

NOTES ON
TRAINING
BY
LIEUT-COLONEL
PAPINEAU

J. V. Pickering.

110. Bm. C. & P.



Quelques Notes

(Few Notes)

A

(for)

L'usage des Officiers d'Infanterie

(For the Use of Infantry Officers)

By

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The Royal Canadian Regiment

Late Infantry Instructor to the 4th Division
Commandant Royal School Infantry
Halifax, N. S.

3rd ENGLISH EDITION

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PREFACE OF THE FIRST EDITION.

I have already published two FRENCH editions of these notes, and at the instance of several officers I have decided to publish this English edition.

The object of this book is to help the young officers and N.C.O.'s who do not know how to make use of the manuals.

In this book I have followed the syllabus of the Lieutenants' course. This course is the fundamental principal of the new system of training, and nobody can expect to become an efficient officer or N.C.O., if the first course is not sound.

D. B. P.

Halifax, N. S.,

8th. February, 1915.

PREFACE OF THE THIRD EDITION.

The call having been so great for these little notes, that I do not hesitate to publish this third edition, which has been corrected to date, and includes the latest notes on trench warfare as carried out in the present campaign.

D. B. P.

Halifax, N. S.,

24th January, 1916.

FEW ADVICES.

Officers, N. C. O.'s and buglers allowed to take a course of instruction at a Military School, must consider themselves on duty, and subject to Military law and regulations, which govern all persons called out for duty.

Officers attending a School rank among themselves according to their seniority in the Militia. All the Officers of the School Staff are senior to them.

Officers wishing to take a course of instruction will apply officially in writing to their own Commanding Officer, who will forward same to the G. O. C. who in turn will forward it to O. C. R. S. I., inquiring if there is a vacancy. If there is a vacancy, O. C. R. S. I., will inform the G. O. C., at what date he can accommodate the applicant. The applicant will then be supplied with transportation by the A. D. of S. & T.

Officers attending school must be in possession of the following articles: Service dress, 1 pair puttees, 1 pair breeches, 1 pair long trousers, Sam brow belt, Sword, Forage Cap and gloves. In winter, Great Coat and furs.

On arrival at the School they will report to the Adjutant, who will give them the necessary instructions.

All officers attending the school are members of the Mess. They pay an entrance subscription of \$3.00 and a monthly subscription of \$3.00, they will be supplied with a copy of the regulations. Mess bills are the first charge against them. They will receive if provisional \$1.00, per diem, and if qualified, \$2.00, and will be accommodated in Barracks.

On arrival, the officers will get their hair cut in accordance with the regulations. They must shave every day and must always be clean.

In addressing the Commandant R. S. I., they will call him "Sir."

The officers will be allowed a batman, if he neglects his duties they will report him to the Adjutant. All complaints must be made to O. C., attached company.

Officers will wear their gloves, and not carry them in the hand when in uniform. They will not enter the Sergeants Mess, nor the Canteen, except on duty. The system of treating is forbidden. They must not be familiar with the instructors or the men.

The Adjutant keeps the duty roster, and the officers can see it upon application. If they wish to exchange duty they can do so upon application to the adjutant.

Officers wishing leave of absence will make sure they are not for duty, then will write their names in the leave book.

Daily orders are posted in the Officers Mess, they must read them.

Dress for Parade is sounded 20 minutes before parades. Officers will set their watch by the bugle, and they should never be late.

On duty the orderly Officer will not leave barracks without the sanction of the Commandant.

All Dining Members Dress for Dinner at night, (Mess Dress) attached Officers not being in possession of Mess Dress, will wear the blue serge.

No official books will be brought in the anteroom, nor gloves, rubbers, sticks, hats, etc. When the Commandant enters the room, they must stand at attention. The dinner is a parade; all officers on entering the anteroom will pay their respects to the senior officer present.

No body will leave the table without the permission of the president.

Political or Religious discussions are forbidden at Mess.

If the Officers have any complaint to make about the messing, or mess waiters, they will make it to the Mess Secretary, and they must consider the Mess as their home, and use it as such.

INTERIOR ECONOMY.

1. What do you understand by interior Economy?

The administration of a battalion; outside of discipline and duties, comprises:—Pay, Quarters, Food and clothing.

2. What is an order?

Generally a written communication sent by a superior to his subordinate.

3. Name the different classes of Orders?

- a. Standing orders.
- b. Operation orders.
- c. Routine orders, (Orders of the Day).
- d. Messages.

4. How are orders published?

Orders are published and issued on the eve of the day for which they are intended; usually in the following manner:—

The Sergt-Major orders "Orders to be Sounded." The regimental Orderly Sergt. and the Companies Orderly Sergeants will assemble at once at the Office of the Sergt-Major, who will dictate the Orders or distribute copies to the Orderly Sergts.

The Coy. orderly Sergts. will place a copy in a conspicuous place in the corridor of their companies, where all soldiers can read them, or they may be read on parade. K.R. 933 & K.R. & O.C.M. 1910. Para. 725. They will take a copy over to the Officers of their companies. Orders which concern officers only, will not be published but will be sent to each officer directly by the Adjutant. Those orders will be entered in a special book called "Memo Book"; and every officer will be requested to sign it.

5. What is the object of standing orders?

- a. Prevent repetitions.
- b. Adapt existing regulations to local conditions.

6. Can an officer temporary in command of a unit, publish standing orders?

He must not publish any standing orders nor change those in existence.

7. Can a commanding officer on leave, publish orders for his unit?

No.

8. What is the object of Operation Orders?

Notify the tactical and strategical operations which will take place, i.e., Marches, Camp, Attacks, etc.

9. What is the object of routine orders?

They refer to questions of interior economy; are the same in time of peace and in time of war.

10. What are the duties of officers as regards to orders?

O.C.'s regiments and units are responsible that all orders, letters, memos received for information of officers, and men, be

published in regimental orders. K.R. 104. K.R. & O.C.M. Para. 51.

All officers must acquaint themselves with all orders even those published while they were absent. K.R. 1263 K.R. & O.C.M. 1007.

"I did not know" will not be accepted as an excuse for a neglect of orders.

12. What is the difference between rank and appointment? The first one is permanent and the second is not.

13. What is a N.C.O.?

An under-officer who has no warrant.

14. What are the different ranks in a regiment?

Lt. Colonel.

Major.

Captain.

Lieutenant.

Regimental Sergt.-Major.

Regimental Quarter-Master-Sergt.

Company Sergeant-Major.

Company Quarter-Master-Sergeant.

Sergeants.

Corporal.

Private.

All others are appointments. Ex. Sergeant-Instructor.

15. What is the permanent rank of each appointment?

That which is attached to the appointment. It is indicated by the title of the appointment. Ex. Quarter-Master-Sergt.-Instructor.

16. By whom are N.C.O.'s appointed?

By the C.O. on recommendation of the O.C. Company.

17. How long will N.C.O.'s keep their ranks?

Except in the units of the permanent force, all N.C.O.'s retain their ranks during the pleasure of the C.O.

18. What do you understand by Warrant Officer?

A certain number of N.C.O.'s after so many years service on the recommendation of their O.C., will receive from the Minister of Militia a parchment called Warrant. K.R. 286. K.R. & O.C.M. 271.

They take precedence over all other N.C.O.'s. They are:—

- i. Conductor C.O.C.
Master gunner 1st. class.
Staff Sergt. Major 1st. class.
- ii. Master gunner 2nd. class.
- iii. Garrison Sergt.-Major.
- iv. Sergt.-Major.
Band Master.
- v. Active Militia Sergt.-Major.
Active Militia band Master.

19. Which rule governs the appointment?

A soldier may be removed from his appointment by his C.O. (If the soldier's rank is higher than that of Corporal, the sanction of an officer not below the rank of colonel must be obtained. If after having been removed from his appointment he is not in every respect qualified to perform the duties of his rank, application may be made to Head-Quarters to have him reduced K.R. 302-303.)

20. What are the requirements of a good soldier?

Obedient and respectful, clean, sober and inspire confidence.

21. What are the duties of a N.C.O.'s in charge of a barrack room or a Section?

He must have a list of the names of his men, showing their age, height, date of enlistment, religion, etc. He is responsible for the cleanliness of the equipments and of the barrack room, also the conduct of the men.

Each week he will send to the Coy. Commander a report showing that the men of his section have taken a bath and changed their clothing.

He will keep a list of the Orderly men of his barrack room.

22. (a) What are the duties of the company sergeant-major?

He is to the company what the Regimental sergeant-major is to the battalion. He is the senior of the N. C. O.'s of the company. He reports direct to the company commander, and is responsible (under the officers) that all orders affecting the instruction, administration, and discipline of the company are carried out. He will be constantly amongst the men, prepared to give advice, and assistance to those who require it, checking all cases of irregularity and while maintaining a high standard of discipline, will always be ready to contribute to the comfort and well being of the men. He will take a special interest in the training and comfort of the recruits.

He is responsible that the crimes and minor offences against any of the men are prepared for the company commander's signature; that the duty rosters are kept with accuracy.

He will parade all the accused at company office with the witnesses. He will be present at orderly room when any men of his company parade before the commanding officer.

He will keep the following:

1. Alphabetical roll of the company, showing the date of each man's enlistment, age at original enlistment, country, religion, trade.
2. A list of the men sleeping out of barracks.
3. A roll of the N. C. O.'s with the date of their promotion.

4. An alphabetical roll of the company including attached men, for muster parade, with the cause of absence of each man, marked opposite his name.

5. Roll showing how each man is employed.

22. (b) What are the duties of the company quarter-master-sergeant?

He is to the company what the Regimental Q. M. S. is to the battalion. He keeps the accounts between the company commander and the men. He will attend to the taking over and giving over of the barracks to be occupied or vacated by his company, the drawing or exchanging of bedding or barrack utensils; also at all barrack inspection noting any damage or deficiency. He will be present at kit inspection and note any deficiencies in the kits. He will draw from stores articles of clothing and equipment required by the men. He will make an inventory of the kit of any man reported absent.

He will see that the section commanders return to stores the kits of all the men going sick or who are absent.

The orderly sergeant is responsible that this duty is not omitted.

He is responsible for all company stores.

He will keep the following books:

1. Ration return book in which he enters all casualties.
2. Clothing roll showing what articles have been issued to the men.
3. Equipment ledger.
4. Bedding Book.
5. Washing list.
6. List of regimental necessities.
7. Pay list.
8. Pay sergeant's cash book.

23. What are the duties of the Regimental quarter-master-Sergt.?

He is the assistant of the Quarter-Master. He is responsible for the cleanliness of the barracks. He will be present at the inspection of barracks, and will superintend the distribution of clothing, bedding, etc., to the different Coy. Q. M. Sergts. He has charge under the Quarter-Master of the reserve of ammunition, baggage and equipment. He will superintend the loading of the baggage waggons. The pioneers are under him.

24. What are the duties of the Regimental Sergt-Major?

He is the senior of all the N.C.O.'s. He is the assistant of the Adjutant. He must not interfere with the administration and discipline of the Companies, but he will report all neglects in the performance of duties to the Adjutant. He keeps the roster of all N.C.O.'s for regimental duties. He is responsible that the defaulters parade and are dismissed at the proper time, that

their names are posted in the Canteen and at the gate; that the orders for the guard are written and posted in the guard-room.

He is responsible that the prisoners are sent and released from the detention barracks at the proper time.

He will see that the accused for the orderly room parade with the witnesses at the proper time.

25. How will the N.C.O.'s and men address the Regimental Sergt-Major?

They will stand at attention and always call him "Sir."

26. For what is a Subaltern responsible?

He is responsible for his Half-Company or his platoon, and must have a list of his men.

27. To whom, and for what, is a Company Commander responsible?

To his C.O. for the pay, arms, and equipment, ammunition, cleanliness and discipline of his Company. He will visit the barrack-room or tents of his Company every day.

28. What are the responsibilities of the Majors?

Field officers should make themselves acquainted with the professional ability of all officers under their supervision. The senior Major is the assistant of the C.O. and should look after the interior economy of the Battalion.

29. How is a Battalion divided?

A Battalion is commanded by a Lieut.-Colonel with a Regimental Staff, composed of an Adjutant, Quartermaster, several Warrant Officers and other Staff Sergeants.

A Battalion on the new establishment is composed of 4 companies commanded by a Major or Captain (mounted), a Captain second in command and 4 subalterns. Each company is divided into 4 platoons under the orders of a subaltern assisted by a sergeant, known as platoon sergeant, a platoon is in turn divided into sections under the command of a sergeant or corporal. Under the old establishment a battalion was composed of 8 companies which were commanded by a major or captain and 2 subalterns, the company was divided into half companies each under a subaltern, each half company was divided into 2 sections and each section was divided into 2 squads.

30. What is the establishment of a Company on war footing?

One Major or Captain in command (mounted), 1 Captain second in command, 4 Subalterns, 1 Company Sergeant Major, 1 Company Quarter-master Sergeant, 8 Sergeants, 10 Corporals, 188 privates, 3 drivers, 4 Buglers, 6 Batmen, making a total of 227 all ranks.

31. What is the establishment of a company of the Active Militia?

3 officers, 1 color sergeant, 3 sergeants, 4 corporals, 1 drummer, 47 privates, total 59. On the new system a Company would have 6 officers and 112 other ranks.

32. What is the establishment of a battalion on war footing?

33 officers, 1 warrant officer, 51 sergeants, 16 drummers, 930 rank and file, total 1033; left at base, called first re-enforcements, 1 officer, 4 sergeants, 95 other ranks, making a total of 100.

33. Give the composition of the Regimental Transport of a Battalion?

The regimental transport of a battalion is divided into 2 lines.

(a) The first line which accompanies the unit wherever it goes and is made up as follows:—

- 9 Bicycles.
- 5 S. A. A. Carts.
- 1 Maltese Cart for Medical Equipment.
- 2 Tool Carts.
- 2 G. S. Wagon for 2 machine guns, and 2 G. S. Wagons for ammunition.
- 8 Pack Animals.
- 2 Water Carts.
- 4 Travelling Kitchens.

The second line called the train moves were ordered and consists of 4 G. S. Wagons.

(Note).—When specially ordered 1 blanket per man is carried in 2 G. S. Wagons which are specially supplied for that purpose.

34. What is the amount of ammunition carried by each man in the field?

On the soldier 120 rounds in the regimental reserve 100 rounds, with the brigade ammunition column 80 rounds, with the divisional ammunition column 50 rounds, total with field unit 350 rounds, with the ammunition park 100 rounds, further supply on the line of communication 100 rounds, making a total of 550 rounds. For each machine gun there are 3500 rounds with the gun, 8000 rounds in the regimental reserve, 5000 rounds with the brigade ammunition column, 5000 with the Divisional Ammunition column, making a total with the field unit of 21500 rounds, with the ammunition park 6000 rounds, further supply on the line of communication 14000 rounds, making a total of 41500 rounds.

35. What tools are carried into the field for a battalion of infantry?

- 110 shovels.
- 76 pick axes.
- 16 felling axes.
- 8 hand axes.
- 40 bill hooks.
- 1 hand saw.
- 20 reaping hooks.
- 32 folding saws.
- 8 crow bars.

Besides these each man carries an entrenching implement.

36. What articles are carried in the haversack?

Fork, spoon, tooth brush, pair shoe laces, shaving brush, razor, housewife, towel, and surplus service ammunition and when an engagement is imminent the emergency rations and the balance of the daily rations of bread and biscuit, in the great coat pockets 1 toque and 1 pair of socks, around the neck by a lanyard a clasp knife.

37. What are the responsibilities of the Officer Commanding a battalion?

He is responsible to the Crown for the efficiency of his battalion, he will check all gambling and any extravagance he might notice, he will stop hazing, with the aid of the senior major he will superintend the military education of the officers.

38. How are the Companies designated?

For the purpose of interior economy they are designated alphabetically commencing with the letter "A".

39. How are the men quartered?

Whether in Barracks or Camp the men of the same company, platoon or section are quartered together.

40. What do you understand by the chain of responsibility?

The N.C.O. in charge of a section is responsible for his section to the platoon commander and the platoon commander to the company commander and the company commander to the battalion commander and the latter to the Militia Council representing the King.

41. What persons are eligible to serve in the Militia?

Every British subject between the age of 18 and 45.

42. What is the form of the oath of allegiance?

I do sincerely promise and swear that I will be faithful and bear true allegiance to His Majesty, so help me God.

43. Who administers the oath of Allegiance?

In city corps the Officer Commanding the battalion, in rural corps the captain of the company. An officer to administer the oath of allegiance must himself have been sworn by a judge or justice of the peace.

44. How is a man enlisted?

First of all He must be a British subject between the age of 18 and 45, be medically examined and found fit for service, after which the attestation papers are prepared, on M.F.B. 233, which he must sign before being sworn in, before he is sworn in the conditions of the service are explained to the man, i.e., that he enlists for 3 years and that within three months (except on active service) he can claim his discharge by paying \$15.00, after 3 months he must pay \$2.00 per month for the unexpired portion of his service, after which he is sworn in, then he signs the service roll in the presence of a witness, and is given a regimental number and his name appears in orders.

N.B. In the Active Militia (non-permanent) no attestation papers are prepared, but all other conditions are followed.

45. What persons are ineligible to serve in the Active Militia?

1. Persons unfit for service.

2. Persons of bad character or who have been previously discharged for misconduct or who have been discharged with bad character from the Regular Army, Royal Marine Artillery or Infantry, Territorial Forces, Canadian Permanent Force, Royal North West Mounted Police, or Irish Constabulary.

46. Can boys be enlisted.

Boys of good character between the age of 14 and 18 (sometimes 13) are enlisted to be trained as bandmen, buglers or drummers. They must not be enlisted without the consent of their parents.

47. What happens when a man is re-enlisted after he has left the service?

He must declare his former service and produce his discharge papers also state why he left the service.

48. For how many periods can a man re-enlist?

Warrant officers 7 periods of 3 years, making a total of 21 years. This applies to bandmen and sergeants. Other ranks 3 periods of 3 years making 9 years.

49. What are the general rules regarding discharge in the active Militia?

The paper is only a record of services, M.F. 350 A, and contains no reference to the man's character, if the man did not behave himself properly during his service the Commanding Officer will write in red ink on the discharge papers "Did not prove himself a good soldier." When the Active Militia is called out on Active Service for a period of 3 months or more the same discharge certificates as is used by the Permanent Force will be used.

50. What happens when a man is discharged from the service as medically unfit and his power of earning a living is impaired?

A special Board of Officers will be assembled to inquire into the cause of the disease and the probable duration of his incapacity, after which the proceedings with certificate of discharge will be forwarded to Militia Headquarters who will decide if the man is entitled to an indemnity.

51. When can a man claim his discharge?

In time of peace he can obtain his discharge on giving 6 months notice. In time of war he may be kept until the end of his service and in case of an emergency for a further period of 12 months.

52. Can a man be discharged for misconduct?

Yes, but authority must be obtained from the Officer Commanding the Division.

53. What happens in the case of discharge, death or transfer?

When a man is transferred to another unit, a certificate certifying his services, his conduct sheet, medical history sheet, last pay certificate, musketry record and the date on which he received his last issue are forwarded with him. In the case of transfer, death or discharge the man's name is published in orders as being struck off the strength of the unit.

54. For how long is a man compelled to serve in time of war?

For 12 months unless he has volunteered for the war. In case of emergency he can be kept in service for a further period of 6 months.

55. What rules govern bandmen?

Bandmen are enlisted regularly, they must wear the same uniform as the Unit to which they belong, with the authorized trimmings. They must always be properly dressed when playing at mess or in public. No musician is allowed to accept an engagement to play in public without having first obtained permission from the president of the band committee and the band will never play in public without having first obtained the sanction of the Officer Commanding the regiment. The band will never take part in any political or religious demonstration. Every man is responsible for his uniform and instrument.

56. What are the pioneers?

In the list of regimental establishment a certain number of pioneers are authorized. The sergeant if possible must be a qualified carpenter, there must always be a qualified carpenter to replace him. A certain number of fatigue men will be detailed to help the pioneers. Every pioneer must have a trade and be competent in it, they are liable to attend all parades ordered by the Commanding Officer. They may be employed in the Quartermaster Stores or other works.

57. What do you understand by "Crying down credit."

The Officer Commanding the Division once a year will publish in the papers having the largest circulation a notice calling the attention of the tradespeople to the fact that if they give credit to a soldier they do so at their own risk, as a soldier's pay cannot be stopped to pay his debts.

58. What rules govern the observance of the Lord's day?

All soldiers are obliged to attend service at their own Church, they will be in charge of an officer or N.C.O., who will remain with them during the whole of the service.

59. How are the different religious denominations classified?

Church of England.

Roman Catholic.

Presbyterians.

Methodist.

Other Protestant Denominations.

Jews.

60. What is the object of the Regimental Institutes?

Regimental Institutes will be established with each unit to supply the troops with articles of good quality at low prices without preventing the soldiers from buying outside.

61. How are these institutes governed?

The Officer Commanding will appoint a committee composed of 3 officers who will act under his orders. The president must be a Field Officer sometimes a Captain. The Adjutant and Quartermaster will not form part of this committee. There is also a sub-committee, composed of 2 N.C.O.'s and a private to make recommendations to the committee. Not more than one member of the committee will be changed at one time.

62. What comprises the regimental institutes?

The wet canteen, grocery shop, coffee bar, library, and recreation room. The profits of the regimental institutes are used for the benefit of the men.

63. Who is responsible for the men's messing?

The Coy. Commander. He will appoint a committee comprised of 1 N.C.O. and 2 privates to look after the food. They will try to vary the menus by buying vegetables and other things with the money given by the canteen or subscribed by the men. Rates of subscription vary between 2 and 5 cents per day.

64. What do you understand by the Sergeants Mess?

A Sergeant's mess will be established whenever possible. The object is to keep the sergeants together, the Officer Commanding is responsible for the running of the mess. It is under the supervision of the senior major.

65. Who are the members of the sergeant's mess?

All warrant officers, staff sergeants and sergeants are members, all unmarried members are dining members. Lance Sergeants who receive only the pay of corporals are not obliged to belong to the sergeants' mess. N.C.O.'s of other units above the rank of lance sergeant with the sanction of the Officer Commanding may become honorary members, their number is limited.

66. What rate of subscription is paid to the sergeants' mess?

A subscription of 3 days pay and the difference of 3 days pay on promotion, a monthly subscription of 50 cts. for the dining members and 25 cts. per month for married members. Warrant officers and militia sergeants attached for instruction must belong to the sergeants' mess and pay an entrance fee.

67. How is the mess conducted?

By a committee composed of 3 N.C.O.'s, the president must not be below the rank of color sergeant, this committee has power to authorize current expenses, all extraordinary expenses

must be sanctioned by the members at a regular meeting and approved of by the C.O.

68. Who presides at these meetings?

The sergeant major, or in his absence the senior N.C.O. present.

69. Who looks after the sale of liquors?

An N.C.O. who does not belong to the mess committee will be detailed as caterer.

70. Who is responsible for the discipline in the sergeants' mess?

The senior N.C.O. present.

71. Who are the N.C.O.'s exempt from acting as president or treasurer?

The sergeant major, bandmaster, quartermaster sergeant, and sergeant instructor of musketry.

72. Who is responsible for the establishment of an officers' mess?

The Officer Commanding. He will see that the mess is conducted economically. He is responsible for the observance of the regulations.

73. Who will belong to this mess?

All officers. All officers unmarried will be dining members, once a month all officers will be obliged to attend at mess on a date fixed by the officer Commanding.

74. Who is responsible for discipline in the Officers' Mess?

The senior Officer present.

75. What are the Rules of etiquette at Mess?

When the dress for dinner is sounded, or after dinner, no Officer will enter the Mess premises in plain clothes, or with his forage cap. If he wishes to enter the Mess he must ask the permission of the Senior Officer present.

When the Commanding Officer comes in the Mess, or Ante-room, all the other Officers must stand up and remain standing until they get the order to sit down. Before dinner, if the Officer commanding is in the Ante-room, all the other Officers coming in must say "good evening" to him. The President sits at the end of the table which is nearest to the entrance to the Dining-room; the Vice-President at the other end. The Senior officer present will sit at the centre of the table on the right of the President; the other Officers will sit anywhere they like. If there are any guests, the guest of honour will sit on the right of the Senior Officer present, and the others are divided equally. The Senior Officer present may allow the officers to smoke after the wine has been around the table twice. No Officer will leave the Mess table without the sanction of the President.

76. How is the Mess conducted?

By a committee of three Officers. The President will either be a Field Officer or a Captain. A Sergeant can be detailed as

Caterer. Every three months there will be a Board assembled to Audit the Accounts and elect a new Committee.

77. How are the Accounts paid?

Personally to the Treasurer before the 7th of the month, and all Officers who have not paid on that date will be reported in writing to the Officer Commanding, and if by the 15th, the Account is not settled, the Officer Commanding will report the case to the Officer Commanding the division.

78. What subscriptions do the Officers pay to the Mess?

An entrance fee of 30 days' pay, and Annual subscription of 8 days' pay for the dining members, and six days' for the others. All married Officers must dine in the Mess when their families are away.

79. What subscription do Officers, attached for Instruction pay to the Mess?

An entrance fee of three Dollars (\$3.00) and a monthly subscription of Three Dollars (\$3.00).

80. What subscriptions do Officers of the Militia pay to their own Mess?

On appointment, with the rank of Lieutenant, \$10.00. On promotion to the rank of Captain \$10.00 and \$10.00 on each promotion. If an Officer is appointed directly to the rank of Captain, he must pay \$20.00, to the rank of Major, \$30.00, to the rank of Lieut.-Colonel \$40.00.

81. What rules govern passes?

Permanent passes are signed by the O.C. Battalion. All other passes by the Company Commanders. Passes will not exceed six days. Over six days they are called a Furlough, and must be signed by the Officer Commanding the Battalion.

82. What is the difference between "Furlough" and "Leave of Absence?"

Furlough applies to N.C.O.'s and men; Leave of Absence to Officers.

83. How will an Officer ask for Leave of Absence?

In writing to his Commanding Officer. In his application he will give his reasons and his address, also the name of the Officer who will replace him during his absence. In the case of a Subaltern Officer, before sending in his application, he must obtain the verbal permission of his Company Commander.

84. What should an Officer do on returning from Leave?

Report to the Adjutant.

85. How many days' leave can a Commanding Officer grant?

Three days.

86. If an Officer wishes an extension of leave, what should he do? Write or telegraph to the Adjutant.

87. What is the pay of the Officers, N.C.O.'s and men of a Company?

| | | |
|----------------------|-------|-----------------------------------|
| Captain | | \$3.00 per day. |
| Lieut. Qualified | | 2.00 " |
| Lieut. not Qualified | | 1.50 " |
| Col. Sergt. | | 1.10 " After 2 yrs. tm. \$1.20 |
| Sergeant | | 1.00 " " 2 " " 1.10 |
| Corporal | | .85 " " 2 " " .95 |
| Private Soldier | | .75 " " 2 " " .85 |
| Bugler | | .75 " " 2 " " .85 |
| Bugler | | under 18 years of age 40c. a day. |

88. What qualifications should N.C.O.'s have to receive the pay of their rank?

No N.C.O. except Orderly Room Clerks, Pay Sergeants, and Sergeant Cook in the Infantry of the Active Militia, will receive the pay of their rank unless the Officer Commanding certifies on Form D 891.

1st. That he is in possession of a certificate of qualification for his rank, which certificate has been obtained at a Provisional or Permanent School of Instruction.

2nd. Or that he was present the previous year at training and was paid the pay of his rank.

3rd. Or that he has served one year in the Regular Forces or in the Permanent Forces of Canada.

4th. In the case of a Corporal who is in possession of a Certificate granted by a Board of Officers, one of the Members being a Permanent Officer, and that he has passed the examination prescribed by Headquarters.

5th. Or that he has had three years previous training.

89. What do you understand by Efficiency Pay?

Pay at the rate of 15 cents per diem, granted to N.C.O.'s and men under certain conditions. Efficiency Pay is granted to N.C.O.'s and men when called on duty for a Guard of Honour or a Salute.

90. What conditions are required to be able to draw Efficiency Pay?

1. A man must belong to the Active Militia; attend Annual training during a period of at least 10 days.

2. Have performed the duties of his rank, and have been recommended by his Officer Commanding as being entitled to it.

3. Have performed Musketry instructions, and Firing, and have obtained a minimum of 42 points at 100 and 200 yards, 7 rounds being fired at each range, unless the man is exempt.

91. Who are exempt from the Musketry Exercises?

Regimental Sergeant Major, Quartermaster-Sergeant, Orderly Room Clerk, Paymaster Sergeant, Pioneer Sergeant, Sergeant Cook, Stretcher-Bearers. All grooms, 1 cook per Company, unless the Battalion is training at Regimental Head-

quarters. The Bandmaster, Sergeant Drummer, and the Bandmen.

92. How are troops supplied with food, forage, ammunition, and other articles in time of peace?

Food and forage are furnished by the A.S.C. An indent must be sent in a day before the issue is wanted. The Quartermaster prepares this indent and shows on it the number of rations required. Ammunition and other articles of stores are furnished by the Ordnance on an indent from the Officer Commanding. In time of peace, the A.S.C. obtains its supplies from the Contractors. The Ordnance Corps receives clothing from the Contractors, and ammunition from the Quebec Arsenal.

93. What is the composition of a day's rations?

- 1 lb. of bread. In camp 1 1/2 lb.
- 1 lb. of meat.
- 1 lb. of potatoes.
- 2 ozs. of bacon.
- 2 ozs. of beans.
- 2 ozs. of jam.
- 2 ozs. of butter.
- 1 oz. of peas.
- 1 m. of salt.
- 1 m. of coffee.
- 1 m. of tea.
- 1-36 oz. pepper.
- 1 oz. of cheese.
- 6 ozs. fresh vegetables.

94. How are the men paid?

The men are paid weekly by the Company Commander and the accounts are balanced every three months.

95. What books are kept in connection with the Pay?

A pay-list which contains the name of each man, on which are entered all advances received by the soldier, and also all charges against him, like washing, Tailor's bill, Barber, etc., a Captain's cash book and Ledger, and a Pay Sergeant's Cash Book and Ledger.

96. What do you understand by stoppages of pay and fines?

A soldier loses his pay for every day he is in Hospital for a disease contracted by his own fault, or is in Detention Barracks, or is in Guard-room for an offence for which he is found guilty. He is fined for drunkenness. A soldier's pay is stopped to pay his messing, clothes, washing, Barrack damages, etc.

BOOKS AND CORRESPONDENCE.

1. What books should be in possession of officers.

King's regulations. Field service regulations 1 and 2, Appendix training Manuel. Administration and Organization, Field service pocket book, War establishment, Field service Manuel, Infantry Training, Musketry Regulation, Manuel of Military Law, Engineering, Manuel of Topography, Pay and Allowance Regulation, Clothing and Equipment Regulation, K.R. 1877. (VI.)

2. What books should N.C.O.'s have in their possession?

Field service regulation Part I. Appendix training Manuel, Infantry Training, Musketry Regulation, Manuel of Military Engineering. K.R. 1877. (1) (VI.)

3. What books are kept in a company?

Order book, Conduct book, Messing book, Pay List, Cash book and Ledger, Equipment, Clothing and Necessaries returns, Roll book. K.R. 1881.

4. What books are kept in a Battalion?

Army orders, General orders, Regimental orders, Record of Officers services, Digest of Battalion services, Register of Marriages and Baptism, Attestation papers, Letter book, Postage book, Copies and Returns, Deserters book, Register of Recruits, Diary, K.R. 1878.

5. What books are kept by the Quarter-Master?

Equipment and Necessaries, Equipment, Clothing, belonging to the public and issued to the companies. Bedding book, Equipment book, Ration book, Letter book, Copies of boards of officers on equipment, etc. K.R. 1878.

6. Name the different official publications.

(a). Acts of Parliament.

Army Annual Act.

Army Act 1881.

Territorial & Reserve forces Act 1907.

Regimental Debts Act 1893.

(b). Orders published in accordance with Acts of Parliament.

Orders in Council.

Rules of Procedures.

Regulations and Army Orders.

Officials Books:

Pay and Promotion Regulations.

King's Regulations.

Allowance Regulations.

Recruiting Regulations.

Equipment Regulations.
Clothing Regulations.
Infantry, Cavalry and Artillery Training.
Field Service Regulations.
War Establishment.
Mobilization Regulation.
Field Service Manual.
Field Service Pocket Book.
Transport Manual.
Territorial Force Regulation.
Militia Act of Canada.
Manual of Military Law.

7. How do you write an official letter?

On a sheet of foolscap paper with $\frac{1}{4}$ margin. Contains only one subject which is indicated in the margin, Ex. "Leave", "Equipment" etc. All the paragraphs are numbered in the margin. Official letters are sent to the O.C.

All answers and remarks to a letter are made in the form of minutes which are numbered in red ink, beginning by minute No. 1 for the original and so on.

N. C. O.'s and men make their application verbally to the O. C. Co'y.

8. Give an example of a letter with minutes.

EXAMPLE OF LETTER WITH MINUTE

From Capt. R. Marchand, 85th, Reg.
To the Officer Commanding 85th, Reg.
Quebec 12th. October, 1909.

Course of
Instruction.

Sir:—

1. I have the honor to apply for permission to take the next course of instruction at the Infantry School so as to qualify myself as Field Officer. I took my Captain Qualifications in 1907.

I have the honor to be

Sir,

Your obedient servant,
R. Marchand, Capt., 85th. Reg.

2. To D.O.C.M.D. 7.

Forwarded and Recommended.

J. Barry, Lt. Col.

Quebec 12-10-1909.

O. C. 85th. Reg.

3. To O.C. No. 5, R.D., R.C.R.

Will there be a vacancy for this Officer?

J. Barry, Lt. Col.

Quebec 13-10-1909.

D.O.C.M.D. 7—

4. To D.O.C.M.D. 7.

There will be a vacancy.

A. A. Major.

14-10-09.

O.C.No. 5 R.D., R.C.R.

DRESS.

N. B. Every officer must be proud of his uniform and wear it with dignity. Therefore he must always keep it very clean and will not show himself in public with an uniform that does not fit well or is dirty. He should wear his N. P. Cap perfectly straight on his head and not as if it was the old pattern service cap. He will see that his uniform fits well and that his trousers are well creased and his boots cleaned. Nothing is more disgusting than to see a person with a dirty uniform or one that does not fit well; it is a disgrace and insult to the uniform.

1. What are the different orders of dress for Officers?

Review order, Drill order, Marching order, Mess Dress order, Undress order, K. R. & O. C. M., Table A.K.R., Table A.A., p. 277.

2. When are the different orders of dress worn?

REVIEW ORDER (a) State ceremonies; that is when the Sovereign or his representative is present, on parade in celebration of the birthday of the Sovereign, or when specially ordered on the occasion of any parade or ceremony or entertainment at which a member of the Royal Family is present.

(b) Royal escorts.

(c) Guards on Royal residences.

(d) Guards of Honor.

(e) As ordered by O.C. command or independent district and on garrison duty.

(f) General Courts martial.

(g) Ceremonies and state entertainments and when it is considered desirable to do special honor to the occasion. Official and public balls, dinners, luncheons or breakfasts, and evening receptions as may be ordered.

(h) Church parade.

(i) Funerals.

MARCHING ORDER. Training, manoeuvres, marches, inspections as may be specially ordered.

DRILL ORDER. Divisional and brigade parades as may be ordered. All ordinary drills, regimental duties, examinations for promotion. Regimental court martial, courts of enquiry and boards, riding school.

MESS ORDER. Dining at a military or naval mess and with O. C. command or Flag Officer of the navy unless full dress is ordered and at naval and military evening dances and entertainments. Will not be worn at manoeuvres.

UNDRESS ORDER. At districts courts-martial, districts, garrison and special boards and courts of enquiry. At afternoon naval and military entertainments, dances and receptions, in

garrison or on board naval ships; and on other occasions when not on duty with the troops for which no special order of dress is laid down.

K. R. & O. C. M. Table A., p. 194, K. R., p. 277.

3. Describe the different orders of dress.

REVIEW ORDER—Full dress, head dress and tunic.

When mounted, Pantaloon, butcher boots.

When dismounted, Trousers, Wellington boots. On guard infantry officers will carry great coat, haversack and water bottle.

When the order is staff in blue, the staff will wear frock coat.

White leather gloves (rifle regiments, Black.).

MARCHING ORDER. The staff will wear undress uniform (patrol jacket). At manoeuvres, black leather leggings and ankle boots instead of the butcher boots. Brown leather leggings will be worn in drab service dress. The following articles will be carried by regimental officers. Haversack, water bottle, field glasses, pocket book, field message book, great coat or water proof sheet. Brown leather gloves (Rifles, black) Helmet or N. P. cap, drab serge, trousers of same material, lace boots, puttees.

MESS ORDER. Coat and waist coat, white shirt, black tie, trousers and wellington boots.

DRILL ORDER. The staff will wear the undress uniform (patrol jacket) and if mounted, butcher boots. The following articles will be worn when ordered: field glasses, haversack, water bottle great coat, or water proof sheet, brown leather gloves (Rifles, black).

UNDRESS ORDER. Sword will be worn when on duty and as the occasion may require when not on duty. Forage cap frock coat, rifles patrol jacket, Highland regiments, white or red drill jacket. Trousers, sword belt, girdle or sash, wellington boots, white gloves, rifles black.

N.B. In Canada active militia officers do not wear the khaki except those appointed before 1904, or when permission had been obtained from H. Q. at Ottawa (C.O. 188, Dec. 1903.).

4. What rules govern the wearing of the sword?

Swords will be carried on parades and duties unless otherwise ordered. They will not be worn on board ship at mess, stables or by infantry co. officers on active service or manoeuvres.

Swords of mounted officers will be carried on the saddle in all mounted order of dress other than review order.

The scabbard of officers of dismounted units in review order are to be hooked by those that wear the waist belt over the tunic and carried in the left hand by other officers. The scabbard will be carried in the left hand by dismounted officers when on dismounted duty. In review order, the web sword belt will be worn under the tunic. Officers carrying the colors may wear it over the

tunic under the sash with the sword hooked up. The sword belt will be worn over the frock coat. F.R. & O.C.M. 1311. K.R. 1707.

5. When are spurs worn?

Jack spurs will be worn with butcher boots; box spurs with wellington. They will not be worn: (a) on parade by majors and brevet majors of dismounted units unless these officers are performing mounted duties. (b) on board ship. (c) by officers inspecting armament and magazines. K.R. & O.C.M. 1311. K.R. 1707.

6. When are whistles worn?

Drill order and marching order. K.R. & O.C.M. 1311. K.R. 1707.

7. What are the different order of dress for N. C. O.'s and men?

Review order, marching order, drill order, K.R. & O.C.M. Table B. p. 196, K.R. p. 284.

8. Describe the different orders of dress for N.C.O.'s and Men.

REVIEW ORDER. Great coat rolled or folded, one cartridge pocket, haversack and water bottle (when ordered). Full head dress and tunic.

In hot weather the serge frock may replace the tunic.

MARCHING ORDER. Full head dress, haversack, water bottle and bandolier and the equipment.

DRILL ORDER. Sam brown belt for those for whom it is regulation, two cartridge pockets on waist belt, haversack, water bottle, and great coat rolled or folded when ordered.

