.[2]

[1] Regulations of May 14, 1912, par. 460, contain rules for dismounting.

[2] He halts his squadron in a place masked from the view of the enemy near the advance guard platoon and joins the chief of platoon to acquaint himself with the situation.

If the patrols find a free passage, the squadron uses it without delay, while the advance guard platoon continues to hold the enemy. According to the circumstances, the squadron deploys in the rear of the enemy elements facing the advance guard platoon or continues the pursuit.

If the obstacle can not be circled, the squadron commander, after a rapid personal reconnaissance, decides to attack. He gives orders for dismounting, divides the duties between the platoons, as is further explained in squadrons acting together. He may either hold back a mounted reserve, whose strength may vary from a squad to a platoon, or dismount all his strength. The method of using the forces at his disposal are left to his initiative.

If the squadron commander has cyclists' machine guns, auto-mounted light guns, and auto-mounted machine guns at his disposal, he uses them in the most effective manner in forcible concentration against the selected point of attack.

The squadron commander seeks always to operate as effectively as possible and by surprise. It is to his advantage to concentrate his forces, even if this slightly delays his action. If the attack succeeds, the squadron rallies and continues the pursuit without loss of time.

If the attack fails, the squadron holds its ground, organizing with the idea of taking up the offensive.

A squadron which can be supported never abandons terrain it has occupied unless it receives an order or a mission that definitely relieves it from this obligation.

The regiment.—The methods of reconnaissance used for platoons and squadrons apply also to a regiment—to find the enemy's flank and fight in order to pass it.

Chapter IV.

DISMOUNTED OFFENSIVE ACTION.

The leader of a Cavalry unit who decides to fight dismounted determines the number of subunits that are to dismount and, if necessary, reinforces or completes his systems of information and security.

He holds back a mounted reserve if he is alone or if he foresees the possibility of rapidly following up a successful foot action by maneuvers or pursuit.

A subordinate unit of a command dismounts its entire strength if ordered to fight on foot, and does not hold back a mounted reserve unless so ordered.

In any case the reserve should be made up as far as possible from an organized unit, and not by the union of parts drawn from each of the units engaged.

When dismounted, the chief of a Cavalry unit gives his orders as to the formation to be taken for the security of the command and for the guard for the lead horses.

In units larger than a squadron an officer may be given command of the lead horses.

The lead horses should be scattered so as to be best hidden from view.

Close formations are absolutely forbidden.

The care of the lead horses or the question of rejoining them can not be considered when fighting a dismounted action. After the success of an engagement or at night it is possible to take the necessary steps in this direction.

DISMOUNTED PLATOON ACTION.

The increase of the platoon's strength, the number of automatic rifles, grenades (V. B.), and hand grenades give platoon leaders opportunities for executing several simple combinations of fire and movement without changing the direction of march given him.

The fighting front of a platoon varies from 80 to 130 yards.

The platoon dismounts at the point indicated by the captain. The horses are held by four troopers commanded by a noncommissioned officer.[1]

Troopers place tool in belt.

Platoon forms in line of squads in columns of troopers.

The platoon leader calls his noncommissioned officers and gives them the objective and the line of march, which must be repeated to the men. He carries out his orders according to instructions given by the captain:

The march formation of the squadron.
Eventual Artillery support.
Liaison to be established.
The captain's place.
The position of the dressing station.

In principal, each squad should have a file closer, who according to the platoon commander's order, is a sergeant or a corporal.

The platoon commander can generally employ the signalers as observers and agents of liaison.

[1] A method of tying 12 or 15 horses together so that a trooper mounted or dismounted can lead them across fields is being looked into.

THE APPROACH.

The formation of approach for a platoon is the line of squads in columns of troopers at intervals depending upon conditions.

The platoon commander leads at the head of the center squad.

The march is always covered by a patrol.

The platoon advances using the terrain to the best advantage.

When the enemy's fire prevents uninterrupted marching, progress is made by rushes or by infiltration. The march is now executed by the initiative of the squad leader who keeps on a line with the platoon commander.

The platoon commander takes advantage of any cover to reorganize his units and get them in hand.

When the platoon enters the zone of effective Infantry fire and it is impossible to advance without firing, it takes "action formation," which is the skirmish line in single rank with intervals of four paces at the minimum. The automatic riflemen's position depends on the situation. At the outset it is well to place them in the center of the platoon near the platoon commander.

File closers.—The file closers are an invaluable auxiliary to the platoon commander during an advance, an action, and an assault. They assure the carrying out of orders and the regularity and continuity of the movement. They replace the commander if he leaves temporarily or if he is put out of action.

DIRECTION FOR FIRING.

Fire is opened at the initiative of the platoon commander.

The object of opening fire is to facilitate the platoon's advance or to strike a particularly vulnerable objective.

The platoon commander gives orders for opening and ceasing fire, indicates the objective, the kind of fire, and, if necessary, the number of rounds.

The squad leaders and the chief of the automatic rifles supervise the firing and oversee its execution.

It is always advantageous to open fire as late as possible.

The careful designation of the objective is also most important, as it is very difficult to distinguish the enemy's exact position.

Observation should be well organized. Signalers are detailed as observers and receive special instructions.

The platoon fires at will, by counted cartridges and by volleys.

Volley firing is one of the most effective means to hold the unit in hand during critical moments. It can be used to stop wild firing, a sign of badly trained, raw, or fatigued troops.

In addition to the collective fire the squad leaders, during halts, supervise the terrain through the best shots in the unit. These watch for the enemy's movements at a particular point. They fire at the slightest indications of movement.

The automatic rifles are excellent for this type of firing as long as their supply of ammunition lasts.

THE ATTACK.

At the opening of fire the platoons march in echelons, protecting one another by their fire.

The automatic rifles help the advance by their fire. They may be held for a given time in a position from which their fire may be directed on the objective without impeding the platoon's movement. They rejoin the platoon under cover of the latter's fire and the advance is resumed under the original conditions.

Each time that the machine guns or Artillery are sweeping the objective with fire the platoon should profit by it and advance.

When nearing the enemy the chief of platoon and the noncommissioned officers avoid all unnecessary gestures or movements that might draw attention. The platoon advances until within assaulting distance.

THE ASSAULT.

Assaulting distance varies with circumstances.

If the Artillery is supporting the attack the platoon is within assaulting distance when it is within 150 yards of the enemy and ready to advance as soon as the Artillery increases its range.

When there is no Artillery, the assaulting distance is reduced. It is possible to advance to within 100 yards and to prepare for the movement by the concentrated fire of all the means at hand and to clear the distance by a rush.

In the first case the assault is always ordered by a given signal by the commander, in order to unite the Artillery action with the progress of the attack. In the second, it is well to start together, but the assault may be launched on the initiative of certain particularly well-placed units. The duty of the remainder of the line is to conform to the movement by joining in the attack.

When Artillery supports the attack, the platoon should follow the shells closely. Surprising the enemy is worth the risk of being hit by a few fragments.

The automatic rifles go into action with the platoon, unless there is a chance for enfilading fire on the objective or if they are held in the rear to cover a flank. In the first case they try to fire while advancing.

The platoon commander and his noncommissioned officers are the soul of the assault and lead their men by their example to the enemy's position.

Occupation of the objective.—Following up a success, if the assault is successful the platoon continues to move inside the enemy's position to the objective indicated by the captain. To reach it, it is necessary to engage a number of resisting parties. The platoon commander combines the action of his V. B.'s, his grenadiers, and automatic riflemen in attacking them.

The platoon on reaching its objective helps its neighbors, if needed, and in any case forms a firm connection with them.

The platoon commander pursues the enemy with fire, principally by the automatic rifles. He does not continue the movement unless in connection with the rest of the squadron. However, the platoon should always have one or two patrols to follow the enemy to maintain contact or to cover the establishment of a new line which may be occupied later.

The sending of patrols is indispensable. They comprise a mounted or dismounted unit supported, if possible, by an automatic rifle held in the rear at some distance. The platoon is reorganized as quickly as possible.

If the mounted pursuit is not resumed, the various elements are divided over the captured ground in such manner as to cover it. The automatic rifles should be so placed as to flank the line. The particularly vulnerable points that might be subject to counter attack are occupied by groups of grenadiers and V. B.'s.

If the assault is not successful, the platoon reorganizes on the spot while waiting for the chance of taking up the attack again. Captured ground should not be abandoned on any account.

It is always the strong resistance of small elements that makes it possible to check the counter attacks and take up the offensive again.

DISMOUNTED COMBAT OF A SQUADRON.

The squadron is a tactical unit whether on foot or mounted.

The captain carries out the march of approach mounted as long as possible in the formations noted in the chapter on the approach.

The squadron dismounts three of its platoons.

The captain directs the placing of the lead horses.

The mounted platoons are left in charge of a competent noncommissioned officer who keeps in touch with the captain.

A squadron acting alone has a mounted reserve.

THE APPROACH.

The battle front of a squadron varies from 165 to 275 yards.

After dismounting the captain in command reconnoiters the terrain on which his troop is to engage and issues his orders.

This order determines—

(1) The mission of the regiment.

(2) The principal and secondary objectives of the squadron.

(3) The objectives of the neighboring squadrons.

(4) The division of the three platoons into platoons of the first line and support, intervals and distances, base platoons.

(5) The mission and objective of each platoon.

(6) The Artillery support, if it has been indicated.

(7) The connection with the neighboring squadrons and, if lacking, flank protection.

(8) Procedure after the assault.

(9) Position of the captain and of the colonel.

(10) Location of the dressing station.

In the advance of a first-line squadron the platoons take their positions as indicated for the formation for attack, so that they can engage instantly.

The second-line squadron takes a position in depth.

Each platoon in line of squads by troopers.

The captain marches in front of the directing unit. He places a sergeant and a trumpeter in position, and one liaison agent for each platoon. These liaison agents are observers in addition.

During the advance safety is assured by several small dismounted patrols in front, and on the flanks if necessary.

The advance is carried out in the sector assigned to the squadron by following a route hidden from the enemy's view, so that the operation may be a surprise if possible.

Crossing terrain in sight of the enemy—such as roads, edges of woods, etc.—should be carried out quickly and simultaneously. In this case the units in rear are pushed up close to the head of the column. Proper distances are retaken later. When continuous progress can no longer be made the advance is continued by rushes, at the initiative of the platoon commanders. These conform to the movement of the captain or the base unit.

The captain in command endeavors to place his squadron as close to the enemy as possible without opening fire, unless particularly favorable objectives present themselves.

The squadron of the second line gains the attack position assigned it by the same methods. The captain makes a reconnoissance of the terrain, and keeps in constant touch with changes in the fight, so that when the time comes he can give his order to engage.

THE COMBAT.

The squadron places one or two platoons on the first line with the rest in support. When they debouch from the last cover the captain leaves his place at the head of the squadron. He marches now between the platoons of the first line and the support at a point from which he can see what is occurring and make his presence felt.

When no further advance can be made without opening fire, the platoon commanders give the order to open fire. The fire and the continuation of the movement follow those principles used by the platoon.

The rapidity of the advance depends on the platoon commander's energy.

When the captain has machine guns under his command he assigns them to positions from which they support the advance. The machine guns follow the advance of the firing line, changing positions by rushes.

The captain holds his supports in hand and takes care that they do not become a part of the first line without his orders. Throwing reinforcements into the firing line should be avoided, for when the first line is halted, heavy reinforcements only add to the losses. The advance can not continue until the effectiveness of the fire is increased by a more accurate adjustment of fire and increase of intensity.

When three platoons are engaged the captain marches with the platoon that is in the best position to reach the objective.

THE ASSAULT.

The assault is begun when within a satisfactory distance and at the time or at the signal fixed by the commander after the preparation by the Artillery.

The squadron assaults with its own strength or with the help of the reinforcing units.

When the captain has machine guns at his command he uses them to cover the flanks or to prepare and accompany the attack. If the attack is successful the captain carries the combat to the interior of the enemy's position so as to overcome all resistance and reach the

designated position. If the pursuit can not be carried out mounted it is carried on dismounted by the units of the second line and the only care of the captain commanding the squadron of the first line is that it shall be thoroughly installed. In this case tactical units or patrols are immediately sent out to keep contact with the enemy and to protect the organization.

Machine guns are placed in the most favorable positions to check counter attacks, always arranging to operate by flanking fire. The captain takes a rapid survey of the most particular points to be held. He sees that the occupation is thorough—without hesitating to leave intervals which are to be well covered by fire.

In addition the captain directs his attention to the flanks and to the liaison with the neighboring squadrons. He also takes care that the platoons do not become isolated in the pursuit. He forms a reserve without delay in order to be ready for counter attacks.

In order to enable the Artillery to operate successfully the captain sends all information to the colonel without delay, regarding his situation and the enemy. He indicates the observing stations of the Artillery in the vicinity.

If the second line units are successful in taking up the pursuit the captain assembles his squadron, reorganizes it, and continues the pursuit mounted.

If, on the other hand, the assault is checked the squadron sets to work to renew the attack at the hour fixed by the commander or at a favorable moment.

In any case the squadron holds fast to its ground, and does not fall back under any pretext.

CONSOLIDATING OCCUPIED POSITIONS.

If the occupation of a position is to be for a certain length of time the captain, after nightfall, rectifies the traces of his first line, organizes good flanking defenses, and gets into thorough touch with the neighboring and rear units. He diminishes the density of his line by placing units in reserve, arranges the position of his automatic rifles and machine guns (if any) to secure the most effective flanking fire.

All the platoons work on the trenches started during the day, organizing supporting points, etc.

DISMOUNTED COMBAT OF A REGIMENT.

The regiment acting with others usually dismounts its four squadrons. The regiment acting alone holds back a mounted reserve of variable strength.

The front of a regiment acting with others is at least 435 or 635 yards.

The squadron, as a rule, marches straight on its objective; the regiment, on the other hand, has at its command means that permit it to form combinations of forces with a definite maneuver in sight. Depth of formation is used by the regiment in all circumstances.

COMMAND.

