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PROVISIONAL INSTRUCTIONS

FOR

MANEUVERS.

ARMY DEPOSIT 1969

PREPARED UNDER THE DIRECTION
OF THE
CHIEF OF STAFF, U. S. Army,

Published by authority of the Secretary of War.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1904.

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WAR DEPARTMENT,
Washington, July 1, 1904.

The following provisional instructions for maneuvers, prepared by the General Staff, under the direction of the Chief of Staff of the Army, are approved by the Secretary of War and published for the information and government of the Army, and of the organized militia of the United States when engaged in joint maneuvers, under the provisions of section 15 of the act approved January 21, 1903 (General Orders, No. 7, Headquarters of the Army, A. G. O., January 24, 1903).

By order of the Secretary of War:

ADNA R. CHAFFEE,
Lieutenant-General, Chief of Staff.

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MANEUVERS.

1. The maneuvers serve as the culmination of the course of instruction begun with the drills in close and extended order and continued in the minor field exercises. They simulate the conditions of war and, by making free use of large and diversified areas, acquaint the troops with the possibilities and difficulties of actual campaign. While they furnish almost the only opportunity for the exercise of the functions of the higher commanders and their staff officers in the field in time of peace, officers of all grades, and the enlisted men as well, obtain a large view of military operations and the combination of the three arms, realize the importance of the elements of time and space, and learn to appreciate the labor attending the transportation and supply of large bodies of troops.

2. In order to secure the maximum return for the expenditures entailed by the maneuvers, all troops expecting to participate therein will, after attaining proficiency in the usual extended order drill and battle exercises, be required to familiarize themselves with the duties of officers and men in the field, and with the formations and movements to be expected in the vicinity of an enemy, by a course of instruction and the practice of minor field exercises at their stations. When no ground is available for this purpose near the garrison this instruction will, if possible, be had in connection with the annual target practice.

3. The autumn is usually selected as the season for maneuvers because of diminution of the discomfort incident to high temperature, the greater probability of fine weather, and the fact that most of the valuable crops have been harvested.

4. The selection of a suitable region for maneuvers is influenced by many considerations, of which the following are the most important:

a. It should be large enough to permit the troops to operate as they would in war.

b. The location should be central with reference to the stations of participating troops, in order to secure economy of time and transportation.

c. The region should be readily accessible by means of railroads, and there should be good wagon roads to the proposed sites for camps.

d. The ground should be diversified, most of it practicable for troops of all arms, and with large open spaces for camps, etc. Undulating grazing country with some woods is most suitable.

e. The region should be naturally healthy, free from contagious diseases, and provided with an ample supply of pure water.

5. When the ground owned or controlled by the Government is of sufficient extent the troops may be placed in two camps separated by an interval of at least 10 miles. In most cases, however, it will be necessary to shelter all the troops in one camp and to seek for diversity in the situations by causing all or a part of them to bivouac occasionally at a distance from camp.

6. Life in field barracks or standing camps, with their many conveniences, affords but little instruction in the field duties which soldiers would have to perform in time of war. It is desirable, therefore, when time is available and other circumstances permit, that the troops proceed to the maneuver grounds by marching from their stations or from preliminary rendezvous.

7. The commanding general of a geographical division in which maneuvers are to take place will, in order that the health of the troops participating therein may be properly safeguarded, take necessary measures to have a timely sanitary examination of the proposed site made by a medical officer, and will, on or before March 31 of the year designated, prepare and submit a general scheme as to the location, extent, and duration of maneuvers to be held, together with a plan of concentration, an estimate of the cost, and a list of organizations of the regular army and the organized militia to participate therein. After approval thereof by the War Department, all the details of encampment, administration, equipment, transportation, pay, and subsistence will be worked out, and the chief umpire, or a board of officers, will draw up the program of instruction and the problems to be executed. Engineer officers will be detailed in ample time to prepare maps, and request will be made for medical officers and for the necessary units of the Engineer, Signal, and Hospital corps, when not available in the division. The chief surgeon for the maneuvers will be detailed by the War Department at a sufficiently early date so that he may make proper sanitary arrangements and may inaugurate measures for the care of the sick and for the performance of the duties of the Medical Department and Hospital Corps.

PROGRAM OF INSTRUCTION.

8. A program showing in general terms the work contemplated on each day of the maneuver period will be printed and distributed to troops upon arrival. As many of the troops come from small garrisons, and as others, especially among the organized militia,

have had but limited opportunites for field exercises, owing to lack of grounds, the program will include, if practicable, brigade drills for both regulars and militia, and for the latter, regimental drills, the formation of advance and rear guards, and the deployment of marching columns to the front and to a flank. There should also be at least one review of the entire command.