9. When is the uniform worn?

Uniform will be worn by all ranks when on duty. It is left to the discretion of the O. C. independent district to permit plain clothes to be worn by officers, Warrant Officers, and N.C.O.'s not below the rank of color sergeant, when not on duty, and by other ranks for the purpose of recreation. Permission may be given by a C. O. to N. C. O.'s below the rank of color sergeant and men of good character to dress in plain clothes when on furlough or pass. Such permission will be entered on the furlough form or pass and will be initialed by the officer granting it. K.R. & O.C.M. 1295, K.R. 1694.

10. Can changes be made to the uniform?

No. K.R. & O.C.M. 1290. K.R. 1691.

11. Is smoking allowed on the street?

Yes, when not on duty. K.R. & O.C.M. 1292, K.R. 1692.

12. Can watch chains be worn?

No. K.R. & O.C.M. 1294, K.R. 1697. On St. Patrick's day the Irishmen can wear a sprig of shamrock in the head dress.

13. How is the hair to be worn?

The hair of the head will be kept short. The chin and under lip will be shaved, but not the upper lip. Whiskers if worn will be of moderate length. K.R. & O.C.M. 1297, K.R. 1695.

14. What are the different chevrons to indicate ranks?

| | |
|-----------------------------|-------------------------------------|
| L/Corporal | 1 woollen stripe |
| Corporal | 2 " " |
| L/Sergeant | 3 " " |
| Sergeant | 3 gold stripes |
| C. S. M. & Color Sergeant | 3 " " & Crown |
| C. Q. M. S., Quarter-master | |
| Sergeant | 4 " " & 6 pointed star |
| Regimental Sergeant Major | 4 " " & Crown |
| Regimental Sergeant Major | W. O. 1 Crown, on the right forearm |
| Sergeant Instructor | 3 gold chevrons & Crown |
| Q.M.S.I., | 4 " " with crossed rifles |
| Gymnastic Sert. Instructor | 3 " " & crossed swords. |

N. B. All chevrons are worn on the right arm. Those of less than four stripes between the shoulder and elbow point downwards, the others on the right forearm point upwards.

On the great coat all chevrons are worsted and worn on the forearm.

15. How are military decorations worn?

On the left breast. The Royal Humane Society medals are worn on the right breast. K.R. 1750.

16. What badge of mourning will be worn?

By officers and warrant officers a band of black crepe 3 1-2 inches wide on the left arm above the elbow. K.R. & O.C.M. 1302, K.R. 1702.

17. What are the badges of rank for officers?

| | |
|-------------------|---------------|
| 2nd Lieutenant | 1 star |
| 1st " " | 2 " " |
| Captain | 3 " " |
| Major | 1 Crown |
| Lt. Colonel | 1 " & 1 star |
| Colonel | 1 " 2 " |
| Brigadier-General | Sword & Baton |
| Major-General | " " & Star. |

18. What do you understand by services badges?

A worsted chevron worn on the left forearm point upwards, by all N.C.O.'s and men below the rank of corporal. Each chevron indicates three years service. G.O. 245 December 1905.

SUPPLY OF AMMUNITION.

1. What is the number of rounds carried for each man in the field?

On the man 120 rounds.

In the Regimental reserve 100 rounds.

With the Brigade Ammunition column 80 rounds.

With the Divisional Ammunition column 50.

With the Ammunition park 100.

Further supply on the line of communications 100. Making a total of 550 rounds.

2. Who is responsible for the Ammunition?

The O. C. battalion, in the limit of his unit. O.C. Artillery Brigades are responsible for the 130 rounds carried by the Ammunition columns under their command.

3. How is the Ammunition carried?

In ammunition carts, and on pack animals. Each cart carries 16 boxes and each pack animal 2. In each box there are 1000 rounds. In each battalion there are 5 S. A.A. carts, and 8 mules giving a total of 96 boxes for the men of the battalion.

4. What other Ammunition is carried in a battalion?

Ammunition for the Machine Guns, 3500 for each gun carried in the G. S. Waggon for the transport of the Guns, 8000 rounds in the regimental reserve, 5000 rounds with the Brigade Ammunition column, 5000 with the divisional ammunition column, 6000 with the ammunition park, and 14000 on the line of communication, making a total of 41500 rounds.

5. On the march, where are the Mules and Carts?

The Mules (2 per company) follow in rear of their company, three Carts follow the Battalion, and 2 carts from each battalion in the Brigade form the Brigade reserve ammunition under an officer detailed by the Brigade Commander.

6. What distance in the rear of their unit are the Mules and Carts?

Mules as near their Companies as possible, according to the nature of the ground, they will advance to within 500 yards of the firing line. 2 carts follow in the rear of the reserve and advance to within 1000 yards of the firing line. The carts forming the Brigade reserve follow in rear and in the centre of the Brigade.

7. What happens when one of the Carts with the supports is empty?

It is sent back to the Brigade reserve, and a full one sent in its place. When there are 4 empty carts with the Brigade a messenger or signal will be sent to the O.C. brigade ammunition column asking for ammunition.

8. What shall be done before an engagement?

Issue 50 extra rounds to the men, these are taken from the regimental reserve.

9. How is ammunition distributed to the firing line?

Each Co.'y Commander will detail 1 N.C.O., and 4 men to carry the ammunition (strong and active men must be chosen) which they take from the Mules. The N.C.O., remains with the mules during the whole of the engagement. After his company has been absorbed he will place his mules in the most favourable position and issue ammunition to the supporting lines.

10. How many rounds are carried by the ammunition carriers?

Not more than 300 rounds.

11. What is done with the ammunition of the dead and wounded?

Section commanders will collect them and re-issue them to the firing line.

SUPPLIES.

1. Who is responsible for the supplies of an Army in the Field?

The Quarter-Master General, assisted by the Director and Assistant Directors of transport and supplies.

2. Give the composition of a ration in the Field?

Fresh meat or canned, bread, biscuit, flour, groceries, fresh or compressed vegetables, jam, lime juice, rum.

The G.O.C., establishes the scale for each item.

3. Give the composition of a ration for animals?

Heavy Artillery horses 15 lbs. of oats, 16 lbs. of hay.

Horses and Mules 10 lbs. of oats, 12 lbs. of Hay.

4. How does an army obtain its supplies in the field?

As much as possible in the country where it is operating. When this is impossible, supplies are brought from the rear. Supply depots are established at the base and along the line of communications to collect supplies, the mobile supplies are replenished at these points.

5. How are supply depots classified?

Base depot, at the base.

Intermediate depots along the line of communications, which are replenished from the surrounding country.

Advanced Depots, which supply the troops.

6. What is the capacity of a supply depot?

1. Officer and 13 N.C.O.'s and men are able to supply 4000 men, 1000 animals. However if baking must be done 15 bakers must be added.

7. What do you understand by Mobile Supplies?

1. The ration carried on the man or horse.

2. Supplies in the regimental transports and supply and transport column.

3. Transport and supply park.

8. How are the rations carried?

On the man, the unexpended portion of the days ration.

In the regimental transport, one bread and meat ration, grocery rations, one of lime juice, jam and rum.

In the divisional transport and supply column, 1 bread and meat ration, 1 grocery ration, jam, lime juice, vegetable, rum, and 1 emergency ration.

In the transport and supply park, 3 days rations, but no emergency ration.

It is the same for the animals who receive a corn ration.

9. What is the composition of a ration?

1 lb. Corned Beef, or 1 1-4 lbs. fresh meat, 1 1-4 bread, or 1 lb. biscuit or flour. The grocery ration consists of 3 ounces groceries (tea, coffee, salt, pepper, sugar).

10. What is the amount of water allowed.

1 Gallon per man for drinking and cooking. A horse drinks 1 1-2 gallons at the time.

In camps 5 gallons per man are allowed, and 10 gallons per animal.

11. Explain the different ways of obtaining supplies.

a. By contract. Experience has proved that this system is unreliable, often contractors are in the impossibility of filling their contracts at the critical time. Impossible if things must be kept secret. Requires a careful inspection.

b. By purchase. This system was adopted by the British in the Peninsular, and the Germans in 1870. This system is the best, as the farmer will always bring supplies if he is sure of being paid immediately.

c. By requisition or contribution. This system is adopted when persuasion has failed.

Requisition means the obtention of supplies in kind.

Contribution, Collection of money to buy supplies.

DUTIES.

1. What do you understand by duties?

All services which Officers and N.C.O.'s are obliged to perform according to the Duty Roster.

2. Give the classification of duties.

1. Guards for the Sovereign Members of the Royal Family, Viceroys, Captain Generals, Governors of Colonies, Commander-in-Chief abroad.

2. Duties under arms. Divisional, Brigade or Garrison, Regimental.

3. Courts Martial, General, District, Regimental.

4. Boards and Courts of Inquiry. Divisional, Brigade or Garrison Regimental.

5. Working Parties.

6. Fatigues.

These duties are divided in the Regiment into duties for Officers and duties for N.C.O.'s and men.

3. What do you understand by Duty Roster?

A book which contains the names of units and persons called upon to perform duty.

4. How many Duty Rosters are there?

In a Battalion, there is one for the Officers kept by the Adjutant. One for the N.C.O.'s, kept by the Sergeant-Major: one for the men kept by the Company Orderly-Sergeant, under the supervision of the Company Sergeant-Major. There is also one for the N.C.O.'s for Company duties, kept by the Company Sergeant-Major. In the case of Officers and N.C.O.'s their names are entered by seniority. In the case of men, alphabetically.

5. What are the duties of the Orderly-man of a Company or a tent?

He is responsible for the cleanliness of that part of the Barrack-room which is common to all. He will draw the day's rations, and will report any damage or loss to the N.C.O. in charge. He is on duty for 24 hours, from reveille to reveille, and will attend all Parades.

6. What rules govern the conduct of a soldier on duty?

On guard he will keep himself perfectly straight and smart. On piquet or escort, he is responsible for the prisoners in his charge, and he must be ready to turn out at a moment's notice.

7. What are the duties of a N.C.O. in charge of a fatigue party?

He is responsible for the conduct of his men. He will see that they perform their work properly. He will not dismiss them without obtaining the permission of the Officer who has ordered the fatigue.

8. What are the orderly duties which a N.C.O. is called upon to perform?

Regimental Orderly Sergeant. Company Orderly Sergeant, Regimental Orderly Corporal. Company Orderly Corporal. Guard Duty, Canteen Duty. Marching Sick. Drilling of the defaulters, etc.

9. What are the duties of a N.C.O. marching sick?

The Regimental Orderly Sergeant will hand over the sick, which he will march to the Hospital, and will hand over the sick-report to the M.O. After the Medical Inspection he will bring back the sick reports to the Orderly-Room. At retreat he will go to the Hospital and bring back patients discharged. Men who are going to Hospital must take with them all they need to clean themselves.

10. What are the duties of the N.C.O. in charge of defaulters?

He is detailed for one week. He is responsible that they fall in and are dismissed at the proper time, and perform the required amount of punishment drill. In Battalions where there is a Provost Sergeant he will perform these duties.

11. What are the duties of the N.C.O. on Canteen duty?

He is detailed every day. He will see that the Canteen is opened and closed at the proper time, and that only persons entitled to enter the Canteen are allowed in. That persons under the influence of liquor do not remain in the Canteen and that local orders are observed.

12. What are the duties of the N.C.O. at the gate?

He is detailed daily and will see that no N.C.O. or men leave Barracks without being properly dressed. That nobody leaves or enters Barracks without permission. He will confine all persons returning drunk to Barracks. He will see that local orders are observed, and that men going on fatigue are in charge of an N.C.O. or soldier responsible for them.

13. What are the duties of the Company Orderly-Corporal?

He is detailed weekly. He will see that the Orderly-men parade at the proper time for the distribution of rations. He will parade the defaulters and men detailed to take the meals to the Guard. He will also parade the sick, and hand them over to the Regimental Orderly-Sergeant.

14. What are the duties of the Regimental Orderly Corporal?

He is detailed daily. He is the assistant of the Regimental Orderly-Sergeant. When no N.C.O. is detailed for this duty, he will march the sick to Hospital.

15. What are the duties of the Company Orderly-Sergeant?

He is detailed for a week. He will call the Roll at Reveille, at meals and on all Parades. He will parade the men for duty.

the defaulters, the sick and the prisoners. He will prepare the Company parade-slate: passes and sick report, also the Minor Offence report. He will furnish the Regimental Orderly Sergeant with a list of the men on pass, defaulters or prisoners. He will keep and post the list for the duties. He will see that the men are warned for duty. He will be present at the 10 p.m. Parade. He is responsible for showing the daily Orders to the Officer of his Company.

16. What are the duties of the Regimental Orderly-Sergeant?

He is detailed for duty daily. He will accompany the Orderly Officer in his visit to the Barracks. He will parade the men for fatigue also the orderly-men for the distribution of rations, also the defaulters and the sick, and will hand them over to the N.C.O. concerned. He will parade the prisoners for the Orderly-room, and the men with the meals for the Guard. He will prepare a list of the prisoners and defaulters for the Canteen and the gate. He will be present at the issuing of Orders, obtain a copy and show it to the Field Officer. He will assist the Orderly Officer at "lights-out", and will hand in a written report to the Sergeant Major.

17. What are the duties of the Commander of the Guard?

He will read the Orders to the Guard and show them to the men. He will inspect each relief going on duty or coming off. He will see that the sentries are changed every two hours, but at night, or in very cold weather, or again, in bad weather, he can change them oftener at the discretion of the O.C. He will visit the sentries twice by day and twice by night. Further more, he will send a N.C.O. or man to visit them at irregular intervals. He will not allow any man to leave the Guard without permission. He is responsible for the prisoners in his charge. He will visit and inspect all men confined for drunkenness at least every two hours. He will prepare the Guard-Report, M.F.B. 160, containing a list of all prisoners whether in Hospital or in the Guard-Room, also the hour he has been visited by the Orderly Officer, and the manner in which he has posted the sentries.

18. What are the duties of the Orderly Officer?

He is on duty for 24 hours. He will visit the Barrack-rooms one hour after Reveille, and see if they are clean. At meal hours he will inspect the Dining-rooms, and enquire if the men have any complaints. He will attend the distribution of rations, and see if they are of good quality. He will attend all Parades, and in the absence of the Adjutant, will inspect the duties and march them off. He will turn out and inspect the Guard once by day and once by night. He will visit the Latrines, Canteen, Kitchens, Workshops at least once during his tour of duty. He will inspect the picquet at Retreat and 10 p.m., also be present at "lights out." He will send a written report to the O.C. the following day.

19. What are the duties of the Captain of the day?

As in the preceding question, except that he will leave the Subaltern of the day to perform a part of them.

20. What are the duties of the F.O. of the day?

He will be present at the Garrison Parade Ground when the duty men parade. He will visit his guards once by day and once by night. Unless otherwise ordered, he will perform his duties mounted. He will take charge of the picquets in case of fire or riot. He will send the Guard-Reports to the O.C. the station, and send in a written report to the O.C. Commanding Station.

21. What do you understand by Duty State?

A list prepared by the Company Commander each week, showing the number of men available for duty, and how every other man is employed, also the number of nights each man has in bed.

22. How are the Officers detailed for duty?

The Adjutant or Brigade Major will publish their names in Orders.

23. How are the N.C.O.'s detailed for Duty?

The Sergeant-Major will prepare his list, and hand it over to the Company Orderly Sergeant; who will notify the N.C.O.'s concerned.

24. How are men detailed for duties?

By means of Daily Orders posted in central places in the Quarters of each company. Every soldier must read these Orders.

25. What will happen when an Officer's tour of duty comes for two duties at the same time?

He will perform the senior.

26. Can an officer be detailed for more than one duty at a time?

Yes, if in the opinion of his Commanding Officer, he can perform them.

27. What do you understand by overslaugh.

When an officer's tour of duty comes for two duties at the same time. He will perform the senior and receive credit for the two.

28. What requirements must an Officer have to count a Court Martial as a tour of duty?

The Court must assemble and the Member must be sworn. When the Court is not sitting the Members are available for other duties. The same rules apply also to Courts of Inquiry and Boards of Officers.

29. What should Officers wishing to exchange duties do?

Address a written application to the Adjutant. Both Officers must sign it.

30. When can an Escort, picquet or Guard count a tour of duty?

When they have been marched off the Parade ground to go on duty.

31 How should Brevet Officers (F.O.'s) perform their duties?

Garrison duties according to their Brevet rank. Regimental duties according to their Regimental rank. When they perform Garrison duties they are mounted.

32. When is a Guard or detachment Commanded by an Officer?

When it is composed of 20 men or more.

33. At what hour is Reveille, Retreat and Tatoo sounded?

Reveille between 5 o'clock in Summer and 6.30 in Winter. Retreat at Sunset. Tatoo, 1st. Post 9.30 p.m. last post 10.00 o'clock. Lights out 10.15 p.m.

34. What calls are sounded between Tatoo and Reveille?

None except the alarm or the alert to call out the troops. When the alert is sounded troops must turn out fully equipped.

35. What compliments will be paid by Guards?

Guards will turn out and present arms when an armed corps passes them, in case of an armed party the sentry alone in this case presents arms. They will not pay any compliments between "Retreat" and "Reveille," except to Grand Rounds. A mounted detachment in passing a Guard will draw swords.

N.B. By armed corps is meant either a Regiment of Cavalry a Battery of Artillery with guns, a Brigade of Artillery with or without guns, at least two Companies of Garrison Artillery, 4 Companies of Engineers or a Battalion of Infantry, with or without the Colours. Guards will turn out and present arms:—

1. To the King. Members of the Royal Family, Governors General, Generals in Uniform. Lieut.-Governor in the limit of his Province. F.O. of the day once by day and once by night.

A Regimental Guard will turn out and present arms to the O.C. Regiment once by day, no matter of what rank he is.

Guards will not turn out when unarmed party passes their post. Guards including Guards of Honor mounted, for the King. Members of the Royal Family, will not pay compliments except to members of the Royal Family and in the case of guards mounted for a Viceroy or Governor they will not pay any compliments to any Officer of a lower rank. These guards, when they are inspected by the Officers on duty, will turn out at the slope.

36. If the persons mentioned in the preceding question pass in rear of their post, what will happen?

The Guard will turn out but will not present arms.

37. What should the Guard do when the fire alarm is sounded?

Turn out immediately and remain under arms until told to turn in.

38. What is a picquet?

An armed detachment detailed to help the Civil Authorities to suppress troubles in which private soldiers are concerned. The picquet will be served with ammunition. When employed to

suppress trouble it will be under the orders of an Officer. A Regimental picquet called out to pick up drunks, etc., will be armed with the bayonet only.

39. In what formation does a guard turn out?

In two ranks facing the front at the slope if composed of two files or more.

40. Describe the routine observed in a Battalion daily.

At Reveille the men get up, dress, make up their beds, clean up the Barrack-rooms, so that everything is in order half an hour after reveille.

Dress for the first parade is sounded 20 minutes before the Parade. This gives the men time to get ready. The ration call is to notify the men that the rations are ready for distribution. The cook-house call which sounds 15 minutes before meals is to notify the Orderly-men to parade at the Cook-house to receive the meals which they divide equally between the men. The call "Orderly Sergeants" at meal time notifies the orderly men to parade with the meals of the Guard and prisoners in the Guardroom. The second call at meal time is to notify the men to sit down to eat their meal. Sick call is to notify the sick to parade for the M.O.'s Office. Defaulter's call to notify the defaulters to parade. Orders, to notify the Orderly Sergeants to parade at the Office of the Sergeant Major to receive Orders. Orderly-Room call, to notify the Prisoners and witnesses to parade at the Orderly-room. When Reveille, Retreat and Tatoo are sounded, the Guard will turn out to be inspected by its Commander. "Lights out" is a signal to put out all the lights.

Routine Hours. 5.30 a.m. Reveille, 6.10 dress for first parade, 6.30 a.m. 1st. parade, 7.30 a.m. Rations, 7.45 a.m. Cook-house call, 7.55 a.m. Orderly Sergeants, 8.00 a.m. Breakfast, 8.40 a.m. dress, second Parade, 9.00 a.m. 2nd. Parade, 10.00 a.m. Orderly-room, 10.40 a.m. dress for 3rd. Parade, 11.00 a.m. 3rd. Parade, 12.45 p.m. Cook-house, 12.55 Orderly Sergeants, 1 p.m. dinner, 1.40 dress for Parade, 2.00 p.m. 4th Parade, 4.45 p.m. Cook-house, 4.55 Orderly Sergeants, 5.00 p.m. Supper. Between 6.00 and 9.00 p.m. at irregular hours the defaulter call should be sounded when the defaulters will be called upon to report at the Guard Room to answer their names. 9.30 p.m. 1st. post, 10.00 p.m. last post, 10.15 Lights out.

41. Duties in Aid of Civil Power.

In what circumstances is the Militia called out in aid of civil power?

In case of riot, or to prevent riot.

42. How is the Militia called out?

By a written application signed by three Magistrates. One must be the Mayor of the place or the Warden of the County. This application is sent to the O.C. troops at the nearest station.

43. What should the O.C. troops do on receiving this application?

He will decide whether or not he will grant it. If so, he will order a detachment of his Corps strong enough to face the situation to parade, and he will notify by telegram the O.C. Division so that Militia H.Q. will be informed afterwards. He will send further information in writing. The O.C. Division will notify Headquarters, and will forward the written application from the locality.

44. What are the duties of the Officer in Command of the Detachment?

Upon his arrival he will be received by the authorities who have applied for the troops. He will be conducted to the place indicated by the Magistrate. His troops will march in the ordinary Military Order, and will take the necessary precautions for protection. He will not allow his troops to be isolated, and will not allow them to be placed in a way that they cannot defend themselves. He will see to the distribution of ammunition, and also see that the Magistrate who accompanies them remains with them. If possible, before opening fire, he will explain to the mob that if he fires his fire will be effective.

45. What should a Magistrate do before asking an Officer to open fire?

If possible he will read the Riot Act, if this has not been done already. The reading of the Riot Act is important, because it notifies the rioters that if they do not disperse an hour after the reading of the Act, they are liable to be fired upon. Sometimes one can dispense with reading the Act if lives or properties are endangered.

46. How are troops called out in aid of Civil Power divided?

If the detachment does not exceed 20 files, it will be divided into 4 sections, more than 20 files into more sections. Troops will not fire without first receiving an order from the O.C. Before giving an order to fire, the O.C. must get the Magistrate to ask him to do so, in a loud tone of voice, so that everybody will hear him, and if possible, he will get the Magistrate to write the order and sign it.

47. How are troops re-called?

The Magistrate will notify the O.C. troops that he does not require their services any longer. The Commander will send in a report of the events. He will send it to the O.C. Division for transmission to H.Q., Company Commanders will then prepare their pay-lists.

48. Who pays the troops called out in aid of Civil Power?

The Municipality which has asked for them, unless in certain places where the Government is interested to help in the suppression of trouble, in which case the Governor-General in council will authorise the Government to pay part of the expenses.

49. What pay will the troops receive when called out?

Their ordinary pay, plus active service allowance.

50. To what punishment is liable, a man who refuses to turn out in aid of the Civil Power?

If an Officer, a fine not exceeding \$100.00.

If a private soldier \$20.00.

51. What should an Officer in charge of an armed party do in passing a Guard?

He will carry sword and give the command "eyes right" or "eyes left." If the detachment has no rifles he will give "eyes right" and salute with his hand.

52. What is the composition of a Guard of Honour?

To receive a Member of the Royal Family, or attend a State Ceremonial:

100 men with a Captain and 2 Lieutenants. One carries the colours, with a Colour Sergeant and four Sergeants and an escort for the Colours. He will also have a bugler and the Regimental Band.

To receive a distinguished visitor, 50 men and two officers one carrying the Regimental Colours, and the Regimental Band.

DISCIPLINE AND MILITARY LAW.

1. What do you understand by discipline?

Strict obedience of orders. It is the first duty of a soldier.

2. What do you understand by Military Law?

The law which governs a soldier in time of peace or war.

3. What is the object of military law?

To maintain discipline. Every military offence must be punished as soon as committed, often very severely. Civil law is too slow and the code too complicated, and could not be administered by officers who are not experienced in law, further more, most of the military offences, even the most serious, are not offences at all according to civil law, or only are looked upon as breaches of contract.

4. Where is military law contained?

In the Army Act, supplemented by the rules of procedure, King's regulations, army orders, and in Canada the Militia Act.

5. What is the Army Act?

An act to enforce discipline in the army.

6. What do you understand by the Army Annual Act?

An act of parliament, passed each year which maintains the army act in force, its object is to save the constitutional principle, for parliament to control the wants of the army and also allows to amend the Army Act which is used very much.

7. Is a soldier subject to civil law, when he is under military law?

In becoming a soldier he does not lose his civil rights, but on the other hand his civil rights are limited as regards his debts or support of his family.

8. Can a soldier found guilty of an offence by civil power be tried by military law?

No.

9. Can a soldier found guilty of an offence by Court Martial be tried by civil power.

Yes, but in passing sentence the civil court will take into consideration the military punishment undergone.

10. Before the introduction of the army act, how was the army governed?

By articles of war published by the crown.

11. What do you understand by martial law?

Martial law in its proper sense means the suspension of ordinary civil law and the administration of the country by military courts.

12. What do you understand by C.B.?

C. B. means confinement to barracks for a certain number of days, not more than 42, without interruption, during this time

the defaulter must answer his name on certain hours during the day, he will be employed as much as possible on fatigue duty and in this manner relieve the well behaved men. He will attend all parades and perform his duties in his turn. When there are not enough fatigues to employ him, he is liable to punishment drill, he will not be obliged to do any punishment drill after 10th day.

13. What is the meaning of detention and imprisonment?

Detention has been introduced in the scale of punishments so that soldiers found guilty of purely military offences will not have their reputations stained by the stigma attached to imprisonment, as a rule imprisonment is only given for serious military offence which in the opinion of the court call for the discharge of the man with ignomy.

A man sentenced to detention will be sent to the detention barracks, and a man sentenced to imprisonment will be sent to a civil prison.

14. Explain military custody.

In the case of a private soldier who is not under sentence it means arrest, close or open; under open arrest he will not leave barracks until his case has been disposed of, he will attend all parades but will not be detailed for any duty except those covered by section 42 of the Army Act, under close arrest a private soldier will be placed in the guard room in charge of a guard picquet, patrol, sentry or provost marshal, he will be searched and his knife, and other belongings will be removed. In the case of an officer or N.C.O. arrests are open or close, when open arrest is not specified, it always means close arrest. An officer or N.C.O. under close arrest will not leave his quarters or his tent in camp except to take exercise by the order of the medical officer, he will be in charge of another officer or N.C.O. as the case may be, under open arrest he can take exercise at stated periods, he must not leave the camp or barracks. If the circumstances require it an officer or N.C.O. may be placed in a guard room in charge of the guard. An officer or N.C.O. under arrest will not be allowed the privileges of the mess, he will not wear his sword, belt, sash, or spurs, he must always appear in uniform.

15. Can an officer place his senior under arrest?

Yes, if the senior engages in a quarrel, fray, or disorder, or his conduct is unbecoming an officer and a gentleman. Like drunk on parade.

17. How is a complaint made?

In the case of an officer he will parade before the commanding Officer and explain his case, the officer commanding will refer the matter to the G. O. C., if this is not done the officer can make a written complaint and request that it will be forwarded to the proper authority, pointing out that if this is not done he will send it direct to the proper authority. In the case of a N.C.O. or private soldier, he will parade before his company commander,

the company commander will inquire into the matter and report it to the commanding officer, then the commanding officer will deal with the case himself or report it to superior authority. If the N.C.O. or private soldier thinks his captain does not look after his case he may ask to be paraded before the commanding officer and if he cannot get redress from the commanding officer he will wait until the annual inspection of the G.O.C. and then make his complaint.

18. Define mutiny.

Mutiny means collective insubordination or again 2 or more persons bound together to resist authority. A single person cannot be charged with mutiny.

19. What do you understand by lawful command?

An order which is not contrary to civil law and is also justified by military law.

20. Are religious scruples any excuse to neglect or refuse to obey an order?

No, no matter how bona fide they may be.

21. Who can release an officer under arrest?

The officer who has ordered the arrest or the superior authority to whom the case has been reported.

22. What do you understand by minor offence?

A slight irregularity committed by a soldier like being late on parade, untidy cot, etc., these irregularities are entered on the minor offence report. The O.C. company disposes of these cases, he will send the minor offence report to the orderly room for the approval of the officer commanding, who signs it, afterwards it is attached to the guard report of the day.

23. What constitutes a crime?

Any offence against any of the following:—

Mutiny.

Insubordination.

Absence without leave.

Drunkenness, etc.

All the accusations are entered on the crime sheet, M.F., B. 214, which will be signed by the O.C. company and sent to the guard room to be entered on the guard report M.F.B. 237, the charge can be made verbally before being entered on the crime sheet, the charge must be made within 24 hours of the arrest of the accused, if the commander of the guard does not obtain it and it cannot be obtained at the end of 48 hours the officer commanding will order the release of the accused.

24. How is a sentence of C.B. detention or imprisonment given?

C. B. always in days; detention and imprisonment up to 7 days in hours, example 168 hours, over 7 days to 6 months in days, example 90 days, 6 months to a year in months, over a year in years.

25. What are the offences which may be dealt with by a commanding officer?

Section 6, (except when on active service) section 8 (2) (except when on active service) section 9 (2) (except on active service), section 10 (1) section 11, section 14, section 15, section 18 (1) and (3), section 19, section 20, section 21, section 22, section 24, section 27, section 40 of the Army Act as a rule the officer commanding will dispose summarily of the first offence against these sections, also those of a less serious nature any other charge he wishes to dispose of summarily will be referred to superior authority with the necessary explanation. The officer commanding can refer any case to superior authority with an application for court martial.

26. What is the difference between summary and minor punishment?

Summary punishment which affects the pay of a soldier, minor punishments like C.B., extra guards, etc.

27. What are the powers of a commanding officer subject to the right of a soldier to elect to be tried by court martial.

The commanding officer can impose the following summary punishments, not exceeding 28 days detention. An officer under the rank of field officer never more than 7 days, in the case of absence without leave he can give as many days detention as there are days of absence, if the absence exceeds 7 days, he will not give more days detention than there are days of absence, fines not exceeding \$6.00, stoppages of pay under section 138 of the army act, he can impose the following minor punishments: C.B. not exceeding 28 days, extra guards, picquets. These punishments are only awarded for offences committed when parading for these duties, admonition, reprimand, severely reprimand.

28. Can a C.O. award a combined sentence of detention and C. B.?

Yes, if the detention does not exceed 168 hours, but the combined sentence must not exceed 14 days.

29. Can a private soldier under sentence be awarded a new sentence for any offence?

Yes, so long as the sentence does not exceed 42 days.

30. When the sentence comprises detention and C.B. which part will be served first?

The C.B. will start at the expiration of the sentence of detention.

31. When does a sentence begin?

C.B. from the moment of the award. While undergoing a sentence of C.B. if a man receives a fresh award for a fresh offence, the second award will begin on the completion of the first. A sentence of detention in hours will begin at the hour the soldier is received at the detention barracks, or if it was impossible to have him admitted at the detention barracks on the date of the award the sentence will begin the following day at the hour

set to receive the accused into detention barracks. A sentence of detention in days begins from the moment of the award, if a man under detention receives a new sentence for a new offence the 2 sentences run concurrently.

32. Can a Commanding Officer impose or award stoppages of pay for absence without leave?

No, he will simply inform the soldier of the number of days' pay he will forfeit under P. & A. Regulations.

33. What rules govern forfeiture of pay of a soldier?

a. Six hours absence counts as one day's absence, even if part is in one day and part in another.

b. 12 hours consecutive absence, part in one day and part in another counts as two days.

c. If a private soldier owing to his absence has missed a duty and another man was detailed for it, he will forfeit his pay, no matter how short was the absence.

34. When can a private soldier claim trial by court martial.

When the sentence affects his pay.

35. When does a soldier forfeit his pay?

For every day he is absent without leave, every day he is in detention barracks, either condemned by civil or military authority, every day he is under arrest charged with an offence for which he is afterwards convicted, every day he is in hospital for a disease contracted by his fault.

36. Give the scale of fines for drunkenness?

1st. offence no fine.

2nd. offence \$2.00

3rd. offence and every subsequent offence if within 3 months \$6.00, within 6 months \$5.00, over 6 months \$3.00 the amount of the fine is stopped from the soldier's pay.

37. When is the commanding officer obliged to dispose of cases of drunkenness?

Any case of simple drunkenness, unless the accused has already 4 cases of drunkenness in the preceding 12 months or has elected to be tried by court martial.

38. When can a private soldier be tried by court martial for drunkenness?

For drunkenness on active service, on duty, or after having been warned for duty or again cannot perform the duty for which he has been detailed owing to his state or again has 4 cases of drunkenness in the preceding 12 months.

39. When can a commanding officer award detention for drunkenness?

In cases of drunkenness which are liable of trial by court martial and the circumstances are of a very serious nature or require severe punishment, or again when the amount of unpaid fines is \$10.00.

40. What punishment can a commanding officer award a N.C.O.?

Admonition, reprimand or severely reprimand, or if the N.C.O. has only an acting rank, deprive him of his stripes.

41. What are the powers of a company commander?

Up to 7 days C.B. for minor offences, extra guards and picquets, fines for simple drunkenness, absence without leave when a soldier loses his pay automatically he can also award punishment not exceeding 7 days C.B. for these offences. He can admonish or reprimand N.C.O.'s under the rank of sergeant.

42. What is the power of an officer who has not got more than 3 years service?

He cannot award more than 3 days C.B.

43. Can an officer adopt a new system of punishment?

No, he must follow those laid down by regulations.

44. Can an officer increase a punishment?

No, but he can diminish it.

45. Can an N.C.O. resign his rank?

Yes, with the permission of his commanding officer, but this will not be allowed if the man is liable to trial by court martial for an offence he has committed unless sanction has been obtained from superior authority.

46. What should be done when an N.C.O. is convicted by civil power?

The officer commanding will refer the case to an officer not below the rank of brigadier general, and if he thinks the N.C.O. should be reduced, he will refer the case to superior authority for transmission to militia headquarters.

47. Can a commanding officer alter the records of the conduct book?

Not after the sentence has been completed, but if an officer not below the rank of brigadier general finds that the sentence is too excessive within 2 years from the date of the punishment he can order that his sentence be expunged or reduced, if 2 years have elapsed, the case will be referred to Militia Headquarters.

48. What is the limit of the fines?

By a commanding officer not exceeding \$6.00, by court martial not exceeding \$10.00.

49. How are investigations of charges carried out?

In cases of drunkenness, at the end of 48 hours and in any other case after 24 hours, the soldier will be paraded before his company commander, with the witnesses, the company commander will then inquire into the case; if the charge is not proved he will dismiss the case, if it is proved he will refer the case to the commanding officer if he cannot dispose of it himself, if the case is remanded for the commanding officer the commanding officer will either dispose of it himself or refer it to superior authority.

50. What is a Court of Inquiry and its object?

The Army Council can order a Court of Inquiry, also a commanding officer, to arrive at a decision on important subjects, this court might be obliged to express an opinion. When the court

of inquiry affects the military reputation of an officer or private soldier he will be allowed to be present during the whole of the inquiry. The number of officers who compose this court is decided by the officer ordering the court.

51. What do you understand by a Board of Officers?

A board of officers differs from a court of inquiry in this respect, that it refers to matters of interior economy, like condemning clothing, etc.

52. How many kinds of courts-martial are there?

Three, Regimental, District, and General, also Field General.

53. What punishments can be awarded by the different courts-martial?

In the case of an officer, penal servitude for at least 3 years, imprisonment with or without hard labor for 2 years, cashier, dismissal from the service, loss of seniority in the army or regiment, to which he belongs, reprimand or severely reprimand; in the case of a N. C. O. or private soldier penal servitude for 3 years, imprisonment, for not more than 2 years, discharge with ignominy, also in the case of a N.C.O. loss of seniority, reduction to a lower rank or reduction to the ranks, stoppages of pay and fines.

54. Who can convene a court-martial?

a. General; His Majesty, or an officer, who has received the power from His Majesty.

b. District; by an officer who has the power of convening a general Court-Martial, or an officer who has the power of assembling a D.C.M.

c. Regimental; an officer who has the power of assembling a D.C.M. or a G.C.M. also an officer not below the rank of captain in command of one or more detachments, or on board ship an officer of any rank.

55. Of how many members are these courts composed?

a. General; in England, India, Malta, and Gibraltar not less than nine members, other places not less than 5 members and they must have three years service and not less than 5 members must be of the rank of captain or above it.

b. District; 3 members who must have at least 2 years service.

c. Regimental; at least 3 members, who must have 1 years service.

56. Of what rank should the president of a court-martial be?

a. General; he must not be below the rank of Field Officer, unless the exigency of the services prevent from so doing, in any case an officer, not below the rank of captain will be detailed.

b. District, as in "A."

c. Regimental; Captain, unless none are available.

57. Who details the president of a court-martial?

The officer who convenes the court.

58. What are the powers of the different courts-martial?
a. General; death, penal servitude and all punishments enumerated in section 53.

b. District; cannot try an officer or award a sentence of death or penal servitude nor give more than 2 years detention, or imprisonment with or without hard labour, fines not exceeding \$10.00, loss of seniority, reductions, etc.

c. Regimental; cannot try an officer, warrant officer nor N.C. officer above the rank of sergeant, nor pass a sentence of more than 42 days detention, reductions, or fines exceeding \$10.00.

59. What is the rule to be followed in the case of a court-martial assembled to try an officer?

In the case of a commanding officer, as many members as possible must be of equal rank to the accused, none of the members of a court-martial assembled to try a field officer should be below the rank of captain.

60. What is required to award a sentence of death?

The concurrence of two-thirds of the members.

61. What officers are not eligible to sit as members of a court-martial?

Officers who are not subject to military law, the convening officer a witness for the prosecution, the officer who has taken the summary of evidence, the officer who has made the first investigation or an officer who was a member of the court of inquiry assembled to inquire into the charges and the company commander who has made the first investigation, the officer commanding the unit to which the accused belongs, a person who has an interest in the case or a person who has not the required service.

62. How is a regimental court-martial assembled?

It is published in regimental orders as follows:—

A regimental court martial will be assembled at day date and hour, to try the accused person or persons named in the margin or any other accused persons that may be brought before them.

President

Captain has been appointed president.

Members.

Lieut.

Lieut.

Members in waiting

Lieut.

All witnesses will be warned to attend.

The proceedings will be sent to the adjutant.

(Signed) Captain
Adjutant Regiment.

63. How is a general or district court-martial convened?

The officers who convene these courts-martial act as follows:—

The officers commanding the regiment having remanded the accused for D.C.M. will take himself or detail another officer to take the summary of evidence in the presence of the accused. The accused will be allowed to cross examine the witnesses. The summary of evidence begins as follows:—

"Summary of evidence in the case of No.
Pte. Regt., charged with

"1st witness No. Pte. having been duly cautioned states." The witness signs his evidence. At the end of the summary, the officer who takes it will state the rule of procedure 4 (c.d. & e.) has been complied with.

c. Means that the evidence was taken in the presence of the accused.

d. Means that the accused was allowed to cross examine the witness.

e. Means that the witness has read and signed his evidence. All evidence or confessions made by the accused will be attached to the summary of evidence, the accused will be examined by a medical officer to see if he is fit for service or not. A certificate will be written on form B. 321, and signed by the medical officer, all documents will be attached to this form in their proper order; this form is also the application for a court-martial, the officer commanding signs the form and then it is sent to the A. A. G., of the division, the following documents are attached to the application:—

Copy of charge sheet in duplicate, and in case of desertion a written confession, also a statement whether the accused was apprehended or gave himself up, also if the accused has elected to be tried by D.C.M. summary of evidence, certified copies of company and regimental conduct sheets of the accused, list of witnesses for the prosecution and the defence with their address, statement of evidence of the accused, list of officers available to sit on courts-martial, all these documents will be sent to the officer commanding the division who will read them over convene a court, then a divisional order similar to that example of a regimental one given above will be published. All the members must be detailed from division headquarters or this might be left to the officers commanding units except in the case of the president who will always be appointed by the convening officer.