In the regiment acting with others the colonel always directs the dismounted combat.

In the regiment acting alone or in a regiment dismounting but two squadrons, the colonel can command the whole and direct a field officer to conduct the dismounted action. During the fight the colonel places himself where he can best observe and receive information.

The elements of command at his disposal are the liaison agents with the squadrons and machine-gun section. There are observers also charged with overlooking the battle field; signalers with lanterns and distinguishing flags; detachment of sappers; eventually a detachment of Artillery liaison and observation.[1]

The whole is placed under the order of the captain, assistant of the colonel, assisted by a staff adjutant.

The machine guns[2] are used to assist the advance to the principal objective. They march, as a rule, on a line with the squadrons of the second line, in a position that admits of quick entry into action. The colonel at the opening may give a special mission to one portion of the machine guns by putting them at the disposal of a squadron.

THE APPROACH.

The regiment advances mounted as far as possible.

The colonel indicates the approximate positions where the squadron dismounts the position of the lead horses. He designates the leader who will take command of the mounted squadrons, who, after a reconnaissance, will locate the lead horses so as to best shelter them from view.

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[1] The composition of this detachment varies with the resources at the Artillery's disposal. It contains, when possible, a sergeant and a corporal, with several of the liaison signalers. This detachment is generally near each brigade commander of the first line. In case a regiment uses an Artillery battalion as direct support the position of the liaison detachment of the battalion should be near the colonel commanding the regiment.

[2] Tactical use of machine guns, G. Q. G., Nov. 24, 1915, No. 13251.

BATTLE ORDER.

After dismounting the colonel issues his orders. These show—

(1) The mission of the whole Cavalry division or brigade.

(2) The mission of the regiment and its neighboring units, its objective, and the general plan.

(3) The regiment's formation for attack, number of squadrons in the first line and in the reserve; distances, intervals, mounted reserve.

(4) The mission and objective of each squadron.

(5) Flank protection, if necessary; organization of liaisons with neighboring units.

(6) Use of machine guns, their place in the initial disposition.

(7) The mission of units placed at the disposal of the regiment (auto-mounted light guns, auto-mounted machine guns, etc.).

(8) The orders under which the Artillery prepares and supports the attack, if these are known by the colonel.

(9) The method of procedure after the assault.

(10) The position of the colonel, brigade commander, and division commander.

(11) The liaisons with the brigade, the division, and the Artillery.

(12) Arrangements for supplies.

(13) Position of dressing station.

The methods to be used in reaching the objective are based on the character of the ground and the information the colonel possesses when he dismounts the command. He must not delay his action to wait for precise information, which generally arrives too late. He must make his decision from rather vague reports. He modifies his plan as the situation clears up.

When the regiment is in the second line, the colonel orders the command to dismount at a designated point chosen by him, has all necessary reconnaissances made, and keeps in close touch with the first line. From here he issues the orders for the fight.

The dismounted advance is made in a formation ready for action, the same as indicated for the squadron—utilization of the terrain, security on the front and flanks, maintainance of liaisons.

THE COMBAT.

The colonel places, at first, one, two, or three squadrons on the first line. He moves forward one or more of the reserve squadrons that he may see what occurs and may exercise command. The fight is conducted as indicated for the squadrons.

During the combat the colonel must watch carefully—

(1) To make sure that the first-line squadrons push unceasingly toward the principal objective.

(2) To maintain order in the second-line units. He takes advantage of any pauses in the combat to reform and reorganize his available units, so that they may be ready to enter the fight at any moment.

(3) To establish communication with the neighboring units on the flanks and with the brigade commander and the division commander in the rear.

(4) To assure security by watching for possible counter attacks and by covering the flank. He prepares for these contingencies by a judicious echeloning of the second-line forces toward the direction of danger and by proper distribution of the machine guns or of the auto-mounted light guns and auto-mounted machine guns.

ARTILLERY SUPPORT.

To assure effective Artillery support for the first line squadrons the colonel must have the most accurate information possible of the situations and the positions occupied by the enemy. This information can only be obtained if his interior liaison and observation service are well organized and work perfectly.

When the colonel has an Artillery observation detachment near him it is the chief of this detachment who transmits the information directly to the Artillery. If not, the information is sent to the brigade commander, who has it sent immediately to the Artillery. It is better to send such information by two methods.

The colonel uses the observing stations to keep informed of the effectiveness of the fire.

He concentrates all his attention on the combined action of the Artillery and dismounted squadrons, for the attack is not successful unless prepared by an accurate fire. He notifies the squadron commander whenever possible of the conditions under which they will be supported by the Artillery.

EMPLOYMENT OF SQUADRONS OF THE SECOND LINE.

The squadrons of the second line are used to bring about a decision or to meet and throw back a counter attack. The plan for the employment should be prepared by the colonel after making sure of the concentration on the objective of all means at hand.

The moment this operation may be put into effect depends on the effectiveness of the Artillery preparation.

When the colonel decides that he has the necessary means to make a decisive effort he should—

(1) Determine the objective to be carried, if that has not already been done.

(2) Have converging fire on the objective from all the weapons at his disposal (artillery, machine guns, auto-mounted light guns, automatic rifles, V. B., etc.).

(3) Bring up the reserve to their position opposite the objective, while the preparation is being made.

(4) Neutralize at the moment of attack all the points on the enemy line where an attack could be made on his flank.

The best means of assuring a rapid success is to neglect no detail.

COUNTER ATTACK BY THE ENEMY.

Counter attacks are stopped by automatic rifles, machine guns, hand grenades, and V. B., and if possible barrages by the Artillery.

Every small group, even those made up of two or three men, must resist fiercely, wherever they are, allowing themselves to be surrounded, if necessary.

It is always the tenacity of the small groups which foils the enemy's efforts.

If the enemy succeeds in spite of everything in penetrating the lines, he must be thrown back by an immediate counter attack.

If there is time, it is advantageous to prepare this counter attack by violent fire of V. B. grenades.

Important.—The danger of giving too great density to the attacking line by too great concentration must be avoided. This leads to failure because of the large losses that it entails.

CONCENTRATION OF FORCES—OR CONCENTRATED FIRE.

The second line units must never break away from the colonel to throw themselves into the first line to increase the density, disorder, and the losses. The reserve should only engage on the colonel's order.

If the attack succeeds the position is occupied according to instructions issued. The following up of a success is assumed by the reserve units.

If the attack fails the colonel makes arrangements for a renewal of the attack. When there is sufficient preparation the assault recommences. A regiment should never abandon occupied terrain.

ORGANIZATION OF THE TERRAIN.

Whatever the result of the attack, *if the pursuit can not be taken up immediately*, the colonel must take immediate steps to:

(1) Regulate the Artillery barrages in his front and indicate his position and that of the enemy.

(2) Connect up his flanks with the neighboring units.

(3) Reduce the density of the first line and reorganize the reserves.

(4) Establish a liaison system in depth and breadth.

(5) Start work of organization and especially communications to the rear.

The first-line trench can not generally be maintained as determined by the position of the combatants at the end of the engagement. The colonel must rectify it so as to be sure of good flank protection.

The reserve squadrons organize the second line supporting points.

The colonel establishes his command post at a point from which he can overlook the terrain—near an observation post, if possible—so that the liaison will be easy.

REPLENISHMENT OF SUPPLIES.

The organization for replenishment of food, ammunition, and matériel falls on the colonel. He determines the point the wagons must reach, the depots, and the means of transportation between the depots and the battle line. The supply of grenades, if there is to be immediate contact, is very important.

DISMOUNTED COMBAT OF THE BRIGADE.

The brigade may be employed singly or as part of the division.

In the first case it is supported generally by Artillery, cyclist, auto-mounted machine guns, and auto-mounted light guns. It has the same composition, in proportion to its size, as a division, and its action follows the principles shown later for that unit.

The rules that follow are those for the action of a brigade in a division (engagement of dismounted reserves of a Cavalry division or a Cavalry corps attack by the Cavalry forces in connection with the troops of all branches).

The brigade in the division dismounts all the squadron, unless orders have been received to hold itself as a mounted reserve.

The brigade commander directs the action. He takes up a position sufficiently near the firing line to follow the changes in the battle and to make his presence felt. As the brigade dismounts, at the most, 800 men, the brigade commander has the strength of two

small battalions under his orders. His rôle is now similar to that of an Infantry commander.

The brigade generally engages with the regiments side by side. This arrangement makes it easy for the commander to divide the front of the brigade between the two colonels.

The front varies in this case from 800 to 1,100 yards.

The brigade commander's orders for the fight shows:

(1) The general mission of the Cavalry division; the brigade objective; the plan; the objectives of the neighboring units.

(2) The strength of the mounted reserve, if there is one, and its position.

(3) For each regiment the sector of action, the principal and secondary objectives.

(4) The strength of reserves at his disposal.

(5) The flank protection or the connection with the neighboring units.

(6) The mission of the Artillery and the manner by which the Artillery prepares for and supports the attack.

(7) The mission of the auto-mounted light guns and auto-mounted machine guns, etc.

(8) The conduct after the assault.

(9) The position of the brigade and division commanders.

What has been said regarding the action of the regiment applies to the brigade. The plan must be made out beforehand, being based on the character of the terrain and on the information at the commander's hand. He modifies it according to developments.

THE COMBAT—ARTILLERY SUPPORT.

The brigade commander should have a liaison detatchment and an Artillery observation detatchment near him.

The most important duty of the brigade commander consists in guaranteeing effective and constant Artillery support to the dismounted squadrons. This result may be secured if the commander informs the Artillery of—

(1) The position of the first line.

(2) The most desirable objective for Artillery fire.

(3) The observing stations.

This information is furnished him by the colonels, and either transmitted directly to the Artillery by the observation service or through the division commander.

The brigade commander gives orders to the Artillery fraction assigned him.

The auto-mounted machine guns and auto-mounted light guns assigned to the brigade are generally placed at the disposal of the colonels. The commander may always give them some special mission.

The brigade commander supervises the action of his regiments, follows the combat closely, and endeavors to keep well informed. He must at the opening of the engagement determine the point at which the principal effort is to be made. The choice of this point is based on the chance of bringing to bear a strong concentrated fire, and on the ease of covering the flank of an attack. The point of attack being determined, the brigade commander prepares for the fight, following the principles previously indicated for the regiment.

The arrangements made for the attack are completed by the measures taken to follow up the success. The mounted reserve—if there is one—is brought up.

The Artillery, the auto-mounted machine guns and the auto-mounted light guns make arrangements to advance.

If the attack is successful, it is most important for the brigade commander to immediately verify the direction of the operating troops without loss of time, as the immediate following up of a success is most efficacious.

This operation should look particularly to the capture of the enemy's batteries.

If the attack fails the commander must recommence these preparations, whose effectiveness he observes. He determines the conditions under which the attack shall be renewed.

THE LIGHT REGIMENT.

The light regiment has the same organization as an Infantry regiment. It marches, maneuvers, and fights according to the principles given in the Instruction on Offiensive Combat of Small Units (G. Q. G., January, 1916, No. 2481), and by the note in the temporary Appendix (G. Q. G., Sept. 27, 1916, No. 22282).

THE CYCLE DETACHMENTS.

The cycle detachment can march all together or divided among the different brigades, according to circumstances.

Employed united in the Cavalry division or brigade, the cycle detachment maneuvers and fights as an Infantry company.

In brigade or division combat the cycle detachment, if it is united, forms one of the units that the commander holds in reserve to put into the action on account of the rapidity with which it can move from one point to another.

The reconnoitering units are sometimes reinforced by a platoon or a half platoon of cyclists. Their position in marching is behind the point of the Cavalry platoon, in order to support and rapidly overcome such slight resistance as it may encounter.

In case the reconnoitering platoon becomes engaged, the cyclists carry on the frontal action while the rest of the mounted platoon try to turn the position.

When the reconnoitering party crosses fields the leader indicates to the cycle fraction leader the mission and direction and gives him a point of rendezvous near a road practicable for machines.

In no case must the cyclists be the cause of slowness on the part of the unit to which they are assigned.

DIVISION COMBAT.

The division is the true combat unit of the Cavalry. It has the means to carry on a sustained offensive and to follow up a success.

Its composition is—

- 6 regiments of Cavalry (2 sections of machine guns to the regiment).
- 1 light regiment.
- 1 cyclist group.
- 1 detachment of engineer sappers and 1 detachment of telegraphers.
- 1 battalion of Field Artillery.
- 2 battalions of auto-mounted light guns and auto-mounted machine guns.

The Cavalry division may be reinforced by Field or Heavy Artillery and by Infantry, transported by motor.

The Cavalry division marches in the sector assigned to it, preceded by detachments generally the strength of a brigade or a regiment and as much Artillery as possible.

The combat front varies from 1 to 2½ miles.

Cavalry division engagements, like those of Infantry divisions, follow the following general rules:

Reconnaissance and approach.

The Artillery engagement preparation for the attack.

The attack.

Following up of the success.

RECONNAISSANCE AND APPROACH.

Reconnaissance and approach are carried out according to the regulations given in the first part of these instructions.

The pursuit detachments must quickly find—

(1) The line on which the enemy's strongest resistance is encountered, which may make it necessary to use the main body or the approximate line occupied by the enemy.

(2) Intervals in the line through which the Cavalry division may pass.

This information is completed by the aircraft.

In principle each Cavalry corps has one or more air squadrons at its command, and these are divided so that each Cavalry division has two or three aeroplanes working for it.[1]

The aircraft work in close liaison with the Cavalry division and in a restricted area. They fly ahead of the pursuit detachments and communicate with them by means of weighted tubes containing information.

The results of the reconnaissance of the detachments and aircraft permit the commander to give the modifications to his initial plan demanded by the events, to determine the positions where he may outflank and overthrow the enemy's resistance, or halt his point of attack.

Lack of information never justifies inaction.

If it is impossible to advance mounted the Cavalry division commander causes the division to attack dismounted, for which he gives the preparatory order for the attack.

PREPARATORY ORDER FOR THE ATTACK.