The construction of intrenchments and gun pits, and the technical work of engineer troops, the Signal Corps, and Hospital Corps will be carried out as far as practicable.

Instruction will also be imparted by means of lectures and discussion of the solution of problems.

Problems will usually be assigned on alternate days so as to secure ample time for preparation, reports, and discussion; however, when the troops are in bivouac for the purpose of maneuvers the course of the exercises will continue without such intervals.

9. Under the assumption of the existence of a state of war the commanding general of the maneuvers will draw up a *general situation* conveying information which would be known to both the opposing commanders, and for each of them he will devise a *special situation.* The latter may be so framed as to leave it to the commanders to work out their own course of action, or a suitable problem in connection therewith may be prescribed by the chief umpire.

10. Simple "situations" will generally admit of a number of solutions and are more useful than such as are based on numerous and remote suppositions. Unnatural assumptions with reference to the ground should be avoided.

11. When the opposing forces are each of the size of a division the same "general situation" may serve for several days, or even for the whole maneuver period, but with smaller commands frequent changes will be necessary. A point of importance in such cases is to prevent each force from making a correct estimate of the strength of the adversary.

12. At the beginning of each exercise the opposing forces should be separated by a sufficient distance to permit of proper execution of military reconnaissance and the preliminary dispositions based thereon. Nevertheless, as time is limited, the arrangements of each problem must be such that the deployment of a considerable portion of the troops will not only be possible, but probable. Mounted forces charged with exploration should be given the necessary start.

13. Ammunition columns and baggage and supply trains will be represented in marching columns by as many wagons as may be available. They will not be imaginary except in certain assumptions in "general situations."

14. The opposing forces will be designated as the "Blue" and the "Brown." The brown forces will be in service uniform. The blue forces also will wear service uniform, but the dress coat or dark blue flannel shirt will take the place of the service coat.

DUTIES OF UMPIRES.

15. The commanding general of the maneuvers will be assisted in his duties by an officer designated as *chief umpire*, who will have charge of the details of the preparation and conduct of the tactical exercises. As it is impossible for the chief umpire to be present at all important points to render a decision, it becomes necessary to detail assistants. Two of these will be assigned as *senior umpires* of the opposing forces, and the others will be attached to units as *umpires*.

16. The work of the umpires is intended to supply, as far as practicable, the impressions and consequences of actual war. Their decisions must be based on the actual tactical situation, not on the intended course of the maneuvers, or on what they conceive to be a proper solution of the problem.

The number of umpires detailed should be sufficient to avoid unnatural situations caused by long delays to await decisions by an umpire.

17. The decision of an umpire should be given promptly. When several umpires meet, the senior will announce the decision. A decision once rendered will not be changed except by the chief umpire. Should an umpire conclude upon further investigation that his decision was erroneous it is expected that he will so state in his report.

18. The chief umpire will usually assemble the umpires for instructions in the afternoon or evening preceding an important exercise. Copies of the general and special situations will be issued to umpires on that occasion, or sooner. He may also call them together immediately after the close of an exercise for the purpose of comparing data and elucidating points in dispute.

19. Umpires and their orderlies will wear the uniform of the side to which they are assigned; their head dress will be a white uniform cap or a white helmet. The chief umpire may wear either blue or brown uniform, and will be accompanied by a mounted orderly carrying a white flag with a diagonal red cross.

20. The chief umpire may make use of the following trumpet signals:

1. "Cease firing," "halt:" All firing will cease and the troops will halt in place.
2. "Attention," "commence firing:" Operations will be resumed.
3. "Recall:" The exercise is terminated.
4. "Adjutants call," "halt:" Signal for umpires to report to the chief umpire.

These signals are of a general nature and will not be used by anybody except the chief umpire or higher authority. Officers will order their trumpeters to repeat these signals as soon as heard.

Signals other than trumpet signals and directions intended to be

of local application may be given by any umpire. The whistle may be used to stop the firing and to attract attention, and may then be supplemented by verbal directions or motions with the arm. Such signals will not be repeated beyond the vicinity of the umpire and the unit to which he is attached.

21. The result of an engagement in war depends upon circumstances the effect of which is not felt at maneuvers in time of peace. It is especially necessary to counteract the tendency to disregard long range artillery and infantry fire, so difficult to appreciate at maneuvers. The progress of exercises with greater rapidity than would occur in war should be prevented by the umpires.