RULES OF PROCEDURE.

64. What are the powers of a commanding officer as regards the investigation of charges?

Each commanding officer will see that nobody serving under him, is kept under arrest for more than 48 hours after the case has been brought to his notice unless it is impossible to do so in

which case he will report the matter to superior authority. All charges will be heard in the presence of the accused and if he wishes to have it done the officer investigating the case may place the witnesses on oath.

65. Should the evidence be read to the witness?

All evidence will be read to the witness in the presence of the accused and the fact must be mentioned.

66. How is a charge sheet prepared?

A charge sheet will contain all the charges which will be tried by court martial. Example of a charge sheet:

"The accused No. Pte. of Regt. of the Active Militia of Canada is charged with
"Drunkenness"

In that he at the drill hall, Quebec, on 2nd October 1915, at or about 10.00 p. m., when on sentry was drunk."

The charge sheet is divided into two parts, first the fact, second the circumstances of the case.

67. What chance is given the accused to prepare his defence?

Every person to be tried by court-martial will have a chance to prepare his defence, he will be allowed to see his friends, witnesses, and lawyer, in the case of a regimental court-martial 18 hours before the assembly of the court and in the case of a district court-martial 24 hours.

68. What should the accused know before being tried by court-martial?

An officer notifies him of the charges against him and will ask him for a list of his witnesses in order that he may warn them to be present, he will give the accused a copy of the charge sheet and the summary of evidence, he will also inform him who are president and members of the court.

69. What inquiry is necessary to find out if the court is properly constituted?

After having read the order convening the court, the president will see that the court is convened according to the army act, that the officers are eligible to sit and that the president is of the required rank, in the case of a G. C. M. that the officers are of the required rank after which the court will examine each charge, also inquire if the person is subject to military law and can be tried by court martial, also that the charge contains an offence against the army act.

70. If the court is not satisfied with the above questions what should they do?

Address a written report to the convening authority.

71. If the court is satisfied on the above point what will happen?

The prosecutor, who must be a person subject to military law, will be told to take his place and the accused will be brought before the court.

72. What will happen after the accused has been brought before the court?

The president will ask him if he objects to be tried by him or any member of the court.

73. What will happen if the accused objects to the president and members?

First of all the accused must give his reasons, then the court will decide whether it will allow them or not, if the objection against an officer other than the president is maintained this officer will withdraw and another officer will be warned to take his place, if there is no officer available the court will adjourn and report the case to the convening officer. If the objection is maintained against the president the court will adjourn and address a written report to the convening officer. The accused has no right to object collectively to the members of the court, if he persists in doing so, the objection against each member will be taken up separately.

74. Can the accused object to the prosecutor or judge advocate?

No.

75. After the objections have been disposed of what will happen?

The president and members will be sworn.

76. What plea can an accused register?

Guilty or not guilty. If he does not plead intelligently or refuses to plead, a plea of not guilty will be registered, the president will inform the accused, that if he pleads guilty he will be found guilty and if the summary of evidence is not very clear will recommend him to plead not guilty although the accused offers a plea of guilty, he can also offer a plea "At Bar" stating that he has already been tried on this charge by civil court or another military court or again that the offence was dated 3 years previously or that it was pardoned.

77. What will happen when the court registers a plea of guilty?

The court will accept any evidence on behalf of the accused regarding the charges, then the summary of evidence is read and attached to the proceedings the accused may make an address with a view of asking the leniency of the court, afterwards the court will ask the prosecutor to read the statement of character of the accused then the court will be closed to consider the sentence.

78. What will happen if the accused pleads guilty to one charge and not guilty to another?

The charge to which he pleads not guilty will be disposed of first.

79. Can the accused change his plea?

Yes at any time during the trial.

80. What will happen when the accused pleads not guilty?

The prosecutor if he so desires can make an address, witnesses for the prosecution will be heard and then the president will ask the accused if he wishes to give evidence himself as a witness and that if he does so he will be placed on oath and will be liable to cross examination by the prosecutor, after having heard the evidence of the defence the court will be closed to consider its finding.

81. What finding will the court register?

Guilty or not guilty.

82. What happens if the court registers a finding of guilty?

The accused will be brought back before the court the evidence of the prosecutor as regards the character and service of the accused will be heard and the court will be closed to consider their sentence. The court will pass only one sentence although there may be several charges then the proceedings will be sent to the confirming officer.

83. What will happen if the court registers a finding of not guilty?

The president will sign the finding and read it in open court, after which the proceedings will be sent to the convening officer.

84. What does the confirming officer do?

In the case of proceedings which do not require confirmation he will make no remarks, but if he thinks it necessary he will address a report to the person concerned. In the case of a sentence requiring confirmation he can order the court to reassemble to revise the finding or sentence or both, giving his reason; or again he can confirm the proceedings or withhold confirmation.

85. What happens when the sentence or finding is sent back for revision?

When the findings are sent back for revision and the court changes its finding a new sentence will be passed, if the sentence alone is sent back for revision the court will not change the finding, in no case is the court allowed to increase the sentence.

86. How are the proceedings of a court martial promulgated.

As a rule publicly in front of the unit to which the accused belongs.

87. What other pleas can an accused offer?

Plea to the jurisdiction of the court, or that the accusation, or the charges made against him do not contain an offence against military law.

88. When can the prosecutor give evidence?

After he has made his address and before any witness for the prosecution is called.

89. When is a charge considered outlawed?

If more than 3 months have elapsed, since the accused has left the service and ceased to be subject to military law except in the case of mutiny, treason, desertion, and felony which are never outlawed.

90. What do you know about a Field General Court Martial?

This court is an exception, it has the same powers as a general court martial and can try an officer. It is convened in a special way and is guided by special laws, it is convened only on active service or abroad when for state reasons or public interest it is impossible to convene a general court martial, it is composed of three members unless it is impossible to find three members, in which case it cannot pass a sentence of death, a sentence of death requires the unanimity of the members.

91. What are the duties of the prosecutor?

He is there to assist the court in administering justice and will act with impartiality, his object is not to obtain a conviction but to find the truth.

92. What are the duties of the president of the court-martial?

He is responsible that the trial is conducted properly and in a dignified manner, his duty is to see that the accused gets a fair and impartial trial and that he suffers no disadvantage of his disposition, owing to his ignorance or incapacity in examining witnesses.

93. What persons are subject to military law?

All officers of the regular force or officers serving under officers of the regular force. Officers of the permanent staffs which are not otherwise subject to military law, other persons who are not otherwise subject to military law, and who are employed under the orders of officers of the regular force. Any person who with the sanction of the secretary of state accompanies an army in the field in an official capacity or accompanies an army with the permission of the commander in chief, officers of the Indian Army, Officers of the Reserve on duty, officers of the Active Militia of Canada, N.C.O.'s and men of the regular army, Indian Army, or employed with the regular army, militia and yeomanry and territorial forces called out for annual drill, in aid of civil power or on active service.

94. When are the officers, N.C.O.'s and men of the Royal Marine, subject to military law?

When they are on shore and their names not carried on the log book of any ship.

MILITIA ACT.

1. How is the Militia of Canada divided?

Into Active Militia.

Into Reserve Militia.

The Active Militia is composed of (a) Corps raised by voluntary engagements, (b.) Corps raised by ballot.

2. Who forms part of the Active Militia? Give the classification.

All male inhabitants between the age of 18 and 60 who are not exempt or disqualified by law and who are British subjects. There is nothing in the law to prevent persons under the age of 18 to enlist as buglers or drummers. The Male population which might be called upon to serve in the militia is divided into four classes:

1. Men between 18 and 30 years of age who are single or widowers without children.

2. Men between 30 and 45 years of age single or widowers without children.

3. Men between 18 and 45 years of age married or widowers with children.

4. All men between 18 and 60 years of age.

This classification is also the order in which the population is called on.

3. What persons are exempt to serve in the militia?

Members of the King's Privy Council for Canada. Members of Executive Councils of the different provinces. Deputy Ministers of Federal and local governments. Officers and clerks of the Inland Revenue. Wardens and other officers of Prisons and Asylums. The clergy and ministers of the religion. The members of the Naval Militia. Members of the Police force and Fire brigade of cities and villages. Professors of Colleges, universities and religious orders. Pilots and apprentice pilots during the navigating season. The cripples and fools. The only son of a widow being her only support. People whose religion or doctrine does not approve of rendering military services or of bearing arms. Officers on the unemployed list or retired officers of the regular forces are not obliged to serve in a rank lower to the rank they hold in these forces. Nobody can be exempt unless he has filed an affidavit prepared by a justice of the peace to the O. C. of his district; at least a month before the exemption is required.

4. What is the length of service in the time of peace?

For the Active Militia, three years.

5. Of what is composed the Permanent force; what is its object?

Troops engaged permanently and not exceeding 5000 men. The object of the permanent force is to establish schools of instruction for the training of the active militia and supply instructors. The permanent force is at all times available for general service.

6. Explain the procedure to be followed to take proceedings in civil courts against a militiaman?

No proceedings will be undertaken against an officer in accordance with this act unless the complaint has been made by the militia council; or no proceedings will be undertaken against a militiaman unless the complaint has been made by the Officer Commanding or the adjutant of the corps he belongs to; or the captain of his company; The officer commanding or the company commander can authorize another officer to act in his name. The authority of this officer will not be questioned except by the O. C. concerned. No proceedings will be undertaken if six years have elapsed except in the following cases. Having bought illegally or having illegally in his possession articles of clothing or equipment the property of the crown or of the unit; also in cases of desertion. Any sum of money due to the crown for damage done to arms or equipment the property of the crown will be considered as a legal debt and recovered as such. Any action or proceedings under this act against an officer or person will be heard in the district where it has been committed. No proceedings will be taken if six months have elapsed since the offence was committed except in the case mentioned above. No plaintiff can gain his case if the defendant has made sufficient amend before the proceedings were started or has paid in court a sum of money after the proceedings were started in which case the plaintiff can request the court to grant him the cost of the action up to the time the payment was made in court. No action will be taken against an officer unless a month's notice was given before starting proceedings.

7. What are the fines and punishments awarded by the civil power?

An officer who knowingly claims payment for training performed with his regiment for a man belonging to another corps or for an officer or soldier who was not present or knowingly enters on his parade or return the name of a person not belonging to his corps and any man who claims pay for training performed in another unit or in several units in the same year is guilty of an indictable offence.

An officer who under false pretences obtains or keeps in his possession the pay or money belonging to an officer or soldier guilty of an indictable offence.

Any officer or soldier who knowingly signs a false parade state or payroll is liable to a fine of \$100.00.

Any person who refuses to give information regarding an officer so as to enable him to complete a report is liable of a fine not exceeding \$20.00 for each item of information required, and any person who refuses to give his proper name and necessary information or gives the wrong name and information is liable of a fine not exceeding \$20.00 for each offence.

Any officer or soldier who refuses to ballot or makes a return required by this act is liable of a fine not exceeding \$ 50.00, if an officer and \$20.00 if a man.

Any man enlisted in the militia who refuses or neglects to take the oath of allegiance or refuses to make a declaration required by the law when a magistrate or an officer demands it if found guilty by a justice of the peace is liable for the first offence to be imprisoned for a period not exceeding 12 months.

Any officer, militiaman or other party who impersonates another person is guilty of an indictable offence and is liable of a fine not exceeding \$100.00.

Any officer or militiaman who refuses or neglects to help his C.O. to make a return or refuses or neglects to obtain the required information is liable if an officer to a fine not exceeding \$50.00 if a man not exceeding \$25.00.

Any officer or militia man who without excuse refuses to be present on parade or drill or refuses or neglects to obey a lawful command is liable of a fine not exceeding \$10.00 if an officer and \$5.00 if a man.

Any person who interferes with the training of a unit or trespasses on the limits fixed by the officer commanding is liable of being arrested and detained in prison by the order of the O.C. till the day's work is over, also liable of a fine not exceeding \$5.00 for each offence.

Any officer or soldier who refuses to obey an order or is insubordinate or misbehaves himself is liable of a fine, if an officer of \$25.00 if a man \$10.00.

Any man who refuses or neglects to keep in good order his arms and equipment is liable of a fine not exceeding \$4.00 for each offence.

Any person who without authority sells or removes arms and accoutrements the property of the crown or refuses to give them up or has them in his possession without authority is liable of a fine not exceeding \$20.00 for each offence. But nothing in this section prevents bringing up the guilty party before the courts and get him punished more severely. This person can be arrested on an order signed by a justice of the peace before whom the complaint was made if the said person is leaving the country taking with him the articles in question.

Any officer or soldier who refuses to turn out in aid of the civil power is liable, if an officer of a fine not exceeding \$100.00 if a man \$20.00 for each offence.

Any persons who after having been balloted refuses to enlist or serve or any person who advises a person to resist a call or help or advise a person legally enlisted not to appear at the rendezvous is liable of a fine not exceeding \$100.00.

Any person who deliberately violates the provisions of this act is liable of a fine not exceeding \$20.00 for each offence but nothing in this act prevents bringing to court this person with a view of securing a more severe punishment.

CHARACTERISTICS OF THE VARIOUS ARMS.

INFANTRY.

Slow of movement.

The distance which it can cover in one day is limited.

It can move on any ground.

Nights do not stop its movements, and it can dissimilate itself easier than any other troops.

Can fight at long range, or hand to hand.

Can employ rifle fire or bayonet charges.

Can use rapid fire and concentrate in any direction.

Essence of its Action.

By its fire can stop the resistance of the enemy; then complete its defeat by an assault.

N.B. It is necessary to deliver an assault, or to threaten to deliver one, to force the enemy to abandon the battle-field.

CAVALRY AND OTHER MOUNTED TROOPS.

Can move rapidly.

Covers long distances in a comparatively short time.

Can combine attack and surprise to the best advantage.

Can move very rapidly from one end of the battle field to the other and in this way, make use of opportunities which otherwise would have been lost.

Very useful in pursuit and for reconnaissance.

ARTILLERY.

Characteristics of the different kinds.

As the different kinds of Artillery vary very much a special duty is given each according to its mobility also the range of its fire; the strength and power of its projectile.

HORSE ARTILLERY.

The most mobile of all Artillery. Projectiles are not very heavy (13 pounders). Very useful as an aid to Cavalry attacks. Can also combine its action with that of the other arms in battle.

FIELD ARTILLERY.

Less mobile than the Horse Artillery. Projectiles are heavier (18 pounders). It is composed of guns and howitzers, and forms the major part of the artillery of our army. Its duty is to assist the Infantry by all means possible so as to obtain superiority of fire.

HOWITZERS.

Projectiles are more powerful than those of field guns.

The angle of the ascent of the projectiles is more acute (steeper).

Can fire behind cover at high angle, and in this manner get cover more easily.

It is used to attack the well hidden guns of the enemy, and also the enemy itself when in deep trenches.

It is employed also to support the final assault by keeping on firing when the Infantry is reaching its goal.

By means of projectiles loaded with high explosive: can destroy buildings, covered parapets and walls.

MOUNTAIN ARTILLERY.

Projectiles are very weak.

Can pass on any broken or mountainous ground.

Can move in open Country or flat ground without being over-exposed.

Can be employed in country too difficult for Field Artillery.

In open or flat country, can assist or support Infantry at close range which it can do better than the Field Artillery, owing to the facility with which it can find cover.

HEAVY ARTILLERY.

(Field pieces, 4.7 and 60 pounders).

Less mobile than the rest of all the Field Artillery.

Its projectiles are most powerful.

It is used to engage the shielded guns of the enemy by means of oblique fire, also to enfilade covers which ordinary Field guns can attack only by means of frontal fire.

Also to search distant points. Destroy buildings and other cover used by the enemy.

In the final stages of the attack to support the assault by converging its fire against difficult and important points.

HEAVY ARTILLERY (i. e. Garrison).

Guns of large calibre employed against big war-ships.

Also has guns with a high angle of fire to attack the bridges of war-ships. Also defend the approaches near the shore and prevent enemy from disembarking or landing.

ENGINEERS.

The other arms of the Service are responsible to construct their own defence work.

Engineers are used for special works, or to help other troops

The Engineers which accompany the Army are divided into Field Troops with a mobile equipment to accompany the Cavalry.

Special Duties.

Help to cross Rivers. Repair roads or other means of communications. Prepare localities for defence. Help in the cutting up of the enemies communication by destroying Railroads, Bridges, Telegraphs, etc.

FIELD COMPANY ENGINEERS.

Form part of a Division.

Duties.

Construction of defensive works.

Improvement of communication, and, in certain measures, construction of roads and bridges.

Demolishing of obstacles and the reinforcement of captured localities.

Also helps in preparing and maintaining water supplies.

SIGNAL COMPANIES.

Form part of a Division.

Duties.

Maintenance of communication between the Commander and the different parts of the Division

BALON COMPANIES.

For observation and reconnaissance.

PONTOON TRAIN.

To repair and construct bridges.

FORTRESS COMPANIES.

Duties.

In connection with a siege.

RAILWAY COMPANIES.

Duties.

To maintain, repair and operate Railways

INFANTRY IN BATTLE, I. T. SEC. 114-120.

1. What general principles should be remembered in studying tactics?

That no two military operations are alike. The ground, its extent the co-operation of the other arms, the strength and the morale of the enemy, physical conditions, the object in view, must always vary. It is, therefore, impossible to give a system of attack which does not vary, all we can do is to give general principles.

The position adopted by one or the other side may change during the engagement. Take for instance, an enemy offering battle in a defensive position, can by a counter attack, force adversary to assume the defensive, or the attacker may fight a delaying action in one part of the field and in another simply use the offensive. But in all the variations of the battle there is only two main lines to consider:—**the attack and the defence.**

2. How is the difficulty of command increased?

By the fact that the commander can no longer lead his men by word of the mouth, nor direct personally his subordinates further, even at long range mounted officers are often obliged to dismount.

3. During an engagement, how can a commander influence the course of action?

By means of his reserves. However, a commander can exert a great influence on the engagement if he acts as he should, that is, gives clear, comprehensive, and concise orders, which have been prepared after a careful reconnaissance which are distributed to the subordinate commanders; these orders must also secure the co-operation of the different parts of the force.

4. What points should a commander always remember in choosing his position?

Have a good field of view, must be central enough to allow to receive and give orders easily.

5. Where should subordinate commanders place themselves?

Where they can best supervise their command and the enemy, receive and transmit orders.

6. What points should a commander always remember?

That he must never interfere with his subordinates. There are no doubts that personal example is of great value, principally when facing a heavy fire, and very often it is necessary to sacrifice everything to prevent the troops from becoming panic stricken. A commander who tries to exert personal control on all the parts of his force will neglect some of his duties, like the reinforcing of the firing line at the right moment and at the right place, receive the counter-attacks, address reports to the superior commander.

and maintain communications with the commanders of units on his flanks.

7. Is the rifle a powerful weapon?

The rifle is certainly the most deadly weapon which can be given a soldier; in the last wars it was responsible for 85 per cent. of the casualties inflicted to the enemy.

8. What is the object of the rifle in attack?

Facilitate the forward movement. So that the men who are halted can protect the advance of those who cannot fire. More than any other arm, the infantry can use its weapon to facilitate its mobility. One must turn to advantage this facility of movement if he wants to get full benefit from the rifle.

9. For what object is the fire used in the attack?

To force the enemy to remain hidden in his trenches. also demoralise him, so as to come to a hand to hand fight. Although it is very powerful, the rifle alone cannot obtain a rapid and decisive success, unless the enemy is exposed to a powerful and effective fire. Against troops behind cover, rifle fire is of little effect in comparison to the number of rounds fired, therefore one cannot expect to force the enemy to abandon his position simply in using rifle fire.

10. In this case how can we force the enemy to retreat?

In delivering an assault, or oftener in advancing to the assault, if the enemy is demoralised.

11. When should an assault be delivered?

"When the superiority of fire has been obtained." The culminating point of the infantry attack is the assault, which will be delivered when the superiority of fire has been obtained. Any assault delivered against an enemy who has not been previously demoralised by an effective fire has very little chance of success, and very often runs the risk of being repulsed with heavy losses, as the attacker must cease fire when advancing to the assault, and the enemy has the power to develop his fire.

12. For what main object is rifle fire employed?

a. To attract troops in the required direction. Experience has proven that well trained troops when struck by fire are attracted towards it.

b. Principally in the defence, fire may be employed to interfere with the enemy's movements, because if fire is not opened too soon, the enemy might be induced to deliver a premature assault, then if an effective fire is opened while the enemy is exposed, he will either be forced to rush in advance or retire.

Well trained troops will follow the first principal. In this manner the defender can force the attacker to deliver separately attacks which he intended to make simultaneously.

13. To use fire intelligently what is required?

To know its probable effects on the enemy. An effective fire, opened suddenly, has a very demoralising effect. Therefore, it is

sometimes advantageous to keep from firing, if one wishes to surprise the enemy.

14. What is the result of bad or uncontrolled fire?

Such fire causes very little damage, it tends to encourage the enemy, in making him believe that the attacker is demoralised and cannot cause him serious losses. Such a fire employed against well trained troops is useless, if not worse.

15. What is the ordinary fire unit?

The section, which comprises the greatest number of men that can be commanded by one man. Sometimes, under certain conditions, at long range, a captain can himself control his company.

16. On what rests the value of a fire unit commander?

On his ability to apply the fire of his unit, at the right time, in the right volume, on the proper target.

17. What are the duties of the fire unit commander?

- i. Carry out the fire orders he has received from his superior.
- ii. Point out the targets.
- iii. Give the orders to adjust the sights and windgages.
- iv. Make sure that the sights are well adjusted.
- v. Regulate the volume of fire.
- vi. Redistribute the ammunition of the dead and wounded.
- vii. Control the expenditure of ammunition and make the necessary arrangements to replace it.

18. Who decides when to open fire?

The captain of the company, whether he controls directly or not his company. But the battalion commander is the chief authority to give the order. The captain makes the necessary arrangements to distribute or concentrate the fire, indicates the targets to the fire unit commanders and regulates the supply of ammunition.

19. What does the firing line require to obtain the superiority of fire?

Ample supply of ammunition. When the supply is limited this consideration affects the time at which fire should be opened. It is advisable for the battalion commander to give orders on this point. As a rule, company commanders give orders on this point according to the circumstances of the case.

20. In arriving at a decision, what points should a company commander remember?

i. If fire is opened too soon, the occasion of making a surprise is lost, furthermore, the position is given away, which, under all probabilities, the enemy would not have discovered.

ii. Beyond 1400 yards, no matter how well the fire is controlled, it counts for very little in the fight to obtain the superiority of fire. Special circumstances, like the apparition of a

numerous corps of the enemy in a vulnerable formation can justify the employment of fire at long range principally in the defence.

iii. Between 1400 and 600 yards, collective fire, well controlled will give a better result than a fire which is not controlled, when everybody is left to himself to choose his target and fire where he pleases; such a fire ceases to be effective beyond 600 yards and does not counter balance the expenditure of ammunition.

21. What deductions do you make from the above given rules?

In the attack, fire should rarely be opened when satisfactory progress can be made without it. When progress is no longer possible, the troops covering the advance of the firing line and supporting, it will open fire to allow it to capture fire positions, from which points the firing line can overpower the enemy's fire. Subject to this rule, fire in the attack will be opened when there is an occasion to produce a good effect, or again if by not opening fire great losses will result.

In the defence, as ammunition can more easily be replaced, fire can be opened at long range if there is an advantage to be gained, principally if the different ranges are known. However, if a decisive result is aimed at, it will be advisable to keep the fire for the closer ranges.

22. Why is it necessary to have the whole of the enemy's line under fire?

To disturb his aim, to cover and prevent any movement. However, if a vulnerable target is seen, or a greater effect is required at certain point, fire can be concentrated with advantage. The effect will be increased, if the fire of two distant points can be concentrated.

23. Is enfilade or oblique fire better than frontal fire?

Its material and moral effect is greater; generally it comes from an unexpected point, and has a greater target.

24. When should oblique fire be used?

a. In the attack, occasions will arise when, owing to the configuration of the ground, certain parts of the firing line advance quicker than others.

b. In the defence, commanders may beforehand make arrangements to create occasions to use this fire.

25. What considerations will affect a company commander to decide which fire to employ?

The target, the desired effect, the range and the ammunition supply.

26. When should rapid fire be employed?

When it is necessary to beat down rapidly the enemy's fire, like when reinforcements are advancing, or when supporting the advance of units in the neighbourhood. Also when protecting the retreat of other troops, in the pursuit, or again, when targets

appear for a short period. In the attack as a final preparation previous to the assault; in the defence to beat down an enemy advancing to the assault.

27. What is the effect of rapid fire?

A well directed fire coming from an unknown direction, causes a great surprise. The employment of rapid fire for short periods allows to observe the result of the firing and to adjust the sights. Allows to control the firing in critical circumstances. These periods of rapid fire must be limited, and rapid fire must not be used except when necessary; if rapid fire is used for long periods it excites the troops, tires them and tends to the wasting of ammunition.

28. How should rapid fire be considered?

As a reserve of power which is used when the occasion requires it. Good aim must be combined with rapidity, and it must not end in a race, the winner of which will be the party who fires the greatest number of rounds. As a rule, independent fire must be used, when each man takes his time and every time he fires he strikes the target.

29. In advancing to the attack, what target should be chosen?

As the object of fire in the attack is to allow the troops to advance, the targets chosen will be those which prevent the advance of the troops.

30. How will the company commander correct the different ranges?

He will choose a man from each section who has a good reputation in the judging of the distances to judge the distances, and if the company is in possession of a mekometer, it will be a great help to verify them. One must not rely too much on this mode of estimating the distances, they must always be checked, either by means of the mekometer, in measuring them on the map, or by asking them of the artillery or other units in the neighbourhood.

The company commander will also use these men to help him judge the result of the firing, by watching the troops in the neighbourhood of the enemy, also to maintain communications between the different sections. They will not use their rifles as long as they are required for these duties.

31. What do you understand by fire discipline?

Strict obedience to orders, attention to signals, combined with an intelligent observation of the enemy. This allows to make sure that the sights are correctly adjusted, each man fires deliberately, saves the expenditure of ammunition, and also ceases firing when the target disappears.

32. What considerations affect the battle formations?

First the object in view, and the ground. But, so as to reduce the casualties, allowances must be made for the effect of fire on

the different formations, at rest and on the march. On the other hand, if the infantry must use its full power and obtain the best result with the ammunition expended, it must know which target is the most vulnerable in the different conditions of the battle field.

N. B. Experiences carried out lately, show that at effective range infantry advancing rapidly without losing control, suffer fewer casualties, than if it remained lying down, even under fairly good cover. This is due to the moral effect that a continued advance has on the enemy, and the constant changing of the targets. Casualties are always heavier in the retreat than in the advance.

33. What formations should be adopted at the different ranges?

At ranges beyond 1000 yards the greatest losses come from the artillery fire of the enemy. Against direct artillery fire, small shallow columns are less vulnerable (section in fours or files.) These columns, if they make use of all the ground at their disposal, will be on an irregular frontage so that the range to each column will be different. The intervals between these different columns will be 50 yards, as the radius of explosion of a shrapnel is 25 yards, the distance between each will exceed 200 yards. The forward effect of the bullet of a shrapnel is 200 yards. If the infantry is surprised by the enemy's artillery fire, losses will be best avoided in adopting proper or suitable formations and in advancing rapidly, as it makes it more difficult to find the range than by getting under cover. The enemy's artillery, under all probabilities, would have discovered the position and found the range.

Small infantry columns are less vulnerable at long rifle range (2000-1400 yards) than if they were deployed with small intervals. It is also easier to control them. Although there is nothing serious to be expected from infantry fire at ranges beyond 1400 yards, it might happen sometimes that one is obliged to cross zones swept by this unaimed fire at these ranges. Units must be ready to assume formations which reduce the casualties. This will apply not only to the firing line but also to the supports and the reserves and other formations. The angle of descent of the bullet at these ranges is so steep that it is practically impossible to find good cover, and therefore, it will be best to pass these zones rapidly. At ranges behind 1400 yards, a line of skirmishers is less vulnerable than a close formation if the ground is swept by infantry fire. It is advisable for the troops advancing to the attack to deploy even before they are obliged to fire. Small column formations must be kept as long as the situation does not require any change. (It is easier to control troops in these formations than when they are extended.) As a rule, deployment will be carried out only when it is necessary to open fire, at what

distance deployment will be carried out depends on the volume of fire wanted and the result of the enemy's fire.

The more a line is extended, the less good will be the results of the firing, and when the fight for the superiority of fire commences, casualties are reduced not so much by the formations adopted than by the material and moral effect of their fire, and more again by the fire of the troops covering the movement.

34. What happens when the enemy's fire stops the advance of the firing line?

It will be necessary to advance by rushes, which will be made by the whole line or a portion of it, in alternating.

35. What rules govern these advances?

Parallel lines of skirmishers will suffer less in advancing together if the distance between each is 200 yards or less. The greatest amount of casualties occur when the men get up to advance or lie down when halting. It goes without saying, if the men get up and lie down together the enemy has not got time to find a target and fire. But if they get up or lie down one after another the enemy's attention will be attracted and he will wait his chance. When arriving at close range, these rushes will be limited in length. The length of the rushes will depend first on the efficiency with which the troops which cover the advance can stop the enemy's fire. Secondly, on the ground and the physical conditions of the troops. If, as an example, a fire position offering good cover is seen, behind which the men can rest a long rush to occupy it may be made. In the same way, if the firing line finds a slope offering no good cover it will be better to run to the bottom than to stop half way. On the other hand rushes made without object tire the troops and prevent them from firing effectively and furthermore, offer the enemy a good target.

36. When arriving at close range what happens?

It is important to have a fire as strong as possible, otherwise it will be impossible to cross the ground, if the enemy's fire has not been beaten down. The advance of the firing line must be covered by the fire of other troops, or again, in increasing the volume of fire of a part of the line while the rest is advancing. The volume of fire may be increased in bringing the supports in the firing lines.

N.B. One must always bear in mind that the ultimate object of the advance is the assault, also that the fact of advancing man by man or in crawling forces the advance to go more slowly, and one must never employ it when advances can be made otherwise.

37. Should infantry be afraid of the cavalry?

The effect of fire which the infantry can develop against the cavalry is such that if the fire of the infantry is good and well aimed it has nothing to be afraid of in the cavalry charging, if there is no dead ground over which the cavalry can advance unseen. Any formation which allows to fire rapidly and correctly

is good enough to receive the cavalry. The fact of closing a line of skirmishers to receive cavalry is not advisable, as by so doing a target is offered to the enemy's artillery, who might have sent the cavalry just to find such a target. Even if the cavalry passes through a line of skirmishers, the men will suffer very little if they remain very quietly in their place. If there is danger of the cavalry charging, flanks must be looked after.

38. What effect has infantry fire on the artillery?

Artillery coming in action or preparing to retire offers a good target for rapid infantry fire, and firing at long range will be permissible. Infantry will find it a difficult task to put out of action artillery protected by shields, but will be able to interfere with the gun crew. Decisive results will be obtained if oblique or enfilade fire is used.

Machine guns on carriages are as vulnerable as artillery, but it is very hard to difference them from infantry when they are mounted on a tripod and carried in action by the detachment. When in position they are a very hard target to find, and to obtain a good result it will be necessary to concentrate the fire of several rifles in that direction.

39. How can casualties be diminished and the effects of fire increased?

In using intelligently all the facilities offered by the ground.

40. For what main object do you use the ground?

To obtain cover, and to hide oneself from the enemy's fire and view. By this allow the troops to advance with the minimum of losses, also cause a surprise. In this case the main object is to hide from view; protection against stray bullets is only secondary. Undulations of the ground, a deep road, a railway embankment a thick hedge, a row of trees, a high wall furnish these covers. The first named one is the one which is generally met, and when at a certain distance it is very hard to recognise it.

If we wish to use the ground for a good end, it is important that those responsible for the direction of the movement make a reconnaissance. In making such a reconnaissance it is important not to attract the attention of the enemy.

41. What will one find in making such a reconnaissance?

That certain lines of advance are better than others, as they offer better cover, and greater facilities for mutual support. Infantry advancing to the attack, should make use of these avenues of approach to capture tactical localities or fire positions from where they can help the forward movement of other troops. In the same manner the line of advance from one position to another should be recognised, and by so doing use the ground as much as possible for mutual support in the attack.

42. What important points should be considered in choosing these covers?

That each man is able to use his rifle to the best advantage. In using his rifle the man must expose himself as little as possible

to the enemy's fire; but, if first of all he looks for protection, he will neglect to use his rifle to the best of advantage and therefore will not carry out his duty.

Cover from view or fire must not offer a good target for the enemy. Moving objects attract the attention quicker than those which are still. Men lying down in dry hay, the color of their uniform, offer a less conspicuous target than if they were lying behind a well defined feature. When lying in the open men must remain perfectly motionless and move only to load and fire their rifles, as the least little movement might attract the enemy's attention. It is better to lie in the open than behind cover, which offers cover from view and not from fire principally if it is conspicuous, like a hedge, embankment, etc. It will be advantageous if it is possible to find fire positions in the open where the men do not show on the sky line.

43. How should the hedge of woods and brush parallel to the enemy's position be considered?

They offer good targets to the enemy's artillery; they must not be occupied unless they offer good cover from fire, because, if the enemy thinks they are occupied, he will concentrate his fire on them. In the same manner, if you can obtain just as good a view of the enemy it will be better to fire around the side of the object than over it, as one is less visible.

44. What must you observe when firing from behind cover?

You must not lose sight of the enemy between each shot as you run the risk of losing your target, and then you fire without following the line of sights.

45. For what are subordinate commanders responsible?

They must notify their superiors, as well as the commanders in the neighbourhood, of the progress of the engagement, and of every important change in the situation. F.S.R.I. section 8-2.

Everybody must remark what is happening in the neighbourhood and send a report to his commander who will send it to superior authority, as well as to the commanders in the neighbourhood. This is the fundamental principal of cooperation in the field; it is essential not only during an engagement but also during all the phases of the engagement (campaign).

46. Who is responsible for the transmission of messages?

The senior present with the unit.

46. How are orders and messages transmitted?

During an engagement, orders and messages passed in a battalion are verbal when they can be given directly by the sender to the addressee. However, these messages or orders must be reduced to a minimum, as very often errors are occurring in the transmission. However, in the firing line messages or orders are always verbal, and they must be passed without noise. As a rule they are passed from one section commander to another.

47. On what does success depend?

On the battle field personal control by a commander is very limited, and success depends on the clearness of the orders which send companies to the attack. It is therefore important not to send a battalion to the attack, without having previously reconnoitered the ground and given the necessary orders, and also give company commanders the time to explain the situation to their men.

48. What should be done if there is time?

Assemble all company commanders and the officer in charge of the machine gun section in a central point where the greatest part of the enemy's position can be seen; every commander will be given an objective, and also be told the objective of the companies in the neighbourhood. When the objective cannot be seen from the position, the direction will be explained on the map, and the compass bearing given. Company commanders will act in a similar manner with their subordinates.

There will be times when it will not be possible to explain the situation thoroughly. It is therefore necessary to be able to act at a moment's notice.

49. How are verbal messages prepared?

Verbal messages take the same form as written ones. They start with the name of the addressee and will finish with the name of the addressor, his appointment, and the hour. Example:—"To the Commander of No. 2 section:—Open fire on the enemy near the wood at 700 yards on your left front. From Commander 'B' company, at 3.00 P.M." Or again, "To the Commander 1st. Royal Scots:—The enemy in front of me, estimated at 29 men is retiring; I am advancing. From Commander 'B' company 1st. Royal Scots, at 5.30 P.M." In verbal demands for reinforcements a resume of the situation must be given so that the commander can judge of the necessity of such reinforcement. Example:—"To the O.C., 1st. Royal Scots:—My company has lost 25 men; the enemy's fire is increasing; I cannot advance unless the fire from the supports is increased. From Commander 'B' company, 1st. Royal Scots, at 2.30 P.M." A verbal message must never be sent without stating who sent it and to whom it is addressed. Example:—"Stop in front." For messages sent by order the rules given in the F.S.R.I. must be followed.

50. What should the recipient of a verbal message do?

He must acknowledge it by a salute of the hand if he can see the sender, if not he will send another message to acknowledge it.

51. What should the hearer of a verbal message do?

Repeat it to show he understands it. The recipient must put it in writing if it is important and get the messenger to sign it.

52. What should the bearer of a verbal message do?

In arriving in the neighbourhood of the addressee the bearer will shout in a loud tone of voice "A message for naming the addressee." He will give him the message and ask for a receipt. It is the duty of the senior present to direct the messenger to the right person.

INFANTRY IN ATTACKS. SEC. 121-147. T. 1914.

1. What should the commander who decides to assume the offensive do?

As a rule he will divide his force into two parts.

2. What are the duties of those two parts?

The first to develop the attack, wear down the enemy's power of resistance in engaging him all along his line and forcing him to employ his reserves, and in this way prepare the way to deliver the decisive blow which will be given by the second part, called the general reserve.

3. What is the strength of these two parts?

As one cannot expect to win a battle without making a turning movement, three-fourths of the force will be allowed to develop the attack and one-fourth for the general reserve.

4. How is the force of the attack divided?

The one detailed to carry out the turning movement will be composed of two parts, and the one for the frontal attack one part.

5. How is the infantry of the attack divided?

1. Scouts. 2. Firing Line. 3. Supports. 4. Local Reserves at the disposal of the battalion, brigade or divisional commander.

6. What are the duties of each part?

Scouts, 4 per company, precede the advance, reconnoitre the ground, look for ambushes, watch the flanks, report all obstacles, discover the enemy's position and observe his dispositions. (Scouts, 8 per company with the double company system.)

The Firing Line, composed of one section of each company (if the sections are numerous, otherwise 2 sections), duties are to begin the attack, engage the enemy after the scouts have been observed, when the enemy's fire prevents them from advancing any farther. If the Firing Line is stopped by superior fire, it will remain in its position and await reinforcements. The supports furnished by the rest of the company will reinforce the Firing Line, or, again, occupy fire positions to allow it to advance further, by keeping the enemy under fire. The local reserves, as a rule formed by the remainder of the battalion. 4 companies will reinforce the Firing Line to give its maximum of density of one rifle per yard. Late experiences have shown that it is necessary to have from 3 to 5 men per yard for the decisive attack. (If using double company system, use 2 platoons for firing, and instead of 4 companies for reserve use two.)

7. What is the extent of ground occupied by a battalion in attack?

A battalion can develop an attack between 250 and 800 yards; and for the main attack between 160 and 270 yards. A company, between 50 and 100 yards. (Double company, 100 to 200 yards.)

8. How should the action of the infantry in the attack be considered.

First, as an advance to fire positions, which must be as near as possible to the enemy's position. Secondly, a fire battle with the object to obtain the superiority of fire, and gradually gain ground on the enemy and advance to a position from which the assault will be delivered. Thirdly, the assault which is delivered when the superiority of fire has been obtained.