The aim of this order is to concentrate all the forces opposite the Cavalry division's objective, placing them according to the plan.

The preparatory order for the attack shows—

(1) The situation.

(2) The division commander's decision—his point of attack.

(3) The positions to be attacked on which the units at the division commander's disposal direct themselves.

(4) The mission of the combat units destined to hold the enemy who are outside the point of attack. Special duties, if there are any.

(5) Division commander's temporary command post, brigade commander's temporary command post.

The movements as a result of this order place the Cavalry division in position to move to the attack. During their execution, the division commander and the Artillery commander make the reconnaissance.

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[1] In order that the aeroplanes work with the pursuit divisions and the reconnoitering detachments shall be of the greatest use, frequent communication should be kept up between the Cavalry and the aircraft.

This preparatory action is covered by the pursuit detachments and principally by those in front of the point of attack. These detachments continue their duty, unless otherwise ordered, and engage the enemy. These engagements hold the enemy on the whole front while the division commander assembles his forces and prepares for the attack.

The reconnaissance preparatory to the attack is made by the division commander, his staff officers, and the Artillery commander.

It determines—

(1) The exact front to be attacked.

(2) The conditions under which the Artillery preparation will be carried out (observing stations, objectives, battery positions).

(3) The general plan of attack.

(4) The division and brigade commanders' positions.

The choice of the point of attack depends largely on the ease with which the Artillery may sweep the objective with fire.

ATTACK ORDER.

This reconnaissance finished, the division commander issues the order for attack containing—

(1) Additional information regarding the enemy.

(2) Objective of Cavalry division's attack.

(3) Division of units; units designated to lead the attack; dismounted reserve units at disposal of division; commander Cavalry division's mounted reserve; their position.

(4) Sectors of attack and successive objectives of the subordinate units (brigades or regiments, light regiments, or Infantry units).

(5) Method of executing Artillery preparation; mission; objectives.

(6) Hour of attack.

(7) Method of supporting the attack with Artillery fire.

(8) Division commander's position.

(9) Following up of the success.

This order also contains regulations for the communications, the liaison, supply, and evacuations.

ARTILLERY PREPARATION.

The Artillery commander commences the Artillery preparation as soon as possible. It needs sufficient ranging or adjusting, then effective fire. Great precision is necessary.

The supplies at the batteries' disposal are limited, the supplies having farther to come than in position warfare, hence wastage should be avoided.

The success of the attack is dependent on the precision of fire during the preparation. This accuracy requires a certain amount of preparation. During this time the attacking troops take their position facing their objectives, they advance and make all necessary preparatory reconnaissances.

These advances are made in open formation as has been noted before.

The main body of attacking force is made up of dismounted regiments, a light regiment, cycle detachment (if not broken up), and by the Infantry units eventually placed at the Cavalry division commander's disposition. The different units conduct the fight in accordance with the principles given in these instructions.

The auto-mounted light guns and the auto-mounted machine guns should be placed at the disposal of the brigades and regiments, or given a special mission as supporting mixed detachments, covering flanks of an attack, etc.

The strength of the mounted reserve varies from two squadrons to a brigade.

The period of preparation for the attack will take time, as it is always well to carry the preparation out in great detail.

Before a line hastily occupied by a detachment of troops, who are falling back, the division commander does not hesitate to deliver a hasty attack, dismounted, supported by the Artillery of the division. But in face of a more solidly occupied position he must wait for the arrival of the Infantry elements and the Heavy Artillery. While waiting, the Cavalry should be employed in making reconnaissances of the enemy and in procuring all the information necessary for the foot elements and Artillery so that they may engage without delay.

THE ATTACK.

At the moment the attack is launched the division commander's rôle consists of (1) supervising the work of the Artillery, (2) bringing up the reserve so that they may engage at the proper time.

He keeps in touch with the advance of the line by all of the regular methods. He employs the Infantry's aircraft if they are put at his disposal.

If the attack does not advance, or if it fails, he employs all means at hand to give a greater intensity and precision to the preparation. Success lies in the intensity and precision of the preparation and not in the exaggerated reinforcement of the line of battle. The attack is renewed when the preparation is considered sufficient.

Overcoming the first objective does not, as a rule, determine the enemy's retreat. The resistance met with inside the position must be broken. If the Artillery can not cooperate, the attack on the centers of resistance is best prepared by machine guns—automatic rifles, the V. B.'s, and the auto-mounted light guns.

During the fight inside the position the Artillery must be on the watch on those points from which counter attacks may issue. In addition, it delivers a prohibitory fire on those approaches that permit the enemy's reserve to change position.

EXPLOITATION OF SUCCESS.

The exploitation will be more successful if pushed rapidly.

The troops for immediate use are the mounted reserve, the cyclists, and the disengaged Infantry elements, supported by the auto-mounted light guns and auto-mounted machine guns and Horse Artillery.

During the attack the division commander brings up those troops to be thrown forward in the pursuit, so that there may be no pause in the attack. The mounted reserve, supported by the cyclists, the auto-mounted light guns, and the auto-mounted machine guns, takes up the direct pursuit.

The Infantry elements deploy to the right and left, to enlarge the breach.

All the troops that can be reassembled mount and are thrown forward to support the pursuing troops.

The essential points are to act quickly and in order, to organize the detachment of pursuit, under the command of chosen commanders to give them their mission and direction.

The preceding regulations apply to the normal combat of an independent Cavalry division. They apply also, except for modifications of details peculiar to each operation, when a Cavalry division is part of a Cavalry corps, or when it is placed in an Infantry line.

The last case is found in the pursuit. If the difficulties encountered by the Cavalry against a seasoned enemy take long to overcome, the Infantry rejoins the Cavalry and the battle begins again, the Cavalry division now being one of the units of the frontal attack.

In its sector it must carry on the attack with the same methods, the same means, the same will to hold out as the neighboring Infantry units.

REPLENISHMENT OF SUPPLIES.

The great consumption of munitions and matériel of all descriptions during an attack calls for great foresight on the commander's part.

A staff officer of the Cavalry division should be a specialist in all questions of supply. The plans should be worked out in advance.

USE OF ENGINEER AND TELEGRAPHIC DETACHMENTS.

The engineer sappers carry on all the work requiring technical skill, particularly the repairing and laying out of means of communication, bridges, roads, etc. The detachment generally marches together, so as to use all its hand power—24 men—on urgent work. Occasionally it may be assigned to one of the pursuit elements. When the Cavalry division establishes itself in a fixed position they may help with the construction of the command post, the observing stations, or any work requiring a certain technical skill.

The telegraphic detachment installs and repairs the telegraph and telephone lines. It maintains the Cavalry division's wireless service.

CHAPTER V.

DEFENSIVE ACTION.

During the pursuit the Cavalry may have to assume the defensive in order to check the enemy's counter offensive while waiting for the Infantry to come up.

Large Cavalry units may also be incorporated momentarily in the battle line to enable the commander to send selected Infantry to those points where he wishes to obtain a decision.

In defensive combat the Cavalry draws its strength from the following:

Fire.
Obstacles.
Cover.
Counter attack.

FIRE.

The effectiveness of fire depends largely on the value of the flanking fire that can be organized with the automatic rifles and machine guns. The present armament is satisfactory, with a considerably reduced field of fire, if it is possible to flank the occupied line.

OBSTACLES.

Obstacles are used to hold the enemy under fire for some time as he delivers an assault. Natural objects should be used and adapted and auxiliary defenses constructed, wire entanglements placed, abatis made, etc.

COVER.

When no further advance is possible, entrenching is the general rule.

The trooper goes into action with his individual tool in his belt and must make use of it each time there is a check. Shelter reduces the losses and lengthens the life of the command. The first work is to dig a trench, which is later deepened from 5 to 6 feet.

If the stay is prolonged, communication system with the rear must be quickly established by means of communication trenches.

Also deeper shelters for protection against bombardment.

THE COUNTER ATTACK.

All commanders of defensive positions, no matter what their unit's strength, should place but few men on the first line. The position should be held by the most efficient weapons—automatic rifles, machine guns, V. B.'s. The remainder of the command should be held for the counter attack.

The defense of a position depends on watchfulness, flanking fire, and the counter attack, never on the number of men placed on the front line.

Employing mechanical and automatic appliances in the Cavalry service, in increasing considerably the amount of fire, diminishes the strength of the first line to the advantage of the reserve. This increase of force attains its maximum when the automatic arms are employed for flanking fire.

The grenade is the arm of the counter attack. All Cavalry commanders must see that fighting units have a large supply.

FRONT.

In the defensive, the front of each unit depends on the value of the obstacle behind which they are located, as well as the enemy's activity. It is not possible to determine the front, as in offensive combat all units assigned the duty of holding a front must immediately determine the important supporting points and the garrison needed by each one. The remainder of the command is placed in reserve. The commander then organizes the flanking fire. An equal division of forces or a continuous line is a bad disposition of the command. It is only in the presence of an important attack that an interrupted line is employed.

Occupied terrain must never be given up.

THE PLATOON AND THE SQUADRON.

Upon arriving at the position where he is to be located the captain in command makes a rapid reconnaissance that enables him to dispose of his force as has been shown in a preceding paragraph (2d paragraph). His unit installed, a more detailed reconnaissance is made of each sector for the purpose of—

(1) Fixing the line of resistance, the line of observation. Mounted or dismounted patrols, pickets, etc.

(2) Determining the definite strength and duty of the garrison of each supporting point.

(3) Insuring proper flanking disposition—positions of the automatic rifles and the machine guns, etc.

(4) Organizing the system of observation and the defense of intervals.

(5) Placing his reserve in the most advantageous position for a counter attack.

(6) Establishing liaisons with the first-line platoons and the colonel.

(7) Determining the work to be done and the relative importance.

He sends a report to the colonel. He designates the observing stations in his sector that offer a good view of the ground in front. Immediately organizes an observation service of his own.

The platoon leader carries out in his sector all that has been prescribed for the captain. He places in the first line only the number of men necessary to insure safety and the observation service. He holds the rest of the platoon for counter attacks.

THE REGIMENT.

After dividing the defense of the position between a certain number of units and indicating the general plan of defense, the colonel makes a more detailed reconnaissance of the sectors of the units and gives his instructions. He determines—

(1) The line of resistance and the directions to be explored by patrols.

(2) The number of units in the first line and the limits of their sectors.

THE RESERVE AND ITS POSITION.

(3) The character of work to be done.

(4) The assignment of the machine guns and the character of special work.

(5) The methods of supply and evacuation. The position of the dressing station.

(6) The liaisons.

The colonel gives his subordinates information as to the assistance to be furnished by the Artillery if the commander has informed him on the subject.

This information is sent in a report to the brigade commander.

The colonel asks—

(1) Information on the assistance to be furnished by the Artillery—establishing of barrages. He must designate the observing stations to adjust the fire.

(2) Establishing telephonic liaison between his command post and the brigades.

(3) The matériel he needs; the places and hours for replenishment of supplies.

If the colonel occupies the position for several days he issues orders for a methodical organization, occupation, and defense.

CHAPTER VI.

MOUNTED COMBAT.

Regulations of May 14, 1912, are always in force when used for the instruction, evolutions, and the combat of Cavalry mounted.

CHAPTER VII.

LIAISONS.

GENERAL RULES.

Liaison has as its object:

To enable the commander to keep constantly in touch with the situation of the units under him.

To assure the transmission of orders, requisitions, reports, information between the different echelons of the command, between the neighboring units and the different arms. In general all necessary communications to obtain concentration of effort.

It is first established by operation orders which define the duties and indicate the units of the same or of different arms with which they are to cooperate.

It is maintained by—

(*a*) Different methods of securing information (liaison agents, terrestrial observation, aerial observation).

(*b*) The different methods of transmission of information:

Telephonic system.
Wireless.
Visual signaling.
Other signals (by arm, by panels, by rockets, etc.), agents of transmission (runners, carrier pigeons, etc.).

The use of these methods of liaison should be the result of a general plan. It is always noted in full detail in the orders for operations and in the plans of defense where it constitutes a special paragraph or an appendix.

The commanders of all grades should keep in frequent and personal touch with their subordinates and make themselves familiar with the situation of their units.

The unit commanders of the different arms designated to cooperate arrive at an agreement by a reconnaissance made together on the ground. *The fact that the mechanical means of transmission fail in certain circumstances does not excuse the commander for remaining in ignorance of the important changes occurring in the situation of his own and neighboring units and for not employing the necessary personal action in the conduct of affairs.* (See instructions on liaison for troops of all branches of the service.)

The use of the methods of liaison vary according to the situations where a Cavalry command may find itself. It is well to note the two cases:

1. Cavalry in combat.
2. Cavalry on the march.

CAVALRY IN COMBAT.

The organization of liaison defined in "Instruction in liaison" for the regiment of Infantry is applicable to the Cavalry brigade and those prescribed for the battalion for the Cavalry regiment.

Commanders of Cavalry corps, divisions, brigades, and regiments, as well as the staff, should have a thorough knowledge of these instructions, and the operations of the liaison should always be carried out in the instruction of the officers and noncommissioned officers and the instruction of commands taking part in combat exercises.

CAVALRY ON MARCH.

Large bodies of Cavalry—Cavalry corps, Cavalry divisions—make use of various means of liaison. A general staff officer directs the operation, and is also specially detailed for the general duty of organizing information centers, etc.

The commander of the Cavalry corps designates a line of communication in which the Cavalry corps and Cavalry division sector shall be the "axis" of the liaison. The principal communication posts, the telephone controls, and, in general, the information centers and the wireless aerials are installed in this line of communication.

The general staff officer in charge of the communications of each unit makes sure of the permanence of the liaisons on this line and changes the positions according to a schedule established in advance, or on his own initiative if no order has been given. He keeps constantly informed of the change of positions in the various units in the command between which he must keep up the liaisons. He arranges for the rapid transport by mounted dispatch bearers—motorcycles, automobiles—of orders and messages.