22. Umpires are authorized to ask for information from commanders as to the object of movements in progress. Their decisions should be of a definite character, and it is their duty to see that they are carried out.

When important decisions are rendered the chief umpire will be notified at once.

23. Whenever, during an exercise, a situation is brought about or an action is had, which in war should be productive of results, a decision should be rendered by an umpire.

Should phases of an exercise require suspension of movement in any part of the field, the umpire at that point will cause the troops to halt and any firing going on to cease. A decision will be rendered at once and necessary changes of position made without delay. The exercise will be resumed upon indication from the umpire, who will be careful to allow sufficient time for the troops to gain the distance ordered. The commanders and umpires of adjoining bodies of troops will take cognizance of such pauses and the resulting movements, to the extent necessary to prevent unreasonable situations.

24. When on account of contests in close country the lines have become very irregular and the troops are to a considerable extent out of hand, it will usually be advisable for the chief umpire to order a general suspension of hostilities for the purpose of bringing about greater distances between the opposing forces.

25. The umpires assigned to batteries will, when practicable, be taken from the artillery. On account of their effect on the other arms the decisions of these umpires should be communicated not only to the chief umpire and the commander of the artillery, but, if practicable, also to the other umpires and troops within effective range.

26. When practicable the umpires will adjudge casualties in the manner indicated under "fire losses" herein. It must be remembered that only approximate accuracy and probable results can be obtained. Care must be taken to avoid, on one hand, the infliction of extraordinary losses, and, on the other, the absurdity of troops being subjected to a heavy fire without penalty.

27. Special attention must be paid to the moral factor and its effect as in war. The order and discipline of the troops, as well as the manner in which they are led, should have special weight in arriv-

ing at decisions. For example, troops remaining under cover until the opposing force arrives at decisive range and then suddenly opening a heavy fire would have the important factor of surprise in their favor.

28. During a long engagement the umpire may from time to time adjudge losses due to the enemy's fire. Before a detachment can be ruled out of the fight its losses must have amounted to one-third of its strength, or it must be in such condition that it could not be expected to resume fighting until after expiration of some time; or the situation must be such that in war surrender would be unavoidable. In the second case the umpire, after deducting the losses, may authorize the temporary assignment of the remainder to the reserve.

29. Umpires should carefully avoid giving information or advice, or making suggestions to combatants. They should not precede their advance parties and will be careful not to betray the location of troops attempting concealment. If necessary they will dismount.

30. The use of cover by patrols, flankers, scouts, sentinels, etc., the conduct of officers in this respect while leading their commands, and the formation and pace of troops while crossing unavoidable open spaces will be carefully noted and referred to in reports of umpires.

31. The personal observations of the chief umpire and the senior umpires, supplemented by information from the other umpires, form the basis for the final decision. These officers should therefore select good points of observation behind or on the lines, keep in touch with developments of the exercise, and endeavor to be on hand at critical points at the right moment.

32. The decisions of umpires will determine whether troops can continue to advance, whether and to what distance they must retire, the losses they have sustained, whether and for how long unfit for action, and whether or not captured. Before ordering artillery to retire they will decide whether, under the circumstances, it is capable of movement.

33. Value will be attached to intrenchments, gun pits, and obstacles only to the extent justified by their actual construction and the correctness of their location. Demolition of bridges, loopholing of walls, and intrenchments in valuable fields may be outlined or indicated. The commander will notify the umpire, who will decide whether the work could have been done with the means and in the time available, and cause proper notice thereof to be taken by the opponent.

34. After the conclusion of an exercise each umpire will submit a report to his senior umpire. The senior umpires will then submit their reports, accompanied by the reports of their subordinates to the chief umpire; the latter will submit all these papers with his own report to the adjutant general of the whole command. The reports will be in writing and will be submitted as soon as practicable.

DISCUSSION.

35. At such time after the conclusion of the exercise as the commanding general may deem expedient, the officers of the command will be assembled and the report of the chief umpire read. The exercises will then be open for discussion. Such portions of the reports of subordinate umpires as may be necessary to clear up doubtful points may be read. The commanding general is the final arbiter in regard to the conduct of the exercises and will at the conclusion of his remarks state whether the report of the chief umpire is accepted, or in what respects it is modified.

The chief umpire in his report will present a general view of the course of the exercise, discuss the important features, and dwell upon the professional lessons to be drawn therefrom, illustrating his remarks on maps of suitable scale. Criticism must be entirely free from remarks having a personal bearing. When errors are pointed out he will not only express a definite opinion, but will also indicate a course of action which would have been proper under the circumstances.