9. What is the object of the infantry in attack?

Engage the enemy as soon as there is a chance of success.

10. What is the object of fire in the attack?

Whether it is artillery, machine guns or infantry, fire which supports the advance, or even the fire of the firing line, its object is to allow the force of the attack to advance enough to allow the firing line to deliver the assault.

11. Who delivers the assault?

The general reserve at the proper time. However, the troops which have developed the attack must advance to assaulting distance and lead the enemy to believe that they are going to deliver the assault.

12. What is required to obtain the superiority of fire?

The greatest co-operation possible between the infantry and the artillery; quick firing guns cannot maintain a rapid fire during the whole engagement. Artillery must employ rapid fire when it is noticed that infantry requires help to advance. The infantry must take advantage of these periods of rapid fire to advance.

13. Who must protect the artillery?

Infantry, without receiving special orders, must protect the artillery. If the artillery has a good field of fire, it can protect the front, but the flanks and the rear are the vulnerable points.

14. How should infantry pass artillery in action?

Infantry must not interfere with the firing of the guns. It will pass a line of guns by the flanks or in the intervals between the batteries and brigades. If it is absolutely necessary to pass through the guns it will do so at the double.

15. At what distance does infantry cease to mask the fire of the guns?

In flat country at 500 yards in front.

16. How can the firing line be supported when it gets under effective fire?

In opening from the rear a covering fire and by the mutual support of the units in the neighbourhood. All leaders, even those of the smallest units, must do all they can to apply in all the periods of the engagement the principle of mutual support.

17. How is mutual support organized?

No rules nor systems can be given. In undulating country, the firing line can be supported from fire positions at the rear. In other occasions it will be better to send forward certain troops to occupy fire position from which they will protect the advance

of the troops following them. In turn, the last ones named will occupy positions and will support the advance of their comrades.

Battalion, Company and Squad Commanders must constantly watch their communications with the units in the neighbourhood, principally those on the flanks, so as to help them by all the means at their disposal.

18. What effect on the enemy has an advance continued and decided?

It has a great effect on the nerve and military spirit of the defence. The effect from such an advance will always be increasing, will interfere with the accuracy of the fire of the defence. On the other hand, if the advance shows hesitation and does not seem sure of its work, it gives more confidence to the troops of the defence and it increases the effects of its fire, also its volume. To prevent any hesitation, the object in view must be chosen with care, and explained to all before the advance starts.

19. What do we often remark during an engagement?

That it is necessary that the same body of infantry occupies successively several points which are along the line of advance. Each position captured weakens the resistance of the enemy, and his hold on the main position and opens the way for a new advance.

20. How is each new advance prepared?

Deliberately and methodically; it must be carried out like one operation and each point captured must be used as a support against a counter attack.

21. What should be done by the Firing Line when the fight for the superiority of fire is in progress?

The Firing Line must be reinforced until it has obtained the necessary strength to overpower the fire of the defence. This period of progress will be long. The Firing Line will not on that account diminish its efforts to advance: when it is noticed that the fire of the defence weakens, even if it is only temporary, the Firing Line must take advantage of this occasion to advance.

Gradually the firing will make progress until it arrives in the position from which it will deliver the assault.

22. How will it be noticed that the superiority of fire has been obtained.

The Firing Line will be the first one to notice it by remarking that the fire of the defence weakens, and also by the movements of certain groups of men who are going towards the rear of the position.

The movement to advance to assault will often come from the Firing Line; it is the duty of the commander of the Firing Line who judges that the moment for the assault has arrived to give the signal, and the other commanders will immediately co-operate with him.

23. What should the commander who decides to give the signal for the assault do?

It is most important to deliver the assault with the strongest force possible, as spasmodic and premature attempts will never succeed. The commander who decides to give the signal for the assault must arrange so as to notify the other commanders, and by so doing insure co-operation.

24. When should the Firing Line deliver the assault?

If the enemy is not superior in number and has had his morale shaken by the advance of the attack, the superiority of fire will be obtained rapidly, and it will be better to deliver the assault immediately without waiting for the arrival of the supports, as the time lost may allow the enemy to recover from the shock and bring up fresh troops. In this case it is the duty of the Firing Line to give the signal for the assault.

25. When will the commander of the force himself give the signal for the assault?

When the enemy is strong and decided and fire at close range has been strong and severe, it is then necessary for a commander to reinforce the Firing Line and bring up fresh troops to give the impulse to advance to the assault.

26. How will the Firing Line act during the fight for the superiority of fire?

One after the other the Firing Line will be obliged to occupy a series of positions. As a rule, those which afford natural cover will be chosen, but if none exist and it is impossible for the Firing Line to advance, it will be advisable to give the order to entrench. This cover constructed in a hurry, will allow the attack to resist the enemy's fire and pave the way for a new advance. As the fact of entrenching during an attack causes a diminution in the volume of fire, it will never be ordered unless it is absolutely impossible to advance otherwise. The advance must be resumed at the first opportunity.

27. What should be done with all important points captured?

They must immediately be placed in a state of defence so as to repulse any attempt of the enemy to recapture them. They must be used as supporting points for the attack.

28. Why is it important to have engineers with the local reserves?

To help them to protect the fire positions, of which it has been spoken previously, or other positions captured which the local reserve will be often required to do.

29. What should the infantry lines, following as supports, do?

During the development of the attack, counter-attacks may be expected. The lines of infantry following in supports must take advantage of all occasion to improve the trenches started by the Firing Line, also prepare the positions abandoned by the

firing line to advance further, so as to be able to receive successfully any attack from an enemy superior in number.

30. How is a battalion distributed in the attack?

The distribution of a battalion in the attack will depend on the factors of which we have spoken in the preceding question. No matter what the object in view, is the battalion will be divided into (1) Firing Line and Supports, (2) Local Reserve.

31. What will be the strength of the Firing Line?

In the beginning the Firing Line must not be any stronger than it is absolutely necessary to allow it to make satisfactory progress. As a rule it must not exceed a quarter of the battalion; the supports are furnished by the balance of the companies furnishing the Firing Line.

32. What will be the strength of the Reserves?

In the beginning not less than one-half the battalion.

33. What will precede the Firing Line?

Scouts to reconnoitre the ground and lead the attack. They will be sent forward far enough to the front and on the flanks of the battalion to prevent surprise and obtain on time information of the ground over which it is required to advance.

34. If the country is broken what will follow the scouts?

Connecting files to maintain communication with the scouts.

35. What should the scouts do when they cannot advance any further?

Remain on the lookout until the arrival of the Firing Line, then they will join their companies. Scouts on the flanks will remain on the lookout until recalled.

36. What is the duty of the firing line?

Advance without stopping until a superior fire forces it to halt, then it will await the arrival of reinforcements or a powerful covering fire or the diminution of the intensity of the enemy's fire to be able to resume the advance.

37. What are the duties of the supports?

The supports reinforce the Firing Line when it cannot advance any longer. It is advisable not to send all the supports in the Firing Line at the same time as very often a part of the Firing Line only requires reinforcements. At other times it will be better to push the supports through the Firing Line to occupy fire positions in front of it, the firing line protects their advance as long as possible then assumes the role of support, and vice versa.

38. What is the most important duty of a battalion commander?

After having prepared his plan of attack and given clear and comprehensive orders to the company commanders, the main duty of the battalion commander rests in the effective employment of his reserve. It is by using his reserve that he can influence the course of action. By developing a covering fire or reinforcing the firing line at the right time and the right place, he gives the attack the chance of advancing and in the end

obtains the superiority of fire. Support at the right time is not all that is necessary; it is not sufficient to have the flanks well protected or the advance supported by a good covering fire; he must be able to meet counter attacks of the enemy or face sudden reinforcements received by the defence when on the point of gaining the superiority of fire. The battalion commander must use and assimilate his reserve in such a way as to have always on hand a strong enough force at the critical moment. He must not neglect to reinforce the firing line, nor send his reserves forward, and in any case when the decisive moment arrives he must employ all available men to finish the overthrow of the enemy. Every time that men who have fallen out or are slightly wounded are met, they must be reassembled and formed up as a reserve.

39. In what formation will the reserve advance?

According to the principles given in sections 120-127 Infantry Training. The great point is to advance the reserves without diminishing their force for fighting.

40. What distance should be kept between the different lines?

This will depend on the nature of the ground; if the ground is favorable the supports will follow close to the Firing Line; in open country principles already given will be followed; in close country distances will be reduced.

41. How can we reduce to a minimum the danger of the sections, companies, etc., from becoming mixed up?

It is impossible to prevent them from becoming mixed up, but it can be reduced to a minimum in arranging so that the supports belong to the same company as the Firing Line preceding them.

42. What should the men from the supports and the reserves do in arriving in the Firing Line?

Place themselves under the orders of the nearest section or squad commander if their own is not visible. Platoon and section commanders must divide all the available men, and, if necessary, form new sections. Advantage of cover will be taken to reform the platoons and sections during an engagement.

43. When should bayonets be fixed to deliver the assault?

When at 200 yards from the enemy. The commander who decides to deliver the assault will order the charge sounded and all buglers must take it up. In advancing to the assault the men will cheer, the bugle sound, and the bagpipes play.

44. What should be done if the assault is successful?

Pursue the enemy with its fire and reform for a new advance. Troops must be reorganized and steady to receive a counter-attack if the enemy delivers one. While reorganizing, scouts must be pushed forward to find the enemy and establish contact. It is the duty of subordinate commanders (company platoon and section commanders) to reorganise the troops.

45. What should be done with all captured points?

They should be placed in a state of defence to be used as supporting points. They will be occupied by troops from the rear so as not to delay the advance. For this purpose besides the entrenching tools carried by the men special provisions must be made to have some tools in the neighbourhood.

46. What should be done as soon as the units are reformed?

Get ready to pursue; pursuits must be kept up day and night without taking into account the fatigue of the troops.

47. How should one act in the pursuit?

With vigour and energetically; be ready to accept any risk. Delay for the purpose of detailed reconnaissance or for turning movement is not warranted; the enemy must be attacked as soon as he is seen.

48. How should one act if the enemy is surprised?

It is most important to arrive to close infantry range as soon as possible and increase the state of panic in which the enemy is. In this case we may dispense from advancing from cover to cover, and of gradually building the Firing Line. In the beginning a greater number of men will be placed in it. However, a part of the force must be kept on hand as a reserve to meet counter-attack or other unforeseen danger.

49. How will a battalion acting independently carry out an attack?

According to the principles laid down in the F. S. R.

50. How is a company divided for attack?

The battalion commander assembles all Company Commanders in a central place, explains the object in view, explains, to each his objective, gives them special necessary orders. In turn the company commanders assemble the platoon, section commanders and the scouts he will explain the intention of the C. O. Then he divides his company into Firing Line and supports. No. 1 and 2 platoons Firing Line, 3 and 4 support.

The scouts will precede the Firing Line at 400 yards distance. The supports will follow the Firing Line at 250 yards distance.

51. In giving his orders on what points should a company commander touch?

1. Divide the company (if acting alone, keep a small reserve).
2. Give orders to the scouts.
3. Explain to each platoon its objective and task. Will indicate the line of march and name a platoon of direction.
4. Will make the necessary arrangements to maintain communications with the units in the neighbourhood, will see to the ammunition supply.
5. Will tell the platoon and section commanders where to send the reports and where he will be during the engagement.

52. What are the duties of the platoon commanders?

1. Be always on the lookout to see the signals of the company commander and the scouts.

2. Maintain the direction.

3. See that the section commanders control the fire.

4. Watch the enemy's movements and report their observations to the company commander.

5. If the assault is successful they must not lose any time in reforming their men.

6. During the advance they will take charge of all the men who are alone and keep them until the engagement is over or the force reorganized.

53. What are the duties of the section commanders?

1. If possible before advancing he will explain to his section the object in view and how he expects to carry it out.

2. Choose the best line of advance.

3. Choose the points where to stop his section, also fire positions.

4. See to the maintaining of the direction

5. Control the fire of his section.

6. Co-operate with the men in the neighbourhood to support with his fire their advance to the best advantage.

7. Lead the way from one fire position to another.

8. Try to discover what is taking place and notify the commanders in the neighborhood and his company commander.

9. Control the expenditure of ammunition, collect that of the dead and wounded and take the necessary steps to obtain a fresh supply.

10. Reorganize his section whenever possible.

Section commanders will not use their rifles when they are in command of their unit.

54. What are the main duties of each man?

1. Keep on fighting and do all in his power to carry out the commanders' intention.

2. Judge the distance, fire deliberately, and husband his ammunition.

3. If he is wounded and cannot advance any farther he will place his ammunition in a spot well in view so that the others can pick it up.

4. If he loses sight of his Section Commander he must place himself under the orders of the nearest.

5. If he is separated from his company he will join the nearest.

6. No man will leave his company to carry wounded to the rear unless he is ordered to do it, during an engagement.

Every man who is not wounded will rejoin his company immediately the fight is over. He will give his reasons for his absence.

NOTES.

If reference is made to infantry training 1914, Sec. 123, the points to be considered by a commander in the attack will be seen. The words Car, D.S.O. form a mnemonic for remembering these headings in case an I. T. is not at hand. The mnemonic works as follows:

- C. Communication.
- A. Ammunition and Tools
- R. Reports.
- S. Scouts.
- D. Distribution.
- O. Objective, including direction.

Taking these in order we explain the Battalion Commanders plan the objective and frontage allotted to the company.

Disposal of scouts. The distribution, communication, reserve of ammunition. Reports.

The actual verbal orders will be as follows (this is given only as an example).

"The enemy is reported in position on the upper street, WICKHAM MARKET Road. The G. O. C. intends to attack him, and our battalion is the centre battalion of the three detailed to carry out the attack."

"Frontage has been allotted to our battalion from THREE TUNS INN inclusive to JAVA LODGE exclusive. "A" Company is the right company of the two which the C. O. has detailed for the first line and has been allotted a frontage from THREE TUNS INN inclusive to pt. 104 therefrom exclusive.

"A company of the 174 Mislander will be on our right and "B" company of 175 will be on our left.

The scouts divided into four parties will precede the company, and will move towards the objective on an approximate front of 200 yards. Information is required on the enemy's dispositions and strength, both in front and on the flanks of the company's line of advance, especially as regards the THREE TUNS INN, and on the best line of advance for the Company. They will look out for hostile advanced posts and patrols, and when checked will remain in observation. Special attention will be paid to the WOODS, S. W. GROVE FARM and around LOUDHAM HALL.

The Company will be distributed as follows:—

Firing line No. 1 and 2 platoons.

Supports No. 3. and 4 platoons.

Captain "S" will command the firing line and maintain the direction by the centre on a true compass bearing converted to magnetic 305 degrees. The centre man will march to begin with on the S. E. corner of the wood S. W. GROVE FARM. Lieut. "K" will command the supports.

The following distances will be observed:—The firing line will follow the scouts at 600 yards; the supports will remain 250 yards in the rear of the firing line till the latter has reached the farther bank of the river where it will close up as much as possible.

Each platoon of the firing line will send forward a pair of connecting files, to keep touch with the scouts. The supports will send forward four men to keep touch with the firing line and will drop a similar number to keep in touch with the local reserve.

"Each platoon of the firing line and supports will find a party of three men to keep touch with the neighbouring units, pass informations regarding the movements and the state of affairs both in the vicinity, as regards ourselves and the enemy.

"The signallers will move with the supports and keep up communications with the Regimental H. Q. whose position they must ascertain as soon as possible.

"Communications within the company will be by semaphore and verbal messages. The range takers Ptes. "S" and "B" will move with the two centre sections of the firing line.

"Privates "J" and "G" will move with the right and left sections of the firing line, to assist in the estimation of ranges, which will be ascertained by instruments; enquiries from neighbouring troops and from the map.

These four men will also assist in observation of fire, watch the enemy and neighbouring troops and keep up communications between the sections and squads of the firing line. C.Q.M.S. Jones in charge of the reserve ammunition pack animals, will be assisted by Ptes. "O", "Q" and "P" as ammunition carriers. Touch will be obtained with the Regimentals S. A. A. reserve.

"The reserve ammunition will move off in rear of the supports. The river will be crossed by swimming the animals, the ammunition being carried over the foot bridge. On the observation of the whole Company, in the firing line, C.Q.M.S. Jones, will place his animals in the most favorable position for the issue of ammunition to the supporting lines.

Reports will be sent to the right section of the support.

The following general instructions will be observed:—

1. Water bottles will be filled at the stream.
2. Equipment and rifles will be looked after before moving off.
3. Magazines will be charged before moving off.
4. Mutual support by covering fire will be observed both within the Company and with regard to neighbouring units; even the case of the smallest unit.
- Information will be passed on all opportunity by all ranks.
5. Reorganization will be effected at every opportunity. (I. T. 1911 sec. 129-8.).

6. Section and squad commanders will keep their commands well in hand as long as possible; creeping and crawling is only to be adopted as a last resort. (I. T. Sec. 129-8.).

7. Fire will be held as long as possible (I. T. Sec. 123-3, i. and ii.).

8. Ammunition of casualties will be collected. The first duty of every wounded man is to place his ammunition in a conspicuous place. (I. T. Sec. 137-1, iii.).

Section commanders will now return to their sections and explain the foregoing to every man under the supervision of the half company commanders.

The firing line will move at 10.30 A.M.

✓ INFANTRY IN DEFENCE (I.T. 1914 SEC. 125-136.).

1. How many kinds of defence are there?

I. **Active Defence.** In which the ultimate object in view is to create and seize a favourable opportunity for a decisive offensive.

II. **Passive Defence.** In which the object may be to beat off the enemy's attack without hoping to be able to turn the tables on the enemy, by assuming the offensive, at some stages of the fight, as for example, in the defence of a fortified post weakly garrisoned.

III. **Delaying Action.** Which may take the form of a passive defence, or of a manoeuvring action in which efforts are directed to gaining time without risking defeat, as in the conducts of rear guard.

2. How is the force of the defence divided?

In two main parts, one for the defence of the trenches and the other for the delivery of the decisive counter-attack.

3. What is the relative strength of these two divisions?

The commandant of the force will decide that himself; choose the position for the general reserve (the force which will deliver the decisive counter-attack) the extent of front occupied by the defence and the action of each. As a rule he will keep half of his force for the **General Reserve**.

4. What should be borne in mind when choosing a position for defence?

No matter what is the strategical situation, the fundamental principles of a decisive action aiming at decisive results are constant.

Whether the position is strong naturally or made so artificially, this will not compensate for the loss of initiative, if the enemy has the time and liberty for manoeuvring. The position must be chosen with the object in view of economising the defender and have more men for the **General Reserve**.

6. What should be done when the position can be chosen only at the last minute?

It is advisable to prepare alternate positions along the enemy's line of advance.

7. What conditions should a good position fulfil?

1. The locality chosen must satisfy the plan of operations. This fact will be noticed easily in reading the circumstances related in the general and special ideas, or in active service in reviewing the past operations.

One must always remember that the force of the defence to cover a certain point is not obliged to interpose itself between that point and the enemy.

Sometimes the defence can occupy a position parallel to the line of advance of the enemy, and it will be as good as another. The attacker will not start on his way to attack if the defence occupies a strong position menacing his flank, or rear.

He will find himself in the impossibility (perhaps) of detaching a part of his force to mask the enemy, and will find himself obliged to attack the enemy in the position he has chosen and fortified.

II. The extent of the position must satisfy the force of the defence. That is, there must be enough men and guns to fulfil the object of the commander, defend the trenches and deliver the decisive counter-attack.

III. Have a good field of fire to the front and the flanks. The officer who can read a map will have no difficulties to find out if there is a good field of fire, and if there are points which are not under control.

IV. Flanks must rest on strong points, or which can be made so easily. A flank resting on impassable obstacles, like a river; a flank resting on a high hill or ridge must not be neglected (passed over) as it will command all the surrounding country.

V. There must be good cover and facilities for same. Very often in rear of the lines of the defence, good cover for the supports and the reserve will be found. Principally in rear of the heights occupied by the firing line. Woods can also furnish cover for these detachments. To be able to keep the position well hidden and unknown to the enemy is also an important factor in the defence. Cavalry supported by the other arms, if necessary, can do a great deal to screen the position, and prevent the enemy's commander from finding it, also sometimes induce him to deploy prematurely, and tire his troops in groping to find well covered flanks. His uncertainty will not be relieved if the main position is well covered and the defence keeps its fire until the last minute.

VI. There must be a good artillery position with a good field of fire to the front and flanks.

The main objects is to find a good field of fire, which commands the enemy's line of approach and the probable position of its artillery.

There must be enough room and cover for the guns, or at least for the limbers and animals. Good hard ground for moving the guns, and no prominent objects which would facilitate the enemy's ranging. Each battery requires a frontage of 100 yards and an interval of 25 yards between batteries.

VII. The position must have enough depth. It is said that the position has enough depth, when there is possibility of choosing a rallying position in rear of the defence line, so that the troops occupying it do not fall immediately under effective artillery fire of the enemy if he captured the position (2500 to 4000) yards.

VIII. Good lateral communications are necessary in rear of the trenches to allow the troops to pass from one point to the other, without being exposed to the enemy's fire.

The defence must have liberty of manoeuvre, therefore it is very important to have good communicating trenches in rear of the main position.

IX. It is necessary to have a good line of retreat and good rallying position. Lines of retreat running perpendicular to the position are considered as good lines of retreat.

X. There should not be any good artillery position for the enemy nor facilities for the co-operation of the infantry and artillery fire. Nor positions from which the enemy can use enfilade fire.

XI. The ground must favour the co-operation of all the arms detailed to deliver the counter-attack. As in an active defence the main object is to assume the offensive at the first opportunity, if the ground does not favour the co-operation of the three arms, the position is not satisfactory.

XII. There must be facilities for the supply of ammunition and for water.

XIII. If the position is parallel to the enemy's line of march, (a flank position) the flank nearest the enemy must repose impassable obstacles and the line of retreat chosen must be perpendicular, for a certain distance at least, to the position.

8. What should be done if the position is extended? It must be divided into sections. One section is allotted to a distinct unit, the extent allowed to a battalion varies between two and 800 yards. This depends on the power of control of a commander and varies with the ground.

9. How is the force of the defence divided? A general reserve composed of half the troops of the defence. In each section there must be a local reserve equal to the force of the firing line and the supports.

As a rule we take for the local reserve half the troops allotted to the defence of the section.

The supports to reinforce the firing line and give it new vigour, vary between 1-5 and 1-2 of the firing line. Where it is desired to deliver or develop a more powerful fire, it is necessary to have a man per yard.

10. What are the duties of the local reserves? Deliver the local counter-attacks.

N.B. In the past it was the duty of the local reserves to reinforce the firing line. To day one must explain to the firing line that if they need reinforcements the local reserve will help it by delivering local counter-attacks.

11. Are supports always detailed? If there is no good cover in rear for the supports, the firing line will be made self-supporting, and the supports will be dispensed with.

12. Where are the supports placed?
In the rear of the firing line; they must be able to communicate with it easily and if possible under cover. They must be placed in deep trenches just in rear of the crest, and covered communication trenches must be prepared.

13. Where is the firing line placed?
In deep trenches or behind existing cover so as to be able to sweep the slopes in front with its fire.

In the case of convex slopes, I.E. slopes running first of all gently then suddenly becoming very steep, the trenches must be placed so that the fire of the firing line covers those slopes.

14. What should be done in placing the trenches?
See to communications, facilities for ammunition, food and water supplies.

15. What are the advantages of placing the trenches at the foot of slopes?

They are easily hidden, and the fire is more grazing. It is difficult to bring them reinforcements, ammunition and water, it also is hard to retire. Besides slight undulations in the ground may render the fire useless.

16. Where are the local reserves placed?
In the rear of their own sections of defence. In the case of flank sections, they are echeloned in rear of the flanks.

17. Where is the general reserve placed?
In that part of the position which offers by its nature of the ground the best line of advance for the counter-attack. If it cannot be seen where the decisive counter-attack will be delivered, it will be placed in rear of the flank on which the enemy intends to deliver its decisive attack. No matter where it is placed it must be kept under cover, as the counter-attack must always take the form of a surprise, and if the enemy knows its position the effect is lost.

18. What is understood by the employment of covering troops?

If there are covering troops they may be used as a screen to hide the position and prevent the enemy from discovering it. If there is cavalry with the force it will be used as a screen to cover the position, force the enemy to deploy quicker and tire its troops while groping to find the flanks of the position. Covering troops must be withdrawn in time to prevent them from masking the fire from the position, and also from becoming too closely engaged.

The commander of the defence will as a rule give himself orders for the employment of covering troops. However, commanders of sections of defence can act as they like and will deal with the tactical position according to their ideas. As an example, if there are woods in their section, they can send detachments to occupy them, break the enemy's attack and create occasions to deliver the counter-attack.

When employing these detachments care must be taken that they do not when retiring mask the fire of the main position.

19. How do you retire from a position?
A rallying position must be chosen and the routes to be followed reconnoitred. Some artillery and infantry will be sent to occupy it.

The Mounted troops and a strong force of artillery will keep the enemy at bay.

The remainder of the force with the exception of a rear-guard will retire as quickly as possible towards the rallying position.

All grounds commanding the line of retreat will be occupied by flank-guards. Bridges, defiles and other localities along the line of retreat will be occupied to prevent the enemy from capturing them.

20. How will a company acting alone retire?
A party composed of one or two sections will be sent to the rear, while the rest of the company will protect its retreat; once in position they will in turn protect the retreat of the others.

This method is repeated until all have retired beyond range.

21. How many kinds of counter-attack are there?

Two (a) local; (b) decisive.

22. When are they delivered?

When the enemy advance close to the position without the proper support.

If a part of the force enters the position.
To diminish the pressure on the firing line.

23. Who makes these counter-attacks?

The local reserves under the command of the O. C.'s sections. The firing line must not leave its trenches.

24. How are local counter-attacks made?

They must be covered, supported by the fire of the artillery and infantry. Enfilade fire is very effective. Success must not be followed too far.

25. When are decisive counter-attacks delivered?

When the enemy has used its reserves. Or commits an error creating a favourable occasion.

26. What are these errors?

Expose a part of his force without any hope of support. Extend his front more than necessary; place his reserves in the wrong place.

27. In what direction is the decisive counter-attack delivered?

It is preferable to choose one of the flanks, so as to threaten the enemy's line of retreat. Some times occasions might be found to break through the centre.

28. Who delivers this counter-attack?

The general reserve and if a decisive result is obtained it will be the signal for the whole force to throw itself on the enemy with vigour.

29. How is it done?

The advance must be protected by the rapid fire of all the artillery against the enemy's infantry, and it will be on the look out for the apparition of the reserves.

Counter-attack must be delivered with vigour, everybody must understand that if the enemy is forced to leave the battle field he must be pursued with vigour. The books do not give the manner in which the counter-attack must advance, except that it is carried out like an ordinary attack, which means that part of the force will advance as a firing line with support and local reserve.

The rest of the force will be kept to deliver the decisive blow, when the time comes. The cavalry allotted to the general reserve will protect the exterior flank. The artillery allotted to the general reserve will try to come in action at close range (2500 yards.)

Even if the position is occupied with a view of gaining time, it is not advisable to make only a passive defence.

30. How are the troops divided for a passive defence?

As it is not intended to deliver a decisive counter-attack, the bulk of the troops will be placed in the firing line.

31. Should a passive defence be resorted to, if a decisive success is aimed at?

No. All that can be done is to repulse the enemy's attacks, and if the enemy has liberty of manoeuvre and is enterprising, defeat may ensue.

When the object in view is simply to gain time, it is better to manoeuvre. It can be employed with success to gain time when the enemy's power of manoeuvring is limited, as for instance, when the flanks rest on impassable obstacles.

The extent of front occupied in a passive defence is more extended.

32. What is the object of a delaying action?

A commander may decide to offer battle without aiming to obtain a decisive result with the object of:-

Awaiting the arrival of a part of the army: covering a concentration in rear; gaining time to help a decisive attack in another part of the field.

33. In these cases how should the commander act?

In the first case (awaiting the arrival of a part of the army) he will act like in an ordinary defensive action; his troops will act as the force detailed to defend the trenches, and the force he is awaiting will act as general reserve.

In the second or third case, even if the object is not to strike a decisive blow, he will choose a position resting on impassable obstacles which the enemy cannot turn without making a long detour. He will attack the enemy's troops as soon as they arrive close enough, force them to retire and delay their deployment.

According to the F. S. R. Part 1. "The occupation of a position with the object of making a passive defence, no matter how strong the position is, will lead only to defeat."

34. How should a position be occupied while the attack is not developed?

The firing line will be formed of only a few skirmishers, to watch the enemy, the rest of the force will be kept under cover.

35. What is the duty of the firing line?

Prevent the enemy from advancing on the position, tire him and in this manner prepare for the offensive.

37. What are the duties of a company commander in the defence?

I. See that each man can use his rifle effectively.

II. Covers are good.

III. Trenches well built and hidden to the enemy's view.

IV. Ranges taken and given to the men.

V. There is plenty of ammunition and water.

38. What should the commander of the defence do?

As in the defence there are several localities which have a tactical advantage, he must occupy them, and use them as pivots to defend the position. He will arrange these localities so that they can support each other mutually. If these pivots are strong and there is enough troops to defend them, the ground between each will not be occupied. And this ground will be used for the delivery of the counter-attack.

39. When a defensive position is to be occupied at night, what should be done?

The system of occupation of the localities will be supplemented; the line of defence must be more continued to prevent the enemy from entering the position. When the engagement has been started during the day and the issue not decided, the local reserves may be employed to occupy (space between) these positions in the line of defence.

40. How should villages and buildings which form part of these localities be treated?

The commander will decide whether they will be occupied or not. When they are well prepared they are of great value against an infantry attack; but they offer an excellent target if they are exposed to the artillery fire. As a rule they will not be occupied as long as they are under artillery fire, but troops will be kept in readiness to occupy them.

41. Where should the firing line be placed?

As a rule trenches in front of the village or building will be dug, they must be at a certain distance from these as long as the artillery is in action.

In defending villages in this manner, out trenches are first occupied, then afterwards, when the artillery fire has ceased the infantry of the defence will occupy the buildings. If the troops

from the out trenches are used for the occupation of the buildings instead of the supports; communication trenches will be occupied.

42. What are the different points to be followed in preparing a position?

Choice of ground, clearance of fore ground, preparation of cover, assimilation of the ground, creation of obstacles, improvement of communications.

MODEL OF DEFENCE ORDERS.

| Reference Map. | Operation Order No. | Copy No. Place Date |
|----------------|---------------------|---------------------------|
|----------------|---------------------|---------------------------|

By
Col. "X" Commgd. Detached Force.

1. INFORMATION. (a. As to the enemy).
(b. As to our own troops).
 - a. The enemy, who has just been defeated by us has retired in the direction of BOIS LAMENCE, but its battery is just coming into action again on the ridge Northwest of the BOIS, and three fresh battalions are advancing on FLEURY.
 - b. Colonel B's detachment is holding its ground on the line HOSPITAL WALD, MECLEUVES.

INTENTION.

The detachment will hold the brick kiln and the villages of FLEURY as a defensive position.

3. ORDER FOR THE ARTILLERY.

The artillery will remain in its present position and fire on the enemy's battery north of the BOIS LAMENCE.

4. ORDER FOR THE M. G. SECTION.

The M. G. Section will remain in its present position and fire on the road leading to Notre Dame.

5. ORDER FOR THE INFANTRY.

The 1st Battalion will occupy the section brick kiln inclusive to western border of FLEURY exclusive. The 3rd Battalion will defend FLEURY. The position will at once be placed in a state of defence.

6. ORDERS FOR THE GENERAL RESERVES.

The 2nd Battalion will form a General Reserve at the North East of FLEURY.

7. ORDER FOR THE ENGINEERS.

The 1st Field Coy. R. E. will assist the 1st and 2nd Battalions in preparing their sections of defence.

8. ORDERS FOR THE CAVALRY.

The 1st Dragoons will cover the left flank by reconnoitring the Hospital Wald and in the direction of POURNEY-LA-GRASSE. Patrols are also to be sent along the SEILLE and communication to be kept with Colonel B's detachment.

9. ORDER FOR THE AMMUNITION.

The detachment reserve S. A. A. carts will halt at the Northern outlet of FLEURY.

10. ORDERS FOR THE TRAIN.

The baggage section of the train will retire to "B" and await orders.

11. POSITION OF O.C.

Reports will reach me at the brick kiln.

HOW COMMUNICATED.

TIME.

Signature.

Name.
Appointment.

Rank.

✓ ADVANCED GUARD.

For what is the commander of the advanced guard responsible?

For the protection of his troops against surprise.

2. How are the troops protected on the march?

By placing detachments to the fronts and the flanks also the rear of the force to be protected. These detachments in turn, assure their own security by placing detachments. This is repeated until these detachments are reduced to small groups.

3. What should the commander of a protecting detachment do?

Have his detachment always ready for action.

4. For what is the commander of a protecting detachment responsible?

For the maintenance of communications with the force he is protecting. In case of attack he must at all costs gain time to allow the force he is protecting to prepare to receive the attack.

5. If a force of cavalry is operating independently in front of an army is it necessary to have other troops for its protection?

Yes; the fact of having cavalry in front is not sufficient to dispense with local protection; because if the force of the enemy is strong in mounted troops, and is enterprising, it will find an opportunity to pass by the cavalry of the other force, and attack the army in rear.

6. At the end of a day's march who is responsible for the protection of the troops?

The troops which have protected the march. Unless other arrangements have been made, and vice versa. When the march begins the troops which have protected its rest, will not be withdrawn until the troops for the protection of the march are in position.

7. What are the duties of the mounted troops of an army?

- I. Divisional duties;
- II. General protective duties;
- III. Special duties.

8. What do you understand by divisional mounted troops?

Troops detailed for duties with the division. As it is impossible to detail the same troops for these three duties, separate troops will always be detailed for each.

9. What do you understand by independent cavalry?

Troops employed on special duties.

10. How are named the troops employed for general protective duties?

Protective mounted troops.

11. What are the duties of the protective mounted troops?

When the troops of the enemy are not within striking distance, their duties are:

I. Allow the commander of the force they are protecting to receive on time, informations regarding the enemy and the ground reconnoitred.

II. Furnish tactical informations on tactical points and the roads in front of the army.

III. Oppose the enemy's troops, and prevent them from obtaining information off the column they are protecting.

IV. Sometimes capture and occupy tactical positions until the arrival of the slower moving infantry. **These troops form the first line of protection.** When the enemy's troops are within distance, it is the duty of the protective cavalry, to dis-close the tactical situation. This means an offensive action. **The best method for the protective cavalry to insure the security of the force it is protecting, is to keep the enemy under close observation once the contact has been established.**

When it is desired to cover the movements of several columns by something stronger than a cavalry screen, other arms may be attached to these troops and the whole forms a general advanced guard under the orders of one commander. The commander who orders a general advanced guard will inform the O. C. A. G. of his duties.

12. At what distance in front of the main body are the mounted troops?

They must be far enough in front to allow the commander of the force it is protecting, to decide on his plan of action, and deploy his forces. Patrols will be sent four or five miles in front of the main body.

13. What do you understand by advanced guard?

A detachment furnished by each column for its own protection, in case the enemy's mounted troops would interpose themselves between the mounted troops and the main body. All the divisional mounted troops will form part of the advanced guard.

14. What are the duties of a tactical advanced guard?

Protect the column from the time the march starts.

II. Help the mounted troops to repulse the enemy's covering troops.

III. Capture tactical positions which can help the development of the attack.

IV. Give the main body time to deploy from column of route if the enemy is met advancing.

V. Sweep away any minor opposition, so that the march of the main body is not constantly interrupted. **It is in this respect that the troops in time of peace are always at fault.**

An advanced Guard specially in the case of small infantry advanced guards, too frequently allows itself to be "held up," by the smallest show of opposition to a flank or in front, with the result that the main body suffers a constant series of checks. It is often forgotten when minor opposition is encountered, especially to a flank, that to push on and threaten the line of retreat of the hostile party is the quickest way of disposing of such checks.

To halt and deliberately engage every hostile patrol who may succeed in firing at the advanced guard, is to delay the march unduly and abandon the initiative.

Exception will, of course, occur when a small party of the enemy is found in a position which cannot be turned with the necessary rapidity, and which will seriously threaten the line of march of the main body.

✓ 15. What is the composition of an advanced guard?

Composed as a rule of the three arms, cavalry, infantry, artillery and also detachments of engineers and field ambulance.

16. What is the strength of an advanced guard?

Depends on the situation, nature of the ground, force of the covering troops. For a force marching independently it varies between 1-4 and 1-8.

17. How is an advanced guard divided?

Van guard and main guard.

18. How are the troops of an advanced guard divided?

As the duty of the van guard is reconnaissance all the mounted troops will be placed in it with a small detachment of infantry as support. If engineers form part of an advanced guard they will go with the van guard, they will be useful, and by going with it will be on the ground quicker in case there were some repairs to be done to the roads, bridges, or again to remove obstacles. The remainder of the troops will go with the main guard.

19. What are the special duties of the van and main guards?

Van Guard. Reconnaissance in order to afford protection against surprise.

Main Guard. When the Van guard reports the advance of the enemy in force, or again is driven in, it is the duty of the Main guard, to offer sufficient resistance to enable the main body to deploy for action.

If the enemy is found in a position, and if the main body decide to attack, it will be the duty of the main guard to help the advanced guard mounted troops or the protective cavalry, to brush aside the enemy's mounted troops, to discover what lies behind.

N. B. Do not forget that the advanced guard may be required to furnish flank guards besides its other duties.

20. What distance should exist between the advanced guard and the main body?

In the past it was the duty of the commander of the column to decide this. Today it is left to the initiative of the A. G. commander.

This will depend on the strength of the different parts of the A. G. In a strong advanced guard the distances will be greater than in a small one. The general rule is that no body of troops should be far enough ahead of the one following so that it cannot be supported rapidly. This will depend also on the nature of the ground and the tactical situation, it should be far enough ahead to allow the main body to deploy and allow the minor oppositions to be brushed aside.

We can say that in the case of an advanced guard composed of a company of infantry, if the ground offers a clear field of view for 600 yards; the distance between the vanguard and the main guard will be from 600 to 800 yds. The main guard could precede the main body at a distance of say one mile. These distances are not too great to allow each portion to receive early reinforcements and gives about 20 minutes for the main body to deploy. In close country where artillery is not to be considered, these distances may be reduced by half, principally if there is not a good field of view. N.B. **One must not forget** that the troops of the van guard must be far enough ahead to protect the main body against effective artillery fire (4000 yards.) By this we don't mean to say that the advanced troops must be at 4000 yards; because you must not forget that the rifle is sighted for over 2000 yards, and its effective range is between 1400 and 1600 yards.

21. What should the commander of the advanced guard know?

- I. What is known of the enemy.
- II. Strength and composition of the A.G.
- III. Intention of the commander.

If you happen to be in doubt as to the intention of the commander, it will be good principle if you repulse the enemy's advanced troops, and by so doing you will:

- I. Throw light on the situation and help the commander to come to a decision.
- II. Very seldom will you induce the commander to do something he did not anticipate.