The means at the disposal of large Cavalry units during the pursuit have the following characteristics:

Aircraft.—By day aircraft are the most rapid means of liaison, whether they are used to carry orders or messages in weighted tubes or reconnoiter and organize a sufficient number of landing places to permit the liaison between the two branches to be established. In this case the general staff of the units with aircraft give the commanders of the squadrons concerned all the information and facilities possible.

Wireless.—Wireless is often the only means of liaison possible between the Cavalry corps and the elements in the rear, between the Cavalry corps and its large units, and above all between the Cavalry corps and any elements supplied with receiving aerial and the aircraft.

Its use has certain drawbacks, as the enemy can intercept messages. It is therefore absolutely forbidden to send orders or messages in plain words, which might contain information of any use to the enemy.

Telephone.—The use of the telephone between the echelons of the Cavalry corps is hazardous because of installation difficulties. Construction should be carried on to the lines connecting the central posts installed on the general axis of liaisons of the Cavalry corps and Cavalry division.

Couriers.—Motorcycle and automobile couriers are frequently used for the liaisons between the Cavalry corps and the Cavalry division if the roads are in a passable condition. Mounted dispatch bearers are always a sure means of communication. It is the only means at the disposal of the smaller units of the division. When they are employed, it is almost always necessary to establish relay posts, whose positions are fixed by the Division General Staff.

These should be nearer together when the country to be crossed is difficult or dangerous.

Important messages should always be sent by several different dispatch bearers. Officers may act in cases of necessity.

Carrier pigeons.—This means of liaison may be used if the pigeons are thoroughly accustomed to a moving pigeon cot. But they are of doubtful use during a pursuit.

Visual telegraphy.—This means of transmission has not much practical application now, but it should be employed when the conditions of the advance and the nature of the country make it of use.

CHAPTER VIII.

METHODS OF INSTRUCTION.

PROCEDURE.

Instruction procedure is classed in two categories.

Evolution exercises, by means of which the command acquires flexibility and rapidity in maneuvers.

Combat exercises, having as their object the study of concrete cases, phases of combat relating to the execution of an attack or the defense of a front. Combat exercises assure the training not only of the troops but, above all, of the officers and noncommissioned officers. Evolution exercises are executed dismounted by the small units (squads, platoons, squadrons); mounted, by all units.

In the preparatory training of a dismounted trooper it is well to insist on—

Execution of skirmish rushes—individual work, then by group.

The crossing of obstacles—wire entanglements, trenches, walls, barriers, etc.

A long march in formation, at rapid gait, crossing various obstacles.

Rapid change of formations.

Manual of arms (including bayonet exercise).

COMBAT EXERCISES.

Preparation is decidedly necessary in combat exercises, as they are the reproduction of some phase of war.

For the small units a few minutes' reflexion only is required. For the squadrons and larger units the preparation needs more time. Frequently a preliminary reconnaissance is carried out. It is also well to make attacks on torn-up terrain, representing a system of

trenches to attack or defend. Too great care can not be taken in preparing these exercises, as the results are excellent. The enemy may be represented, but "maneuvers of double action" are avoided. Badly executed movements are repeated. In order to allow each unit commander to exercise the command of his troops, the director's function is filled by the commander of the larger unit.

Combat exercises include, for the platoon and squadron, marches of approach, attacks on supporting points, debouches, counter attacks, occupation, and organization for position. The squadron executes, in addition, attack exercises on a depth of 1 or 2 miles (successive assaults in between marches of approach).

The combat exercises of a regiment should be frequent. Perfect execution of the whole as well as in detail should be obtained. They consist of a fight from the beginning to the end for the regiment of the first and second line on a depth of 2 or 3 miles. The director introduces various incidents on the front and flanks, accustoming them to rapid return to order during halts of a short duration. Finally, it organizes the conquered terrain in contact with the enemy's new line.

The resumption of the pursuit immediately after storming the supporting point is also studied.

Training a regiment for combat is excellent, and too much trouble can not be taken.

The exercises of the regiment and brigade (marches of approach and combat) should be executed frequently combined with the Artillery. When this last can not be represented effectively, several men should fill its place, so that the liaisons may be operated.

It is well to carry out exercises for the officers and noncommissioned officers of the regiment and brigade, given over entirely to replacing the units of the command to installation and the working of liaisons. All the units should carry on night exercises.

Great care must be taken to develop good order and rapidity of execution, and to try to give the idea of surprise to the leaders and the men.

The exercises are followed by several movements in close formation, in order to get the troops in hand.

Methods of Instruction of a Cavalry Division.

The conduct of a division in combat is not improvised. The division commander should plan carefully and prepare by numerous exercises with the officers and noncommissioned officers and with the troops.

Because a large unit has a portion of its strength in a sector, it does not prevent the chief from working constantly over the training of his officers and noncommissioned officers with a view to combat.

The officers of all grades should keep up hard and thorough riding exercise.

The commander must watch for all these things.

EXERCISE OF THE OFFICERS AND NONCOMMISSIONED OFFICERS.

(*a*) Combat exercises directed by the commander of the brigade, having as their object the study of the debouch, of the advance, of the storming of secondary objectives, flank protection, installation facing the enemy's line.

Combat should be combined with maneuver as much as possible. All liaisons should be worked out up to the brigade commander. One Artillery officer at least should take part in the exercises.

(*b*) Artillery exercises directed by the division commander:

Situation at the moment of starting an attack.

Organization of liaisons and observing stations.

Change of position of command posts.

Change of position of observers.

Change of position of batteries.

Organizing fire on new objective, observation, liaisons.

Means of assuring close liaisons between the Artillery designated to prepare the attack and the Cavalry to carry it out.

(*c*) Combined exercises of Artillery and dismounted Cavalry under the two following forms:

(1) Exercises of the division directed as much as possible by the commander of the Cavalry corps, permitting the study of the complete combat of the division—the liaisons of the arms.

(2) Combined exercises of the dismounted brigade or light regiment and battalion of Artillery, permitting the study of combat phases, particularly for the officers and noncommissioned officers of the division.

EXERCISES WITH TROOPS.

These exercises are a repetition with troops of the exercises here prescribed. They should be conducted as combat exercises and not as maneuvers. The enemy should be represented either by several fractions or distinguishing flags. These drills call for careful advance preparation, and the terrain should be arranged as if for action. The director repeats any phases that were not well executed. The change of the Artillery's position is particularly studied.

The commander of the Cavalry corps should frequently take charge of these exercises in order to accustom the division commander to the management of his unit.

INSTRUCTION IN CAMP.

Instruction of the platoon and squadron does not need greatly extended terrain and should be held when the Cavalry division arrives in camp. The stay of a Cavalry division should be given over entirely to the drill of the regiment, brigade, and division. Each drill of the Cavalry division should last one or two days. It has as its object the attack on an enemy position, when contact is made previously, the assault of the position and the renewing of the pursuit.

PART 4.

CAVALRY CORPS.

The necessity of coordinating the efforts of the elements engaged in following up a success have led to the organization of the Cavalry Corps.

The rôle of the Cavalry corps commander is of the utmost importance in the pursuit, in its execution, in the directing of combats that the Calvary division can bring about.

OPERATIONS OF A CAVALRY CORPS IN THE PURSUIT.

The army commander decides what is the proper time to bring up the Cavalry corps to the battlefield and to foresee everything necessary for immediately commencing the pursuit.

The Cavalry corps commander receives from him a well-defined outline of his mission and his principal objectives.

Accurate information on the roads to be used to cross the combat area as well as the conditions by which the supplies of food and munitions are assured.

Information as to the enemy forces engaged in battle and the unattached troops that he can bring up.

Information as to the auxiliaries at his disposal (Infantry, Artillery, aviation, means of liaison, and transports) and the large Infantry units that can support his action.

Orientated in addition on the situation by proper reconnaissances and liaisons, the Cavalry corps commander determines his plan of action.

The plan fixes—

(1) The mission of the Cavalry corps and the general line of pursuit.

(2) Division of the objectives among the Cavalry divisions, the sectors assigned to each, their particular mission.

(3) Movements of supporting and maneuvering elements at the disposal of Cavalry corps commander.

(4) The command posts on the successive halting positions of the Cavalry corps commander.

(5) Special instructions for the aircraft.

(6) Organization of liaison between the different elements of the Cavalry corps and between the Cavalry corps and the army.

The Cavalry divisions constitute the pursuit detachments that may be reinforced by Infantry transported by motor, and by the Artillery and their reserve elements. While leaving great initiative to his subordinates, the Cavalry corps commander reserves the right to intervene in the combat. He keeps, as a rule, a mounted force at his disposal, whose strength varies, according to the circumstances,[1] from a division to a brigade.

The troops whose speed in marching is inferior to the Cavalry march in the Cavalry division's tracks ready to support its action. These troops should include Infantry in motors and heavy motor-drawn Artillery.

The Cavalry corps commander must also establish a plan for supplying food and munitions and a plan for transporting the personnel.

Each Cavalry division's sector of pursuit should include, when possible, a road to facilitate the movements of all the wheeled elements.

When the same road is used by two Cavalry divisions, the movement of the wheeled elements is always regulated by Cavalry corps which detaches a staff officer for this purpose.

Once the pursuit is begun the Cavalry corps commander should see that his subordinates push the operation with vigor and rapidity. He keeps continuously in touch with his division's advance and with information of any nature that they can gather. He transmits all information to the army commander that would enable the superior commander to more actively push the success.

Where one of the Cavalry divisions has been successful in breaking through or in flanking the enemy's rear guard, or in penetrating the adversary's position, the Cavalry corps commander makes every effort to follow it up. To accomplish this, he concentrates all troops at his disposal on the breach to enlarge it or to support the advancing units.

A Cavalry corps commander must never engage too many troops to follow up a success.

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[1] This can not be the question of a plan. The deployment of a Cavalry corps with the object of following up a success should be made on a very wide front, but the condition of the terrain, the availability and practicability of the roads, and the enemy's attitude must be taken into consideration. The commander may engage all his squadrons if it is only to overthrow troops in disorder. If the retreat is executed in good order, he must reserve a strong mobile unit to quickly follow up a success obtained on any point.

If the enemy resists on a line and accepts combat, the Cavalry corps commander should choose the point to attack, determine whether the force at hand is sufficiently strong to attack, or wait until all his forces are united and concentrate them against the point of attack.

The fight is carried out now under the principles given for a Cavalry division and for the large units of all branches.

The commander should not limit himself to assigning the frontal attack between the units under his orders, but he must take effective direction of the combat in giving the preparatory order for attack, then the order for attack.

If the attack is successful the Cavalry corps commander should seek a complete and immediate following up.

When the Cavalry corps in certain cases must occupy a position to check the enemy's counter offensive, the commander holds in reserve as many troops as possible that are easily transported—Cavalry, mounted Artillery, cyclists, and Infantry in autos.

LIAISONS.

The organization of the Cavalry corps liaisons is of supreme importance.

The Cavalry corps commander must be in touch with—

(*a*) The large units.
(*b*) The aircraft.
(*c*) The army.
(*d*) With the large units (army corps or Infantry division) following him.

This organization is the result of a plan of liaison made in advance at the same time as the order for the attack, and following the principles shown in the chapter of liaisons. A staff officer of the Cavalry corps should specialize in the handling of this service.

Approved:

J. JOFFRE.

II.

THE EMPLOYMENT OF FRENCH CAVALRY DURING THE RETREAT OF THE GERMAN FORCES.

(*CONFIDENTIAL REPORTS.*)

EMPLOYMENT OF FRENCH CAVALRY DURING THE RETREAT OF THE GERMAN FORCES, MARCH, 1917.

1. These official observations pertain to the employment of the first and third French Cavalry divisions during the recent retreat of the German forces before the northern group of the French armies, March 18 to 21, 1917.

2. Particular attention is directed to the comments herewith:

"The following lessons seem clear:

"(*a*) The divisional cavalry should be at least 300 strong (two French squadrons), and should not be used for anything but its own proper missions.

"(*b*) The artillery of the cavalry division should be at least 6 batteries of field artillery and the cavalry corps should have 3 batteries of heavy artillery (4.2 inches).

"(*c*) A light infantry support should be assigned to the cavalry division and the cavalry corps.

"(1) To the cavalry division, 1 battalion of light infantry, 1 battalion of cyclists.

"(2) To the cavalry corps, 1 regiment of light infantry.

"(*d*) Where it is possible to foresee the action of cavalry in exploiting an infantry success, it is necessary that the cavalry with its artillery and light infantry be held as close to the first lines as possible, so as to pass through and beyond the infantry with the minimum loss of time.

"(*e*) As these observations cover the first serious action of mounted cavalry since November, 1914, it is important to note the opinions of the French military authorities with reference to the lessons resulting therefrom."

OBSERVATIONS CONCERNING THE OPERATIONS IN WHICH THE DIVISIONS OF CAVALRY AND THE DIVISIONAL CAVALRY TOOK PART DURING THE RETREAT OF THE GERMAN FORCES BEFORE THE GROUP OF ARMIES OF THE NORTH.

GENERAL HEADQUARTERS, FRENCH ARMIES IN FRANCE,
April 1, 1917.

These operations will be examined with reference to—

(1) The employment of the divisions of cavalry.

(2) The employment of the divisional cavalry.