36. Officers not on duty with the contending forces, or serving as umpires, will not be present at the discussion unless invited by the commanding general.

EFFECT OF WEAPONS.

37. The efficiency of *infantry fire* is influenced by a variety of circumstances, such as distance of the enemy, degree of accuracy in estimating distances, adjustment of the sights, form of the objective, duration of fire, fire discipline, surprise, nervousness, etc.

Strong and well-conducted infantry fire has considerable effect at distances over 1,100 and up to 1,600 yards when delivered against bodies of troops in close order of the size of a company, whether at a halt or in motion, or against an unlimbered battery without cover.

Between 1,100 and 900 yards bodies of troops in close order can halt temporarily, or move laterally, only when the fire of their own skirmishers is about equal to that of the enemy.

Below 900 yards detachments in close order without cover can move only forward or to the rear, even with strong lines of skirmishers in their front. The decision of an umpire will determine whether they can halt within this zone.

Skirmish lines without cover will begin to suffer loss from cool infantry at 1,000 yards, or even greater distance when the country is quite open and the air clear. A steady advance will therefore require adequate fire support.

Within 500 yards a decision will soon be indicated.

In open country without cover cavalry forces should not approach nearer than 900 yards in front of infantry in good condition, unless

advancing to the attack in proper formation. Other movements, or halts without cover, will entail losses.

Mounted patrols should not be ordered back or ruled out on account of long range fire if they adopt suitable formation and gaits to diminish the chances of being hit.

At distances of 1,000 yards or less, favorable conditions, such as actual cover, are necessary to enable artillery to unlimber. If it accompanies infantry in the advance it will suffer corresponding losses. Artillery without cover at less than 1,000 yards soon loses its mobility; at less than 600 yards it can not limber up in the open.

The result of an infantry charge will depend upon the effect of the preceding infantry and artillery fire, the relative strength of the contending forces, the nature of the ground, the direction and execution of the attack, the conduct of the defenders, etc. As the losses are likely to be serious, the attackers or the defenders will generally be ruled out of the fight for the day.

A well-directed and sudden infantry fire at short range delivered as a surprise, and enfilading fire should receive greatly increased weight.

The fire of dismounted cavalry is to be considered as effective as infantry fire, remembering, however, that the strength of the unit is reduced at least one-fourth by the horse holders and the guard for the led horses.

38. The rapid course of a *cavalry attack* renders it difficult to make correct decisions. The umpire should be on hand to observe the advance, the deployment, the execution of the attack, and the strength of the opposing forces.

Cavalry remaining at a halt mounted to receive a charge will be declared defeated.

A cavalry force which is charged while in the act of deployment, or is struck in flank, will be defeated even if numerically somewhat superior.

In the attack on cavalry it is of less importance to pass over long distances rapidly than to deliver the charge with cohesion and force. Envelopment of a flank increases the efficacy of the attack.

When two cavalry forces of equal strength and proper formation meet in mounted action, the victory would probably fall to the side bringing up the last formed reserve.

Against demoralized or badly shaken infantry a cavalry attack can dispense with deep formations, and comparatively small bodies may do effective work.

Against unshaken infantry favorable conditions are necessary to stand a chance of success; for example, cover while approaching, favorable ground, surprise, attack against a flank or while the infantry is changing formation. The cavalry must be in deep formation and cross the fire-swept zone at a rapid gait. Great losses to the cavalry are to be expected in such attacks.

Artillery in motion is to be considered as helpless against a cavalry attack, unless protected by other troops. Artillery in action is

most vulnerable on an unsupported flank. Frontal attack against quick-firing artillery requires favorable ground, skillful handling, and an adequate force; the losses in any event are likely to be heavy.

Should the cavalry succeed in reaching the artillery, the extent of the result would still depend upon whether they know how and have time to disable or carry off the pieces, or can gain sufficient time to secure the victory in some other way.

In the combat of cavalry against cavalry the defeated party will be required to retire 300 yards. The victor may assemble his forces or continue the pursuit with the force available, preserving a distance of at least 100 yards. The defeated party will continue to retreat before an effective pursuit without assembling, unless support is received. The umpire will prevent a long pursuit and state the length of time for which the defeated party is to remain out of action.

39. In estimating the effect of the fire of *field artillery* the following points should be considered: Approach under cover and sudden opening of fire made possible thereby; openness of the field of fire; the number of guns playing on the same objective, and the rapidity and duration of fire. Rapidity of ranging and efficacy of fire are favored by correct estimation of distance and the proximity, size, and visibility of the target.