22. Where will the commander of the A.G. place himself?

The infantry training, says with the van guard. The cavalry manual used to say with the main guard. Griepenkerl the German author used to say the same. F.S.R.I. does not say anything about it. It goes without saying that if the commander of the A.G. marches with the van guard, he will receive the reports from the patrols quicker, and will be in a better place to receive and make a reconnaissance (personal if necessary). Therefore it will be best for him if he marches with the van guard at the head of the supports.

23. What course of action is opened to the advanced guard commander?

I. If the enemy is met, and he is in inferior number:— he should be attacked immediately, and forced to retire, so as not to interfere with the march of the main body. This attack will generally be started by:

- (a) Opening artillery fire on the enemy, at close range (2500 yards).
- (b) Develop a frontal attack with a portion of the infantry.
- (c) Threaten to turn one or both flanks with the rest of the force.

N.B. Do not forget that the least bit of hesitation may give the enemy the initiative; and force the commander of the force to choose a plan of action he did not intend to follow.

II. The enemy is met and offers opposition which is such that it cannot be swept aside, yet is defensive in character. This may be dealt with by the A. G. acting alone or in conjunction with the main body, according to the former's strength, compared with the estimated strength of the enemy. Otherwise if the strength is unknown it is the duty of the A. G. to obtain information.

N.B. F. S. R. I. 1912, says (a) Information on the enemy important.

(b) The first troops that will be met will be the enemy's advanced troops and until they have been brushed aside information on the enemy's dispositions (detailed) will not be obtainable.

(c) By brushing aside the enemy's advanced troops, he will help the commander of the force to arrive at a decision.

III. The enemy is met and the O. C. A. G. knows that it is the intention of the O. C. force to engage the enemy. In this case he will do all in his power to capture tactical points which will help developing the attack. In doing this he can deploy over a greater extent of ground than he would otherwise, with a force of the same strength for an active action, as every moment brings closer the main body. The position for the artillery of the A. G. will be chosen with a view that it will be occupied later by the artillery of the main body.

IV. The enemy is met advancing to the attack in force. In this case the latter must delay as far from the main body as possible, at all costs, to enable the main body to deploy.

24. Give an example of how an A. G. furnished by 1 company is divided?

In this case the company is supposed to protect the march of one battalion. I. divide it into 1. Van guard; 2. Main guard.

The van guard in turn is divided into

- i. Point.
- ii. Connecting files.
- iii. Flankers.
- iv. Support.

I would place 1 section in the van guard (or platoon.).

For the point I send two men, and one N. C. O. and I will send two or more men on the flanks, to watch them.

If necessary between the point and the supports I will have 1 or 2 files to keep up the communications.

Then will come the support in the ordinary march formation (in fours) not extended as a great number of officers wish to do. Troops must not be deployed unless it is absolutely necessary; that is when under fire. Between the supports and the main g. and I will leave a distance of 800 yards. The supports are responsible to maintain the communications with the Main guard and therefore will furnish connecting files. Then will come the main guard composed of three sections, it is responsible to maintain the communications with the main body. Therefore, it will drop some connecting files.

25 What is an advanced guard for a force retreating?

It is always advisable to have a small A. G. for a force retreating. Its duty is to remove the obstacles which might interfere with the march. It will observe all precautions against surprises and will be accompanied by some cavalry as scouts. A detachment of engineers will accompany it to remove the obstacles, prepare bridges for demolition, etc., after the rear guard has passed. If there is possibility that the enemy interpose himself between the A. G. and the retreating force it will be necessary to have an A. G. composed of all arms.

EXAMPLE OF ADVANCED GUARD ORDERS.

| Reference Map | Operation Order No. | Copy No. 1. |
|---------------|-----------------------------|----------------|
| | By | Place, Date |
| | Lieut. Col. X, Comdg. A. G. | |

1. INFORMATION.

1. A small force of the enemy is reported at
2. Our column will proceed tomorrow to

2. INTENTION.

The advanced Guard will proceed tomorrow to
passing the starting point "Bridge at the East of
the village at 7.40 a. m.

3. ORDERS FOR A. G. CAVALRY.

The A. G. Cavalry. 1 Squadron 17th Hussars, less
(3 sections) moving via..... will
reconnoitre towards.....

4. ORDERS FOR VAN GUARD.

The Van Guard under the command of Captain "C"
with 2 platoons (A) Coy. 1 Bn. and No. 4 Sec.
C. E. will start at 7.30 a. m. moving via

5. ORDERS FOR THE MAIN GUARD.

The Main guard will pass the starting point at 7.40
a. m. and follow the Van Guard in the following
order:
1 Section 17th Hussars.
A Coy. 1 Bn. (less two platoons)
1 Section 3rd. F. B. C. A.
B. Coy. 1 Bn.
1 Bearer Subdivision. 1 Fd. Ambulance.

6. REPORTS.

Reports will be sent at head of the support of the Van
Guard.

Signature,

Name.

Rank.

HOW COMMUNICATED.
TIME.

REAR GUARD.

1. What is a rear guard for a force retreating?
Essentially a fighting force composed of all arms. As a rule will be very strong in mounted troops and artillery.

2. What is its duty?

Relieve the defeated force of the pressure of surprise.

3. What troops are detailed to form the rear guard?

Those which have suffered the less and are the freshest.

4. What is the strength of a rear guard?

The F. S. R. do not give anything. In the combined training it was said that a rear guard was composed of 1-3 to 1-5 of the force. Today it is said that it depends on the situation, but it will be discovered that it will come within the limits given above. It will depend:—

I. On the energy, strength and distance of the pursuit.

II. Condition of the main body. Whether the force has been badly beaten or is simply retiring for strategical considerations.

III. Character of the country. I. E. facilities to hamper the enemy and delay him.

5. It is said that a rear guard will be composed of all arms, what is the utility of each?

I. **Mounted troops.** To watch on a large extent all the roads by which the pursuit can advance to turn the flanks of the rear guard.

II. To keep the enemy's cavalry in check and prevent its artillery advancing at effective range under its protection.

III. Defend the position longer than artillery can do so, then retire rapidly.

Artillery will be useful on account of its long range fire; can force the enemy to deploy early, and by so doing delay its advance. Therefore it will be very useful, if there are good artillery positions allowing to open fire at long range or again if there are defiles which the enemy is obliged to pass in diminishing its front.

Infantry is necessary to give the force its strength for defence.

Engineers, are useful to place obstacles on the roads, destroy bridges &c.

6. How is a rear guard disposed on the line of march?

When pursuit is not too close a rear guard looks very much like an A. G. reversed, the rear party correspond to the van guard, in this detachment are placed all the mounted troops.

7. What expedients can be employed to delay the enemy's march?

I. Narrow roads can be blocked in locking together several waggons once the wheels have been removed, or again by felling trees so as to block them completely.

II. Fords may be rendered impassable by throwing in them plows, harrows.

III. Boats can be taken on the opposite bank and there sunk or burnt.

IV. If the circumstances require it the villages, woods, etc., can be burned, so as to hide the movements of the rear guard. It will be the duty of the rear party.

8. What instructions should a rear guard commander receive?

To what extent he can destroy bridges, burn villages, destroy railways, etc. As it might happen that the retreat is only temporary and the road be followed over again.

9. How does a rear guard perform its duty?

Its action can be considered under two headings:—

I. The action of the rear guard when it can still retire without being forced too close on the main body.

II. If it keep on retreating it will be forced on the main body. In the first case, still keeping on retiring, the rear guard will do all in its power to delay the march of the enemy, by placing obstacles in his way, by destroying bridges, etc., preparing ambushes which will force him to advance with caution.

In the second case, retreat for the present must cease, and will force the enemy to deploy for attack as often as possible, and as far as possible. This is done, generally, by occupying a series of defensive positions which the enemy is obliged to attack or turn. When his dispositions are nearly ready or the enemy threatens to turn the flank, the rear guard will retreat successfully to another position. Part of the force retreats while the other protects it and so on. The same procedure is repeated at the next favourable occasion. All this takes time, this is what is wanted by a retreating force.

10. What are the requirements of a rear guard position?
It must be strong, the flanks must rest on impassable obstacles. Must allow the artillery to use long range fire. The flanks must be so placed that they cannot be turned. Turning movement must require a long march. As it is not intended to deliver a counter attack, a strong obstacle must be placed in front of the position.

11. How is a rear guard position occupied?

I. Show as strong a front as possible.

II. Have good lines of retreat. O. C. rear guard will place the greatest part of his force in the firing line from the very beginning and will keep only a small part as a reserve. Artillery will be placed where it can use long range fire and retreat easily. Mounted troops will be employed on the flanks to oppose turning movements, and notify the O. C. on time.

12. What points should be borne in mind when retreating on an other position?

I. An officer should be sent to the rear to choose a new position.

II. This position must be far enough in rear to force the enemy to reform column of route before advancing.

III. Lines from one position to an other must not be converging.

IV. Part of the force must be retreating under the protection of the rest. And once in position will protect the retreat of the other.

13. On what depends the success of a rear guard?

On the ability and energy of its commander.

14. What important points should the commander of a rear guard remember?

That he must judge properly the time to retire; if he retires too soon he fulfils only a part of his duty; and if he falls in the error of fighting each inch of the ground, he runs the risk of becoming seriously engaged, and runs the risks of being cut off or forcing the main body to come back to extricate him. He must not forget that every time he halts to fight the main body keeps on moving and the distance increases.

15. What distance should exist between the rear guard and the main body?

Far enough to prevent the main body from being struck by the enemy's artillery. Must not be too far so as to run the risk of being cut off.

16. When should a rear guard sacrifice itself?

When the main body is endangered or is engaged in passing a defile.

17. How will a small detachment of infantry or mobile troops, retire either a platoon, a section or company when engaged on a ridge or other locality?

First of all begin by retiring the men from the centre, and at the same time order the rest of the men to gradually increase their fire so as to give the idea that it is the same number of men firing. The extent of front remaining the same, during a certain time, this will prevent the enemy from noticing any changes, so long as the men in retiring do not get up and expose themselves. Each man should crawl back until they can stand up without being seen.

It is necessary to have some organization to carry out this manoeuvre with success, and it is advisable to practice this movement in time of peace. This movement has the disadvantage of making the men run, and it will not be used if they are demoralized.

18. Give an excellent way of surprising the enemy?

Let us suppose that a detachment of infantry carrying out a retreat, is engaged on the crest of a hill behind which there is a

depression which will render him invisible to the enemy. The commander makes the necessary arrangements so that at a given signal, all the men will get up and retire. They will only retire till they become invisible to the enemy. The commander will remain on the crest or ridge and will watch the enemy. The men in the rear will be on the alert so that at a signal from the commander (a movement of the hand) they reoccupy the position, and open fire on the enemy, who having noticed the retreat thought the position abandoned and in his anxiety of pursuing engaged himself on an open ground and was caught.

19. What is a rear guard for a force advancing?

If the enemy can attack the column, it will be composed of all arms and will be strong enough to face any eventuality.

If there is no danger of meeting the enemy—the rear guard will be composed of only a small force to pick up stragglers and keep away followers. It will be composed of infantry and mounted troops. If the second line transport follows the main body one rear guard will be sufficient. Otherwise it will be necessary to make special arrangements to protect the transport.

| MODEL OF RETREAT ORDERS. | | |
|--------------------------|---------------------------------|----------|
| Reference Map. | Operation Orders No. | Copy No. |
| | By | Date. |
| | Col. "O" Comdg. detached force. | Place. |

- HOW COMMUNICATED.
TIME.

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| | | |
|----------------|-----------------------------|-----------------|
| Reference Map. | Operation Orders No. | Copy No. |
| | By | Place. Date. |
| | Col. "B" Comdg. Rear Guard. | |

- | Signature. | Name. | Rank. |
|------------|--------------|-------|
| | Appointment. | |

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FLANK GUARDS.

1. What do you understand by a flank guard?

When a column runs the risk of being attacked on flank, detachments will be placed on the threatened flank to protect it. As a rule the main body will furnish these detachments; sometimes the A. G.

2. What is the strength and composition of a flank guard?

As for an advance guard.

3. How does a flank guard march?

Parallel to the main body or again occupies a position on the threatened flank, a flank guard may be obliged to hold the enemy in check until the main body and train have passed and this without receiving reinforcements or supports.

4. What happens when the column changes directions?

If the direction of the march is changed and the march becomes a flank march it is advisable to use the old advance guard as a flank guard and throw out a new advanced guard from the main body.

5. What should be done if one is in doubt as to the employment of a flank guard?

The following points must be considered:

I. If after considering everything a flank guard is absolutely necessary.

II. If there are favourable roads for the flank guard.

III. If so at what distance are they apart. It is only in exceptional circumstances that an infantry flank guard is sent out at more than 1-4 miles from the main body. (that is the main guard.)

IV. If the two roads are separated by ravines, woods, etc., exposing the flank guard to be destroyed before the main body can give assistance. After giving due consideration to these points nine times out of ten an infantry flank guard will not be used, as it is slow of movement and will always have difficulty in rejoining the columns. When cavalry can fill the bill infantry will not be used.

6. What should the commander of a flank guard remember That his protective duty includes the protection of the whole of the column (main body and train, etc.) and that he may be obliged to protect a great extent of road space. For example, the flank guard of a division would be obliged to, protect 12-15 miles of road if the division marches on one road.

7. Give an example of how to place a flank guard composed of one company of infantry.

Two points vary its distribution from that of an advanced guard:

I. When there is possibility of marching parallel to the main body.

II. When it is impossible.

N.B. The flank guard must never be equally divided all along the length of the column as no where will these detachments be strong enough to resist an attack. Furthermore such a distribution would leave you without a reserve.

So as to be able to make reconnaissance the formation must have patrols and scouts to watch the front, furthermore there must be a detachment in rear to support these patrols. The double duty of reconnaissance and resistance will be best performed by a line of scouts or patrols (i.e. van guard) and a reserve (main guard) nearer the main body which will give strength and electricity to the defence. The whole may march parallel to the main body. The main guard will follow the road and the patrols or scouts will move across country if the ground is open. Each patrol will march in a formation which will allow it to take advantage of all cover.

A patrol will never march on the top of a ridge nor on the side nearest the enemy, but will march under cover and will send a man high enough near the crest so as to be able to see without being seen. In this way with a company you would take a platoon as a van guard divided into scouts and patrols. And three platoons as main guard. The O. C. flank guard will march with the first platoon of the main guard. The company second in command will march with the second platoon.

The van guard divided into patrols and scouts will march on the flank of the main guard say at 1-2 mile distance covering the whole flank and will maintain connection by means of connecting files, the main guard will follow the road but not in a compact formation but divided so as to have one platoon about in line with the first line of scouts, one in the centre and one with the last line. In this manner there will always be supports at the right place. These supports will always be strong enough to resist until the arrival of the others if necessary. The main guard will keep connection with the main body by means of connecting files. N.B. One must not forget that when a flank guard halts it always faces in the direction of the enemy.

✓ OUTPOSTS.

1. How are troops at rest protected?
By an outpost so that they can rest without being disturbed.
2. What are the duties of an outpost?
I. Protect the main body against surprise.
- II. In case of attack gain time to allow the commander of the force to carry out his plan of action.
3. What is the strength of an outpost?
Not more than 1-6 of the force. No man or horse more than it is absolutely necessary is to be employed. The duty of outpost is very tiring.
4. What is the composition of an outpost?
Infantry, mounted troops, artillery, and when available machine guns.
5. When will artillery be employed with an outpost?
I. When the outpost occupies the ground to be occupied by the main body in case of attack.
- II. If there is a defile or other ground not very extended which the enemy is obliged to pass to attack.
- III. If there are artillery positions in the neighbourhood and it is important to prevent the enemy from capturing them.
Guns will always be withdrawn at night unless they are with the reserve.
6. For what purpose should machine guns be employed?
I. To sweep the approaches.
- II. Cover the ground which the enemy is obliged to pass to attack.
7. What is the principle of outpost duty?
See without being seen. All troops on outpost duty must be kept well under cover.
8. For what purpose are mounted troops used with an outpost?
(a) Reconnaissance.
(b) To maintain contact with the protective cavalry.
(This last point will not be considered by a force acting independently). These troops are furnished by the divisional cavalry.
- One must act with economy in the employment of mounted troops for this.** They will be withdrawn at night and only a few standing patrols left out.
9. Who performs the greatest share of outpost duty?
Infantry, principally at night.
10. When will the outposts occupy the position which will be occupied by the main body in case of attack?
I. When the position to be occupied is far from camp.
II. Enemy is close.
III. Country in front close and difficult.
IV. The force not very large.

11. At what distance should the outposts be from the main body?

Far enough to prevent the enemy's artillery to open fire at effective range (4000 yards) of the ground which will be occupied by the main body in case of attack. This distance will depend on the ground and on the positions which the enemy's artillery might occupy. It is considered that if the firing line (outposts) can develop rifle fire at 2000 yards from these positions it will be sufficient. And it will prevent the enemy from occupying them.

12. Who will form this firing line?

The piquets reinforced, if necessary by the supports. Therefore it must be deducted that the piquets must be at 2000 yards of any position which might be occupied by the enemy's artillery; which position is at 4000 yards of the ground which will be occupied by the main body in case of attack? If there are facilities of observation not too far from the main body, it will be a good thing. The rest of the line chosen for the outpost must offer all facilities for a protracted resistance. If there are facilities for observation it will be an advantage, but less important than facilities of resistance. It is an excellent thing to place the piquets along well defined natural features, like a ridge, a stream, the edge of a wood, etc., but this must not override the necessity of making the best tactical distribution possible.

13. When is a reserve employed with the outposts?

- I. When the force of the outpost is strong.
- II. When the outpost occupies the ground to be occupied by the main body in case of attack.

- III. When the outposts are in contact with the enemy.

O. C. force will detail himself the reserve if it is required. This reserve will be under the orders of O. C. outposts, who will select its position. The reserve will always be composed of a complete unit, with some cavalry and artillery.

14. If there is no reserve detailed what will happen?

The commander of the unit furnishing the outpost, will detail an "Inlying Piquet" which will always be under arms one hour before day break.

15. Where will the reserve be placed?

In a position where there are good roads for communications with the different parts of the outpost. It is advisable sometimes, to divide the force of the reserve into two or more parts when the position of the outpost is very extended or the country difficult.

16. How is an outpost Company divided?

Piquets, supports, and if necessary detached posts.

17. How many piquets will be furnished by one company?

This will depend on the number of roads or paths that must be watched. Facilities for resistance; and the number of patrols required.

18. Where are the piquets placed?

The piquet as a rule forms the line of resistance of the outpost; as a rule they must be placed in good defensive positions, but never in buildings or other places which are hard of exit.

19. Where should the supports be placed?

Generally from 400 to 800 yards in rear of their piquets, where there are good means of communication; as the support must reinforce the piquet in case of attack.

20. When are detached posts employed?

They are never employed except in case of necessity, as they run the risk of being captured by the enemy. They are employed:

I. To watch a certain place or important road on the distant flank of the outpost position which might be turned.

II. Watch certain points in front of the sentry line, where the enemy might assemble to make an attack, or might occupy for observation purposes.

III. To regulate the traffic for the outpost, when for certain tactical reasons, piquets cannot be placed on the main line of traffic. A detached post is composed from 6 to 12 men under an N. C. O., sometimes an officer, this post might be stronger.

21. What is the strength of a piquet?

A piquet is composed of a complete unit, and will never be less than two sections. Under the new system 1 platoon. **As the piquet line is the line of resistance, piquets must always entrench whether they receive the order to do so or not.**

22. What should a piquet furnish?

I. Sentry posts for observations.

II. Sentry over piquet (3 relieves).

III. Sentries for communications (sometimes), (3 relieves).

IV. Reconnoitring patrols, (3 relieves).

V. Communication patrols to maintain communications with the piquets or posts on the flanks and if necessary to make sure that the sentries are on the alert.

VI. Standing patrols. They will never be employed except by the orders of the O. C. outposts.

23. How are the sentries posted?

The group system has been definitely adopted; instead of changing sentries from the piquet; this last system will only be used when it is required to have more men with the piquet. A group is composed from 3 to 6 men under an N. C. O. or old soldier. Groups are changed every 6 to 12 hours. In each group in open countries, a man is placed on sentry and the others lie down beside him.

In close or broken country or when it is necessary to take more precautions, it will be necessary to double the sentries. When the sentries are relieved from the piquet, they are posted in pairs, with 3 relieves for each double sentry. One of the relieves is on duty while the two others are with the piquet.

Sentries will never be posted at more than 400 yards from the piquet. They must be so placed as to see without being seen.

24. What should a sentry know?

I. The direction of the enemy.

II. The position of the piquet.

III. The position of the sentries on its flanks.

IV. Where the roads in the neighborhood lead to.

V. The name of villages in front of his post.

VI. What he should do if anybody approaches his post.

Also if the enemy opens fire.

VII. The shortest route to his piquet.

25. How will a group fall back on the piquet?

In case of attack, they must fall back in leaving the front clear, so as not to mask the fire of the piquet or run the risk of being shot.

26. Why is a sentry over piquet required?

To communicate with the groups and notify the piquet in case of attack.

27. When are connecting sentries used?

When the groups cannot be seen from the piquet.

28. What is the object of reconnoitring patrols?

They are composed of 2 to 8 men under an N. C. O. They go in front of the sentry line to:

I. Search the ground in front, for a distance of about a mile, and make sure that the enemy is not in the neighborhood.

II. Watch the enemy if the forces are in contact.

29. What instructions should be given the patrols?

What is known of the enemy. How far in front of the sentry line they should go. Points on which informations are required. The position of the outposts.

30. What formation should a patrol adopt?

It follows the same rules as a stronger force. A small detachment first send on say, 2 men, as an A. G., a main body of say 2 men and a rear guard of say 2 men.

The A. G. will protect the main body and will precede it at a distance of from 50 to 200 yards, or more, it all depends whether the road is straight or not. The rear guard will follow at the same distance in rear of the main body. The men will march on the side of the road in file. The patrol is so divided so that if a part of the same is surprised or captured, the others will know of it.

31. What should a patrol do in going on duty?

Notify the group or sentry it is passing where it is going and of the probable length of its absence?

32. What should be done if a patrol does not come back?

Send another on duty immediately.

33. What extent of ground should a company watch?

From 600 to 1200 yards according to the ground, (double with the new system).

34. What is the depth of an outpost?

From 1200 to 2000 yards.

35. In close country how does the enemy advance?

At night he will follow the paths and roads, therefore they must be watched. As a rule an outpost company will be placed on each road. If the roads are too far apart it may be necessary to place a company between the 2. Or if the roads are close to one another one company may watch the two.

36. What extent of ground can be watched by a battalion?
About three miles.

37. What should the commander of an outpost know?

I. What is known of the enemy and one's troops.

II. The general position to be occupied by the outpost.

III. The intention of the commander.

IV. Where the main body will camp or bivouac.

V. If there are other outpost troops on his flanks.

VI. The position to be occupied by the main body in case of attack.

VII. The composition of the outpost.

VIII. The hour at which the outpost will be relieved.

IX. Also instruction as regards smoking, cooking and the lighting of fires.

38. After having received his instructions what should he do?

Write his own orders and he will deal with the following points:

I. Information of the enemy, and his own troops in as much as it affects the outpost.

II. The general position to be occupied by the outpost. Its division in section, frontage and number of roads allotted to each company.

V. Position of the reserve.

VI. Disposition of the outpost mounted troops.

VII. Disposition in case of attack; The general line of resistance and degree of resistance.

VIII. Special arrangements for the night.

IX. Lighting of fires, cooking, and smoking.

X. The hour at which the outpost will be relieved.

XI. His position. As soon as the outposts are in position, he will send a report and make a sketch showing his disposition.

39. Why is it important to have a strong force under arms one hour before sunset and an hour before day break?

Those hours are dangerous. The enemy just before sunset can make an attack and capture a position which he will reinforce during the night, or he can take advantage of the darkness to approach the position and deliver an attack at day break.

40. How are outposts relieved?

The new outpost parades one hour before sunset or day break and marches to the outpost position, the two commanders relieve the outpost together, then the old outpost remains on the ground until the patrols which have been sent out come in and report that all is correct. Then the old outpost returns to camp.

41. What are the duties of the commander of an outpost company?

I. He will lead his company on the ground allotted preceded by scouts.

II. He will halt under cover and will occupy a line in front of the position chosen for the picquets.

III. He will examine the ground, choose the position of the picquets and the supports and will make his preliminary dispositions with a view to defence. The line of defence must if possible correspond with the picquet line and will support and be supported by the companies in the neighbourhood.

IV. Then he will get the position occupied by his troops, place the sentries, send out patrols, and withdraw the covering troops.

V. Give his instructions to picquet and detached post commanders, as regards their duties in case of attack.

VI. Patrols must reconnoitre the ground in front of the position, and establish communications with the troops on the flanks and ascertain their dispositions.

42. What are the duties of the commander of a picquet?

I. He will read his orders to the picquet. Explain the direction of the enemy, position of the other picquets, what he should do in case of attack by day and night, if there is cavalry in front or not, also his line of retreat.

II. Divide his picquet, place his sentries, and send out patrols.

III. See that the sentries are on the alert, and understand their duties.

IV. Reinforce his picquet as much as possible, dig trenches and see to the sanitary arrangements.

V. Take the range of prominent objects.

VI. Not allow any man to remove his equipment.

VII. If the sentries must be changed from the picquet, see that the relieves go on duty and come back without being seen by the enemy, and do not give the position away. Also prevent the relieves from marching more than is necessary.

43. How are the mounted troops divided when they act alone?

Like the infantry, there are mounted picquets. Sentries are called vedettes and the groups cossack posts. The vedette as a rule dismounts. The relieves are always dismounted. Horses should never be unsaddled or unbridled. When it is necessary to water or feed the horses, they are taken away 1-3 at the time, so as not to disturb the others.

44. What are the rules governing the traffic in an outpost?

Nobody, without the permission of the commander of the outpost, except troops on duty, deserters, prisoners, flags of truce, will be allowed to pass through the outposts. Inhabitants bringing information will be blindfolded, and kept with the nearest picquet

until orders are received, there informations will be sent to the O. C. outposts. Commanders, who have received permission to do so, will speak to people approaching the outposts. Prisoners and deserters will immediately be sent to the commander of the outposts. If piquets are not placed on the main line of traffic, a detached post, to look after it, will be detailed, by the O. C. outpost company.

45. How is a flag of truce dealt with?

He will be stopped at a certain distance from the outpost and kept there until orders are received from the O. C. outpost company. If orders are given for him to go through, he will be blindfolded and taken to the O. C. outposts. If he brings only a letter, or a parcel, it will be taken, a receipt given, and he will be asked to depart, and the parcel will be sent to H. Q. Nobody must speak to him.

46. Where will the outpost commander place himself?

With the reserve, if there is no reserve, with the **Inlying Piquet**.

47. What should a sentry do when somebody approaches his post?

Notify the group that somebody is approaching. And when the party is within hearing distance, will order him to halt and cover him with his rifle. Then the commander will deal with the party according to the orders he has received. If the party does not obey orders he will be fired on. **N. B. A sentry will never lie down, except to fire, unless otherwise ordered.**

48. What maxim should a man always remember?

That is it permissible to be defeated, but not surprised.

49. What should be done to prevent the men of the piquet from being unnecessarily disturbed?

All the men detailed to go on duty at the same time should be placed together. Not more than 1-3 of the piquet will be allowed to leave the piquet together.

50. What do you understand by Standing patrol?

Composed from 2 to 8 men under an N.C.O. generally furnished by the mounted troops, or cyclists, they are never employed unless specially ordered. They are employed to watch certain points in front of the outpost line, sometimes several miles. They remain out for several hours. Sometimes they are furnished by the infantry.

51. What should the commander of an outpost always remember?

That he must always be ready for action. The reserve and the supports may remove their equipment, but never the piquets.

52. How is a company sent out on outpost duty?

The O. C. force will detail the O. C. outpost, and give him the general line to be occupied by the outpost.

In turn if the position is extended he divides it into sections and say he gives a section to your battalion commander. The battalion commander takes charge of the section and divides it between the companies, after he has examined the ground on the map. He will tell O. C. "A" co—you will occupy the ground from Z to O., exclusively, to O. C. "B" from O. inclusively to W. exclusively and so on.

As O. C. "A" you have to guard from Z. to O., the ground is about 800 yards. After having received your instructions you leave with your company in taking the necessary precautions; that is your company is preceded by a small advanced guard composed of 1 section which will precede you at 400 yards distance, the remainder of your company will march in close formation, before arriving at your position you halt your company under cover, your covering troops will advance further and occupy a position to protect you against surprise.

You reconnoitre the position, and decide where you will place your piquets and supports, you decide the strength of each body, and place an officer or N.C.O. in charge of each piquet and explain them their duty. You tell them exactly what to do. He will then detail his sentries, reconnoitring patrols, sentry over piquet, etc. Then he sends the patrols on duty, as it is important that they should go over the ground while it is still day light. Once your outpost is placed you recall the covering troops which as a rule will belong to the support. Once all your dispositions taken you will make a sketch showing your dispositions and send it to the O. C. outpost section with a report if necessary.

EXAMPLE OF ORDERS ISSUED BY A COMMANDER ORDERING THE FORMATION OF AN OUTPOST.

Reference Map. Operation Orders No. 4. Copy No. 1
Lachine 1 By On the March
Col. "A" Comdg detached force. 11 Nov. 1913

1. INFORMATION.

The enemy which occupied the village of PRIMEAUVILLE has retired followed by our cavalry.

2. INTENTION.

The detached force will be billeted in ST. ISIDORE.

3. POSITION OF THE OUTPOST.

Major "X" 3rd. V.R.C. with 4 co.'s 3rd. V.R.C. and 1-2 squadron 17th. Hussars, will occupy an outpost line extending from ST. PIERRE RIVER-COTÉ STE. THERESE, ST. ISIDORE STATION inclusively.

4. POSITION TO BE OCCUPIED IN CASE OF ATTACK.

In case of attack the main body will occupy the high ground (155' contour) S. & S. E. of ST. ISIDORE.

5. FIRES. &c.

No fires will be lighted in the outpost line after sunset.

6. RELIEVED.

The outpost will be relieved at 7 a.m.

7. REPORTS.

Reports will be sent to the TOWN HALL ST. ISIDORE.
"O" Brigade Major.

Copy No. 2 to O.C. Outpost.
Copy No. 3 to O.C.A.G.
Copy No. 4 to O.C. Cavalry.
at 1 P.M. by orderly.

EXAMPLE OF OUTPOST ORDERS.

Operation Orders No. Copy No.

By

Col. B" Comdg. detached force.

Place,
Date.

Reference Map

1. INFORMATION.

- (a) The enemy is reported at.
- (b) Our main body is billeted at for the night.

2. INTENTION.

The outpost will occupy the line.....

3. DISTRIBUTION.

A. Coy. will occupy line from point M. inclusive to N. of outpost, exclusive. B. Coy. from N. inclusive O. exclusive.

4. OUTPOST CAVALRY.

The outpost cavalry will be withdrawn at 6 p.m., standing patrols being left on..... roads.

5. LINE OF RESISTANCE.

The piquet line will be the line of resistance and will be held at all cost until daybreak.

6. POSITION OF MAIN BODY IN CASE OF ATTACK.

In case of attack the main body will occupy the line.....

7. FIRES AND SMOKING.

No fire will be lighted in the outpost line after sunset.
No smoking will be allowed in the piquet line after sunset.

8. HOUR OF RELIEF.

The outposts will be relieved at.....

9. REPORTS.

Reports will be sent to.....

TIME OF ISSUE.

HOW COMMUNICATED.

Col. B.
O. C. Outposts.

MARCHES.

- I. How are all marches classified?
- II. When there is no danger of meeting the enemy.
- III. When there is a possibility of meeting the enemy.
- IV. One marches with the object of meeting the enemy, and to engage in battle.

2. What should be done in these different cases?

In the first case the health and comfort of the troops is the first consideration. It is advisable in this case to march the different arms on different roads, so that each can march at his own pace. If one must march all the troops on the same road, mounted troops will lead, and take their own pace, and will arrive at the halt before the infantry, which moves slower; as the mounted troops are obliged to look after their horses and it requires more time, &c. In the second case, tactical considerations are of the first importance, however one must look to the comfort of the troops and look to the other administrative wants.

In the third case tactical considerations override all others.

3. What are the tactical considerations which affect marches?

I. The column must be able to form battle formation so as to be ready for any eventuality.

II. The march must be carried out secretly and rapidly.

III. Combatant troops for the present must not be hampered by their baggage train, which will be in their way.

4. What do you understand by march discipline?

A good march depends for a great part on the attention paid to march discipline, which includes everything which might affect the efficiency of a man or an animal.

No compliments will be paid on the march.

A space will be left on the right of the road to allow the officers orderly to pass. Mounted officer, orderlies and motor cars, will not keep up passing and repassing infantry on the march, they will take advantage of the halts to do so. An officer, when available, will follow in the rear of each Company, or other of each unit so that no man leaves the ranks without permission, and that the sections, files, vehicles, keep their distances and the column does not unduly open out.

No bugles will be sounded on the march, the column will be directed by signals.

A rapid system of communications will be established throughout the column. When the roads cross one another, the general staff will place orderlies to guide the troops in the right direction. Or again the roads might be blocked by means of a prearranged signal which will be published in orders, like a row of stones, branches of trees, &c.

Where there is much traffic and there are liabilities of checks at certain points, an officer will be detailed to regulate it.

5. What are normal march formations?

Cavalry and Mounted Infantry, section (4 men abreast) or files (2 men abreast).

Artillery Column of route, guns and limbers in one file (column of route). Infantry in fours (four men abreast). N. B. In open country it is advisable to march on a more extended front. One march formation must not be changed for another unless it can be kept for a certain time. When there is dust or weather hot, it is advantageous to march on each side of the road and leave the centre clear. But this will only be done by the order of the commander of the column.

6. What distances are left in rear of each unit?

To prevent minor checks to be felt throughout the column, the following distances will be left in the rear of each unit:—

| | |
|---|-----------|
| Company of infantry | 10 yards. |
| Battalion, battery, squadron or other unit not mentioned here | 20 " |
| Regiment of cavalry or brigade of artillery | 20 " |
| Brigade of cavalry or infantry | 30 " |
| In rear of division | 100 " |

At night when an engagement is imminent, distances might be omitted but only on the order of the commander of the column.

7. What rules govern the pace?

The pace must be uniform, throughout the column. The officer who gives the pace at the head of the column, must remember that an irregular pace causes sudden checks and forces the troops to diminish and lengthen the pace which is very tiresome principally for the troops in rear of the column. If distance is lost, it is forbidden to trot or double to regain them, this might be done under the order of the commander of the column. Infantry will be ordered to increase the pace, to pass and file rapidly, if there is a special object in view.

8. What is the pace of the different arms?

INFANTRY

100 yards in a min. 18 min. 1 mile, 3 miles, per hour.

MOUNTED TROOPS:

| | | | | | | | | | |
|---------|--------|----|---|---|---|-------|---|------|--------------------|
| 117 | " | 15 | " | 1 | " | 3 1/2 | " | per. | —At the walk. |
| 235 | " | " | 8 | " | 1 | " | 7 | " | per. —At the Trot. |
| 440 | " | " | " | " | " | " | " | " | —Galop. |
| 5 miles | 1 hour | | | | | | | | —Trot and walk. |

9. What is the length of a days march?

For a column of all arms, generally 15 miles, with a days rest once a week. Small detachments of well trained troops in favorable conditions can cover 25 miles.

10. What is a forced march?

Depends more on the number of hours the troops are under arms than on the distance covered. A forced march will never

be undertaken unless there is a special object in view, and its obtention compensated for the loss of energy and efficiency. It is only very seldom that infantry will be called upon to march at a greater pace than that ordered by the regulations as it tires the troops too much.

11. What is the order of march of a column of all arms?

When in the neighborhood of the enemy, the troops will march in the order in which they come into action. But artillery will always be preceded by a force of infantry strong enough to protect it.

N. B. Do not forget in tactical problems, (marches) that the artillery must always be preceded by some infantry.

Ammunitions columns of different units will march in the rear of the fighting troops of their division. Sometimes it is advisable to have a column of ammunition near the head of the column. The position of the signalling units, telegraphs and pontoon detachments will depend on the situation. If the pontoons are not wanted, they might be left one or two days march behind. In fixing their place one must remember how important it is to leave the place on the rear of the fighting troops clear of all encumbrance. Spare horses will march at the tail of the first line transport. Those parts of the engineers companies will only be accompanied by the technical transport, they require, and will march at the head of their division. The remainder of their transport will march with the ammunition column in the rear of the fighting troops.

Field ambulances will follow their division unless otherwise ordered.

12. Where will the train march?

The baggage section of the train, will follow in the rear of the main body, but if there is danger of meeting the enemy, the transport must not be too near so as not to hamper the movements.

13. What do you understand by starting point?

A point called the starting point, which the head of the main body must pass at a certain time will be chosen, it will be detailed in operation orders. If the troops are not all quartered together it will be necessary for the commander to fix more than one starting point, to allow subordinate commanders to take their place in the column without undue fatigue to the troops and without crossing the line of march at other units.

In fixing the starting point care must be taken that the troops march in its direction and are not obliged to walk to pass it. If the march starts at night the points will be marked by lamps or fires, the manner adopted will be described in orders. During the march to the starting point the fighting troops with their first line transport have the precedence on the baggage or other transport which must remain parked until the fighting troops are gone.

14. What halts are given during the march?

When the halt is signalled all the troops must halt and place themselves on the left side of the road. The men will lie down and take off their kits. Protecting troops are not obliged to halt as their commander might prefer to advance a little further so as to occupy a position offering a greater tactical advantage.

As soon as the advance is signalled the troops will start advancing. The signal to halt or advance is always given from the front. A short halt will be given 1-2 hour after the start then afterwards at the discretion of the commander of the column. When it is warm or when the start is made early, arrangements must be made to water the horses during the march.

15. How is a military bridge crossed?

A staff officer will place himself at the head of the bridge to regulate traffic and prevent checks. An officer from each unit will remain near the bridge until the unit has passed. It will be the same for the defiles, fords, &c.

In crossing a military bridge, the pace must be broken, files or sections must not close up.

If it is absolutely necessary to halt on a bridge, this must be done between two pontoons.

If the bridge sways the men must halt until the swaying ceases. Horses will be led in crossing pontoon bridge.

The pace must not be increased when the bridge is crossed.

16. At what depth are fords crossed?

Infantry 3 ft., cavalry 4 ft., artillery 2.4 inches. Fords with gravel bottoms are the best. Those with sandy bottoms must not be chosen, they are bad, the sand moves and the depth increases. Fords will be marked by means of long piquets planted on each side of the ford. A river is not fordable in a straight line.

17. What is the extent of road space covered by the different arms in column route?

Cavalry and mounted infantry in section, 1 yard per horse in the rank.