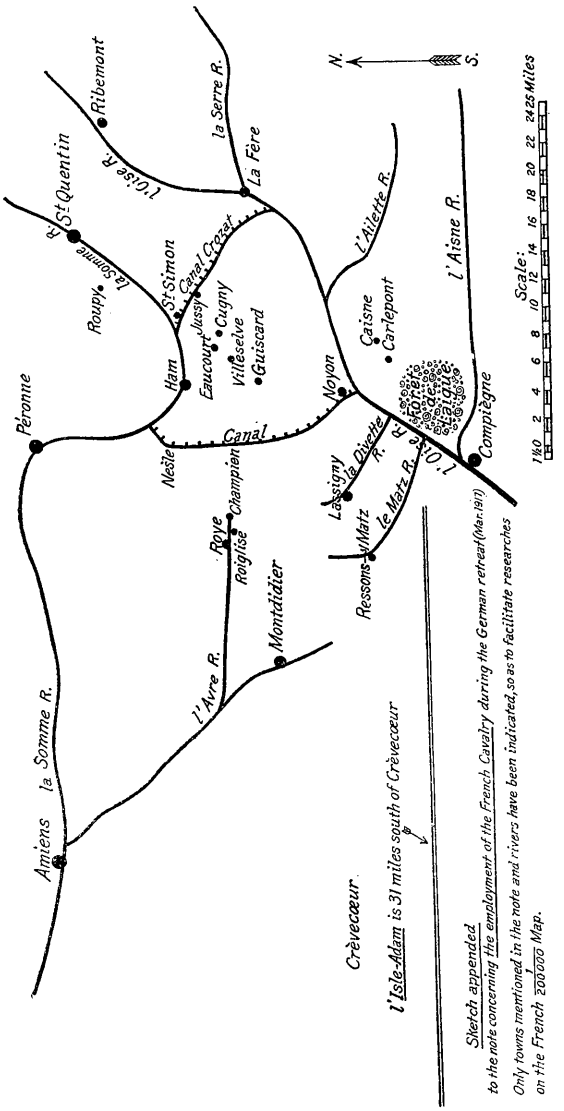
I. THE DIVISIONS OF CAVALRY.

A. SUMMARY OF OPERATIONS.—The First Cavalry Corps (First and Third Cavalry Divisions) held the sector of the forest of Laigue in the first days of March. The horses were cantonned in the region of the Isle of Adam. Commencing with the 6th of March, the First Corps of Cavalry was relieved and reconstituted. On the 15th it was assembled around the Camp of Creve-Coeur and went under instruction for the operations of the first days of April.

On the 17th of March, the two cavalry divisions were sent into the region of Montdidier to report to the First Army "to scout to its front, to cover the constitution of the new front, to try to strike the enemies' advance guards, to make prisoners, and to prevent destructions by the enemy."

On the 18th of March, the First Cavalry Division cantonned to the north of Montdidier after a march of 21 miles and the Third Cavalry Division in the region of Ressons-sur-Matz, after a march of 36 miles.

On the evening of the 18th, the First Division of Cavalry received from the Third Army the order "to move forward and cross the line Ham-Guiscard, with the mission to scout in the direction of La Fère, Ribemont, St. Quentin, to march in the direction of Ribemont, to break in any resistance encountered between the Somme and Oise and to determine the front of the enemy."



Sketch appended to the note concerning the employment of the French Cavalry during the German retreat (March 1917).

Only towns mentioned in the note and rivers have been indicated, so as to facilitate researches on the French 200000 Map.

The Third Cavalry Division received the order "to pursue and disperse the hostile advance guards, to hold the bridges of the Oise, so as to cut off the retreat toward the north of the hostile fractions driven back by the Thirty-third Army Corps, and to reconnoiter the line where the German forces had stopped."

Hereto are appended the detailed reports of the operations of these two divisions of cavalry.

B. The study of these operations has produced the following observations:

(1) *Nature of the operations.*—It was not a case of pursuit; the enemy was in no way disorganized. His forces were intact. Nothing could be expected then beyond the action of a reinforced divisional cavalry—and to this end, missions were given by the armies and carried out satisfactorily to them by the cavalry. But no logical deduction concerning the rôle of pursuing cavalry in a big strategic success can be drawn from these operations.

(2) *Entry into action of the divisions of cavalry—It is important to assemble them in advance in the zone where they are to be employed.*—This could not be completely carried out.

From the 1st to the 16th of March the ideas of the French commander concerning the retreat of the enemy and his methods changed several times. Until March 15 numerous indications made it probable that the enemy would resist on his successive positions. The Day D. fixed for the 18th, was moved up to the 16th. The evening of the 16th the French armies anticipated a serious resistance on the Dive and counter attacks debouching from the Avre. On the 17th the easy advance on the second position cleared up the situation. On this date the cavalry divisions were brought up. But they were on the evening of the 17th in the region of Creve-Coeur and could not cross the lines until the morning of the 19th.

It would have been preferable to assemble them on the evening of the 15th, the first around Montdidier, the third around Ressons.

(*a*) This would have avoided hurried marching. The main body of the two divisions of cavlary marched between the evening of the 17th and that of the 19th a distance of 60 miles. The forward march was held up by the Crozat Canal on the evening of the 20th. If from the 20th to the 22d the cavalry had had to make forced marches it would not have been in a condition for the best results.

(*b*) This would likewise have enabled them to take all the steps necessary for facilitating the movement across the difficult zone that they were to cross (reconnaissance of the terrain and of itineraries, marking the routes, guarding the routes, repairing the routes by the special troops).

The march of the cavalry divisions would have been more rapid (the first cavalry division spent 14 hours, about, in covering the 24 miles which separated it from the heads of columns of infantry and the third division of cavalry spent 8 hours, about, in covering the 18 miles to Noyon).

The problem of the route is in fact as vital for the cavalry as for the other arms until it has passed the infantry and crossed the torn-up zone.

(c) It might, perhaps, by passing the lines 24 or 36 hours sooner, have been able to prevent divers destructions and to take some booty. Information from the inhabitants seems to prove that the destructions commenced at Ham and in the region of Villeselve were stopped by the arrival of the covering detachments of the first cavalry division.

(3) *Entrance into action of the divisional artilleries.*—On the evening of the 18th the divisional artilleries of the first and third divisions of cavalry were respectively at the orders of the third and first armies and were in position. The state of the roads and their occupation by other troops made it difficult for the artillery to follow. The divisional artillery for the cavalry got to Roiglise only on the 19th at 7 o'clock a. m. It could not have worked in liaison with its cavalry division on the 19th.

Whenever possible it is well to relieve the divisional artillery for cavalry on the Day D. minus one, and assemble it with the cavalry division.

(4) *Organic composition of the cavalry division*—(a) *Cavalry supports.*—The light regiments of the two cavalry divisions had been left behind so as not to increase the clogging of the roads because the advance taken by the infantry guaranteed, if necessary, the support of the cavalry by the infantry. The cyclist groups easily followed the cavalry divisions, for even when they can not use their machines these groups are infantry without packs.

The light regiments (dismounted regiments organized like infantry) could not follow because of the destruction done by the enemy; it was impossible to transport these regiments in autos. The question of the route presents so much importance that it does not seem possible to use these light regiments on autos, even after making a rupture, to exploit the result.

However, it is necessary to add to the cavalry divisions elements of infantry which follow immediately, and are capable of forcing a line of resistance, as was done by the heads of column of the first cavalry corps, which engaged along St. Simon and Jussy about 2½

battalions, and it would be well for the cavalry corps to have a reserve of infantry which could permit it to maneuver.

An organization for cavalry supports may then be conceived as follows:

By cavalry division.—1 battalion of cyclists; 1 light battalion, without pack (packs carried on horse or auto transport), following at one day's march.

By cavalry corps.—1 light regiment, organized and equipped like the regiment of infantry, following on foot and transported in auto as soon as the route permits.

The actual resources of the light regiments would permit in a cavalry corps of three divisions the carrying out of this scheme, which has been studied on the second cavalry corps.

(*b*) *Artillery.*—The present allowance of artillery is manifestly insufficient in case of pursuit. It is in fact necessary to support closely with artillery all advanced guards and detachments of pursuit, so as to be able without losing time to attack the hostile resistance. These were the dispositions taken by the general commanding the first division of cavalry for the 22d.

On the other hand, the zone of action of a group of artillery (3 batteries) does not correspond to the front of engagement of a division of cavalry, and it is proper to remark that the elements of infantry which acted as a cavalry support to force the passage of Jussy and of St. Simon employed to this end two groups (6 batteries) of divisional artillery. It appears then necessary to provide for the pursuit an additional group of field artillery.

The first division of cavalry constructed, under fire of the hostile artillery and with makeshift material, at St. Simon and at Jussy, footbridges which permitted the reconnaissance detachments to cross the canal. During the building of these footbridges the advanced elements of the division received the fire of the heavy artillery without being able to reply to it, this artillery being out of range of the field artillery.

Heavy artillery fire produces, moreover, on troops in retreat effects particularly demoralizing because they believe themselves attacked by important forces. It is then indispensable for cavalry, in order to force an obstacle or break down a resistance, to be supported by batteries of heavy artillery capable, at need, of countering on the hostile heavy artillery. The 105 mm., by reason of its range, its relative mobility, and its rapidity of fire, appears the best caliber. A group (3 batteries) per cavalry corps would be enough at the beginning of the operations, at least. So as not to weight down the cavalry divisions and not to encumber the routes at the moment of

the forward movement, the group of artillery should march with the infantry reserve of the cavalry corps.

(c) *Aviation.*—The escadrille of the First Cavalry Division could not get in touch with the elements which it was to cover. This was due to the fact that the escadrille was placed at the disposition of this division only a few days before the operations (it was to have worked in liaison with the division at the Camp of Creve-Coeur up to the beginning of April).

There resulted a lack of coordination that prevented the escadrille from accomplishing what was expected of it. It is important, then, to designate well in advance the escadrilles assigned to the cavalry and to give them the necessary time and means to prepare with the cavalry for the work in hand.

(5) *Composition of the reconnaissance detachments and engagements of the advance guards*—(a) *Constitution of the reconnaissance detachments.*—The reconnaissance detachments must be of the strength of a squadron (150 men) at least, for the taking of contact involves a series of partial engagements which call for combatants.

In fact, all the reconnaissance detachments thrown forward by the First Cavalry Division had to be reinforced during the operations.

That of Roupy (a squadron at the beginning) was increased to two squadrons; those of Jussy and of St. Simon, likewise consisting of a squadron each, were reinforced, one by a second squadron and a cyclist platoon, the other by a cyclist platoon.

In any case it is important to direct, at the beginning, these detachments on *precise objectives*, so as to be able always either to reinforce or to withdraw them.

(b) *Engagement of advance guards.*—The obstacles met by the cavalry, up to the Crozat Canal, exclusive, generally consisted of points of resistance grouped about a locality or an accident of the terrain (Cugny, Eaucourt, etc.). These resistances, supported by machine guns, could never be broken from the front but always gave way before a turning movement.

(6) *Instruction and allowance of matériel*—(a) *Instruction.*—The cavalry divisions which were in the first line from November were to have been placed under instruction at the Camp of Creve-Coeur, commencing from March 15. It was a necessity that events have made clear.

For the cavalry divisions as for the great infantry units, the weak point was the functioning of the liaisons—liaison between artillery and foot troops, between the infantries in the engagement of the 22nd, liaison with the aviation (signal panels, Bengal fire, etc.)—sending in and coordination of reports.

(*b*) *Allowance of matériel.*—When the cavalry divisions were relieved from the first line, at the beginning of March, they were not provided with the matériel called for by order 6093 G. H. Q., December 8, 1916, on the employment of cavalry in battle and by the order of liaison No. 10718 of December 12. By letter 2381 of March 5, the general commanding the group of armies of the north made requisitions for this matériel to the general in chief. The majority of these requisitions were never filled.

The operations have, however, established the following points as useful:

The increase of the number of receiving stations for avions, so as to permit of constant hearing. (An accident to the post of the First Cavalry Division delayed for two days the functioning of the most important post, and the posts of the cavalry corps were obliged to furnish an effort which could not have been prolonged much.)

The allowance of means of transport on pack animals or light vehicles for signal matériel of the cavalry divisions and the wireless receiving stations.

The allowance of special means of transport for the hand grenades and V. B.'s of the cavalry regiments and light regiments.

The general commanding the First Cavalry Corps calls attention further to the fact that the allowance of wire for the telegraph detachment of the cavalry corps is too small; likewise a reel for the rapid establishment of lines should be allowed.

II. DIVISIONAL CAVALRY.

A. *Entrance into action of the divisional squadrons.*—In the majority of the divisions it was too late.

The day was fixed for the 18th and was changed to the 16th.

In certain divisions the divisional cavalry was in cantonment in rear, sometimes at 12 and 15 miles from the line. In others the men were employed in controlling the traffic on the roads or guarding prisoners.

For these reasons, in most of the divisions of infantry, the divisional cavalry did not pass the first infantry lines until the evening of the 17th or morning of the 18th, patrolling toward Carlepont and Caisne, on the route Noyon-Roye, and on the plateau of Champien. After that the divisional cavalry functioned normally and the infantry advanced more rapidly, the cavalry scouting and covering its infantry in the region Nesle-Guiscard-l'Ailette.

If the divisional cavalry had been put in action everywhere beginning on the evening of the 16th or morning of the 17th, it would

certainly have facilitated the march of the infantry divisions on the 17th. It would probably likewise have captured booty and prevented destruction.

B. *Dispersion of effectives.*—In *certain divisions* the divisional squadrons are employed in their true duties of reconnaissance and cover; the number of men detached for liaisons and other missions is reduced to a minimum; the squadrons remain organized and capable of action.

In others it is the reverse and steps must be taken to correct this. In some infantry divisions a whole squadron of divisional cavalry is employed for liaisons and guard of prisoners, in others 70 or 80 men are detached for these purposes, the real divisional cavalry acting as such being reduced to *one platoon*.

A corps commander gives the following instructions on this matter and it will be well to follow them:

"Under present conditions you can not have too much divisional cavalry to secure the effects desired, *namely*, (*a*) surprise by breaking through the hostile lines at several points, and this surprise is greater in the same proportion as the number of points broken through is greater; (*b*) fire action which will be all the more marked the greater the number of carbines employed.

"All efforts must then aim to leave with the divisional cavalry all its means and even to augment them.

"The liaisons must be kept up by horsemen already provided:

"Per infantry regiment: One sergeant of cavalry attached to each battalion commander of infantry; 12 mounted scouts.

"Per staff of divisional infantry: One-half platoon escort: 16 cavalrymen, of which 5 are sergeants. Of this number, 2 cavalrymen must be placed at the disposal of each brigade commander.

"Per staff of army corps: One platoon of cavalry; i. e., 32 cavalrymen, of whom 9 are sergeants.