Stationary targets, or those approaching or receding in the plane of fire, are less difficult to hit than targets moving laterally or obliquely.

A position which renders observation by the enemy difficult, diminishes losses, and facilitates the supply of ammunition, is decidedly advantageous.

When the range is obtained from other batteries the efficacy of fire begins with the first shot. Otherwise some time will be required for ranging, which would only be delayed by undue haste.

Bodies of troops presenting a target of the size of a company in close order can not halt under artillery fire at less than 3,500 yards, unless the hostile artillery has already suffered serious loss and still is under strong fire.

At 3,000 yards columns in motion must seek protection by deploying or taking up increased gaits.

Below 2,000 yards infantry without cover can move only in open order, and either to the front or to the rear.

In the foregoing rules some modification will be made when the hostile artillery is itself hotly engaged with artillery or infantry, and when the ground affords shelter to the attacking troops or interferes with the effective use of the hostile artillery.

Artillery can not get into action under infantry fire at less than 800 yards except under favorable circumstances. At less than 600 yards it should not be able to unlimber in the open.

Under a strong skirmish fire at 600 yards or less artillery will suffer such loss that it must soon retire or lose its mobility.

At less than 1,000 yards the combat between artillery and infantry should be of short duration.

Cavalry in close order and not favored by the ground must adopt rapid gaits under artillery fire within 1,800 yards; below 1,000 yards the attack must be under way.

Artillery which has the range can endanger the unlimbering of hostile artillery within 3,500 yards to an extent which may neutralize original superiority of numbers. At ranges over 3,500 yards the decision of an artillery combat is usually brought about by great superiority of numbers, or participation of the other arms. At shorter ranges numerical superiority is more effective still, and duration of the combat diminishes with the distance.

Artillery can not move into action against artillery fire at less than 1,500 yards, unless favored by the fire of other arms or the ground.

Enfilading fire of artillery is much more effective than frontal fire.

FIRE LOSSES.

40. The effect of fire is influenced by so many considerations that it is impossible to predict the result with even approximate accuracy. There are many factors which either are not known in advance or else do not admit of computation. By practice in calculating losses in war games on the map a certain readiness in recognizing the principal factors governing the effect of fire and consequent facility in estimating losses may be cultivated. However, at maneuvers decisions must be rendered so rapidly that there will seldom be time to make computations or to consult a table of losses. The best that can be done is to fix in the mind a standard case and then make allowance for the principal modifying factors.

INFANTRY FIRE.

As a standard case assume equal forces firing upon each other under the following conditions:

1. Arm: Magazine rifle.
2. Rate of fire: Six shots per minute.
3. Distance: 500 yards, fairly well estimated.
4. Ground: Open plain.
5. Formation: Skirmish line, intervals two paces.
6. Position: Lying down or advancing by rushes (practically the same).
7. Instruction: Average.
8. Physical condition: Fresh.

Losses: Two per cent per minute.

Modifications:

1. Inferiority of weapons has a marked effect, especially at the longer ranges. The moral effect, by depressing one side and stimulating the other, may be sufficient to decide the combat.

2. Rapid fire will cause losses one and a-half times as great; magazine fire, four times as great.
3. At 100 yards the loss would be four times as great as the standard; at 1,000 yards, one-third; at 1,200 yards, one-fifth; at 1,500 yards, one-tenth.
4. Troops firing from loopholes would suffer one-twentieth; behind abatis, one-eighth; from a trench, one-fourth; over a crest, four-tenths; from woods, one-half of the standard loss.
5. The losses vary directly as the density of the skirmish line; for example, single rank about three times, double rank about six times the standard. In columns the losses would be much greater.
6. The effect of the fire of troops standing is slightly less, kneeling about the same, with a rest slightly greater than for troops lying down. Troops firing from a kneeling position would suffer a loss twice as great; standing, six times; mounted skirmishers, at a halt, normal interval, would suffer a loss eight times as great as the standard; cavalry in single rank, sixteen times as great. If moving at double time or a trot, obliquely to the plane of fire, the loss for small bodies would be half as great; at a gallop or run, not more than one-fourth as great. If moving in the line of fire this diminution of fire effect would be only half as great.

   The loss of artillery in action, unsheltered, would be ten times the standard; while in the act of limbering or unlimbering twenty times as great.
7. Fire of sharpshooters or selected shots is twice as effective, of recruits one-half as effective as the average.
8. Fatigue, especially immediately after running, has a decided effect in diminishing the efficiency of fire.