Cavalry and mounted infantry in file 2 yards per horse in the ranks. Infantry in fours 1 yard per two men in the ranks.

| | |
|-----------------------------------|-----------|
| 1 or 2 horse vehicle | 10 yards. |
| 4 horse vehicle | 15 " |
| 6 horse vehicle | 20 " |
| Vehicle with two mares or ponies. | 7 " |
| Pack animal (horse) | 4 " |
| Camels in file | 5 " |
| Bicycle | 6 yards. |

These distances include the distances in rear of the unit.

| | |
|-------------------------------------|-------|
| Infantry with its line of transport | 834 " |
| Infantry Company | 77 " |
| Squadron of cavalry | 248 " |
| Cavalry Regiment | 947 " |

| | | |
|---|----------|---|
| Coy. mounted infantry | 229 | " |
| Battalion mounted infantry | 929 | " |
| Horse artillery battery | 526 | " |
| Ammunition column horse artillery | 796 | " |
| Battery of artillery 18 pr | 482 | " |
| Ammunition column 18 pr | 568 | " |
| Field Coy. R. E. | 487 | " |
| Field troop R. E. | 211 | " |
| Section field coy., R.E. | 180 | " |
| Field Ambulance | 464 | " |
| Section field ambulance | 160 | " |
| An infantry brigade covers two miles and a division 14 1-2 miles. | | |
| 18. How many troops pass a certain point in one minute | | |
| Cavalry at the walk in section calculate | 120 men. | |
| Cavalry at the walk in 1-2 section | 60 | " |
| Infantry in fours | 200 | " |
| Artillery 5 guns or waggons. | | |
| If the troops follow in rear of infantry calculate cavalry in section. | | |
| 100 cavalry in half sections | 50 Men. | |
| Artillery and wagons | 5 | " |
| After the march has been in progress for a certain time it will open out. With well trained troops allow 20 per cent. | | |

EXAMPLE OF MARCH ORDERS.

| Reference Map | Operation Orders No. | Copy No. |
|---------------|---|---------------|
| | By Colonel Cmdg. Column. | Place Date |
| 1. | INFORMATION. A small force of the enemy is at ALLAN'S CORNER, one of its patrols was seen at PRIMEAUVILLE on the afternoon of the 10. Our first division is in MONTREAL. | |
| 2. | INTENTION. Tomorrow the detachment will proceed to ST. ISIDORE. | |
| 3. | STARTING POINT. The bridge 1-2 S.E. CAUGHNAWAGA Village just above the N. in CAUGHNAWAGA will be the starting point. | |
| 4. | ORDERS FOR THE A.G. The A. C. composed as follows:— O.C.Lt.Col. "A" 3rd. Regt. V.P.C. TROOPS.— 2 squadrons, 1 Hussars (less 2 troops) 1 section 3rd. F.B. No. 4 Coy. C.E. 4 Co'ys 3rd. Regt. V.R.C. | |
| | will proceed tomorrow in the direction of ST. ISIDORE reconnoitering in the direction of ALLAN'S CORNER and ST. URBAIN. | |
| 5. | ORDERS FOR THE MAIN BODY. The Main body in the following order will pass the starting point at 8.00 a.m. 1 sec. 1 Hussars. 3rd. Regt. V.R.C. (less 4 Co'ys). 3rd. F.B. (less 1 section). 1st. G.G.C. 1 section Field Ambulance. | |
| 6. | ORDERS FOR THE OUTPOSTS. The outpost mounted troops will join the A. G. cavalry as it passes Outpost companies will join the tail of the Main Body. | |
| 7. | ORDERS for the Train. Lieut. "Y" is appointed Train Master. The second line transport under the escort of 1 section 1 Hussars will be formed in column of route O a.m., at the S. exit of CAUGHNAWAGA and will await orders. | |
| 8. | Reports. Reports will be sent at the Head of the Main body. "X" Bde. Major. | |
| | Dictated to assembled O.C. Units at 10 p.m. Copy No. 2 to C.C. outposts by Lt. "Y" at 10 p.m. Copy No. 3 to O.C. 1st. Division at 10. | |

✓ QUESTIONS ON DISTRIBUTING TROOPS IN CAMPS AND BIVOUACS.

1. How many ways are there of quartering troops?

There are four ways of quartering troops:—

(a) Billets. (b) Close billets. (c) Camps. (d) Bivouacs

2. What do you understand by Billets?

Where men and horses are accommodated in buildings.

3. What do you understand by close billets?

Where as many men as possible sleep in houses, the remainder bivouacking.

4. What do you understand by camps?

Where the men sleep in tents, which may be replaced by huts if the force is likely to remain halted for a long time.

5. What do you understand by Bivouacs?

Where the men sleep in the open with only such improvised shelter as they may be able to construct.

N.B. Billets, of course, have the advantage of allowing proper rest and of giving shelter from the weather; but have the disadvantage of involving considerable dispersion.

6. If the march is to be continued next day, how far should troops be quartered from their line of march?

From one to two miles.

✓ 7. When selecting a site for quartering troops; what considerations should be observed?

Tactical considerations and sanitary considerations must be observed.

8. What do you understand by tactical considerations?

(1) Favourable ground for defence in case of attack.

(2) Concealment.

(3) Facilities for protection, enabling economy in outposts, to be carried out.

9. What do you understand by sanitary considerations?

(1) The sight should be dry, on grass if possible, and healthy; (large woods with undergrowth, low meadows, the bottoms of narrow valleys, newly turned soil, clay soils are apt to be unhealthy,) and not liable to floods and should not be polluted by previous occupation.

(2) There should be a good water supply.

(3) There should be facilities for obtaining shelter, fuel, forage and straw.

10. How is the site selected?

A Staff Officer from the head quarters of the column, accompanied by a medical Officer, an engineer Officer, and some military police, will be sent forward to the proposed halting place. The Staff Officer will select the actual site for the proposed

camp or bivouac; decide upon the allotment of the area to the larger units (Brigades) etc., and take adequate measures to protect the water supply, employing the military police for this purpose.

11. When the column arrives within 2 or 3 miles of its destination. What should Staff Officers of bridges, etc., do?

Accompanied by representatives of their units, they will ride ahead, receive instructions concerning arrangements for the night, lead their units on arrival direct to the ground allotted to them, and explain the arrangements to commanders of units.

N.B. The commanders of the train and of the rear guard will report personally to the Commander of the column as soon as they have reached their destination.

12. What rules should be observed in distributing troops in camps or bivouacs, and spaces allotted to each unit?

Infantry in the more exposed position. Space allotted.—

Battalion mounted infantry 200 by 150

Company " " 55 by 150

Battalion " " 75 by 150

Cavalry and other mounted troops in the less exposed. Space allotted.

Divisional H. Q's 50 by 100

Brigade, H. Q's 30 by 50

Cavalry.—

Cavalry Regiment 160 by 150

Cavalry Squadron 55 by 150

Artillery, train, Ammunition column, and Medical Units always covered by the other arms. Space allotted.

Artillery.—

Battery R. H. or R. F. A. 75 by 150

F. A. Brigade amm. Column 100 by 150

Divisional Amm. Column 300 by 150

Engineers.—

Field Troops 50 by 50

Field Company 35 by 150

Medical.—

Cavalry Field Ambulance 80 by 180

Field Ambulance 120 by 200

N.B. Cavalry, mounted infantry, and infantry require an alarm post of 60 yards depth in front of the camp or bivouac in addition to the depth given. Other arms fall in on the ground, where they camp or bivouac. So far as consistent with the above the units should be in the order from front to rear in which they will come in action.

13. Where should dismounted units be placed?

They should be placed nearest the water supply.

14. Where should Depots be placed?

Near good roads.

15. Where should the staffs and hospitals be placed?

They have the first claim on buildings.

16. When shelter is limited, what troops have precedence?
Cavalry and other mounted troops have precedence of dismounted troops.

Officers must be close to their men.

17. What additional points must be observed in Billets?

(1) Staff offices should be on main communications, and easily found.

(2) Mounted men must be near their horses, guns and waggons; and staff Officers near their offices.

(3) Both sides of a street should be allotted to the same unit to prevent confusion in case of alarm.

(4) Roads and communications must never be blocked. Guns and vehicles must, if necessary, be parked outside towns and villages.

N.B. If parked on the sides of roads, the first and last gun or vehicle should be marked with a light.

18. How are troops accommodated in billets?

To estimate the billeting accommodation afforded by a village divide the dwellings into classes; measure one house in each class to ascertain its accommodation. Multiply this accommodation by the number of houses in the class. For ordinary billets when a halt is for night only:—

Rooms up to 15 feet wide—One man to every yard of length.

Rooms over 15 and under 25 feet wide—two men to every yard of length.

Rooms 25 feet wide, and over—three men to every yard of length.

Some rooms must be left for the inhabitants?

19. How would you billet horses?

For horses, stalls should be counted. Where there are no stalls, 5 feet to be allowed for every horse; if the building is over 25 feet wide the horses may be placed in two rows.

20. How are troops accommodated in Close Billet?

Men must be placed in the passages and less space left for the inhabitants.

N.B. Billets with subsistence can be provided by an area for a force about equal to twice its total population for one week. Billets without subsistence can be provided at the rate of about 10 men per inhabitant in rich agricultural districts and at the rate of about 5 to 6 men per inhabitant in town or industrial districts.

21. What measures must be taken on arriving on the camping ground?

(1) All necessary defensive precautions to be taken.

(2) Guards mounted.

Police posts established.

(4) Water, fuel and forage parties detailed.

2. What explanations must be given?

(1) The boundaries of the unit's area, and of the district.

(2) Other matters of a similar nature, such as the situation of watering places for men and horses, of the bathing and washing places, of the latrines, refuse pits, kitchens, etc.

(3) What each man has to do in case of alarm.

(4) The names of all prominent features of ground near the area, and where the roads in the immediate neighborhood lead to. Names should be invented for such features if none exist.

23. Who is appointed to maintain discipline and command, in a camp or bivouac?

A District Commandant is appointed to each of the districts into which the whole area is divided; each district comprising the camps of a Brigade or of any improvised organization approximately equal to a Brigade.

24. What Officers are appointed in each district to assist the district Commandant?

A Field Officer of the day.

A Medical Officer.

A Regtl. Quartermaster.

N.B. An Officer of the day will be detailed in each Regiment, Brigade of Artillery, Battalion or other large unit.

An Orderly N.C.O. will be appointed in each Squadron, Battery Company or small unit.

25. Will troops be allowed to quit their areas?

No troops, other than orderlies and parties for water, wood, forage, etc., under proper control are to quit their areas until leave has been given by the Commander of the Brigade area.

26. What will a commander of a unit do?

He will, without delay, send an orderly who knows the position of the unit's headquarters to report himself at the Brigade Office.

27. When will daily duties mount?

They will mount at once.

28. If a state of constant readiness is ordered, how will troops remain?

Troops will remain accoutred and will sleep with their arms handy. Horses should be kept saddled and harnessed. In Billets, lights must in this case be kept burning in houses, stables and streets, and doors must be kept open.

29. Should inlying Piquets be mounted?

Yes, if required for internal security or as a reserve for the outposts.

30. When will the alarm be sounded?

The alarm will be sounded only by order of the Commander of a Brigade area or of superior military authority, unless an actual attack is impending, when it may be sounded on the responsibility of any Officer or of the Commander of a Guard.

31. On the alarm sounding; state what troops will do?

Troops, fully armed and equipped, will fall in by squadrons and companies on the alarm post of their unit, draught animals are to be at once harnessed in and pack animals saddled up, and an Officer from each unit is to be sent for orders to the Brigade Office.

ALLOTMENT OF BILLETS.

(When sufficient time is available).

32. How many kinds of billeting parties are detailed in Bille-
lets?

Two kinds, as follows:—

(1) A billeting party in charge of an Officer of the Q.M.G.'s staff, including representatives of the Brigades and divisional troops.

(2) Regimental billeting parties, consisting of an Officer or N.C.O. and 1 rank and file per Coy. for each unit.

33. Where should the first party move?

It should move with the protective mounted troops.

34. Where the second march?

It should march with the advanced guard.

35. By whom will be allotted the billeting areas for the Brigades, etc.?

As soon as the distribution of the troops has been decided upon, the billeting areas for the Brigade will be allotted by the Q.M.G.'s staff.

36. What will the O. C.'s of these areas do?

They will in turn distribute the area among their units; and will also issue billeting demands on the civil authorities to representatives of units together with any special orders to be observed by inhabitants.

37. What will Regtl. billeting parties do on arrival in the locality they are to occupy?

They will proceed direct to the Mayor or other official holding equivalent position, and hand him the billeting demand, together with the instructions to be observed by the inhabitants.

The Mayor will then give the Officer in charge of the billeting party a billeting order for each inhabitant on whom horses or men are to be quartered.

38. What will the O.C. of the billeting party do after he has received the order?

He will then issue these billeting orders in proper proportion to the representatives of each Company.

39. How will the Coy. representatives proceed?

They will proceed to the houses and stables allotted to them; mark with chalk on the doors the names of Officers, the number

of men and horses the building is to hold, etc., and hand the billeting orders to the occupiers.

40. In the meanwhile, what will the O.C., of billeting party do?

He will select and mark the position of the following:—

(a) Regimental Headquarters.

(b) Guard Room.

(c) Alarm Post.

(d) Sick Inspection Room.

(e) Gun and Transport Parks, etc.

He will ascertain the best lines for communicating with neighboring units and the best roads into and out of the billeting area.

ALLOTMENT OF BILLETS, WHEN SUFFICIENT TIME IS NOT AVAILABLE FOR THE ABOVE DESCRIBED PROCEDURE.

41. When will the troops halt?

They will halt outside their billeting areas.

42. How will the billeting parties of each Brigade proceed?

Billeting parties for each Brigade will proceed to the Mayor, present him with a billeting demand and request his co-operation.

43. What steps will the local authority take?

The local authority will then take steps to notify the inhabitants that troops will be billeted on them and promulgate any military orders to be obeyed.

44. How will the billeting parties allot the areas?

They will roughly allot the accommodation; areas being assigned to larger units, and these in turn allotting certain streets or groups of houses to their units.

SPECIAL MEASURES TO BE TAKEN IN BILLETING.

45. What special measures must be taken in billets?

They may be distinguished as follows:—

(a) Measures or rules with regard to the troops themselves.

(b) Measures with reference to the inhabitants.

46. With reference to the troops, what measures should be taken?

They are the following:—

1. Officers will visit the billets at irregular intervals at least once by day and once by night.

2. All houses where liquor is obtainable must be placed under control.

3. In every house occupied by troops at least one man must be detailed to guard the arms. Arms are not to be piled or left outside.

4. Directions will be issued with regard to the use of fires and lights.

5. An alarm signal should be arranged.

6. Officers and men have only a right to cover, unless the inhabitants also provide subsistence.

7. Staff Officers must immediately on arrival communicate their addresses to headquarters.

8. If necessary the village should be prepared for defence and a portion of the troops kept in constant readiness, i.e., the troops will remain accoutred, and will sleep with their arms handy.

Measures with reference to the Inhabitants.

47. What measures should be taken with the inhabitants?

They are the following:—

1. If necessary the inhabitants should be disarmed, and forbidden to leave their houses after a certain hour. Those who have leave to be out after dark should carry lights.

2. Precautions must be taken to prevent inhabitants conveying information to the enemy. The telephone system must be at once controlled.

3. Directions should be issued controlling the use of fires and lights by the inhabitants.

4. Military tribunals should be established to deal with offences committed by the inhabitants.

5. The local authorities will usually be required to take such sanitary measures as may be needed, but assistance may be given if necessary, especially in close billets.

SANITATION OF CAMPS AND BIVOUACS.

48. What precautions should be taken with regard to the sanitary arrangements for a camp or bivouac?

All precautions should be taken with regard to sanitary arrangements for Camps and Bivouacs.

49. In camp what kind of latrines should be used?

Short trench latrines should be used.

50. How would you arrange these latrines?

In one row with 2 1-2 feet clear space between each trench. The size of each trench should be 3 ft. long, 1 ft. broad, and 1 ft. deep.

For the second day these trenches are filled in and fresh ones dug in the intervals.

For the third day a fresh row similar to the first is dug 1 ft. to the front and parallel to the first row. When ground is limited, the depth of each trench may be increased to 2 ft. and the trench made to last two days.

51. How many trenches should be provided for 100 men? And for 500 men?

As a rule 5 trenches should be provided for 100 men (i.e. 5 per cent.) but 15 trenches (i.e. 3 per cent.) will suffice for 500 men.

N.B. When for exceptional reasons deep trenches are necessary, they should be narrow and deep (say 4 ft. deep and 2 ft. wide at bottom); pole seats should be provided and latrines constructed to seat 5 per cent. of the troops, 1 yard per man being allowed.

52. With what should be covered the contents of latrine trenches?

They should be covered with a couple of inches of dry earth daily. The use of kerosene oil and lime will assist in keeping flies away.

53. What should be done with all the refuse?

The rule is burn all you can and what you cannot burn, bury.

54. What should be done with the tents?

Dig a trench around the tents to keep them dry. Roll up flies of tents every morning. Air blankets and kits whenever possible.

WATERING ARRANGEMENTS.

✓ 55. What measures should be taken to secure the water supply from pollution?

Military Police, or the first troops to arrive at the halting ground will mount sentries on all water likely to be required for use.

These sentries will not be withdrawn until permanent water guards are detailed.

✓ 56. If water is taken from a stream, state what should be observed?

Horses will be watered below the place where troops obtain their drinking water, and above bathing and washing places. The length of the stream allotted for each of the above purposes will be marked by flags as follows:

White Flag, for drinking water.

Blue Flag, for watering places for animals.

Red Flag, for washing or bathing places.

57. What measures should be observed if running water is not available?

The following measures should be taken:—

(a) A rough barbed wire fence, if procurable, must be run round the supply to keep animals out.

(b) Animals must be watered by bucket or nose bag.

(c) Washing shall be allowed only at some distance from the water supply. Similar precautions are often necessary with running water if other bodies of troops are halted lower down the stream.

58. When will an Officer accompany watering parties?
An officer will always accompany watering parties of more than twenty animals.

59. How is water rendered safe for drinking purposes?

- (a) By being boiled, or heated in a special sterilizer.
- (b) By the use of sterilizing filters.
- (c) By being treated with chemicals.

60. If the water is boiled in an open vessel, for how long should it be kept boiling?

It should be kept boiling for at least 5 minutes.

61. What filter is provided for this purpose?

The filter usually provided is the filter water tank. This will sterilize about 200 gallons in an hour. A portable filter, to be carried on a pack saddle, will filter 60 gallons per hour.

62. What should be done if the water is very muddy?

It should be clarified to some extent before being put into sterilizer or filter, by being treated with alum, or strained through a sheet or through a layer of sand or gravel.

63. What should be done if the water is dangerous to drink?

It may be sterilized by the use of chloride of lime. (For method of doing this see Field Service Pocket Book, page 46 and 47.)

AMOUNT OF WATER.

64. What is the daily average of water per man?

About one gallon per man is sufficient for drinking and cooking purposes.

65. What is the daily average of water per horse, bullock and mule?

A horse, bullock or mule drinks about 1 1-2 gallons at the time.

N.B. In standing camps an average allowance of 5 gallons should be given per man and 10 gallons for a horse.

66. Why are there a specially trained number of N.C.O.'s and men of the Royal Army medical Corps attached to each unit?

They are attached for the purpose of superintending the supply of pure drinking water, and whenever filters, sterilizers or other means of purifying water are available two men per Company or corresponding unit should be specially detailed for the purpose of providing pure water.

CONVOYS. F.S.R. Sec. 157.

The Senior Combatant Officer with the convoy will command both the transport and its escort. He will consult the senior transport Officer on all matters which affect the welfare and convenience of the convoy; will avoid all interference with his technical functions, and will give effect to his wishes, unless by so doing the safety of the convoy, would be endangered.

2. Convoys may be worked on any of the three following systems:

i. Through convoys; consists in the same animals and vehicles being employed from start to finish.

ii. Staging system. Consists of a division of the road into stages, the same section of the transport working over the same ground, proceeding laden, returning empty.

iii. Meeting system, is that by which two sections, one laden, one empty meet daily at fixed points, between two stages when loads are transferred or vehicles exchanged, each section returning to its respective stage.

The through convoy system is generally adopted in front of the advanced depot, and the staging or meeting system on the L. of C.

3. The success of an attack upon a convoy, usually depends upon the defeat of the protecting troops. This will involve a combat which will be governed by the principals already laid down in this manual.

4. If convoys move frequently along a line of communication, the route should be piqueted daily by troops sent out from posts on the line. Should it be necessary to send a convoy along a route which cannot be protected in this way, and is liable to attack a special escort should be detailed. In civilized warfare the escort should not be distributed along the convoy, but after small advanced and rear guards have been provided for the latter, and sufficient men have been posted along to insure communications. **THE MAIN PORTION OF THE ESCORT SHOULD MOVE WITH THE USUAL PRECAUTIONS AND IN A HANDY FORMATION ON THE FLANK OF THE CONVOY FROM WHICH ATTACK IS ANTICIPATED.**

5. The special business of the commander of the convoy, is to conduct it safely to its destination. Secrecy is most important. Under no circumstances should anything be done to provoke an attack. If fighting is inevitable, the enemy should be engaged as far as possible from the convoy.

6. Early information about the enemy and the roads ahead is essential, and the escort should be strong in mounted men or cyclists. Secrecy in movement being important the

escort and its scouts should be warned to avoid attracting the enemy's attention. If the enemy is near, silence should be enforced in the convoy itself.

7. If the convoy is attacked it should not be halted or parked, except at the last minute as a last resource.

8. If the attitude of the drivers is doubtful, adequate police measures must be taken to prevent their deserting in the event of an attack.

9. Should the whole or part of a convoy be in danger of falling into the hands of the enemy, it should either be destroyed or rendered unserviceable. The transport animals should either be carried off or killed.

N. B Remember That a Convoy is a Long Line which has to be Guarded by a very small force.

Few Shots Fired into a Convoy may soon bring it to a standstill.

INFORMATION AND RECONNAISSANCE.

Timely information regarding the enemy's dispositions, the topographical features of the theatre of operations, is an essential factor of success in war. Systematic arrangements must always be made so that every possible source of information is fully utilized, that all information received is immediately transmitted to the proper quarter, and that it is properly sifted before any conclusions are formed. This is the duty of the general staff.

INFORMATION IS ACQUIRED IN THE FIELD BY:

- (a.) Reconnaissance.
- (b.) Examination of deserters, inhabitants, prisoners, or papers found.
- (c.) Intercepting messages.
- (d.) Secret service.

Of these reconnaissance is most important.

RECONNAISSANCE.

1. Reconnaissance is the service of obtaining information with regard to:

- I. The topographical features and resources of the country.
- II. The movement and dispositions of an enemy.

In the latter case it may be strategical, tactical or protective. **Strategical Reconnaissance**, is required before the opposing armies are within striking distance, to locate the hostile columns and ascertain their strength and direction of march.

Tactical Reconnaissance, is required when the two forces are within striking distance, to discover the tactical dispositions of the attacking or opposing force.

It is the most important duty of the protective cavalry supported by advance guards of columns and sometimes by additional infantry and artillery.

2. While the advanced troops are engaged with the enemy, information may also be obtained

- I. By personal observation.
- II. By general staff or other officers, patrols or scouts.
- III. By observation from balloons or aircraft.

Protective reconnaissance is required by every force at all times to ensure its security against hostile enterprises and to prevent the enemy gaining information.

3. Information may be gained by personal observation of the enemy; by questioning the inhabitants, prisoners and others; and by reading signs, such as tracks, dust, fires, deserted camps, uniforms; or by tapping telegraph wires, taking letters and papers from post offices, telegrams, telegram and telegraph

registers from telegraph offices; register of dispatches from railway stations, etc.

4. In questioning prisoners, or hostile inhabitants, it is well to take them separately out of hearing of others, to let them suppose that a great deal more is known by the questioner about the enemy than possibly is the case. And that questions are purely made with a view to seeing whether they speak the truth or not. The examination should, if possible, be carried out by more than one person.

5. People not accustomed to see large numbers of troops are very apt to exaggerate their strength, a point which a scout should be careful to avoid.

5. Information as to the uniform of the enemy, number of the regiment, may be of great use.

A scout should know what are the usual formations of the enemy, and what are the usual strengths of his different organizations of troops.

6. If troops are moving along a road or defile, they may be timed while passing cavalry in section at the walk 120, at the trot 250. Artillery guns or waggons 5. Infantry in fours 200.

7. The following signs should be noticed as affording information:

Clouds of dust show movements of troops, or baggage, or cattle, etc. Cavalry raises a high cloud. Infantry and vehicles a lower and denser cloud. Motors moving rapidly, a thick high and continuous cloud. In some country it is customary to set fire to grass or bush so that the smoke may hide the dust of movements. In many countries it is customary to light signal fires, to send up a flare by night or puffs of smoke by day. This latter is done by lighting a damp fire and alternately covering it and uncovering it with a blanket. They may be used with advantage by our own look outs, scouts, etc. The enemy's bivouac fires, should be located and counted in the evening or early morning. It is customary to light dummy fires to deceive the enemy.

Tracks. Much observation may be gained by a good tracker from observing tracks on the ground.

Tracks give warnings of enemy's patrols being about, show the formation, direction and speed of his force and almost the hour when the force has passed.

Every scout to be efficient must be a tracker.

Sounds. Sound travels at the rate of about 400 yards per second. Four beats of the pulse to 1000 yards is a fair rough calculation. The sound of the explosion overtakes the modern pointed bullet at about 2000 yards. A double report is heard when the bullet is fired by some one exactly facing the observer.

Since such scout work has to be done at night, it is necessary that he should not fail to make every use of his senses of hearing and of smell, as well as of sight.

RECONNAISSANCE REPORT.

1. To obtain satisfactory results, it is essential that the reconnoitring officer should be given a clearly definite task, which should be within his power to perform.

2. In drawing up his report, the reconnoitring officer should be as concise as possible and should be careful to confine his information to what is relevant.

3. The most satisfactory method is to divide the report into two parts.

The first part should contain a general description of the outstanding features of the reconnaissance to enable the reader to get a grasp of the subject without having to wade through a mass of details. The second part should contain the detail in a tabular form.

4. Where the names of foreign places are spelt the English form should be used and the local form in brackets.

5. Care should be taken to distinguish between what are impressions or hearsay only, and what are facts.

It is important to know the time of the year when a reconnaissance is made.

ORDERS.

There are four kinds of Orders:—

1. Standing orders.
2. Operation orders.
3. Routine orders.
4. Messages.

1. The object of Standing Orders is to adapt existing regulations to local conditions.

2. To save frequent repetitions in operation and routine orders.

Operation Orders deal with all strategical and tactical operations, such as marches, protection, occupation of quarters, reconnaissance and battle. They include such information regarding supply, transport, ammunition, medical and other services of maintenance, as it is necessary to publish to the troops; but detailed orders for such services, which it is not necessary for the troops to know should be issued only to those directly concerned.

An operation order should contain just what the recipient requires to know and nothing more.

It should tell him nothing which he can arrange for himself. The general principle is that the object to be attained, with such information as affects its attainment, should be briefly but clearly stated; while the method of attaining the object should be left to the utmost extent possible to the recipient with due regards to his personal characteristics.

Operation orders, especially in the case of a large force should not enter into details, except when details are absolutely necessary. It is usually dangerous to prescribe to a subordinate at a distance anything that he should be better able to decide on the spot with a fuller knowledge of local conditions; for any attempt to do so may cramp his initiative in dealing with unforeseen developments. The expression "will await further orders" should be very sparingly used for this reason. It is important to train subordinates not only to work intelligently and resolutely in accordance with brief and very general instructions, but also to take upon themselves whenever it may be necessary the responsibility of departing from or of varying the orders they may have received.

In order to facilitate co-operation, the whole of the directions to each portion of a force taking part in a combined operation will usually be embodied in one operation order. When for any reason separate orders are issued instead of a combined order each separate order will include such information regarding other troops as the recipient may find it useful to know.

Routine Orders are precisely the same in war and peace. They deal with all matters not concerned with operations such as discipline, interior economy, etc.

Routine orders will usually be issued daily at fixed hours, the earlier the better. At these hours, commanders of divisions, brigades and units will ordinarily send an officer to the H. Q. of their immediate superior. The officer will not only receive orders but will also be prepared to give any information regarding the command to which he belongs, which the superior may require. Watches will be compared on this occasion. When a force is stationary, the fixed hour for the issue of routine orders should never be later than noon.

RULES REGARDING ORDERS.

I. A formal order should never be departed from, either in letter or spirit:

(a). So long as the officer who issued it is present.

(b). If the officer who issued the order is not present, provided that there is time to report to him and await a reply without losing an opportunity or endangering the command.

II. A departure from either the spirit or the letter of an order is justified if the subordinate who assumes the responsibility bases his decision on some facts which could not be known to the officer who issued the order, and if he is satisfied that he is acting as his superior if present would order him to act.

III. If a subordinate in the absence of his superior neglects to depart from the letter or the spirit of an order when such departure is justified by the circumstances and that failure ensues he will be held responsible.

IV. Should a subordinate find it necessary to depart from an order he should at once inform the issuer of it and the commanders of any neighboring units likely to be affected.

HOW TO WRITE ORDERS.

Orders contain first the class to which they belong.

The name of the issuer, place and date, map referred to.

The hour of 12 will be followed by the words noon or midnight.

A night will be described thus: Night 29-30 Sept. Night 30 Sept. October 1st. Names of persons and places will be written in block capitals. Ex. LONDON, WELLINGTON, and must be spelt exactly as given on the map in use. Great care is necessary to prevent possible misunderstandings resulting from the existence of two or more places of the same name. Units should be described by their army list abbreviations. In naming units from which a portion has been excluded will be followed by the words "less." Ex.—17th Hussars less 1 squadron.

* If a map is referred to the one used must be specified the position of places will, as a rule, be denoted either by the point of the compass. Ex. wood 600 yards S. E. of TETSWORTH, or, when no point of reference is available, by the actual compass bearing. Ex.—Hill 1500 yards true bearing 272° from CHOBHAM Church, or by description. Ex.—road 1.2 mile S. W. of the second E. in HASELEY, the letter indicated being underlined. A road is best indicated by the name of the places on it, care being taken to name sufficient places to insure that the road intended is followed.

A position is best described from right to left looking in the direction of the enemy. The terms right, left, are used in describing river banks it being assumed that the writer is looking down stream, except in the foregoing cases, indefinite or ambiguous terms such as right, left, behind, front, rear must not be used unless it is made quite clear to what force it refers. When compass bearings are given they will invariably be true bearings and this should be stated. The variation of the compass should be checked before true bearing is given and converted into magnetic bearing and vice versa.

If the order, report or message refers to troops arriving at a certain place at a certain time, it is assumed that it means the head of the main body unless otherwise stated.

An order, report or message should be clearly signed with the rank of the sender, his appointment, and the force he is with being stated.

A copy of all orders and messages sent will be kept by the sender, the copy and the original being endorsed by the mode, hour and time of issue or transmission. Ex.—personally to G. S. O. S. 2nd and 3rd divisions at 11.20 a. m. by wire to G. O. C. 3rd Cavalry Brigade, at 2.30 p. m.

A message will begin with the name, rank, unit of the addressee, followed by the sender's number, signature, appointment, date, place and time.

Example of a message in answer to another:—

To O. C. 25th Battalion,
St. John. Place. Date.
Message No. With reference to your No.
of. date.
By wire. From A. A. G. 6th Division.
at 6.30 p. m.

MILITARY ENGINEERING.

1. What do you understand by Field Fortifications?

By Field Fortifications is implied all those measures which may be taken for the defence of positions intended to be only temporarily held. Works of this kind are executed either in the face of the enemy or in immediate anticipation of his approach. Field Fortifications presupposes a defensive attitude, and though recourse to it may, under certain circumstances, be desirable, it must always be regarded as a means to and, and not an end in itself.

2. What is the main object of Field Fortifications?

First, enable the soldier to use his weapon with the greatest effect; the second, to protect him against the adversary's fire. By thus reducing losses and increasing the powers of resistance in any part of the theatre of operations or field of battle, more troops are available to swell the force destined for decisive action there or elsewhere.

3. To what extent should field fortifications be employed?

This will depend on whether the commander acts on the offensive from the commencement of an action, or whether he decides to await the attack in the first instance. If the offensive is assumed, field fortifications will find only a limited application, for the provision of cover must never be allowed to stop the advance, and entrenchments will not be commenced without an order from an officer.

During the process of establishing a superiority of fire successive fire positions will be occupied by the firing line. As a rule those affording natural cover will be chosen, but if none exist, and the intensity of the hostile fire precludes any immediate advance, it may be expedient for the firing line to entrench itself. If any diminution in the volume of fire is thereby entailed, infantry should only entrench when further progress has become impossible, and an energetic advance must be resumed at the earliest moment. Artillery should be entrenched whenever possible.

4. What should be done with the captured tactical points?

Be at once placed in a state of defence, so that attempts on the part of the enemy to recapture them may be defeated, and that they may serve as supporting points for the attack. Local reserves will often find opportunity for strengthening localities or fire positions which have been previously gained by the firing line. Detachments of engineers (field companies) may be attached to them to assist in such work.

5. On what depends the extent of fortifications for defence?

The amount of work to be undertaken, will depend on the object in view and on the number of men and tools available.

6. What points should be borne in mind when reconnoitring a locality which it is desired to strengthen?

(1). Strong and weak points of the position to be defended should be carefully studied and the site for entrenchments chosen with due regard to tactical requirements and economy in men.

(2). The enemy in attacking should be exposed to the fire of the defenders, more especially for 300 or 400 yards. To ensure this, the foreground may require clearing.

(3). The enemy should be deceived as to the strength and dispositions of the defending troops and the character of their works.

(4). The defenders should be screened from the enemy's view and sheltered from his fire by natural and artificial cover, so arranged as to permit the maximum developments of their own rifle fire.

(5). The free movements of the attacking troops should be hampered by obstacles to detain under fire and to break their order of attack.

(6). The free movements of the defenders should be facilitated by improving communications within their position, and clearing the way for a counter attack.

In other words:

1. Choice of ground.
2. Clearance of foreground.
3. Preparation of cover.
4. Screening of position.
5. Creation of obstacles.
6. Improvement of communication.

7. What is the maximum range of the rifle?

Modern rifles are sighted to about 2800 yards, but their maximum range may be taken as about 3700 yards.

The slope of descent of the bullet varies from 1-15 at 600 yards and 1-19 at 1100 yards, and 1-4.75 at 2200 yards.

8. Over what height can the average man fire on level ground?

| Position | France | Germany | Russia | Great Britain. |
|---------------|--------|---------|---------|----------------|
| Lying..... | 11.8" | | | 1 Foot |
| Kneeling..... | 3'3.3" | 2'11.4" | 2'10.8" | 3 Feet |
| Standing..... | 4'7.1" | 4'7.1" | 4'8" | 4'6" |

A higher parapet can be used when firing uphill than down hill.

9. What is the maximum penetration of the bullet in the different materials?

In order to obtain proof cover, a percentage must be added to these numbers 2.9 parapet should not be less than 3 1-2 feet thick, if the soil is free from stone a thickness of 4 feet is desirable.

| Material. | Maximum Penetration. | Remarks. |
|---|----------------------|--|
| Steel plate, best hard. | 7-16 inch | At 30 yards normal to plate |
| ditto, ordinary mild or wrought iron..... | 3-4 inch | 3-16 inch, is proof at not less than 600 yards, unless the plate is set at a slope of 3-2 when 3-16 is proof at 250 yards. |
| Shingle..... | 6 " | Not larger than 1 inch ring gauge. |
| Coal hard..... | 6 " | |
| Brick Work Cemented Mortar..... | 9 " | 150 rounds concentrated on one spot will breach a 9 inch brick wall at 200 yards. |
| Brick Work Lime Mortar..... | 14 " | |
| Chalk..... | 15 " | |
| Sand between border, or in bags..... | 18 " | Very high velocity bullets have less penetration in sand at short range than at medium ranges. |
| Sand, loose..... | 20 " | |
| Hard wood oak with grain..... | 38 " | |
| Earth, free from stones | 40 " | Ramming earth reduces its resisting power. Penetration of brick work and timber is less at short than medium ranges. |
| Soft wood, Fir, with grain..... | 58 " | |
| Clay..... | 60 " | Varies greatly, this is the maximum for greasy clay. |
| Dry turf or peat..... | 80 " | |

10. How are working parties distributed?

The required number is asked for. The same company, brigade and division, will furnish them. Parties belonging to different units should not be employed. In asking for a working party, a reserve of 1/10 of the force must be included. Unless otherwise ordered the parties must be completely armed. If the party is large and the work complicated, the detachment will be divided in squads, squads corresponding to different parts of the work.

Each squad will be under the orders of an officer or an N. C. O. Parties are distributed as follows:

(a). Each party is extended at the required interval (5 feet) in rear of the place they will work, then they are advanced up to the line to be excavated.

(b). An officer will explain to each man what he has to do. Or, each detachment is halted 3 paces in rear of one of the flanks of the ground to be excavated, they are formed up in single rank of file, according to the manner they are going to work, (if two men are detailed to each set of tools). The officer explains the task, then the men make a wheel and form up along the line to be excavated.

The men mark the left of their task with their picks and take 4 paces to the rear, then they ground arms and remove their equipment, and lie down until the order is given them to start working.

Work must never be started before all the detachments are distributed (to prevent errors).

11. How many cubic feet of earth can a man excavate?

1 hour 30 cubic feet.

2 " 25 " "

3 " 15 " "

4 " 10 " "

or 80 cubic feet in four hours.

If the soil is very easy these rates may be increased and vice versa, and if two men are detailed to each set of tools these rates may be multiplied by 4-5.

These rates hold good for a maximum horizontal throw of 12 feet combined with a lift out of a trench 4 feet deep.

When the earth has to be placed more than 12 feet, shovellers will be necessary as well as diggers.

12. What is a task?

A task is the amount of work a man has to do in one relief.

The following rules will be observed:

1. The task of the first relief should be larger than those of the succeeding ones, as the diggers have less distance to lift the excavated earth.

2. If possible the men of each relief should have a vertical face of earth for the next relief to commence upon.

3. All diggers should commence on the left of their tasks, in order not to interfere with one another, and in continuous trench work, should break into the task on their right.

4. If not under fire the earth first excavated should be thrown furthest away.

13. How is the field of fire improved?

To have a good field of fire it will be necessary to clear the ground in front of the position; this must be done in such a way that it will not afford cover to the enemy. If natural obstacles are left standing, care must be taken that they do not interfere with the counter attack or screen the enemy. As a rule the ground nearest the position is cleared first. Low and dead ground which might offer cover to the enemy will be filled by abatis, or material taken from the walls, etc., if possible an entanglement will be placed around.

Big trees if dispersed, offer less cover if they are left standing than if they are cut down. They might be used sometimes to indicate the range.

The ranges to certain objects will be taken and marked in such a way that they are only visible to the defence.

They will be marked as follows: for 500 yards a V. will be made, and for 1000 yards an X., intermediate ranges will be indicated by means of white objects if possible at each 100 yards.

14. How are covers classified?

Cover against fire, cover against view, and a combination of the two. When clearing the foreground, care must be taken to leave a screen to create these covers.

In wooded or close country a great deal can be done in this respect; sometimes it is sufficient to cut enough branches so that one can fire, and in this manner not change the general aspect of the wood, or again, parts of the woods and hedges may be left standing.

When there is no natural cover, some should be created. The main object to remember when existing cover is made use of is that the man must be able to use his rifle. Cover from view and fire must not offer a target to the enemy. Hedges of woods, hedges, which are parallel to the enemy's position and lone trees are as many targets for the enemy which must be avoided. Smoke may be used to screen working parties, principally against searchlights. Bags are filled with straw and lighted at both ends.