"These elements are sufficient to insure all the liaisons on condition that the cavalry of the escort are not employed as orderlies to take charge of extra horses.

"There is one exception to note:

"The allowance of liaison agents for the brigade commander is insufficient. The brigade commander should have two additional cavalrymen; that is to say, *four* in all; likewise the liaison officers of the infantry regiments detached to the brigade commander should have a mount, horse and equipment, for the above duty can not be performed by a company commander or an adjutant major (captain, assistant to battalion commander), as these officers must remain at their posts."

These are the only details that commanders of infantry divisions should make from their divisional cavalry.

C. *Employment of infantry scouts.*—In general the regiments employ them according to the regulations.

In some, however, these men are nothing more nor less than orderlies for mounted officers.

This is absolutely inadmissible.

The same corps commander gives the following instructions for the employment of infantry scouts: "It would seem at first difficult to reconcile their functions of liaison agents and scouts. These functions are, however, perfectly compatible, as will be seen.

"Instead of sending off these scouts, in squads, left to themselves, in advance of the columns, the regimental commander will assign a certain number of scouts to those unit commanders who have a special mission (advance guard, flank guard, etc.). Two scouts will suffice to reconnoiter from cover to cover the terrain on which a small unit is engaged (a battalion, for example), on condition that they keep in touch by sight or by signals. The rest of the scouts can, perhaps, be utilized for the battalion liaisons with the regimental commander, who keeps two for the liaison with the brigade."

D. *Allowance of divisional cavalry to the division of infantry.*—All the corps and infantry division commanders who have been consulted, except one, believe that two squadrons of divisional cavalry (300 men and officers) is the minimum if this body is to perform all the duties which fall to it in a war of movement.

The recent operations fully justify this estimate.

E. *Instruction.*—The general commanding the group of armies of the north has ordered on the 19th of February that in all the sectors of attack the divisional cavalry should be relieved from the sector and put under instruction, commencing from March 1. The limited time given to the preparation of the group of armies prevented this order from being fully complied with.

During the past six months in certain infantry divisions the divisional cavalry has been able to be instructed in liaison with its infantry by utilizing technical instructors furnished by the infantry and by sending the noncommissioned officers to the centers of instruction of the infantry. In others the squadrons were brought together only in the first days of March, the effective strength being on duty not only in the front line but also on the most varied services (police of routes, wood cutting, etc.).

Generals commanding infantry divisions must see that every three or four months their divisional cavalry has a period of instruction which permits keeping up the instruction of officers, noncommis-

sioned officers, men, and horses, and having them fit to perform their tasks.

Colonels commanding corps cavalry are in duty bound to call the proper authority's attention to this matter.[1]

They must likewise see that their units are provided with all the matériel and the ammunition allowed by order concerning the employment of the cavalry in battle. (G. H. Q., 3d Bureau, Dec. 8, 6093.)

[1] Divisional cavalry is under the tactical supervision of the corps cavalry commander.

III.

NOTES ON BRITISH CAVALRY.

(CONFIDENTIAL REPORTS.)

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NOTES ON BRITISH CAVALRY.

1. ORGANIZATION.

In the British Army there are 31 regiments of cavalry divided into 3 regiments of household cavalry and 28 regiments of the line.

The household cavalry consists of 2 regiments of life guards, 1 regiment of horse guards.

The cavalry of the line consists of 3 regiments of dragoons, 7 regiments of dragoon guards, 6 regiments of lancers, 12 regiments of hussars.

In addition to the regular regiments, there are 4 special reserve regiments, the North and South Irish Horse and the First and Second King Edward's Horse, and 55 regiments of yeomanry (territorial force). According to law yeomanry regiments are not liable to service abroad, except with their own consent. Most of these volunteered for service abroad almost immediately after the declaration of war, and at present a regiment of yeomanry is attached to each corps in France as corps cavalry, and other regiments are assigned to brigades with 2 regular regiments, and still others are serving in Egypt, Mesopotamia, India, and at Salonika. They are now considered as good as regulars.

For recruiting purposes the cavalry is divided into 4 corps, called, respectively, household cavalry, dragoons of the line, lancers of the line, and hussars of the line. A recruit is ordinarily allowed to serve in any particular regiment he selects, unless the circumstances are such that this can not be done without harm to the service. At present the term of enlistment is for the duration of the war. In peace time the term is for household cavalry 8 years in the army and 4 years in reserve; for cavalry of the line 7 years in army and 5 years in reserve.

The distinction formerly made into light and heavy cavalry has been entirely abolished.

The regiment is commanded by a lieutenant colonel (the colonelcy is an honorary rank), who has a regimental staff consisting of an adjutant, a signaling officer, a quartermaster, and various warrant officers and staff sergeants. A major is also attached to headquarters as second in command.

A regiment in the British Isles has 3 service squadrons. In India each regiment has 4 squadrons. In the colonies a regiment has 3 service squadrons and a reserve troop.

Each squadron is commanded by a major with a captain as second in command and is divided into 4 troops each under a subaltern.

The total for a cavalry regiment, including attached according to war establishments, is 549, and the total for each squadron is 158.

This is shown in the following statement:

For the regiment:

Officers	26
Warrant officer	1
Sergeants	37
Corporals	29
Trumpeters	6
Artificers	22
Privates	428
All ranks, with 608 horses	549

The above numbers include the medical and veterinary officer and 3 men of the R. A. N. C. for water duties, who are attached.

For the squadron:

Officers	6
Sergeants	10
Corporals	9
Trumpeters	2
Artificers	6
Privates	125
All ranks, with 166 horses	158

At present the cavalry division is composed of 3 brigades of 3 regiments each. At the beginning of this war a division consisted of 4 brigades. It has been found from experience that the 3-brigade organization is better.

To correspond the number of cavalry field ambulances has been reduced from 4 to 3.

Horse artillery guns and first line transport are now assigned to the brigade (one battery of six 18-pounder guns to each cavalry brigade). The ammunition column is still with division headquarters.

The action of the horse artillery formerly was not prompt enough to give actual support to mounted action in encounters of brigades, consequently the assignment of a battery to each cavalry brigade

instead of the old organization where there were 3 batteries assigned to the division.

Three mobile veterinary sections are assigned to each division (cavalry division troops). Cavalry ammunition parks (M. T.) and cavalry supply columns (M. T.) formerly units of line of communication have been transferred to field troops.

The cavalry brigade therefore consists of:

Cavalry regiments	3
Battery horse artillery	1
Signal troop	1
Machine-gun squadron	1

And the cavalry division of:

Divisional headquarters, cavalry brigades	3
Headquarters and 1 field squadron of engineers.	
Signal squadron	1
Ammunition column (artillery)	1
Cavalry train	1
Cavalry field ambulances	3
Mobile veterinary sections	3
Battery 4 armored motor machine guns car with one 3-pounder Hotchkiss gun attached	1

Signals.—One officer and 15 noncommissioned officers and men per regiment are trained in visual signaling, telephony, and telegraphy.

A signal troop is assigned to each brigade.

A signal squadron to each division.

A corps signal squadron, a cable section, and a wireless squadron (2 big sets of 100 miles range, 1 small set of 20 miles range), are assigned to the cavalry corps. The cable section is capable of laying 30 miles of cable.

The corps signal squadron has a personnel of 1 officer and 70 noncommissioned officers and men. It has a motor air-line section, 5 lorries, and 1 motor car, and is capable of building 20 miles of air line.

Each division has a wireless detachment of a sergeant and 10 men, which is equipped with a wireless set with a range of 20 miles. The continuous wave wireless pack set is carried on one pack horse.

There is one balloon assigned to the corps and worked by the corps.

Each regiment, brigade, and division headquarters is equipped with an Aldis accumulator battery lamp for signaling to balloon.

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This lamp works with a trigger—one battery is good for 1½ hours of continuous signaling. Batteries are recharged from divisional ammunition column. The lamp is carried on a pack horse.

A new record had just been made in the distance a message could be received with the naked eye from balloon to the ground. It was 19,000 yards by day and 35,000 yards by night.

2. MACHINE GUNS.

At present there are 12 Hotchkiss automatic rifles allotted to each regiment, i. e., one per troop, and in addition there is a machine-gun squadron, 6 sections of 2 Vickers machine guns each, assigned to each cavalry brigade.

A Hotchkiss detachment consists of 3 men, 3 horses, and 1 pack horse for gun; 2 ammunition pack horses per 4 guns.

The duties of the 3 men are:

No. 1, a junior noncommissioned officer specially selected for the work, carries neither rifle nor bandolier, but is armed with a revolver. He carries 4 pouches which contain 6 clips each of 10 rounds, so that to commence with he is independent of the ammunition in the boxes.

No. 2 brings up ammunition and helps to work the gun. He replaces No. 1 should he become a casualty. He carries rifle and bandolier.

No. 3 leads the pack horse and is the horse holder of the detachment when in action.

All horses carry neck bandoliers.

The gun belongs to the troop and as such is part of the troop.

The personnel of a machine-gun squadron consists of:

Major	1
Captain, second in command	1
Subalterns	6
Warrant officer	1
Staff sergeant	1
Sergeants	6
Artificers	12
Rank and file (this number includes 1 paid lance sergeant and 12 paid lance corporals)	200

There are 304 horses and 12 bicycles.

As a rule the brigade commander allots one section to each regiment of his brigade and keeps in reserve with the brigade the remaining three sections.

Distribution of the machine-gun squadron in a column on march is dictated by proximity of the enemy. If contact is expected

early one section at least is kept with advanced guard squadron, and one or two sections in rear of leading squadron of leading regiment to insure that minor opposition is disposed of quickly, and to prevent head of column being driven in by unexpectedly strong hostile offensive action.

Normally the remainder of the squadron would be in rear of the leading regiment from which position they can be quickly distributed either forward or to regiments following in rear who are ordered to deploy or to move to either flank.

In addition to the prewar divisional troops, there is now assigned to each cavalry division a battery of 4 armored motor machine-gun cars, to which one 3-pounder Hotchkiss gun is attached. Each armored motor machine-gun car has a Vickers machine gun mounted in it, and a Hotchkiss automatic rifle as a spare in case of accidents to the Vickers.

An armor-piercing shell with a delayed action fuze is used in the 3-pounder Hotchkiss.

3. DEPOTS.

A depot has been established in each of the different commands (except Aldershot) and to each of these four or six regiments have been affiliated.

These depots are mobilization centers where cavalry reservists join and where cavalrymen discharged from hospitals report for duty. The depots also receive and clothe recruits and pass them within 48 hours to the reserve regiments where the whole of their training is carried out. During peace the depots are used to train regular recruits for three months before they are sent to their regiments, to train officers and noncommissioned officers of yeomanry, and as a place of storage of arms, equipment, clothing, and necessaries of regular reservists.

The personnel of a cavalry depot is:

Lieutenant colonel	1
Major	1
Captain	1
Subalterns	2
Adjutant	1
Quartermaster	1
Total officers	[1] 7

[1] Two batmen will be allowed for each officer with two horses, and one for each other officer. They will be men unfit for service abroad, and will be supernumerary to the establishment.

Regimental sergeant major (W. O., Class I)	1
Quartermaster sergeant (W. O., Class II)	1
Squadron sergeant majors (W. O.'s, Class II)	2
Total warrant officers	4
Squadron quartermaster sergeants	2
Orderly room sergeant	1
Orderly room clerk	[1] 1
Sergeant cook	1
Sergeants	16
Total sergeants	21
Trumpeters	2
Corporals	20
Shoeing smith corporal	1
Shoeing smiths	2
Saddler	1
Saddletree maker	1
Tailor	[2] 1
Privates	450
Total rank and file	476
Total all ranks	510
Horses:	
Officers	13
Riding	100
Paid lance sergeants [3]	4
Paid lance corporals [3]	24

[1] May be an ex-soldier.

[2] May be a sergeant, corporal, or private, according to the rank of the men available.

[3] Included in the establishment.

NOTE.—The establishment of warrant and noncommissioned officers when that is in excess of the establishment authorized in War Establishments, Part V, 1914, will be filled by warrant officers enlisted for Home Service for the duration of the war and by ex-noncommissioned officers above the age of 45, enlisted for Home Service for the duration of the war.

4. RESERVES.

On mobilization 14 reserve cavalry regiments were formed from the depots (1 for each pair of linked regiments) with a view to providing the machinery necessary for the training of drafts and remounts for the cavalry regiments in the field. These took over all immature and unfit serving officers and soldiers, all recruits, and all surplus reservists.

Last December it was decided that the system of linked regiments was too clumsy and expensive, and the 14 reserve regiments of cavalry of the line were amalgamated into 6 reserve regiments of cavalry as follows:

Reserve regiment.	Corps.	Station of regiment.	Depot.	Station of depot.
First	Lancers	Curragh	1	Waterford.
Second	Hussars	do	2	Dublin.
Third	do	Aldershot	3	Scarborough.
Fourth	Dragoons	do	4	Newport.
Fifth	Hussars	Tidworth	5	Bristol.
Sixth	Dragoons	do	6	Dunbar.

In addition to the above six regiments, there are the four reserve regiments of the North and South Irish Horse and the First and Second King Edward's Horse. For the personnel and establishment of these reserve regiments (see Report No. 4336, Mar. 3, 1917, England). Third line units of Mounted Yeomanry, which were the reserve regiments for the yeomanry regiments on active service, have been abolished and mounted yeomanry regiments are now reinforced from reserve cavalry regiments. The second line yeomanry units are bicyclist units of the home defense force.

The remount department supplies any additional horses required by reserve regiments upon mobilization.

5. TRAINING.

The period allowed for the training of recruits of cavalry and mounted yeomanry is now 16 weeks, divided as follows: Two weeks preliminary training, 14 weeks training.

During the two weeks' preliminary training recruits are vaccinated and inoculated, and arrangements are made for dental and other special treatment that may be needed.

During the 16 weeks, in addition to ordinary cavalry training, instruction is also given in antigas measures, entrenching, filling

and laying of sandbags, rapid construction of wire entanglements. A thorough course in bayonet fighting is also given.