FIELD ARTILLERY FIRE.

As a standard case assume that a battery of four quick-firing 3-inch field pieces, on open ground, is firing at the ordinary rate at a plainly visible line of skirmishers under the conditions assumed in the standard case for infantry fire, but at a distance of 1,000 yards. The losses inflicted by the battery are assumed as follows:

1,000 yards, 3 per cent per minute.
1,500 yards, 2.3 per cent per minute.
2,000 yards, 1.5 per cent per minute.
2,500 yards, 1 per cent per minute.
3,000 yards, .5 per cent per minute.

When the battery uses sweeping fire after accurate determination of the range, the results would be still greater; if itself under active fire, especially of artillery, its efficacy would be reduced.

The modifications to be made in these estimates for other conditions will be similar to those already mentioned under infantry fire.

At less than 1,000 yards a great deal will depend upon which side gets in the first fire. At distances greater than 1,000 yards the artillery is soon relieved of serious danger from infantry fire, and can make its fire effective without suffering loss in return.

Although artillery can sweep the ground in its front up to the limit of infantry fire, skirmishers will often be able to fire from cover for considerable periods of time before the artillery can locate them, owing to smokeless powder and uniforms of neutral tint. On the other hand cover must be substantial to protect infantry. Light walls only serve to cause great increase of casualties on account of flying splinters; houses are untenable.

Other modifications are indicated in a general way in the preceding paragraphs under "effect of weapons."

The introduction of quick-firing field pieces with shields, accurate fuses, reliable range finders, and powerful telescopes will have great influence on the efficacy of artillery fire, the full extent of which is not yet ascertainable from reliable data.

RULES FOR TACTICAL EXERCISES.

41. Maps of the maneuver district will be furnished to troops upon arrival in camp. The practice of riding out far beyond the outposts without an escort with a view to preliminary study of the terrain involved in the solution of a problem, bears but faint resemblance to what would be done in actual war and should therefore be restricted to limits compatible with the similitude of warfare.

42. The commanding general of the maneuvers will designate the commanders of the opposing forces and the troops which are to form their commands. The chief umpire will issue the "general situation," the proper "special situations," and such instructions or memoranda as he may deem necessary, at a time sufficiently in advance of the beginning of the exercise to enable commanders to study the problem and issue orders to subordinates.

43. The commanders of the opposing forces will act independently, being guided by the general and special situations and the instructions received. They will issue their orders as if in campaign, and will furnish copies thereof to the chief umpire before the exercise.

44. All duties pertaining to the maneuvers will, as far as practicable, be performed as they should be in actual war.

45. All umpires are to be regarded as staff officers of the commanding general of the maneuvers, and their orders, signals, and decisions will be considered as emanating from him. They must therefore be obeyed immediately and without question. Officers must under no circumstances attempt to dispute with an umpire at the time a decision is given. Should a decision be deemed erroneous, officers may, after the close of the exercise, make an appeal in writing setting forth the facts as they appear to them.

The commanding officers of the opposing forces will not under any circumstances give orders to the umpires, but if the latter carelessly or needlessly betray the position or movements of the troops, they will be reported to the commanding general.

46. All troops will march fully armed and equipped—except as to ammunition. Infantry and engineer soldiers will carry 50 blank rifle cartridges, and cavalry soldiers will carry 50 blank rifle cartridges and 15 blank revolver cartridges. Artillery will carry such blank ammunition as may be prescribed by the commanding general of the maneuvers.

47. Before leaving camp or bivouac, the cartridge belts of all soldiers who are to take part in the tactical exercises will be carefully inspected to see that no ball cartridges are mixed with the blanks. *These inspections must be made with extreme care, by officers.* When a commander has received the reports of these inspections from his entire command he will report that fact to the senior umpire on duty with his force.

48. All members of the command taking part in or attending a field exercise are forbidden to carry on their persons, or horses, or with field pieces, caissons, or other means of transportation, fixed ammunition or ball cartridges of any kind whatsoever. No weapons, other than those constituting part of the regulation equipment for officers and men, will be carried.

49. The commander of each of the opposing forces will detail a topographical officer whose duty it shall be to prepare a hasty sketch of the field of operations and deliver the same to the senior umpire of the force. Additional topographical officers may be detailed when the problem covers extended or difficult terrain, or to prepare sketches to accompany the commander's report.

Topographical sketches will, as a rule, be made on the scale of 3 inches to 1 mile.

50. Each commander will submit a report of operations to the chief umpire in time to be available for the discussion. He will call upon his subordinates for such reports as he deems necessary to acompany his own.