15. How should hedges be treated?

Those which interfere with the view or fire of the defence, or afford cover to the enemy, should be cut down. It is not so important to cut those which are perpendicular to the position than those which are parallel. As a rule, hedges afford good cover from view, they are not very thick, therefore should be reinforced and a strong obstacle made by means of sticks and barbed wire. If there is a ditch on the defenders side, a good fire trench can be obtained with very little work. (See F. E. Manual plate 7, figure 4.) If there is no ditch on the defender's side, a trench can be dug and the earth thrown against the hedge if command is necessary, but the hedge must be strong enough to support the earth and thick enough to prevent the earth from showing on the enemy's side, (plate 7, figure 5, F. E. Manual). The time required to excavate such trench will usually be longer than that required for ordinary trenches on account of roots, and at first work must be concentrated only at points to be occupied by each rifleman.

16. How are embankments and cuttings treated?

Embankments are not as a rule, good positions for a firing line, exposed to artillery fire, as they offer opportunities for accurate ranging. They must, however, often be held in order

to bring fire to bear on what would otherwise be dead ground. They can be defended by occupying the rear side, as in (Plate 7, figure 1, F. E. Manual), or from the front side as in figure 2, or better still, by a combination of both methods. The front side gives a better view of the ground, but cover can be obtained with less labour at the rear side. Cuttings can be defended in the same manner (Figure 3). The rear side gives the opportunity for concealing an obstacle; the front better for a subsequent advance, and secure good shelter for the troops.

17. How are walls treated?

Walls can be knocked down by using picks, crowbars, and hammers, or a short length of rail slung from the pole of a limber, etc. Lightly constructed buildings may be similarly treated. If solidly built they must be blown down and the ruins levelled as far as possible, so as not to give cover.

To give protection against rifle fire, a wall must be well built and at least 9" thick. Should not be held under effective artillery fire, but may be utilized for defence after artillery fire has ceased. If it is desired to make use of a low wall and time is available, it should be used as a revetment and a parapet thrown up against it. A wall 4' to 4'6" high can be used as it stands; if less than 4' a small trench should be sunk on the inside to gain additional cover. (Plate 8, figure 1, F. E. Manual.) Between 5 and 6 feet high a wall can be notched, but above 6 feet in height a stage is necessary to enable men to fire over the wall or through the notches (Plate 8, figures 2 and 3, F. E. Manual), or else the wall must be loopholed (Plate 8, figures 4 and 5, F. E. Manual). A notch can be made in 10 minutes, a loophole takes 1-2 an hour. They are preferable to notches owing to the better head cover they give. Should not be closer together than 3 feet from centre to centre. In a very high wall there can be two rows of men, the first row fires through loopholes, and the other row fires over the walls.

18. How are earthworks classified?

Trenches, redoubts and gun Epaulements. Trenches are further distinguished as "fire trenches" or "cover trenches" according as they are for the firing line, or for troops not actually engaged. "Communication trenches" are excavated covered ways connecting different parts of a position.

The value of concealment cannot be over estimated, and every effort must be made to conceal the site of all earthworks in a position. Invisibility is often as valuable as cover itself. The curves of parapets should be made to assimilate with natural contour of the ground. Straight lines and sharp angles are therefore out of place.

The front of parapets should be carefully covered with sods, transplanted bushes, etc., to make them resemble their surroundings. Cut branches become very conspicuous when withered, and if used should be changed at night.

If a parapet is placed on the sky line, spare earth may be placed behind the trench, and covered with turf, bushes, etc., to make a background for the defender's head.

As a rule a sky line will be avoided.

All earthworks, whether completed or not, must be concealed as far as possible, and all tools, materials, and signs of work in progress removed or concealed on each occasion.

19. What is the ideal fire trench?

It is one from which the best fire effect can be obtained, in combination with complete concealment of the trench and of the movements of the supports and the reserves in the rear. Such a position being rarely found, the best compromise must be sought, bearing in mind that a good field of fire up to about 400 yards is of primary importance.

20. How are the trenches sited?

When the position includes commanding ground, the firing line need not necessarily be on it. The advantage of high ground for a defensive position is often over-estimated. It is, however, desirable that the position should conceal and shelter the defenders reserves and communications, while enabling the movements of the enemy to be observed. It may sometimes be advisable to place the infantry fire trenches at or near the foot of slopes, so as to obtain a grazing fire, while the artillery is posted on higher ground in the rear. It must, however, be remembered that it will be difficult, if not impossible, to reinforce the defenders of such trenches, or to supply them with ammunition, water, food, etc., during daylight.

"Provided the field fire is good, a parapet cannot be too low, and in some cases no parapet at all need be provided."

Every endeavour should be made to arrange the trenches so that the front of one is swept by the fire from those on either side, for which purpose short trenches up to 40 yards or so in length are more easily adapted to the ground than those of greater length. (Plate 18, F. E. Manual). Earth which is not required should be carried away to some spot under cover, or formed into dummy parapets.

21. What rules govern the trenches?

1. The parapet should be bullet proof at the top.
2. The parapet and trench should be as inconspicuous as possible.

3. The interior slope should be as steep as possible.

4. The trench should usually be wide enough to admit of the passage of a stretcher without interfering with the men firing, and if a step is provided as a banquette, it should not exceed 18" in width (Plate 9, figure 3, F. E. Manual).

5. The interior, as far as possible should be protected against oblique and enfilade fire, and from reverse fire, if there is a danger of fire coming from the rear.

6. Arrangements for drainage should be made.

Type of trenches are given on (Plate 9, F. E. Man. page 26).

22. How can one entrench in frozen ground?

A layer of straw 12 to 20 inches thick should be spread so as to rather more than cover the area to be excavated. The straw having first been covered by a thin layer of earth, is then set on fire at intervals of about 5 yards. The burning should be allowed to go on for 12 hours before the ashes are removed and digging commences.

If water is poured over a parapet constructed during frost, its resistance to rifle fire will be increased.

The sound of digging in frozen ground can be heard at a distance of about half a mile, while the sparks caused by picks striking stones have been seen up to 600 yards.

23. How are loopholes constructed?

Head cover necessitates the provision of some form of loophole, or notch, but tends to diminish the number of rifles that can be put in line as well as to reduce the field of fire and view. They are made of sand bags, sods, or various other materials, such as boxes or sacks filled with earth or gravel. One way consists of placing the larger opening outside. It gives the advantage of a larger field of fire, but also affords a larger target for the bullets of the enemy.

Again one can place the larger opening inside, but it reduces the field of fire.

A compromise may be made by placing a large opening outside and inside, diminishing it in the center. (For type see F. E. Manual.)

24. What general rules govern bridges?

Tactical requirements will usually determine the locality for a Military bridge, but when choosing the exact site, attention should be paid to the nature of the banks and approaches, the nature of the bed, width to be bridged, depth of water, strength of current, and the probability and extent of floods, all of which are important from a tactical point of view. If a tidal river the rise and fall of the tide should be ascertained.

"The approaches at both ends of a bridge are a matter of great importance. Easy access and a difficult exit are liable to cause crowding at the entrance to, and on, a bridge which may lead to accidents and delay."

The passage of troops "off" a bridge should always be expedited, while their passage "on" to it should be carefully regulated and when necessary, checked by material obstacles.

Marshy and muddy banks must be avoided, and if ramps are required gradients should be easy.

River bends are not, as a rule, good positions for military bridges as the current runs unevenly, the depth varies, and the bank on the outside of the bend is often precipitous, while that on the inside may be marshy.

25. To what bridging expedient can one resort to?

1. In shallow water, carts or waggons may be used to form the substructure of a bridge.

2. Small gaps may be filled up with bundles of brush-wood, channels being left for the passage of the water.

3. Rafts or even piers for bridges may be made of water-proof tarpaulin, ground sheets, etc., stuffed with hay, straw, heather, ferns, etc. A raft consisting of four 18 by 15 tarpaulins (See App. 3, table 2, F. E. Man.) stuffed with hay, will carry a G. S. wagon, 18 pr. field gun, without limber, or equivalent load not exceeding 24 cwt. The best method of filling each tarpaulin is to make a light frame work of poles, 6 feet square by 2 feet 6 inches high on the ground (a hole of similar dimensions will do as well). Then place two lashings 24 feet long across the framework each way, and over these the tarpaulins well soaked. Fill the tarpaulins with hay and trample it well down. The ends and sides of the tarpaulin are then folded over the hay and the whole made into a compact bundle by securing the lashings across the top.

Two of these floats are lashed together by means of two 14 feet spars, this forms half the raft. The other is made in a similar manner. The two halves are then lashed to one another and 3 feet apart, by means of four 16 feet road bearers. The raft will then measure 15 feet by 12 feet by 3 feet 6 inches. In such a raft the buoyancy is greatly in excess of that actually required to carry the load, but it is necessary owing to the kind of material employed and the short length of the piers. With good tarpaulins the buoyancy will remain good for at least 8 hours.

The stores required are:—

| | |
|---|----|
| Tarpaulins | 4 |
| Hay (tons) | 1½ |
| Planks | 16 |
| Spars (average 4" diam.) four 16', four 14', and two 12' .. | 10 |
| Lashing, 1" about 3 fms. long | 40 |
| Lashing, 1-2" about 6 fms. long | 16 |
| Ropes, 2" length according to width of river | 2 |
| Punting poles | 2 |

Smaller raft can similarly be made by stuffing ground sheets with hay or straw, 24 of these made into a raft will support a load of 1800 pounds.

4. A rough boat can be made by covering the body of a G. S. wagon with its tarpaulin cover. Any projecting points of the wagon must be covered with hay to protect the tarpaulin, and any hole in the wagon should be filled in the same way. The tarpaulin is kept close to the wagon by lashings. Such a boat will carry from 4 to 6 men. For other expedients, see page 68 F. E. Manual, and page 48, figure 3, and plate 50, figure 1. This last plate shows how to make a bridge with casks.

N. B. The attention of all is called to section 54 and plate 30, F. E. Manual, which shows how to protect an outpost group and picquet.

SPECIAL NOTES ON FIELD DEFENCES.

The following notes have been prepared as the result of experience in the present conditions of trench fighting in Europe. Owing to the accuracy of the enemy's artillery fire, it is desirable that the ground which is to be held defensively or to assist further advance should be entrenched.

Trenches should be started at once with the light entrenching tools and improved later. They should be deep and narrow and should show above the ground level as little as possible and all trenches should be traversed at intervals of five to ten rifles. When siting a trench it should be borne in mind that the enemy is an adept at bringing enfilade fire to bear from flank positions. At any point such as a salient, at which trenches are particularly liable to this form of fire, great care should be taken as to their siting and they should be specially heavily traversed. Where head cover cannot be provided, cover from shell fire for the troops, when not actually using their rifles, can be readily obtained by making recesses in the trenches on the side nearest the enemy.

Communication trenches for support and ammunition supply are necessary, and they should be wide enough to permit of a stretcher being carried along them so as to facilitate the removal of the wounded. Support trenches may be close to the firing line but should be so made that the men can lie down and sleep. All trenches must be assimilated to the surroundings. Elbow rests have usually been found useful.

Protection against the high explosive shells of howitzers is unobtainable in field operations, but this effect can be localized by traverses.

✓ SITING AND CONSTRUCTION OF FIELD DEFENCES.

- I. Concealment from the enemy's artillery.
- II. Concealment from air craft.
- III. Screened communications from fire trench to rear.
- IV. Freedom from water in wet weather.
- V. No ground to be within 200 yards of the defence line which is not under effective rifle fire from some portion of the line.

The following methods are some of those adopted by which the above conditions have been complied with.

- I. (a) Siting on the reverse slope.
- (b) Construction of advanced posts in front of the main line thereby keeping the enemy's snipers and observers at a

distance. These posts have been placed at 50 to 100 yards in front of and held by 5 to 10 men. They must be carefully connected with the fire trenches by communication trenches.

- (c) Construction of alternative lines of fire trenches.
- (d) Construction of dummy trenches.

II. (a) Construction of light cover of brush wood etc. to hide newly excavated earth and the shadow thrown by excavation.

(b) Deception by means of dummy trenches and by arrangement of branches or bundles of straw to give the idea that they hide trenches.

- (c) By utilizing features such as hedges, quarries, etc.

III. (a) Intelligent use of the folds of the ground and lines of hedges.

- (b) Construction of screens to resemble hedges.

IV. Design. Fire trenches should be wavy in plan and as deep and narrow as possible consistent with:

- (i) Effective rifle fire.
- (ii) Easy communications.

TOPOGRAPHY.

1. How many kinds of military maps are there?
 - (a). The military map, which is the work of a trained surveyor.
 - (b). The field sketch, which any officer or N. C. O. of average attainment ought to be able to make.
2. What should one understand to be able to read a map?
 - (a). Scale of map.
 - (b). The different ways in which hills features of the ground may be shown.
 - (c). The position of the north point.
 - (d). The meanings of the various conventional signs made use of in military maps and sketches.

3. What do you understand by scale of the map?
A scale is used to denote the proportion that a distance between two points on a map bears to the same distance between the same two points on the ground.

Thus, if the distance between two farms on the map be 1 inch, and the distance on the ground 2 miles, the scale of the map will be 1 inch to 2 miles. The scale of the map is dependent on the amount of detail which has to be shown: thus, in preparation of the plans of houses, fortifications, etc., the scale will be a large one, whereas, in military sketches of routes, roads, positions, etc., the scale will be small.

4. How is the scale shown on a map?

In various ways:

a. It may be stated on the plan that the scale is so many inches to the miles, or so many miles to the inch.

b. A representative fraction (R. F.) may be used, in which the numerator is always 1 unit, and the denominator is expressed in similar units. The latter shows the length of a line on the ground which is represented by the former in plan.

The unit may be an inch, a foot, a yard, a meter, or what not. Thus if the R. F. is 1-60, it means that 1 inch on the plan represents 60 inches on the ground, also that 1 foot represents 60 feet, 1 yard 60 yards, as a matter of fact 1 unit represents 60 units no matter what the unit may be.

Similarly, if the R. F. of an English map in which the units are inches is 1-63360, it means that one inch on the map represents 63360 inches on the ground, and as 63360 inches make 1 mile, it is evident that the scale on the map is 1 inch to 1 mile.

c. The scale may be shown by a line divided into several equal parts. In all military sketches all three ways are shown.

5. How many kinds of scales are there?

Three. 1. Ordinary; 2. Comparative; 3. Diagonal.

Comparative scale is similar to the ordinary. Comparative scales are scales constructed with the same R. F., but represent different units, 1.2 yards, inches, paces, miles, etc.

A diagonal scale is constructed when it is necessary to measure very small dimensions.

6. How is a scale constructed?

a. R. F. being given, multiply the R. F. by unit in inches, then by a unit which is always a multiple of 10 and divide by the denominator of R. F.

Ex.: I wish to construct a scale of yards R. F. 1-63360. 1-63360 x 36 unit of measures in inches, x number of unit desired to be represented by a line no less than 4 inches long. In this case I take 10,000 units, 1-63360 x 36 x 10,000 = 36000-63360 = line 5'6" long.

I draw on paper a line 5'6" long and divide it into 10 equal parts. Each part represents 1000 yards. Then I would divide the first division into 10 equal parts, each representing 100 yards.

a. If the R. F. is not given, or given in this manner. The distance between two points on the map is 2" this distance on the ground is 1000 yards. Immediately find the R. F., which will be 2-1000 x 1-36 = 1-18000 which will be the R. F. then proceed as explained in "A".

7. How many inches in a yard, foot, etc.:

| | | |
|--------|--------|------------|
| 12" | equals | 1 foot |
| 36" | " | 1 yard |
| 7.92" | " | 1 link |
| 39.37" | " | 1 Meter |
| 28" | " | 1 Archine. |

In a mile there are:—

1760 yards, 5280 feet, 2112 paces of 30", 63360", 80 chains 8000 links.

| | | |
|--------------|--------|---------------|
| 1 Chain | equals | 22 yards |
| 1 Chain | " | 66 feet |
| 1 Chain | " | 100 links |
| 1 Arpent | " | 180 feet |
| 1 Nerst | " | 1166.6 yards |
| 1 Kilometer | " | 1093.63 yards |
| 1 Verst | " | 1507 Archives |
| 1 Stade | " | 220 yards |
| 1 Milan Mile | " | 1808.81 yards |
| 1 Berri | " | 1823 yards. |

8. How can you find the number of English miles to the inch on a map having a R. F.

Divide denominator of R. F. by 63360, this will give the number of miles to the inch.

To discover the number of inches to the mile, divide 63360 by denominator of R. F.

9. Define a few topographical terms?

- Basin.** a. A small area of level ground surrounded or nearly surrounded by hills.
b. A district drained by a river and its tributaries, as the basin of the Thames.
- Col.** A depression between two adjacent mountains or hills, or a break in a ridge, or the neck of land which connects an outlying feature with a range of mountains or hills, or with a spur.
- Crest.** The edge of the top of a hill or mountain, the position at which a gentle slope changes to an abrupt one, the top of a bluff or cliff.
- Dune.** A hill or ridge of sand formed by the winds near a sea or lake shore, or along a river bed or on a sandy plain.
- Defile.** Any natural or artificial feature which causes a body of troops to contract its normal formation during its passage through it as a defile.
- Escarpment.** An extended line of cliffs or bluffs.
- Gorge.** A rugged and deep ravine.
- Knoll.** A low detached hill.
- Pass.** A depression in a mountain range through which a road or trail may pass. A track over a mountain range.
- Plateau.** An elevated plain.
- Re-Entrant.** Occurs where the hill side is curved inwards towards the main feature. Always found between two salient.
- Saddle.** A col.
- Salient or Spur.** A projection from the side of a hill mountain or running out of the main feature.
- Undulating Ground.** Ground which alternately rises and falls gently.
- Water Course.** The line defining the lowest part of a valley whether occupied by a stream or not.
- Water-shed.** A ridge of high land separating two drainage basins.
- Angle.** **Back Angle.** The direction in a traverse of a station which has been passed.
- Forward Angle.** The forward direction of a bearing of one station in a traverse to the next in succession.
- Base or Base Line.** A carefully chosen and accurately measured line upon which the accuracy of the sketch made by triangulation depends.
- Bearing.** True bearing is the angle a line makes with true North.
- Magnetic Bearing.** Angle a line makes with magnetic North.
- Contour.** An imaginary line running along the surface of the ground at the same height about mean sea level through its length. Shows the elevation and depression of the ground.

Gradient. A slope expressed by a fraction. Thus, 1-30 represents a rise or a fall of 1 foot in 30 feet.

Horizontal Equivalent. Sometimes written H. E., is the distance in plan between two adjacent contours measured in yards.

Local Magnetic Attraction. Is the deviation of the Magnetic needle of a compass, from its mean position, owing to the presence of masses of magnetic iron ore in the neighborhood.

Magnetic Variation. The angle between the true and magnetic meridians.

Setting a Map, or plane table is the process of placing it so that the north line points north.

Meridian. A true North and South line.

Triangulation. The process of fixing the position of points on the area to be surveyed, by means of a mean red base and a chain or network of triangles dependent on it.

Vertical Interval. Sometimes written V. I., and always given in feet is the difference of level between two adjacent contours.

Degree. Is also the difference of level between two heights always expressed by D, or slopes 2° to 5°. The horizontal equivalent H. E. has been calculated for the different degrees on the following principle. For a slope of 1° of 1 foot, there is a H. E. of 57.3 feet or 19.1 yards.

To find H. E., multiply 19.1 x V. I.

To find D.
$$\frac{D}{19.1 \times V. I.}$$

To find V. I.
$$\frac{H. E.}{H. E. \times D.}$$

19.1

10. How can you find if two points are visible?

In open country two points are visible if there are no physical features to obstruct the vision.

For example, two points on the opposite sides of a valley will be visible the one from the other, if both are higher than any portion of the ground between them.

It is also obvious that on an open plain, which is perfectly level or on a slope, which is absolutely uniform, not only will any two points be visible from each other, but that the intervening country will be visible from either point.

Plains, however, are seldom perfectly level, even if their surface presents a level appearance when viewed from a distance, they will usually be found on closer inspection to be broken by

depressions and elevations quite sufficient to conceal bodies of troops. If the plane is intersected by fences, or covered with trees or undergrowth, visibility will be further limited.

Similarly slopes are seldom uniform throughout, they are either "concave" i. e. steeper at the top than below, or "convex" i. e. gentle at the top and steeper below. It is evident that if a slope is "concave," two points one at the top and the other at the bottom are visible, if there is no feature to obstruct the view.

11. On a map how can one find if two points are visible? By looking at the V. I.

If the V. I. is small, i. e., 10 feet, the inequalities not represented are small, and it is easy to find out if two points are visible. If the V. I. is big, 25 or 50 ft. the features not shown are more numerous. It is therefore impossible to determine the visibility of two points without a reconnaissance of the ground.

The following rules are given:

1. If the map shows two points opposed to each other on both sides of a valley, and that the features of the ground do not intervene, they are visible.

2. If between the two points there are intervening features between them higher than they are, they are invisible.

3. If the intervening feature is only higher than one of the points they will be either visible, or invisible, it will be possible to discover it by drawing a section in plan. This requires time. Ex.: The distance between A. and B. is 1520 yards, between the two there is C. C. is 820 yards from A and 700 yards from B. The difference in elevation between B and A is 25 feet. Between D and A the ground rises 50 feet in 700 yards. By a proportion you will discover the elevation between C and B.

$$700:920:50 \times = 58.5$$

But B is simply 25 feet higher than C; it is, therefore, clear that the line of sight between A and B will pass $58.5 - 25 = 33.5$ feet above B; therefore B is not visible from A.

12. How can you discover the true North when the variation is East and West?

If the variation is West, deduct the variation from the reading. Ex.: My compass has a variation of 20 degrees West; I take a reading towards the North; I get 360; I deduct 20 from 360 and get 340° direction of true North.

If the variation is East, add the variation to bearing.

Ex.: My compass has a variation of 20 degrees East. I take a reading in a Northern direction and obtain a reading 360°; I add to this 20, the variation, which gives me 380, but the compass is only divided into 360 parts, therefore 20, will be the direction of true North.

13. How can you find your position on the map?

a. By finding the true North.

b. By finding the magnetic North.

c. By finding at least three points, like a church, a hill, or other feature easily recognized.

d. Being on a known point, line another with its corresponding point on the map.

14. How can you set a map in the manner enumerated above?

1. True North being found, stick two pegs in the ground in the direction of the true North. Then place the map on the ground with the North point of map parallel to the picquets line. If the arrow on the map points Northwards, the map will be well set.

2. If you have a compass, place the compass on the Magnetic North and South line on the map, then turn the map till the needle of the compass and the Magnetic North line on the map correspond, then the map is set.

Where you have no compass, but you identify three points and align your map with the three points, when the map has been set, one can find his own position by taking a reading of two points which can be identified on the map, and by tracing a back angle.

Example: A and B are in my neighbourhood; I identify them on the map. I take their reading with my compass: I get A 90°, B 130° with my protractor, I plot the back angle of these degrees, which are 270° and 310°, and where the two angles cross each other on my map it will be my position.

15. What slopes are passable for the three arms?

Up to 5 degrees practicable to all. Slopes of 5 to 10 degrees, movements of infantry in close formation are difficult. Cavalry cannot charge up hill only for a short distance. Artillery cannot fire with efficiency.

Slope of 8 degrees will stop all baggage unless extra horses are hitched on.

Between 10 and 15 degrees infantry can only march a short distance in close formation. Cavalry can trot only during few minutes; Artillery advances with difficulty; it must stop firing.

Between 15 and 20 degrees, Infantry can still move in close formation, but can fire only independently; Cavalry can walk up and walk down obliquely.

Between 20 and 25 degrees, Infantry can advance extended; Cavalry ascends and descends obliquely.

Over 30 degrees men can climb on their hands and knees.

16. How can you discover true North with a watch?

In the Northern Hemisphere: take your watch, point the hour hand towards the sun, then divide the angle between the hour hand and the number 12, this will give you a line running South, prolong it in the opposite direction and you will have the North.

17. How can you discover the distance of certain objects?

Close your hand, extend it at full extension of the arm the thumb in line with the object, close your left eye and cover the object, then always keeping the arm extended open the left eye and close the right, your thumb will seem to have moved; calculate how far you think your thumb has moved, multiply by 10 and you will obtain a fairly correct estimation.

MUSKETRY.

1. What do you understand by axis of the barrel?

An imaginary line which follows the centre of the barrel, from the chamber to muzzle.

2. What do you understand by line of fire?

An indefinite prolongation of the axis of the barrel.

3. What do you understand by line of sight?

A line from the firer's eye, along the line of sights to the target.

4. What do you understand by culminating point?

The highest point over the line of sights attained by the bullet in its flight towards the target. This point is a little over half of the distance to the object aimed at.

5. What do you understand by first catch?

The point when a bullet has fallen low enough to hit the head of a man mounted, or on foot, standing, kneeling, or lying down.

6. What is "first graze."

The point where the bullet strikes the ground for the first time.

7. What is the dangerous space?

The space between the first catch and the first graze.

8. What do you understand by grooves?

a. When the inside of the barrel has been dug out in spiral.

b. The fact of having grooves allows the use of an elongated bullet; the advantage of this bullet is, in the fact that its greatest weight in proportion to its surface is directly opposed to the air. In this manner it can overcome the resistance of the air and keep its velocity.

c. When the cartridge explodes, the bullet is forced in the grooves at the interior of the barrel, and leaves it with a rotary motion on its longer axis.

This tends to keep the point of the bullet toward the target, and assures the accuracy of its flight.

9. What forces act on the bullet?

a. Explosion of the charge.

b. The gravity.

c. The resistance of the air.

10. Explain their action.

a. Explosion forces the bullet forward.

b. Gravity, i. e., the natural attraction which draws towards the ground any unsupported body, with a velocity which is always increasing, acts on the bullet from the moment it leaves the muzzle of the barrel.

c. The resistance of the air diminishes rapidly the velocity of the bullet.

11. How do these three forces act on the bullet?

The combined effect of these three forces make the bullet fly in a curved line, called, trajectory, and this curve gets more accented as the range increases, and the bullet exposed longer to their action.

The bullet leaves the muzzle of a military rifle at a velocity of 2000 feet a second, it will fall 6 inches below the line of fire in the 100 yards. This fall increases to 2 feet at 200 yards.

12. What do you understand by elevation?

To allow for the fall of the bullet it is necessary that the line of fire be above the target, because the bullet will fall below the target if the axis of the barrel is pointed straight at the target.

13. What is the meaning of the expression "Give elevation?"

The fact of raising the muzzle of the barrel to allow for the curve of the trajectory is called "Giving elevation." The target must always be in sight. This is the reason why there are sights on the rifle, so that the firer can give the required elevation, and keep his eyes on the target.

14. How are sights adjusted on the rifles?

In adjusting the sights "mean" graduation has been adopted for each range, and a satisfactory accuracy for practical wants has been obtained. Each rifle is examined with care before being issued for use; one must not forget that there are no two rifles alike. Even if errors could be corrected in placing the sights before issue, the screws becoming loose, or too tight, would be the cause of new errors. It is therefore important that each man studies his rifle and understands its variations.

At long range the elevation of the sight can be taken as the best guide in all conditions.

15. On what depends the augmentation or diminution of the dangerous space.

Dangerous space diminishes as the range increases, the reduction is due to the angle of the descent of the bullet which is very steep at long range. It depends also on:

- The position of the firer and the height of the rifle.
- The height of the target aimed at.
- Flatness of the trajectory.
- Configuration of the ground.

1. The nearer the soil is to the rifle. The higher the target aimed at.

3. The flatter the trajectory.

4. The more the slope of the ground is conformed to the angle of descent of the bullet, the greater is the dangerous space.

16. What do you understand by the jump?

The name given to the motion and vibration of the barrel caused by the explosion of the cartridge, and the passage of the bullet in the grooves of the barrel.

17. What do you understand by the drift?

The term used to define the lateral deviation caused by the bullet in leaving the barrel.

18. How does the fact of fixing bayonets affect the bullet?

By its weight the bayonet counteracts the jump, and therefore affects the position of the barrel when the bullet leaves the barrel, also the direction of the first bullet.

The following table will show the effects of the bayonet on a Lee-Enfield rifle.

TABLE.

| 1. Sights fixed at Right eleva- tion to strike target. | 2. Fall of bullet after fixing the bayonet, and using sights fixed as in Column 1. | 3. Extra elevation required to strike target after fixing bayonet. |
|--|---|--|
| 600 yards | About 6' & 2' to the right | About 100 yds. |
| 500 " | " 5' & 1' " | " 150 " |
| 400 " | " 4' & 1' " | " 150 " |
| 300 " | " 3' & 1' " | " 150 " |
| 200 " | " 2' & 6' " | " 150 " |

It will be seen by the table of trajectory given in the musketry regulations, that if the sights at 500 yards, the bullet when fired will not rise more than 4 feet over the line of sight. It is therefore evident that an effective fire can be maintained at a range of 500 yards. When the sights are fixed for that range one aims at the bottom of the target.

19. Does it affect the rifle to place it on the ground?
No, as long as the muzzle is kept clean.

20. How does a hot or greasy barrel affect the bullet?

In rapid fire the bullets will fall short of the target when the barrel is heated, therefore this must be watched and extra elevation given. The first bullet fired from a greasy or dirty barrel is apt to have a very erratic flight, some carry too high or too low, or to the right or left.

A clean rag must always be passed through the barrel before firing.

21. What is the maximum range of the bullet?

About 3760 yards. This range was obtained with a strong rear wind.

22. How are the rifles adjusted as regards climatic conditions, atmosphere and light?

- For barometric pressure 30 inches (sea level).
- Thermometer 60 degrees Fahrenheit.

c. Calm day.

d. Horizontal line of sight.

In ordinary weather the barometer remains at a certain height. When the weather is very dry, the atmosphere is very thick and heavy and the barometer rises above its ordinary level. When the weather is damp, the air is light and the mercury falls below the ordinary level.

At sea level the barometer remains at 30". In mountainous country the atmosphere is lighter and therefore the barometer height falls below 30".

23. How is the bullet affected by the barometric pressure, and the climate.

If the atmosphere is thick enough to force the barometer to rise above 30" it offers more resistance than in ordinary circumstances, and you require more elevation. On the other hand if the barometer falls below 30", as when the weather is damp, it offers less resistance to the bullet, and less elevation is required. In the same manner, in cold weather the bullet meets with less resistance than in warm weather.

24. What rule is to be followed to correct the barometric pressure?

For each barometric rise or fall deduct 1 1-2 yards per 100 yards.

Example: it would be necessary to lower the elevation by 30 yards at 2000 if the barometer was at 29".

25. What is the rule to correct the variation of the thermometer?

For each degree the thermometer rises above or falls below 60 degrees, add, or deduct, one tenth of a yard per 100 yards.

26. How can one find the direction and velocity of the wind?

By watching the trees, grass, etc., also observing the rays of the heat on the ground (called mirage) and also by personal sensation.

27. How does the wind affect the bullet?

A side wind acts on the greater surface of the bullet, and therefore has more influence on the bullet than a wind from the front or rear. A wind from the front stops the bullet and requires more elevation. A wind from the rear diminishes the resistance of the air and less elevation is required. No rule can be given, experience alone can guide the firer, and by observing where the bullets go he will learn how to allow for the wind. The longer the bullet is exposed to the wind the greater must be the allowance.

28. How does the light affect the firer?

When the light is poor, the barley corn is less distinct than when the light is good, and one is apt to take too much sight in aiming. This affects the elevation, as less elevation is required on a dark day.

29. How is the bullet affected when firing up and down hill.

When firing at a target on the same level, forces acting on the bullet make it travel on its largest curve, and more elevation is required. If firing perpendicularly up or down hill, no elevation will be required as the bullet will go perfectly straight, as long as it has velocity. Therefore, when firing up and down hill less elevation is required.

30. What are the different ranges?

| Ranges. | Rifle, Yards. | Field Artillery Yards. | Heavy Field Artillery Yards. |
|-----------|---------------|------------------------|------------------------------|
| Distant | 2800 to 2000 | 6500 to 5000 | 10000 to 6500 |
| Long | 2000 to 1400 | 5000 to 4000 | 6500 to 5000 |
| Effective | 1400 to 600 | 4000 to 2500 | 5000 to 2500 |
| Decisive | 600 and under | 2500 and under | 2500 and under |

The extreme range of Field Artillery using percussion shell may be taken as 9000 yards, and heavy artillery as 10000 yards. The width of the area of ground struck by the bullets of an effective shrapnel is about 25 yards.

The length of forward spread of the bullets of shrapnel burst at effective ranges is about 200 yards, the radius of explosion of a high explosive shell is about 25 yards.

MACHINE GUNS IN BATTLE.

Characteristics of machine guns.

✓ 1. A machine gun in action requires a frontage of about two yards. From this narrow front it can deliver a fire equal in volume to that of about 50 men firing rapidly, the frontage required for the latter being at least 15 times as great. It is therefore easier to find a concealed position for a machine gun than for the number of riflemen required to produce an equal volume of fire.

2. When well concealed the gun offers a difficult target, and, as only two men are required for its service, it is not put out of action should these become casualties, provided the remainder of the detachment are trained to take their places.

3. As regards fire effect:—

- i. The effective range of the machine gun may be taken as equal to that of the rifle.
- ii. It has been found by experiment that the fire of a machine gun is about twice as concentrated as that of riflemen firing an equal number of rounds at the same target.

4. In the important matter of control of fire the machine gun has several advantages. Once the gun is loaded and laid, fire can be turned on or off instantaneously; it can be directed as readily as required and can be distributed laterally by traversing.

5. By mounting a few men on the limbered wagon, the guns can be moved rapidly from place to place, while a machine gun with tripod mounting can be taken wherever men on foot can go.

6. On the other hand, the machine gun has certain disadvantages as compared with riflemen:—

- i. It is more defenceless when on the move, whether carried in the limbered wagon or on pack transport.
- ii. Owing to the concentrated nature of its fire, as compared with a similar amount of rifle fire, the effect of small errors in aiming or elevation is greater. Thus, a comparatively small error at effective or long ranges will cause the fire of a machine gun to miss altogether a target which would probably be struck by several shots from riflemen making the same error in aim or elevation.
- iii. The mechanism of the gun is liable to temporary interruption.

- iv. The peculiar noise of the automatic firing attracts attention to the gun, and when steam is given off, owing to the water in the barrel casing boiling, the position of the gun can be readily located unless well concealed.

General principles of the employment of infantry machine guns.

1. The general principles governing the employment of machine guns are based upon the characteristics described in the previous section.

2. i. The machine gun is a powerful auxiliary to, and well adapted for close co-operation with, infantry.
ii. The concentrated and accurate nature of its fire, and the speed with which it can be directed on the objective, suits it for the development of surprise effect and covering fire at effective and close infantry ranges.
iii. The small frontage which it occupies makes it valuable in cramped localities such as salients, villages, roads, or defiles, where it is not possible to deploy a number of rifles. It can also be usefully employed to bring a concentrated enfilade fire to bear on a definite line, such as a hedge, wall, or line of obstacles.
iv. The power of opening fire at any time when the gun is once laid is valuable on outpost or for night firing, for the gun can command any required locality for any length of time, and it is only necessary to press the double button to produce and apply a large volume of accurate fire at the moment it is required.
v. The power of turning rapidly in any desired direction, or of "all-round traverse," enables the gun to be brought to bear upon a fresh target without moving the tripod, and with the minimum of movement and exposure. The machine gun can therefore engage quickly an enemy advancing from an unexpected direction without increasing its vulnerability to enfilade fire. This suits it for employment on a flank, in a detached post, or to support infantry in meeting an enveloping attack.
vi. The power of accompanying infantry in any nature of country is particularly useful in close country. The mobility of the limbered wagons allows the guns to be used to meet unexpected or critical situations so that they may often be usefully employed as a mobile reserve of fire, when they can be moved unseen.

✓ 3. The usefulness of the machine gun is limited by its characteristics in the following way:—

- i. It is difficult to observe its fire accurately at long ranges, and, as compared with field guns, its ranging power is limited. It cannot, therefore, be considered as suitable, normally, for use in place of or as an addition to artillery.
- ii. Owing to the concentration of its fire, the expenditure of ammunition is likely to be out of proportion to the results obtained against small or scattered targets such as extended infantry. Unless the range can be ascertained accurately, or the target has considerable depth, effect can only be ensured at ranges of over 1,200 yards by the skilful fire direction of several guns and a heavy expenditure of ammunition.
- iii. Owing to the liability of the mechanism to interruption and the expenditure of ammunition involved, the gun is not suited for sustained fire action.

4. To sum up, machine guns are essentially weapons of opportunity. The power of the gun is best used to develop unexpected bursts of fire against favourable targets.

The organization and tactical handling of infantry machine guns.

✓ 1. Machine guns are organized in sections, which form an integral part of the battalions to which they belong. But as circumstances will often make it advisable to employ several sections together, a brigade commander may detach two or more machine gun sections temporarily from their battalions and place them under the brigade machine gun officer (see Sec. 8), for employment as a unit of the brigade.

2. When employed by sections with their battalions, machine guns are usually better able to take advantage of fleeting opportunities to support infantry closely, and are more easily concealed both on the move and in action, than when brigaded.

On the other hand a single section of these guns cannot be relied upon to obtain results proportionate to the expenditure of ammunition, when first opening fire, at distances beyond about 1,200 yards. Further, it is rarely possible to arrange that sections acting independently shall co-operate effectively with each other.

3. By employing several sections under the control of one commander a brigade commander is able to keep a powerful reserve of fire in hand to be used for any special purpose, the probability of obtaining good effect at ranges beyond 1,200 yards is increased, and it is easier to ensure that the fire is directed on the objective desired by the brigade commander.

- ✓ 4. The disadvantages of brigading machine guns are:—
- i. That the difficulties of concealment are increased.
 - ii. That at shorter ranges than 1,000 yards the control of more than one section usually becomes difficult, more especially in attack.
 - iii. That the positions suitable for a number of sections in attack are often difficult to find at effective and close ranges, and that the combined movement of a number of sections is only possible under such conditions when the ground is very favourable.

5. It will, therefore, usually depend upon the general situation and upon the ground how many machine guns should be placed under the control of the brigade machine gun officer, and how many left with the battalions to which they belong.

6. In attack, when the facilities for concealment and control at effective range are good, good results may be obtained by unity of command, and, by a timely concentration of fire, machine guns may be an important factor in the struggle for superiority of fire.

When control and concealment are difficult, or when the brigade is extended over a wide front, it will usually be better to leave guns with their units.

It will often be advisable to employ both methods and to leave their own machine guns with the battalions which are first extended, while those of battalions in reserve are placed under the command of the brigade machine gun officer.

✓ 7. Machine guns will usually find opportunities for employment in the attack, in assisting the advance of their infantry by means of covering fire, in protecting attacking infantry against counter-attack or against cavalry, in covering an exposed flank, in assisting the infantry in the fire fight, in preparing for the assault by sudden bursts of fire against the objective of the attack, and in assisting to secure localities seized during the advance. After a successful assault machine guns should reach the captured position as soon as possible in order to pursue the enemy with fire and cover the re-forming of their infantry. In the event of an assault being unsuccessful machine guns should cover the retirement of their own troops, if necessary sacrificing themselves in order to do so.

8. Once in action, machine guns should change position as seldom as possible. The difficulties of ranging and of concealment on the move usually outweigh the advantages of decreasing the range.