The standard of riding is such as will enable the recruit to ride across country and to use his weapons mounted. Quickness in mounting and dismounting are insisted upon, and great importance is put on horsemastership and the care in fitting saddlery.

A high standard in schooling is required. Field practices are combined with movement and mounted approach to the targets.

Special attention is given to training in the transmission of reports, both verbal and written.

Every recruit is given a thorough grounding in the mechanism and working of the Hotchkiss gun.

After the completion of the 16 weeks' recruit course, if the soldier is required for draft to the front, an advanced course of training is begun and certain men are picked to be trained as specialists in bombing, signaling, and in the use of the Hotchkiss gun.

In the training of young officers and noncommissioned officers, special attention is given to work out of doors in the tactical employment of cavalry, writing and transmission of reports, map reading, and reconnaissance.

No young officer is deemed fit to be drafted to the front until he has passed an examination before a board of officers, consisting of the regimental commander and two senior officers.

There are schools of instruction for noncommissioned officers in each command.

There are two officer cadet schools for the training of Cavalry officers—one at Netheravon (which was the Cavalry school before the war) and the other at Belfast. The course of instruction lasts four months (see my report No. 4328, Mar. 5, 1917).

Then during the winter months each division in France established a school of instruction for officers—the object being to train squadron and troop leaders in the duties of higher command. The course lasted five weeks and the instruction was mostly tactical (see my report No. 4323 of Mar. 2, 1917).

Officers of some seniority were sent home from regiments in France for a month or two at a time, to aid in the instruction of officers of the reserve regiments in England, so as to keep the training up to date.

6. ARMS.

The cavalry are armed with the short Lee-Enfield rifle; the sword, which is carried by all ranks except signalers; and the revolver (Webley), carried by officers, warrant officers, staff sergeants, sergeants, trumpeters, and drivers.

Each man armed with a rifle also has a bayonet, and carries one bandolier of ammunition over the left shoulder and one around his horse's neck. In addition, there are 10 rounds in the magazine of his rifle, so that altogether he carries 190 rounds of small arms ammunition. The breech of the rifle is generally kept wrapped with a sort of sock to keep out the dust.

Lancer regiments also carry a lance.

The rifle is slung in a boot in rear of right leg and seems to ride there very well.

The sword is a straight one, very similar to our own; the blade is narrower and the handle not so heavy as ours. It is attached to the left side of the saddle and hangs in rear of the left leg.

The bayonet hangs underneath the right arm and is attached to the bandolier.

7. EQUIPMENT.

The saddle used by the men is the Universal steel arch pattern, 1912, and it has given perfect satisfaction. The front and hind arches are jointed to the side bars (the former by clips, the latter by sockets), thus allowing of an automatic range of fitting. The hind arch is supported at the lower angle by struts, which act as baggage staples and do not interfere with the automatic movement. The stocks are provided with washers to minimize wear on the edges; these can be replaced. Steel studs are permanently fitted to the side bars to allow of the flaps being buttoned on instead of being fixed by screws. The seat is stitched around the hind arch instead of being laced. The cross webbing supporting the seat is sewn to the flaps on the near side, and laced on the off side, instead of being nailed to the side bars. The two upper lengths of webbing running lengthways are attached to the front and hind arches by stitching—the two underlengths are laced to the front pockets of seat and stitched to the rear pockets. The length of seat is 17¼ inches. When in the field two blankets are used under the saddle, the saddle blanket and one belonging to the man. The stirrups are metal and are the ordinary open type. The officers ride a saddle very similar to the French officer's saddle.

The bridle is a combination halter bridle. The bit is a Pelham, and the shanks have several holes in them so that the bit can be used as a mild or as a severe curb. Two reins are used.

The rifle boot is very similar to our own.

The head rope used is said to wear out very quickly.

Each man carries a built-up rope which is 4 feet 9 inches long. It is considered very useful, as most of the tying up is to a headline threaded breast high along the pillars of barns, etc.

The haversack is said not to wear very well. Something on the order of a good cartridge bag is what is needed.

Each soldier now carries a wire cutter.

Water buckets were found most useful, as most of the watering was done from them—it was impossible to walk the horses into most of the rivers and canals in France. Nothing is allowed to be carried in the water bucket; it wears them out and increases the weight on the horse.

It was found in the early part of the war that horseshoes wore out in about two weeks. An adequate supply of spare shoes was found very necessary.

The following shows the articles, with weights, that are carried on each man and horse in summer:

	Lbs.	ozs.
(*a*) Average soldier (stripped)	147	...
(*b*) Carried on soldier:		
1 jacket, notebook, and handkerchief	2	6¾
1 pair pants	2	6
1 pair puttees	...	13
1 pair spurs	...	15½
1 pair boots	3	14
1 cardigan	1	6
1 cap	...	7
1 shirt	1	1½
1 pair drawers	...	15½
1 pair socks	...	4½
1 pair braces	...	4½
1 field dressing	...	2½
1 identity disk	...	½
1 pay book	...	2
1 clasp knife	...	7½
Wire cutters or field glasses	2	...
Bayonet, frog, and belt	2	4
Bandolier and 90 rounds	7	4
Water bottle (full)	3	14
Haversack (2 smoke helmets and goggles)	3	2
Haversack (unexpended portion rations, housewife holdall, soap, and towel)	4	2
Total on man	38	4¾

	Lbs.	ozs.
(c) Carried on horse:		
Saddlery (headdress, wallets, blanket, headrope, rifle, bucket, shoe case, and 2 shoes)	42	...
Rifle (oil, pullthrough 10 rounds)	9	10
Sword and sword knot	4	10
Bandolier and 90 rounds	7	4
2 nosebags (contain 10 pounds oats)	12	...
Horse brush	...	10
Water bucket	1	4
Mess tin and strap	1	6
In wallets—		
2 days' rations (meat, 2 pounds; biscuit, 1 pound 8 ounces; grocery, 13 ounces; 1 pair socks, 4½ ounces)	4	9½
Built-up rope	1	1
1 picketing peg	...	10
Man's blanket	4	10
Mackintosh cape	4	...
Cap comforter	...	4
Waterproof sheet	3	2½
Total on horse	97	1
Total carried on horse and man	135	5¾
Average weight of man	147	...
Total	282	5¾

Each cavalryman also carries a steel helmet, which he wears only when he gets within range of hostile guns.

During winter months each man also had a British warm coat (overcoat) and a leather jerkin.

A change of clothing, consisting of 1 undershirt, 1 pair drawers, 1 pair socks, and 1 towel, are carried on "B" echelon wagons. These are done up in bundles and put into one sack per troop and clearly marked.

Clothing in the field is issued free. In peace time clothing is requisitioned for monthly and is charged against the money allowance of the soldier, but on mobilization clothing accounts are balanced and closed.

Baggage allowance is 50 pounds for commanding officers and 35 pounds for other officers.

Arms, equipment, clothing, transport vehicles, camp equipment, ammunition, intrenching tools, etc., are obtained by units direct from the ordnance department.

8. ANIMALS AND FORAGE.

Roughly the British specifications for horses for active service are:

Height (without shoes): 15 hands to 15.3 hands.

Age: 5 to 9 years.

Riding cobs, geldings, and mares (not in foal) in fair flesh and condition, able to carry 280 pounds under active service conditions.

Sound in action, wind, eyes; practically sound otherwise; strong, active, and sufficiently fast.

Fair riding shoulders, strong quarters and loins.

Good constitution.

Short, well-shaped back and legs.

Roomy, well ribbed.

Good, clear, straight action.

Strong clean legs and feet, properly shaped and placed.

Quiet, without vice, well broken and mouthed.

Teeth complete, well shaped, not tampered with.

Color, not very light gray or white.

The remount officer is the sole judge as to suitability.

The scale of forage has varied from time to time. The normal ration which is in force at the present time is 12 pounds of oats and 12 pounds of chaff (chaff consists of 50 per cent hay and 50 per cent straw). Practically every regiment at home has a machine for cutting hay and straw into chaff. As a rule, however, chaff is issued direct to organizations.

At one time the oats ration was cut down to 9 pounds, and all cavalry officers with whom I talked agree that this is not enough in the field. Their horses lost flesh rapidly. Large horses of the hunter type have not given satisfaction in the field. I was told that they require much more than 12 pounds of oats to keep them in condition. The short-legged, short-coupled horse of from 15 to 15.2 hands has proven the most serviceable In the field two feeds, about 8 pounds, are carried on the horse.

Most of the American horses have given satisfaction. It is admitted that they lack breeding, but they are easy to keep, have good mouths, and are generally most useful animals.

The following articles of food are obtainable in lieu of oats, provided reasonable notice is given to the supply officer:

In exchange for 1 pound of oats:	Pounds.
Maize	1
Barley	1
Bran	1⅛
Linseed	½
Oatmeal	⅓
Malt	⅜
Chaff	1½

Other equivalents, such as linseed cake, peas, beans, rock salt, carrots, etc., can be obtained, value for value, if reasonable notice is given. Oats are nearly always crushed before feeding. Straw is no longer issued as bedding. Substitutes such as sawdust, sand, shavings, heather, bracken, oat and wheat hulls, and peat moss are used instead. Peat moss is probably the best of these. Most of them are very unsatisfactory—they afford poor bedding and become foul very quickly. Peat moss is said to be very hot and to soften the horses' hoofs.

The British feed from three to seven times per day, and it varies with squadrons. They almost invariably mix with the oats a proportion of bran and chaff and dampen the whole before feeding. The stable management in the British cavalry is excellent.

During field operations or marches near the enemy no led horses (spare or pack) accompany squadrons.

No private chargers are allowed to go overseas—all such horses are valued and taken on public charge before embarkation. Officers are allowed, however, to use private mounts and to draw forage for them when serving in the United Kingdom.

All horses are clipped. This winter they were clipped all over on account of the presence of mange; ordinarily the legs from the elbow and stifle are left unclippped. Rugs are issued for all horses.

All Government horses are branded with a broad arrow, placed high up on the near hind quarter close to the point of the hip. Horses that are condemned (cast) are branded with a "C" on the near shoulder.

Horses are not given army numbers in war time, but the usual serial regimental number and lettering is branded on the fore feet.

9. SHOEING.

There are four different sized shoes used by the cavalry: III, IV, V, and VI. The No. III's weigh about 7 ounces; the others are a little heavier.

The front shoes have 4 nail holes per side and a toe clip. The hind shoes have 5 nail holes per side and 2 toe clips. The shoes in winter are tapped for frost cogs (calks).

Whenever convenient warm shoeing is used, but the shoeing smiths are all taught cold shoeing, as this method has to be used almost entirely on active service.

It has been a problem to keep units at the front supplied with enough shoeing smiths.

10. TRANSPORTATION.

The regimental first-line transport consists of:

Limbered G. S. wagons for small arms ammunition for rifles and machine guns	7
Limbered G. S. wagons for tools and signaling equipment	3
Limbered G. S. wagon for raft equipment	1
G. S. wagon for cooks	1
G. S. wagons for baggage	4
Maltese cart for medical equipment	1
Water cart	1
Pack horses for Hotchkiss automatic rifles	12
Pack horses for machine-gun ammunition	6
Pack horses for scouts	6
Spare horses	6
Bicycles	15

The cavalry no longer has a train with special vehicles for supplies, so has to use the cooks' and baggage wagons of the first-line transport for drawing supplies from the supply column. Light motor lorries bring supplies to the point where squadron carts get them. There are no divisional columns with cavalry.

If the present trench warfare should cease and the cavalry has an opportunity to push through, then the following is planned:

(1) That the machine gun L. G. S. carts will be taken over by the division for supply purposes and the field ambulances will come under the division, with the exception of mounted detachments which have been specially organized for such an operation.

(2) All machine guns, a proportion of tools, explosives, and ammunition will be taken out of first-line carts and put on packs.

(3) First-line transport carts will be brigaded and will come under divisional control.

(4) No wheels, other than guns and tool wagons of field squadron, will leave the forward rendezvous with brigades. They all come under divisional command.

11. RATIONS.

Field ration:

1¼ pounds fresh or frozen meat or 1 pound preserved or salt meat.
1¼ pounds bread [1] or 1 pound biscuit or 1 pound flour.
¼ pound bacon.
3 ounces cheese.[1]
⅝ ounce tea.
¼ pound jam.
3 ounces sugar.
½ ounce salt.
$\frac{1}{36}$ ounce pepper.
$\frac{1}{20}$ ounce mustard.
½ pound fresh vegetables or 2 ounces dried vegetables.
½ gill rum.
Tobacco not exceeding 2 ounces per week to those who smoke.

Iron ration (carried on soldier):

1 pound preserved meat.
12 ounces biscuit.
⅝ ounce tea.
2 ounces sugar.
½ ounce salt.
3 ounces cheese.
2 cubes (1 ounce) meat extract.

12. AMMUNITION.

The distribution of ammunition is as shown in the table following.

[1] The bread and cheese, less any consumed, is carried on soldier, the rest in vehicles for cooks.

Distribution of ammunition and bombs.

	On man.	Regimental reserve.	Horse artillery brigade, ammunition column.	Divisional park.	Total (in front of railhead).
Rifle (on the basis of 480 rifles per regiment).	100 rounds; 90 rounds (on horse).	50 rounds per rifle (24,000 per regiment).	62.5 rounds per rifle (270,000 in column).	48.6 rounds per rifle (210,000 in park).	351.1 rounds per rifle.
Hotchkiss (12 per regiment).	On No. 1, 60 rounds. On gun horse, 1,200 rounds. Squadron reserve (2 pack horses), 900 per Hotchkiss, 1,800 per horse.	1,000 rounds per Hotchkiss (12,000 per regiment).	1,500 per Hotchkiss (162,000 in column).	2,500 per Hotchkiss (270,000 rounds).	7,160 rounds per Hotchkiss.
Vickers	Gun limber, in belts, 3,500; in boxes, 4,000.	Ammunition limber (1 for 2 guns), 8,000 rounds per gun.	3,000 rounds per gun (108,000 in column).	1,500 rounds per gun (54,000 in park).	20,000 rounds per gun.
Total rounds carried in column, 540,000. in park, 534,000 rounds.					
Bombs		360 per regiment (3,240 per division).	2,160	1,800	7,200 per division.