51. It is the duty of commanders of units to take cognizance of the fire of the opponents and to govern themselves accordingly. Opinions as to the effect of the opposing fire will differ because officers become absorbed in their own work and their sphere of observation may be limited.

Officers usually dismount at 800 yards from active hostile fire, unless they be cavalry officers engaged in mounted action. It is taken for granted that all officers will dismount and place their horses under cover whenever it is necessary to avoid betraying the presence or movement of troops.

52. The actual collision of opposing forces must be prevented under all circumstances. When the combat has reached the stage just preceding the crisis, the commanding general or the chief

umpire will give the signal for suspension of movements, and the relative numbers and positions of the contending forces will be carefully noted. The chief umpire and the senior umpires will then confer and decide whether the exercise should be discontinued or the operations renewed for a final solution. In the latter case one of the parties will be required to withdraw to a distance of 300 yards before hostilities are resumed.

53. Pauses in the exercises to await the decision of umpires, or for purposes of discussion, will not be utilized to send messages, issue orders, or bring up reinforcements; a complete standstill in the operations is required.

54. Firing by opposing parties will be discontinued when they approach within 100 yards of each other, and the umpires will then make a decision. In the general case a definite decision will be arrived at before the troops come to such proximity.

When important decisions are rendered commanders will at once notify their superiors and the commanding officers of adjoining bodies of troops.

55. Should a force succeed in approaching within 100 yards of another without being discovered, captures may be made by giving the command "Halt, surrender." The umpire will consider the strength of the opposing forces, the nature of the ground, and other circumstances, and decide whether actual capture was possible.

56. Commanders of opposing forces approaching within 100 yards of each other will, in the absence of umpires, order cease firing, and when the lines are within 25 yards of each other will halt their men and direct them to hold their rifles vertical, butt uppermost, as a signal that the decision of an umpire is awaited. Troops in this situation must not be attacked. The commanders of units will be held officially responsible for actual collision of their commands as a disobedience of orders.

57. In case troops are ruled out of action by an umpire before the termination of an exercise, they must proceed as rapidly as practicable to the rear of their reserve, and their immediate commander will send notice, without delay, to the commanding officer of the force to which he belongs of the action taken. While proceeding to the rear under these conditions, a white flag will be displayed, if practicable. In the infantry, each man of the command thus ruled out, will, while marching to the rear, carry his piece horizontally across the shoulders, the arms resting over the piece. In the cavalry, sabers and carbines will be sheathed, and the guidon carried horizontally on the shoulder, the flag to the rear. In the artillery, cannoneers will be seated on the limber chests, with arms folded, and the guidons will be carried as in the case of the cavalry.

58. When prisoners are captured they will be considered as having been disarmed and will, with the approval of the umpire, be sent under suitable guard to the rear of the capturing force, away from the field of operations and held there until termination of the exercise.

59. In all the exercises the greatest attention will be given to fire discipline. Violation of the rules and waste of ammunition will be the subject of unfavorable reports by the umpires.

60. Cavalry charges must stop at 100 yards of troops firing upon them. Against mounted troops the charge will stop at 50 yards; in the charge as foragers cavalry is permitted to ride up to and through wagon trains and batteries not firing, but no revolver firing will be permitted at less than 25 yards.

61. When patrols of equal strength meet, neither can advance. The umpire will decide which is at a disadvantage and cause it to withdraw. If a patrol should meet a stronger force, it will retire unless the umpire decides that superior leading entitles it to advance, in which case the other force will retire to the distance prescribed by the umpire.

62. Individuals, mounted or dismounted, when halted and called upon to surrender by one or more dismounted men able and ready to fire, at a distance of 100 yards or less, must comply with the order at once. If, while at a halt or in motion, they are fired upon by one or more dismounted men at about 100 yards, they will give themselves up to the enemy as out of the fight for the day. The same rule will apply up to 150 yards for individuals fired upon while at a halt and in good view. In case of moving individuals, mounted or dismounted, at a greater distance than 100 yards, more than one shot will be required to rule them out. The umpire will render his decision according to the amount of fire and other circumstances of the case.

63. Mounted officers and men who find their retreat cut off by superior numbers of mounted opponents must surrender when it is evident that they could not escape without being closely pursued.

Mounted individuals attempting to escape must surrender when summoned by a pursuer within 15 yards.

Unless there be immediate prospect of approach to close proximity the pursuit of individual mounted men will not be continued.

64. Commanding officers of bodies of troops to which artillery is attached should indicate in general terms the object of artillery fire and the artillery force to be employed; but the definite objective and the manner of regulating the fire should be left to the artillery commander.

65. Each battery in action will mark the object of its fire by placing on the windward flank of the battery two flags on a line marking the direction of the object. The colors of these flags will be red, blue, or yellow, to indicate firing against artillery, infantry, or cavalry, respectively. The flag in front will have a shorter staff than the other, in order that they may not cover each other when viewed from the object under fire.

66. When it is decided to terminate an exercise, the chief umpire will cause "recall" to be sounded. This will be taken up by all the trumpeters, and, when necessary, mounted trumpeters will be

sent to distant detachments to repeat the call. Or, when practicable, a smoke bomb will be sent up in rear of the center of the blue force. The commands will be marched to camp or to the place designated for bivouac, each regiment, squadron, and battery marching independently by the most convenient route, but avoiding damage to fields or fences.

67. In order to prevent confusion, troops engaged in tactical exercises will not use the ordidary trumpet signals except when absolutely necessary. The trumpet signals reserved to the chief umpire will not be sounded, except to repeat them under orders from an officer.

68. All officers will study the instructions under "the duties of umpires," and when the proper occasion arises will be governed thereby.

RULES CONCERNING PRIVATE PROPERTY.

69. There must be no firing in the immediate vicinity of houses, barns, haystacks, ricks of fodder, etc. No camps or bivouacs will be established in orchards, parks, or fields under cultivation.

70. Neither troops engaged in tactical exercises nor individual members of the command will be permitted to enter houses or other buildings, yards, gardens, lawns, tobacco fields, vineyards, nurseries, fields with specially valuable crops, orchards, or cemeteries. Marching troops not engaged in tactical exercises will confine themselves to he public roads.

71. Troops will be provided with wire nippers to be used when necessary. A man or two will be left to mark the place and prevent straying of cattle until a detachment with suitable tools repairs the damage, which should be done as soon as practicable after a column has passed.

Infantry not in column should be able to pass through or over board or rail fences, and in many cases through wire fences, without disturbing them.

72. The greatest care must be taken by officers and men to avoid unnecessary damage to private property. Officers and noncommissioned officers will be held responsible for wanton damage committed in their presence. Offenders will be immediately placed under guard and will be brought to trial by court-martial without delay. In all cases of depredations or wanton damage of a minor character a board of officers will be appointed by the commanding officer to assess the damage, and upon satisfactory evidence the amount will be advanced out of the funds of the organization to which the offenders belong, and will be paid to the claimants with the least practicable delay. Subsequent action against the offenders and stoppages of pay will serve to replace the funds paid out.

MISCELLANEOUS PROVISIONS.

73. The chief surgeon, under the direction of the commanding general, will supervise the hygiene of the maneuver camps. Under his charge, daily sanitary inspections will be made; if sanitary faults are found the attention of regimental commanders will be called to them, and verbal instruction will be given for their correction. Any failure to remedy unsanitary conditions will be made the subject of a written report to the commanding general.

74. Spectators must not go ahead of the advance guard of either side, nor gather in positions liable to mislead combatants. Possible damages by civilian spectators must also be guarded against. Commanding generals will organize mounted police patrols for the purpose of directing spectators to suitable points affording good view and not interfering with the exercises and to prevent trespass on and damage to valuable property. These patrols will be under the orders of an officer detailed as provost marshal.

75. Military attachés, duly accredited military observers from the organized militia and officers of the regular army, attending the maneuvers in an official capacity will either be invited to accompany the commanding general or be assigned to accompany umpires, if practicable. Such spectators will wear a white brassard on the right arm above the elbow.

76. In order to give juniors an opportunity to command, officers will sometimes be excused from participation. In all cases officers so excused, unless detailed as umpires, will attend as spectators, as prescribed in the preceding paragraph.

77. All possible courtesy and consideration will be accorded to properly accredited foreign military or naval attachés accompanying United States troops in the field or attending maneuvers. Enlisted men will salute them and otherwise conduct themselves in their presence as if they were officers of our army.

The chief of staff of the command is charged with the duty of looking after their comfort and may detail an officer to assist him. They will be furnished with such shelter, transportation, messing facilities, and information as the commanding-general may direct.

Properly accredited correspondents for newspapers and other publications, accompanying United States troops in the field or attending maneuvers will, if practicable, be provided for in a similar manner. The chief of staff will examine their credentials and afford them such information and other facilities as may be consistent with the success of the operations. Such correspondents will wear a red brassard on the right arm above the elbow.

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