13. RATIONS, FORAGE, AND AMMUNITION.

Cavalry go without wheels and have to carry what they need on saddle.

The getting up of rations, forage, and ammunition during active operations could not be done by normal methods. Officers are taught to requisition any supplies that may be available in the country. The supply of ammunition is the cause of great anxiety. All leaders and especially machine-gun commanders are expected to strictly control the fire of their units. Independent fire is absolutely forbidden except in sudden close attack by the enemy.

The method of supplying rations, forage, and ammunition is laid down in the British Field Service Pocket Book, revised to 1916.

14. TOOLS.

Each cavalry regiment has—

Intrenching tools:	
Shovels	18
Pickaxes	12
Cutting tools:	
Felling axes	13
Hand axes	7
Bill hooks	12
Hand saws	4
Reaping hooks	36
Folding saws	3
Miscellaneous:	
Crowbars	3
Guncotton (pounds) and primer	105
Sandbags	150
Mauls	3

The wagon and cart equipment, also tools issued with machine-gun tripods are excluded.

15. CENSORSHIP.

Letters are censored by troop or squadron commanders. When censored and signed by an officer they are securely closed before being sent to regimental headquarters.

Men may notify their relatives and friends of their address (e. g., private A., "B" squadron, hussars, B. E. force), but this notification must be embodied in the text and not written as a heading.

16. CASUALTIES.

Casualty reports are rendered daily by squadron leaders. They show the names and regimental numbers of men killed, wounded, missing, joined, or sick.

In case of men being evacuated sick, the cause is stated. In case of men killed, their pay books and an accurate description of their burial place is sent to regimental headquarters.

Casualty reports also show casualties among horses, stating whether riding, light, or heavy draft.

17. FORMATIONS.

The usual formation is "column of fours." In order to be able to fire quickly the following was used:

On command while moving "Prepare for action." Nos. 1 and 3 of each section seize off reins of Nos. 2 and 4—2 and 4 draw rifles, and as soon as halted dash off to be ready to fire. No. 1 can then dismount and follow.

The usual route formation is column of twos—column of fours on wide roads.

On the retirement from Mons, 25 to 30 miles were made per day as rear guard. The rate was seldom more than 5 miles per hour, and long halts took place in the middle of the day and halts of 10 minutes each hour.

Officers and men usually led 10 minutes per hour to keep horses in good condition and offed saddle every opportunity. Distances were not insisted upon if the roads were dusty.

18. ADVANCED FORMATIONS.

Advance guard habitually used and distances varied, depending upon proximity to enemy. Commander between main body and advance guard. In conducting a reconnaissance or maneuver no operation is undertaken without the personal reconnaissance on the part of the commander whenever this is possible. Therefore the commander, as a general rule, rides with the most advanced formation of his command. For example, a regimental commander rides with the main body of his advanced squadron, the advanced squadron commander rides with the main body of his advanced troop, the advanced troop leader rides either with or just behind his advanced section. All other squadrons, squadron leaders in front of command, the seconds in command in rear. Troop leaders in front of units. When halted, picket posts were established. Horses were watered and fed at noon.

19. BILLETS.

There is no tentage of any kind. Billets are used. Squadron commanders must be acquainted with the billets of the other squadrons and of all neighboring units. A sketch or plan of squadron billets is sent to regimental headquarters as soon as possible.

When occupying new billets both regimental headquarters and detached squadrons post sentries on the main approaches: (*a*) To look out for and direct the supply column; (*b*) to direct all messengers to headquarters.

20. METHOD OF ADVANCE.

The method of advance is the "bound" or caterpillar system. The bounds of the brigade are communicated to a regimental commander and those of a regiment to the leaders of the leading squadron, and so on.

The commander of any body is at liberty to subdivide the bounds which he is ordered to make into smaller bounds.

The object of the "bound" is to punctuate the progress of the general advance to enable commanders to consolidate as far as possible the ground which they have "made good," and to prevent small detachments from getting out of hand and moving "in the air."

Subdivisions of the vanguard do not move by separate bounds, but bound with the vanguard, although in doing this every advantage is taken of cover and the advance is methodical and made point to point.

The "timing" of bounds is taken from the rear, the pace of any body between bounds within reasonable limits is taken from the front.

Touch between bodies at the various bounds is kept from rear to front. Touch between individuals or bodies during the progress is kept from front to rear.

In advancing to successive objectives large masses are avoided. The general principle applied is a succession of small bodies at 200 or 300 yards distance if column is unavoidable or successive lines of troops in "column of fours," if such an extension is possible. Only a general alignment is required.

Extended order is not to be taken unless forced by fire. Officers commanding advanced units, the moment they reach the end of each bound, commence to prepare the next bound by pushing forward officer patrols and by personal reconnaissance. A distinct

pause occurs at the end of each bound to allow of reorganization and the issue of fresh orders to deal with the local situation in the spirit of the general instructions.

21. INTERCOMMUNICATION.

For purposes of intercommunication and transmission of information one man, usually a noncommissioned officer, from each regiment is kept at brigade headquarters. Each unit, however small, has one man with the next higher unit, so that he can keep his own unit informed of any developments. It is the liaison system which the British adopted from the French.

Each detached body and every detached individual is told to what extent he is responsible for communication and intercommunication and by what methods it is to be effected. No commander is supposed to proceed on any detachment without a clear understanding upon this subject.

22. MESSAGES AND REPORTS.

Messages and reports are transmitted either by signalers or despatch riders, according to circumstances. When the message has to be sent a distance over 3 miles, or when the country is difficult to cross, it is sent by signal. Under that distance a despatch rider is used unless the signaling station is already established and in communication. When in no particular hurry signalers are used to save horseflesh.

Important messages are sent in duplicate or triplicate and by different routes. When bodies of the enemy are known or believed to be in the vicinity of the ground which must be crossed by the bearer of the message a body of men up to the size of a troop is used as escort.

Reports are written according to a set form and information is tabulated under the headings: Direct, Indirect, or Negative.

Messages are always numbered, dated, timed, and signed. Indelible pencils are never used.

Motor car, motorcycles, and wireless are also used.

23. DISMOUNTED ACTION.

It is considered that the dismounted attack is contrary to the spirit of cavalry tactics, and that it should never be undertaken except under the most exceptional circumstances. It is argued that for an attack of this sort depth is essential. Therefore such an attack undertaken by a body of the strength of a dismounted squadron is usually farcical.

Led horses are kept as near as possible to the dismounted men, but the distance is greater than considered necessary before this war. Every attempt is made to eradicate the prevailing heresy which exists and which exaggerates the value of a horse'e life out of all proportion to the object to be achieved.

In all dismounted work, including the occupation of trenches, troop leaders and sergeants carry rifles and bandoliers, the rifles they take from the horse holders.

24. MOUNTED ACTION.

The percentage of shock action employed by the British cavalry has been very small—about 1 per cent. The British Ninth Lancers and the German Death's Head Hussars charged one another at Moncel; they went clean through, but did not reform. Casualties were small on both sides. The German colonel was shot and killed by the British colonel. The British colonel was caught in the side by a lance and was dismounted, but not killed. The adjutant of the Ninth Lancers was also badly wounded and was dismounted.

The Scots Greys and Twelfth Lancers also took part in a charge.

In the first few days of the war the Ninth Lancers and Fourth Dragoon Guards advanced to charge unbroken infantry at Audregnies. When they got within about 400 yards of the Germans they ran into a barbed-wire fence and the Germans opened rifle and machine-gun fire on them. The British casualties here were very high.

The British cavalry had standing orders to attack and charge all enemy cavalry.

25. FIRE ACTION.

The British cavalry are taught that fire tactics are indissolubly bound up with mobility and maneuver, and that rapidity of thought, rapidity of movement, rapidity in mounting and dismounting, and rapidity and intensity of fire are the essence of cavalry fire action.

Attacks by cavalry fire action are not made in depth—every available rifle is utilized at once, and if the object sought for is not attained, a fresh maneuver is executed.

Every cavlaryman is taught that if he allows himself to become committed to a fire action which he is unable to break off at any moment, he has failed tactically.

The reserve-fire power of a mounted body is its machine guns and automatic rifles.

It is considered that the machine guns and automatic rifles can usually do all the "containing" that is necessary, and that all the men can be employed for maneuver.

26. HORSE LOSSES.

The latter part of 1914 (December) there were about 50 per cent of the original horses that came from England still with their units. I was told, February 2, 1917, by Gen. Vaughn, that there were at that time about 40 per cent of the original horses left.

27. ROUGH SKETCH OF WORK OF BRITISH CAVALRY.

The British cavalry and horse artillery (acting as rear and flank guards) did wonderful work in the retreat from Mons. The infantry were demoralized, and had it not been for the cavalry and horse artillery, there is little doubt but that the infantry would have been annihilated.

During the advance from the Marne to the Aisne, the cavalry covered the front and flank of the British Army—but it did not fulfill its rôle in the pursuit, as it can not be said that they harassed the enemy. The British cavalry was exhausted more or less by the retreat from Mons, and was too weak in fire power (machine guns, etc.) to properly pursue the enemy.

During the battle of the Aisne the cavalry acted as right-flank guard connecting up with the French. It was also used as a mobile reserve and helped to repel numerous counter attacks by the Germans. From the Aisne the cavalry guarded the left flank during the extension of the line to the sea. This took 10 days.

Upon arrival at Flanders, the cavalry drove the German cavalry back and covered successfully the detrainment of a British force in the area Hazebrouck, Aire, St. Omer.

It was unable to cross the Lys, so dug itself in and remained in close touch with the Germans until the infantry came up on their right. Meanwhile the Third Cavalry Division arrived from England and was operating east of Ypres.

There were several brushes between the cavalry and German infantry advance guards. Then the cavalry corps took a prominent part in the first battle of Ypres—it was holding a front of about 7 miles, and the units were at just about half strength (roughly, 5,000 rifles in corps).

The latter part of November, 1914, the whole of the cavalry corps were withdrawn from the trenches and put into general reserve. During February, 1915, the cavalry again took its turn in the trenches for about a month. Then in April it was marched up to help reestablish the line northeast of Ypres, into which the Germans had made a big hole by their first gas attack. During May and part of June,

1915, the cavalry was in the trenches at the Ypres salient. For the next three months it was employed in digging second-line defenses.

In September, 1915, the cavalry got a couple of weeks training in cavalry work. One division was afterwards employed at Loos.

In January, 1916, the cavalry corps, as a dismounted division, took over a portion of the trenches and held them for six weeks, after which it was relieved and sent to the rear for cavalry training.

In March, 1916, the cavalry corps organization was abolished and the divisions of cavalry were allotted to armies.

During the late spring and summer the cavalry was held as a mobile reserve and was ready during the Somme battle to push through if the opportunity should come.

The latter part of November the cavalry was reorganized into a corps and was sent to winter billets near the coast. One brigade of each division underwent intensive training, while the other two were used in the construction of railroads, reserve trenches, etc. Each month the brigades were changed. For a more detailed account see my reports Nos. 3723 dated London, May 26, 1916, and 4068, December 1, 1916.

There have been no cavalry raids.

28. PRISONERS.

In an advance prisoners are disarmed, if necessary the stocks of rifles are broken on the ground; and they are searched, at earliest opportunity after capture, in order to prevent them destroying any letters or orders, which may be in their possession. After being searched they are sent to divisional headquarters with least possible delay.

Lightly wounded prisoners, fit to be questioned, will accompany the unwounded.

Identity disks are left on all prisoners, but all papers, pay books, etc., will be transmitted to headquarters, together with but separately from their owners.

If any prisoners are not fit to be interrogated, a statement showing their unit and the place of capture will be sent to divisional headquarters, together with all papers found on them.

29. CONTACT.

Patrols are used to keep contact with the enemy—usually an officer and about 6 men. Officer patrols were used extensively, mostly for the purpose of finding out composition of enemy forces.

Advanced scouts invariably work in pairs.

The method of reconnaissance varies according to whether the country is inclosed or open, etc. The main principle is kept in mind, viz, that the advanced guard reconnaissance should be made with the greatest boldness, and that, in the event of the advanced parties being held up, supporting parties must immediately develop the whole of their strength to obtain the desired information. "It is no good making two bites at a cherry."

In the early part of the war it was customary in regiments to saddle up in the dark and be ready to move at dawn. Officer patrols were sent out from each squadron as soon as it was light to reconnoiter the immediate vicinity. This is said to have been well worth while.

Reconniassance at night has been used very little.

Each squadron protects its own front by pickets.

30. THE BRITISH CAVALRY IN FRANCE AT PRESENT.

The British cavalry in France has again been organized into a cavalry corps and is commanded by Lieut. Gen. C. T. McM. Kavanagh, C. V. O., C. B., D. S. O.

The corps is made up of 5 divisions—3 British and 2 Indian. The Canadian cavalry brigade is one of the brigades of the fifth (Indian) division.

Most of the British brigades are composed of 2 regular regiments and 1 yeomanry regiment—the Indian brigades of 1 English regiment and 2 native regiments.

A squadron of aeroplanes (18 machines) is attached to the cavalry corps. Divisional cavalry has been done away with, and instead of the old one squadron per division, now a regiment of three squadrons is attached to the corps as corps cavalry. All of the corps cavalry are yeomanry regiments.

The divisions are commanded as follows:

First division—Maj. Gen. R. L. Mullens.
Second division—Maj. Gen. W. H. Greenly, C. M. G., D. S. O.
Third division—Maj. Gen. J. Vaughn, C. B., D. S. O.
Fourth division—Maj. Gen. A. A. Kenedy, C. M. G.
Fifth division—Maj. Gen. H. J. M. MacAndrew, D. S. O.

The ages of these division commanders range between 40 and 46 years.