9. In defence, machine guns permanently allotted to the defensive line may lose their mobility, and can rarely be used as a reserve of fire for special purposes, since it is not possible to foresee the action of the enemy when allotting them to their positions. For these reasons it should be exceptional to employ

more than a limited number of guns with the firing line in a defensive position. It is better to reconnoitre and prepare machine gun positions, and to keep the bulk of the guns out of action and in hand until an opportunity occurs for using them with a reasonable prospect of decisive effect. It is easy to detach guns where required if they are held in hand, but when distributed and in position it is less easy to collect and withdraw them.

When employed with the firing line in a defensive position, machine guns may be used either dispersed, or brigaded to command approaches, defiles, exits from woods, etc., and to bring fire to bear upon the ground in front of weak parts of the position.

10. When retained as part of a local reserve, machine guns retain their mobility and are therefore available to meet any unexpected situation or to support local counter attacks closely.

In order to make full use of the guns alternative positions should be allotted to sections. These positions should be thoroughly reconnoitred and all necessary arrangements made for rapid occupation and quick opening of fire.

These arrangements should include:—Previous preparation of cover, information as to the shortest route to the various positions, preparation of range cards, selection of the most suitable position from which to control and observe fire, the most suitable position for the limbered wagons, and arrangements for the supply of ammunition and water.

11. Owing to the liability of the mechanism to interruption, the guns of a section should rarely be employed beyond supporting distance of one another; when sections are acting independently and good cover is not available the guns should usually be not less than 25 yards apart, the average width of the area of ground struck by the bullets of an effective shrapnel.

12. As a general principle no more guns should fire than are necessary to meet the tactical requirements, the remainder being placed in concealed positions ready to open fire on a favourable opportunity or held in positions of readiness under cover according to circumstances. It is, however, of the first importance that sufficient fire effect to attain the object in view should be produced.

13. A machine gun commander should be given definite orders by the commander of the body of troops to which he belongs, as to what is required of him, but he should be allowed as much freedom of action as possible in carrying out these orders, and should be kept informed of all changes and developments of the situation which may affect his action. Initiative and enterprise are essential to the effective handling of machine guns.

14. Machine guns will usually be sufficiently protected by the dispositions of the troops with whom they are acting. Should

a machine gun commander find himself in an exposed position, he should apply to the nearest infantry commander for a suitable escort if necessary.

15. When a machine gun is in action only those numbers required to work the gun should be with it. Spare numbers when not employed as range takers, ground scouts, ammunition carriers, or on similar duties, should be under cover in the vicinity. Groups of men close to machine guns hinder the working of the gun, are apt to disclose its position, and make a vulnerable target.

The limbered wagons will be unpacked in positions where they are screened from the enemy's fire and observation.

The commander of the machine gun section will arrange for the selection of a covered position for his small arm ammunition cart, as close to his guns as possible.

Choice of fire positions.

1. *Reconnaissance.*—Surprise and concealment being important factors in the employment of machine guns, their effective use depends largely upon the skill with which they have been brought into action.

Reconnaissance is therefore of special importance. The brigade machine gun officer if the guns are brigaded, the section officer if they are not, accompanied by range takers and orderlies, should usually be well in advance of his guns, where he can observe the action of the body of infantry with which he is co-operating. He should carefully reconnoitre suitable fire positions and make all preparations for bringing his guns rapidly into action. Alternative positions to which the guns may be moved to meet changes in the situation or to avoid artillery fire should always be selected.

Similar reconnaissances should be carried out, whenever possible, before changing position.

2. The choice of a fire position must depend upon the tactical requirements of the situation, and upon the object in view; for example, it must depend upon whether it is desired to use covering, enfilade, or flanking fire, or to act by surprise.

In undulating or mountainous country it may be possible to provide covering fire from positions in rear, but in flat country it will rarely be possible to fire over the heads of men in front, and fire positions for machine guns must be sought on the flanks.

Except when affording covering fire from the rear, the gun should be sited as low as is compatible with obtaining the necessary field of fire.

3. A clear field of fire, facilities for observation, a covered approach, concealment and cover for the guns and their detachments, and facilities for ammunition supply, are advantages to be looked for in a good fire position, but one position will

rarely unite them all. As a general principle, when the situation calls for effective fire, fire effect must not be sacrificed to obtain concealment.

In arranging for the concealment of the guns it is important to consider the background. The neighbourhood of landmarks and the tops of prominent features should be avoided.

General principles of fire control.

1. The general considerations which govern the selection of a target for machine guns are, its tactical importance, its range, and its vulnerability.

2. Machine guns should rarely open fire except:—

- i. To facilitate a movement of their own infantry.
- ii. To prevent or delay movement of the enemy.
- iii. Against a favourable target.

As soon as a machine gun opens fire its presence may be disclosed; its subsequent appearance will then be watched for, and it loses to a great extent the advantage of surprise. Fire, should, therefore, not be opened without good reason.

Again, fire should not be opened at ranges beyond 1,200 yards unless a particularly favourable target offers, or a number of guns can be employed (see Sec. 160, 3). Between 1,200 and 800 yards good effect can be anticipated from machine gun fire, and within 800 yards the greatest possible effect should be developed. If the firer can himself obtain observation, the effect of machine gun fire is appreciably increased.

3. Except under special circumstances, as for example when the tactical situation demands the opening of fire irrespective of the probability of obtaining material results in hits, machine guns should open fire only upon targets which are sufficiently large and dense to promise an adequate return for the ammunition expended. Thin lines of infantry in extended order are not a suitable target.

If there is no satisfactory indication of effect, and no special justification for firing at long range exists, it will usually be better to withdraw from action and to seek other opportunities for effective intervention.

4. Machine guns should seldom engage artillery with direct fire beyond close rifle range, for in such circumstances superiority of fire will always rest with the artillery if the machine guns are located. Within close rifle range machine guns, if concealed, should inflict considerable loss on artillery.

5. To sum up, fire should only be opened when probable results will justify it, and the tactical situation demands it. When opened, fire should be maintained so long as there is a reasonable chance of attaining the object for which it was opened. The method and volume of fire must be determined by the tactical situation, the object in view, the nature of the target, the nature of the ground, and the characteristics of the gun.

If these results are to be attained, fire must be skilfully controlled and directed by machine gun commanders.

6. When two or more sections are brigaded they will act as a unit under the command of the brigade machine gun officer, who, if the conditions are favourable, *i. e.*, if the sections can be brought into action in such a way that his orders can be heard clearly by all concerned, will direct the fire as regards range, point of aim, method of fire, and the opening and cessation of fire.

It will, however, seldom be possible for a brigade machine gun officer to make his voice heard by more than one section of guns, and the orders for fire direction will usually be limited to indicating the objective by signal or message, and to ordering the opening and cessation of fire, all other details being left to the section officers. High training in semaphore and in the correct passing of orders is essential.

✓ Methods of fire.

The principal methods of fire are:—

- i. Ranging fire.
- ii. Rapid fire.
- iii. Traversing fire.

1. In *Ranging fire*, groups of from 10 to 20 rounds are used to obtain observation. When the conditions for observation are favourable, a group of 10 rounds should be sufficient. Under less favourable conditions, groups of as many as 20 rounds may be necessary, but if observation is not then obtained, it is unlikely to be obtained with larger groups. Single deliberate shots are of no value for ranging. Ranging fire should never be used when surprise is of importance.

ii. *Rapid fire* is used when the greatest volume of fire is required. It is produced and applied by means of a series of long groups of from 30 to 50 rounds. The firer pauses momentarily between each group to ensure that the sights are correctly aligned, and continues until ordered to cease fire, or until he considers it necessary to do so. Rapid fire will be used (1) when the sighting elevation has been successfully obtained by ranging fire; (2) when surprise effect is required; (3) with combined sights.

iii. *Traversing fire*.—This method is employed against a linear target, and is applied by means of a series of small groups with the object of covering as wide a front as possible with only sufficient volume to ensure effect. In this case a group should consist of from 5 to 10 rounds only, because against a linear target greater volume will not produce greater effect. (See also Sec. 103, 10.) Traversing may be either horizontal or diagonal.

2. *Combined sights*. When two or more guns are working together, the depth of the effective zone can be increased by

ordering different elevations to be used by each gun, while each uses the same aiming mark. By this means, while the effective zone is increased, the density of fire is considerably reduced. The difference of elevation used depends chiefly on the number of guns available. For general guidance, when one section only is available, combined sights differing by 100 yards should be used at and beyond 800 yards and up to 1,200 yards inclusive; beyond 1,200 yards the difference in sighting should not exceed 50 yards between guns. With two or more sections the difference of sighting between guns should not exceed 50 yards. When both guns of a section are sighted to the same elevation, "combined sights by sections," differing by 100 yards may be used.

Combined sights should at once be discontinued if accurate observation of the strike of bullets can be obtained.

Machine gun commanders, when ordering combined sights, will give out the lowest range and the difference in sighting to be used. The lowest range will always be taken by the left hand gun of the section or sections as the case may be. The No. 1 of that gun will pass to the No. 1 of the gun on his right the range he himself is using and the difference ordered, and so on down the line.

When the target to be engaged is a narrow one, and all guns are using the same aiming mark, it will generally be impossible for the firers to observe their own particular cone of fire. In these circumstances no alteration in sighting is permissible except under the orders of the machine gun commander. In other circumstances, *i. e.*, when the guns are laid on different points of aim, each firer should endeavour to correct his elevation from observation of the bullet strike. In such cases the effect may be increased by traversing from the flanks inwards, or from the centre outwards. If, as a result of his observations, or for other reasons, the machine gun commander wishes to alter the sighting, the quickest method is to bring the elevation of the left hand gun above that of the right hand gun or to lower the elevation of the right hand gun below that of the left hand gun according as to whether he wishes to increase or decrease the elevation. If the machine gun commander is directing the fire from the opposite flank to that of the gun or guns whose elevation he wishes to alter, it will be necessary to cease firing momentarily for his order to be received, after which he will immediately give the signal to continue. This will often not be necessary when he is on the same flank.

MACHINE GUNS.

The following notes have been taken from a report from the front and should be read carefully.

The Germans have given the Allies a great many surprises, starting with their air craft, followed by submarines, Zeppelins, and their 42 centimeters gun. All these surprises have failed in a greater or lesser degree. But in the handling of the tactics of the machine gun, however, German prescience was not at fault. The German thoroughness has elevated a weapon, the possibilities of which we did not wholly understand, almost into a new arm. From the opening of the campaign in the West it was clear that the enemy was employing machine guns in large numbers and with great effect. Since the phase of trench warfare, these guns have been employed with such great skill that, as stated by an officer of the General Staff, the losses from their fire have been greater than that due to the rifle, and, when the mobile operations supervene, they may be expected of being no less effective.

We know that the largest proportion of casualties have been due to artillery fire, and the man in the field knows that the machine gun is responsible for the next highest score.

The reason, to put it broadly, is fight with guns and machine guns. Our tactics provide for artillery and machine guns supporting infantry and cavalry; whereas the Germans, in a sense, reverse the process by using their cavalry and infantry as support to the guns. The enemy's methods, on the whole, have not proved as successfully as to discount our theories. We have given more than we have taken in the matter of casualties, but, by adopting some of his ideas in regards to the handling of the machine gun, we can give still more and take less.

At the outset of the war, the German preponderance in machine guns was particularly marked. Added to this they had a considerable lighter pattern, handled by experts.

The Germans have introduced a completely novel phase of machine gun fighting and that is sniping. The possibility of the gun for this kind of work does not seem to have been considered before, and yet the German's gun sniping has made the previous efforts in this direction, of the tribes of the Indian frontier look like children in this game.

They attain the result by selecting a position from which they can best obtain a glimpse of a portion of our trenches in an oblique direction; the configuration of the ground often affording such an opportunity. Having laid the gun, the machine gunner lies and watches with his glasses, and, when he discerns any movement, he presses the button and fires a single shot. For instance, on one occasion two men were killed and two

wounded within a short space of time in one of our support trenches. The support trench was parallel to and about forty yards behind our first trench, to which it was connected by a dyke running at right angles to the both trenches. At this period of fighting, it was not uncommon for men in the rear trenches to be hit by snipers from all directions, even from the rear, so that it was difficult to judge the exact position of this particular sniper. The dyke looked so suspicious that a party was immediately put to work to throw more earth on its flank. During this operation a small tree growing on the side of the dyke in prolongation of the support trench, was struck twice by a bullet. The tree struck was barely three inches in diameter. The accuracy of the shooting, combined with the direction of the bullet marks, on the tree, made the officer in charge decide that the damage was being done from a house 500 yards in an oblique direction on the flank. A message with a hand sketch to the battery commander in the rear soon eradicated the evil. A house is by no means necessary for this procedure. The Germans make use of any little cover and, by operating the gun in its lowest position with the gunner laying along side, snipe out trenches with single shots continually. This single shot practice is continued at night by taking angles and elevations in the day time the gun can be laid for accurate shooting at night, and so we find the lines of approach to our trenches under a continuous sniping fire of machine guns.

In the day time the enemy's sap-head is a likely position for a machine gun, but, for fear of being surprised, the gun is usually withdrawn at night and laid to cover important points, such as the sap-head itself. When German trenches have been captured, it is not uncommon to find their machine guns placed in a communication trench in the rear in such a position that they command the fire trench. In fact, it would appear that they often dig a first line as a bait. Having mined and laid the machine guns in the rear to enfilade it, they place a handful of men in the trench to make a demonstration with flarelights, bombs, and snap shooting in such a way as to invite an attack with the object of destroying the invaders when they have taken the trench.

In the attack, the Germans have used their machine guns with great boldness, often bringing them well to the front in the firing line. There is nothing new in this idea except that the lightness of their weapon facilitates this movement and makes it possible for them to obtain effective results. It is in the offensive defensive that the Germans have achieved their best results with their machine guns. A machine gun is estimated to equal, roughly, the fire of 50 rifles. Consequently a handful of experts with machine guns can defend a line of trench against very large odds. With their superabundance of Maxims this accounts for the surprising manner in which the Germans

have been able to produce reinforcements at a critical point. They can thin their line without weakening it by substituting Maxims for men.

The parachute flare assists the German machine gunner greatly in his work at night. These flares are shot over our trenches at intervals. They go up like a rocket, burst and descend slowly, emitting a very bright light. By means of these the Germans are able to detect any preliminary movement of an attack. They can lay their machine guns, and, when opportunity offers, open a deadly fire on the attackers. In attacks delivered in daylight, the Germans have a particularity for picking out the opposing leaders and making them a special target for their machine guns. Bursts of rapid machine gun fire frequently precede and prepare the way for an attack by the Germans.

The enemy's machine gunners have also been known to make themselves offensive in regard to overhead cover. If this is not made carefully, a machine gun slowly traversed along it causes the head cover to collapse. Perhaps the most deadly results obtained by the German machine guns have been in their retirements. It is a favourite ruse of theirs to lure the pursuers into the concentrated fire of machine guns placed in rear. The retreating enemy screens this machine gun until the pursuers are fairly launched to the attack, and then, by opening out, suddenly expose the machine guns. This manoeuvre is, as I have said, a favourite with them and one they always try to accomplish. It has merits, but it leads one to suspect that the Germans' lack of pressing can be accounted for by the fear of being treated in the same manner.

The Germans' treatment of the opposing machine guns is theoretically the same as it was in 1870. They keep a specially keen lookout and directly they locate a hostile machine gun, they try by all means in their power to destroy it. With this object they continually make demonstrations in the hope of drawing machine gun fire. They go through the whole make-believe of attacking, even down to the cheering, and, at night, to the novice, these demonstrations are rather alarming, but they become almost laughable when one is accustomed to them. On one occasion a British Maxim was carefully hidden in a carefully selected commanding position in the support trench. The machine gunner unfortunately opened fire on one of these demonstrations. The unmistakable "tuck-tuck-tuck" of the Maxim gave the position away with the result that in an hour the Germans had blown the trench with mortars and made the position untenable.

Having described some of the German methods with and against the Maxim, we will see what conclusions can be drawn. The first is that the Germans use the machine gun not only as a weapon of opportunity, but as one that creates its own oppor-

tunity. The German gun is an active gun in comparison with ours. For example, a British machine gun was seen cunningly concealed in a position from which it could enfilade a portion of our fire trench in the event of a German attack. It remained silent and inactive for many days waiting for the opportunity to arrive. The opportunity never did arrive for the line of trenches was altered before the German attack materialized on this particular position. The machine guns are put in the field to do the enemy mischief and it is the machine gunners job to do as much as he can. We are now putting in the field Maxims of the latest and lightest patterns as fast as they can be turned out. We are training teams and sections to handle these guns and it would be well for them to study the German methods.

The machine gunner's path is strewn with difficulties. To adopt the role of artillery is fatal; and, on the other hand, in trench warfare, he is an unpopular neighbour in the firing line because he is apt to draw fire, whereas a position betwixt and between brings a shower of adverse comment on his head from the men in front over whose head he is firing. "No wonder the adverse inaction of our machine guns is noticeable," some reader may naturally remark. The answer is "perhaps". For there is another side to the question, and a wonderfully alluring side to the soldier, and that is that it is possible for the machine gunner to do all these things without getting into trouble, provided he is not found out. That is the secret of success.

GUARDS.

On the bugle sounding "Orderly Sergeants," the company orderly sergeants will fall in, in column distance; they will be dressed by the Sergeant Major, who will give them the command, "Stand at Ease."

On the "Fall in" sounding, the men detailed for duties will fall in on the right of their respective orderly sergeants, at the same time the N. C. O.'s for duty will fall in, in line at right angle on the directing flank at 6 paces. If there are corporals, they will fall in in rear of the sergeants.

The Sergeant Major will then give "Stand at Ease," "Call the roll," the company orderly sergeants will call the roll and inspect the men.

During this time the Sergeant Major will inspect the N. C. O.'s for duty, then he will give them "number," "slope arms," number one stand fast, remainder, "left turn, quick march" and the N. C. O.'s will place themselves in line at the required interval.

Then the S. M. will call the duties to attention and give the command "Report your details," A. Coy., B. Coy., etc., and in turn the company orderly sergeants will answer "Duties present and correct, Sir." Then the S. M. will give the following commands: "Duties, slope arms," "left turn," "form duties," "quick march," and the men will go and form themselves on the left of the N. C. O. in command of their guard.

The S. M. will make sure that the duties are all present by giving the command "tell off the duties," "Main Guard," "Barrack Guard," etc., and the N. C. O. in command of that guard will answer as follows: "Main Guard, 1 Sergeant, 1 Corporal, 1 Bugler, 15 men, present, Sir," etc. The Sergeant Major will then give the command "Fix bayonets," and will report the duties to the Adjutant, who will inspect them and give the countersign to the commander of the guards. If there are officers to command the guards, they will then take their places, and the Adjutant will hand the duties to the Orderly Officer, who will march them off, giving the following commands:

"Guards, slope arms," "form fours," "right," "to your guards, quick march." If the guards are less than 4 files, he will give the command "by the right, to your guard, quick march." The S. M. afterwards will dismiss the picquets and the waiting men. Duties will mount between 9 and 10 a. m., and 6 and 8 p. m.

ADMINISTRATION, ORGANIZATION AND EQUIPMENT.

1. Give the composition of an infantry battalion on war footing.

H. Q. Excluding attached 4 officers, 1 warrant officer, 8 staff sergeants, 61 rank and file. Total 74. With 7 riding horses, 22 draught and 1 pack pony. Total 30 horses.

H. Q. attached. 1 M. O., 1 sergeant, 5 rank and file. Total 7. Horses, 1 riding and 4 draught. Total 5.

4 companies: 24 officers, 40 sergeants, 16 drummers, 828 privates. Total 908. Horses, 4 riding, 8 draught, 8 pack ponies. Total 20.

Total in battalion, including attached who number 7: 30 officers, 1 warrant officer, 50 sergeants, 16 drummers, 910 privates. Total 1007. Horses, 13 riding, 35 draught, 8 pack animals. Total 56 and 9 bicycles.

Details left at the base: 1 officer, 4 sergeants, 95 other ranks. Total 100.

Composition in Detail.

| | |
|---|----------|
| • 1 Lieutenant-Colonel..... | 2 horses |
| • 1 Major (2nd in command) | 1 " |
| • 1 Major (junior) | 1 " |
| • 1 Adjutant..... | 1 " |
| • 1 Assistant Adjutant..... | 1 " |
| • 1 Quarter master..... | 1 " |
| • 1 Transport officer..... | 1 " |
| • 1 Signalling officer..... | 1 " |
| • 1 Sergeant major <i>M. O.</i> | 1 " |
| • 1 Quarter master sergeant..... | |
| • 1 Orderly room clerk <i>read note - let up!</i> | |
| • 1 Sergeant drummer..... | |
| • 1 Sergeant cook..... | |
| • 1 transport sergeant..... | 1 " |
| • 1 Sergeant shoemaker..... | |
| • 9 Drivers for first line transport..... | 18 " |
| • 2 Drivers for spare animals..... | 4 " |
| • 6 Batmen <i>10</i> | |
| • 1 Pioneer sergeant..... | 33 " |
| • 10 Pioneers..... | |
| • 1 Signalling sergeant..... | |
| • 1 Signalling corporal..... | |
| • 15 Privates signallers, 9 bicycles..... | |
| • 16 Stretcher bearers..... | 1 " |
| • 2 Orderlies for the M. O. | |

74 Total attached including personnel for water duty

| | |
|---|-----|
| 1 Medical officer..... | 1 " |
| 5 Other ranks..... | |
| 4 Drivers A.S.C. for train transport. Attached..... | 4 " |

84 Total 35 horses and 9 bicycles.

1 Armourer

85 Total

3 Machine gun section...

| | |
|----------------------------|---|
| • 1 Subaltern officer..... | 1 horse |
| • 2 Sergeants..... | |
| • 1 Corporal..... | 12 draught |
| • 24 Privates..... | |
| • 1 Batman..... | |
| • 6 Drivers..... | Total 35 with 13 horses. <i>1st Lt. in command.</i> |

| | |
|--|-----------|
| COMPANY. • 1 Major or captain in command..... | • 1 horse |
| • 1 Captain, 2nd in command..... | |
| • 4 Lieutenants..... | |
| • 1 Company sergeant major..... | |
| • 1 Company quarter master sergeant..... | |
| • 8 Sergeants..... | |
| • 4 Drummers <i>8</i> | |
| • 10 Corporals..... | |
| • 188 Privates..... | |
| • 3 Drivers 1st line transports, 2 draught and 2 pack..... | |
| • 6 Batmen..... | |

Total.....227 all ranks, and five horses.

DETAILS LEFT AT THE BASE.

| | |
|-------------------------------|---------------------------------------|
| Orderly room clerk..... | 1 |
| Band sergeant..... | 1 |
| • Sergeant master tailor..... | 1 |
| • Storeman..... | 4 |
| • 1st reinforcements..... | 1 officer <i>2 up!</i> 92 privates |
| | 100 total |

TRANSPORT, FIRST LINE

| | |
|---|---|
| Headquarters • Bicycles for signallers..... | 9 |
| • S. A. A. carts..... | 5 |
| • Maltese for M. O. equipment..... | 1 |
| • Water carts <i>4</i> | 2 |
| • G. S. Wagons for tools..... | 2 |
| • Spare animals..... | 4 |

1st Lt. in command

| | | |
|---------------|---|---|
| M. G. Section | 2 G. S. Wagon for 4 guns S. A. A. Carts | 2 |
| Companies | • 2 pack animals per company | 8 |
| | • 1 travelling kitchen per company | 4 |

TRAIN.

• 4 G. S. wagons for baggage stores etc. Horses and drivers furnished by the A. S. C.

N. B. When specially ordered one blanket per man is carried and 2 additional G. S. wagons will be required. For these two extra vehicles, 2 extra A. S. C. drivers and 4 heavy draught horses will be added to the train of the battalion.

N. B. At the present time in Canada, a battalion is composed of 8 companies, but this will soon be superseded. A company is commanded by a captain assisted by 2 lieutenants, 1 color-sergeant, 4 sergeants, 5 corporals, 2 drummers, 102 privates, 2 drivers for pack animals, 3 batmen. Total, 118. Note that one pack animal is for ammunition and the other for tools. Tool animal carries 9 picks and 14 shovels. In a battalion in Canada we have 222 shovels and 148 picks. In England only 110 shovels and 76 picks. No tool animal.

2. For how long does a man enlist?

Three years.

3. How does a declaration of war affect a man's service?

Every man who volunteers for the war or a period exceeding 1 year will complete his service. As a rule, a man will be required to serve during the one year only. In case of necessity, which will be decided by the governor general in council, he may be kept in the field for a further period of six months. Militia Act, section 73.

4. Explain the composition of (1) brigade of infantry, (2) brigade of cavalry, (3) division.

i. Head-quarters and 4 infantry battalions, about 4000 men and 300 horses.

ii. Head-quarters, 3 cavalry regiments, 1 battery horse artillery, 1 mounted brigade ammunition column, 1 field troop, 1 signal troop, 1 mounted brigade train, 1 cavalry field ambulance. Total about 3000 men and 3000 horses and four guns.

iii. Head-quarters, 3 infantry brigades.

| | | |
|-----------------------------------|-----------------------|-------------|
| 1 regiment of cavalry | 500 men and | 500 horses |
| 1 mounted company corps of guides | 43 men and | 543 horses |
| 3 field artillery brigades | 36 guns, 1600 men and | 1400 horses |
| 1 howitzer brigade | 12 guns, 528 men and | 458 horses |
| 1 heavy battery, 60 pounders | 4 guns, 189 men and | 127 horses |
| 2 field companies R.C.E. | 325 men and | 140 horses |
| 1 signal company | 158 men and | 80 horses |
| 3 field ambulances | 243 men and | 250 horses |

Total about 22,000 men and 5,000 horses, and 52 guns.

5. What do you understand by mobilization?

The process by which an armed force passes from a peace to a war footing, meaning completing it in men and horses.

6. When is a unit considered mobilized?

When its war establishment and its war outfit have both been completed, when its horses have been shod, and its saddlery and harness fitted.

7. How are units allotted? (a) To the field army, (b) to garrison duties, (c) unallotted.

1. The field army consists of (a) field units, (b) 1 of C. units.

(a) Field units are mobile units allotted to field formations, divisions, etc., or detailed as L. of C. defence troops.

(b) L. of C. units are administrative units employed on the line of communication.

2. Units allotted to garrison duties are those told off to fortress, coast defences, and vulnerable points for which garrison guards are needed.

3. Unallotted units held in reserve for general purposes.

7. What is a rural unit?

Cavalry regiment, field artillery brigade or infantry battalion of which the component parts, squadrons, batteries or companies are not allocated at the regimental headquarters of the unit.

8. What do you understand by peace establishments?

The number of officers and men and the number of animals provided for it annually in the militia estimates. The numbers are detailed in the regimental establishments issued each year with the militia order.

9. What do you understand by war establishments?

The number of officers, men, and animals which with an army is required to take the field. The numbers are detailed in the Canadian Militia War establishments.

10. What is the war outfit?

The material of all kinds which is required for war. It consists of (i) War equipment, (ii) Clothing and necessities, (iii) Regimental supplies, (iv) medical and veterinary equipment.

WAR EQUIPMENT of a unit consists of its peace equipment less articles not needed in the field, plus its mobilization equipment, i.e., the articles of equipment which the unit requires to take the field. War equipment, which is laid down in the mobilization stores tables is subdivided into (a) personal equipment, (b) regimental equipment.

(a) Personal equipment comprises the arms, accoutrements and service ammunition issued for the personal use of the soldier and taken with him when he is transferred or detached from one unit to another.

N. B. Accoutrements comprises belts, pouch, bandoliers, sling, mess tin, water bottle, and similar articles other than arms, which are carried outside the clothing.

(b) Regimental equipment consists of such arms, accoutrements, and service ammunition which are not personal equipment, and of guns and ammunition, vehicles, harness and saddlery, stationery and other stores which a unit requires in mobilization.

CLOTHING AND NECESSARIES comprises the personal kit of the soldier other than his arms, accoutrements and service ammunition.

REGIMENTAL SUPPLIES comprises the rations and forage to be carried by a unit for its use in the field.

MEDICAL AND VETERINARY EQUIPMENT comprises the medicines and drugs and appliances required by units in the field. Details are given in the medical service manual and in veterinary regulations.

11. What do you understand by first day of mobilization?

Unless otherwise ordered, the day following that on which the order to mobilize is issued from militia H.Q.

12. What are places of mobilization and assembly?

Places of assembly are stations where units begin to mobilize; places of mobilization are stations where the units are completed. Places of assembly and mobilization are, as a rule, identical except in the case of rural units. The places of assembly of a rural unit are its squadron or company H.Q.

13. What are war stations?

The places in the area of concentration to which units are assigned primarily for service.

14. What are the duties of a commander on receiving the order to mobilize?

i. Wire immediately to all his officers to report for duty. Officers or men on leave will report immediately without waiting for further orders.

ii. If he is not there already, he will proceed to his place of mobilization.

iii. He will report to headquarters the number of officers he requires to complete his establishment, and at the same time he will submit the names of persons he recommends for promotion or appointment.

iv. He will do everything in his power to complete his unit in men and horses.

v. He will see that the company commanders make all arrangements to quarter and feed their men and horses at the place of mobilization.

vi. He will make the necessary arrangements to feed and quarter his unit at the place of mobilization and assembly.

vii. As each unit passes from peace footing to war footing he will make the necessary promotions to complete his establishment of N.C.O's. All these promotions are provisional.

viii. He will see that every man is medically examined.

ix. He will make the necessary arrangements to issue the articles of equipment he has in stores.

x. He will buy all the small kit articles which are required, or he may delegate his power to the company commander.

xi. If he receives the order to do so, he will buy all the articles of clothing and equipment he requires and will make the necessary arrangements to buy the regimental supplies.

xii. He will send to their destination the men transferred or detached to other units, he will always send an officer in charge of detachments of twenty men or more, and will furnish him with a list of the men.

xiii. He will send detachments to bring in horses bought to be examined by the veterinary officer, and will cast all those which are rejected.

xv. He will send detachments to bring in horses and transports he requires from the transport and remount depot.

xvi. He will hand over the waggons of the train to the A.S.C. drivers.

xvii. He will get the harness and saddlery fitted and the horses branded.

xviii. He will obtain the medical and veterinary equipment.

xix. He will have the swords and bayonets sharpened.

xx. He will make the necessary arrangements to have the regimental colors stored.

xxi. Every day he will send a report to headquarters showing the number of men and horses he has on hand and an idea of the situation as regards the material.

xxii. Except in the case provided for in section 44 of the mobilization regulations, he will not exceed his establishment. If he can obtain more men and horses than he requires he will report to superior authority.

xxiii. Rural corps only. He will order the various companies to proceed to the place of mobilization.

xxiv. He will do all in his power to facilitate the marching of units from the place of mobilization to the war station.

xxv. At the place of mobilization he will make the necessary arrangements to dispose of the surplus clothing and equipment.

xxvi. He will notify headquarters by wire when his unit is mobilized.

xxvii. He will give the necessary instructions to depot commanders.

xxviii. All reports and applications will be sent to divisional headquarters through the usual channel. All telegrams will be confirmed by letter.

15. What are the duties of the company commander when mobilization is ordered?

i. He will immediately proceed to the place of mobilization, or in the case of a rural unit, to the place of assembly.

ii. He will call on his men to report for duty and will carry out the orders received.

iii. He will do all in his power to complete his company in men and horses for the 1st. line transport.

iv. He will not collect any part of the train without first receiving the order to do so.

v. He will indent on headquarters for the clothing and equipment he requires.

vi. In the case of a rural unit he will make the necessary arrangements to feed his men at the place of assembly.

vii. With the articles on hand he will equip his men as soon as possible.

viii. If he obtains permission, he will buy the articles of clothing and equipment he requires.

ix. If he can obtain more men than he requires he will notify his commanding officer.

x. Every day he will inform his commanding officer of the progress of mobilization.

xi. On receiving the order to do so, he will proceed to the place of mobilization even if his unit is not complete.

16. What are regimental depots?

When an army takes the field recruiting for reinforcements is started.

a. A regimental depot will be formed for each unit or group of units for recruiting purposes and also to keep the documents and the excess baggage.

b. The surplus of personal equipment is left at the regimental depot.

17. How is the war outfit furnished?

a. In issuing the peace equipment and clothing in regimental stores.

b. In issuing the mobilization equipment in ordnance stores.

c. By local purchase read paragraphs 73-74-75 mobilization regulations.

18. How are the regimental supplies obtained?

By local purchase, in the case of rural units this will be obtained at the place of mobilization, where they will be packed in the regimental transport.

19. Give the composition of the staff of a division.

i. G.O.C., ii. G.S.O., iii. A.A.G., i.e., Administration. iv. D.A.A. and Q.M.G.

Attached to Divisional Staff: i. A.D. of S. and T. ii. A.D. M.S., iii. Pay-master. iv. A.D.R.C.E. Services. v. S.O.O. vi. A.D.V.S. vii. D.S.O. viii. D.I.O.

20. What is the composition of the militia council and the duties of each member?

Four military members and three civil.

i. The minister of militia is president; ii. Deputy minister, vice president; iii. Chief of general staff, 1st. military member; iv. A.G., 2nd. military member; v. Q.M.G., 3rd., military member; vi. Master general ordnance, 4th. military member; vii.

Finance member P.M.G. Besides there is a secretary appointed by the minister; he is one of the employees of the department.

The duties of the deputy minister are:—i. Interior economy of the department. ii. Administration of votes. iii. Parliamentary works including legislation on military subjects. iv. Official communications with the state department and the public. v. Administration of contracts with the branch interested. vi. Custody of military property which is occupied by the military, purchase of property for military purposes. vii. Administration of the civil part of the dominion arsenal. viii. Library and records of the department. ix. Control and distribution of the staff clerks, subordinate staff employees (temporary of the internal and external service). x. In the absence of the minister he will act for him in the ordinary routine.

Chief of the General Staff:—i. Advices of political and military questions. ii. Composition and organization of the forces for active service. iii. Military defence of the Dominion. iv. Collection of intelligence. v. Training of the military forces and their employment on service. vi. Training of officers. vii. Control of signal and telegraph services. viii. Selection and administration of the general staff. ix. Training selection, and administration of the general staff on service. x. With the finance member, preparation of estimates of the above services.

Adjutant General:—Creation, and peace organization of military forces. ii. Maintenance of establishments in officers and men. iii. Distribution of units in the various stations, mobilization orders of units. iv. Personal services. v. Appointment, promotion and retirement of officers. vi. Honors and awards. vii. Publication of militia orders. viii. Training of the force generally. ix. Discipline and interior economy. x. Ceremonial. xi. Administrative arrangement for the R.M.C. xii. Selection and administration of the general staff of the A.G. branch. xiii. Preparation of the militia list. xiv. With the D.G.M.S., military and sanitary questions. xv. With the finance member, administration and preparation of estimates for his branch.

Quarter-master General:—i. Organization, administration of the remount and transport, railways, supplies, barracks and ordnance service, also veterinary. ii. Decide on the reserve of supplies and equipments and clothing, also all material to be kept in the depots, also mobilization stores table. iii. Sealed patterns for clothing and equipment. iv. Keeping and distribution of military stores. v. Compensation for damages to animals and material. vi. Postal arrangements. vii. Advise and help the deputy minister in the preparation of contracts for the above.

Master General of Ordnance:—i. Armaments and lights and necessities. ii. With the chief of the general staff, designs choice and armament of technical equipment of the artillery. vi. Administration except finances of military factory. vii. Patents and inventions. viii. Construction and maintenance of targets,

rifle ranges, and fortifications. ix. Maintenance of barracks, hospitals, magazines, and other buildings, and all other buildings and property used by the troops. x. Plans for buildings. xi. Administration of the engineering staff. xii. With the Q.M.G., appointment of inspectors for engineering works. xiii. Technical questions affecting artillery and engineers' services. xiv. Preparation of estimates with the finance member for the above. xv. Advise the deputy minister on the above.

Chief Accountant and Paymaster General:—i. Reception and administration of militia funds. ii. Preparation of accounts and financial reports for the A.G. and other departments. iii. Audit all militia expenses. iv. Advise the different branches of the militia department on financial matters. v. In conjunction with the other departments prepare the estimates. vi. Superintend the expenditures of the different votes, and revise all new expenses proposed. vii. Administration of the paymaster branch.

21. What are the duties of the staff and head of services and departments in a division.

Their duties are similar to those corresponding at headquarters. The C.N.S.O. looks after:—War organization, training, instruction, and examination for promotion of officers, operations of war, publication of operation orders, exercises and manoeuvres, also publication of funds for manoeuvres and training, defences, and maintenance and preparations of plans of defence, military library, intelligence, books and field service manuals. Organization.

A.A.G. looks after:—Discipline, courts martial, confidential reports, personnel services, honors decoration medals, appointments except first appointment, promotions, retirements, peace organization and mobilization.

D.A.A. and Q.M.G. looks after:—Establishments, and disbandment, administrative arrangements for camp, recruitings, interior economy, movements of troops, inspections of arms and equipments, also military stores in charge of militia units.

THE MINOR TACTICS OF TRENCH WARFARE.

Trench and Field Warfare Compare.

MODERN WAR OF TWO (2) TYPES.

1. Modern "Civilized" warfare, now falls into two categories viz.: Field warfare; which has hitherto formed the bulk of all military operations, and Trench warfare, which has hitherto been confined to siege operations, but which now forms the major part of all military operations. In our Field service Regulations the chapter describing the battle, is composed largely of descriptions of methods to be adopted in the preliminary advance culminating in the building of a strong firing line prior to the assault. Of the assault itself very little is said, but according to recent experience, volumes might be devoted to study of it.

To-day, many weeks elapse before the delivery of the assault; and the dragging of the assault into protracted trench operations lasting a long time constitutes modern trench warfare, and is due to the necessity of making frontal attacks against carefully entrenched positions, owing to the absence of flanks which may be turned, which is due to the enormous size of modern armies, enabling them to hold the whole length of a frontier from end to end.

But it is probable as the enemy's forces are sufficiently reduced in number to prevent them to hold such frontage, and no other shorter frontage existing to fall back on, we will see the resumption of the field operations, which marked the beginning of the war.

FIELD WARFARE CHARACTERISTICS.

2. (a) Flanks are turned by manoeuvre.
- (b) The majority of responsibility falls upon the staff.
- (c) Field Works when carried out are generally constructed by working above ground and more or less free from fire.

TRENCH WARFARE CHARACTERISTICS.

3. (a) Frontal attack; by force resulting in much greater ferocity and more hand to hand fighting, the ultimate object of these frontal attacks being the production of those flanks which did not previously exist.
- (b). The majority of responsibility and initiative falls on the regimental officer.
- (c). Field works have to be constructed by working below ground under the close range fire of the enemy leading to the adoption of hoes in the place of shovels, also under the cover of darkness.

(d). Trench warfare consists entirely of the attack and defence of fortified positions resulting in:

(I). Short ranges in which the long range features of the modern rifle and machine gun are no longer a necessity, suggesting the adoption of an entirely new type of weapon, capable of combining the flat trajectory of the rifle with the highly curved trajectory of the Trench mortar or hand grenade. A combination of the rifle and bayonet as now used with a single pattern of grenade capable of being either thrown by hand or fired from the rifle, would appear to be the ideal compromise.

(II). Deliberate methods resulting in slow progress, advance by Sep and parallel, the expenditure of much more time, and consequent feasibility of adopting much greater elaboration in detail, and the use of much more highly scientifically developed appliances requiring time and deliberation in their employment.

EVOLUTION OF TRENCH WARFARE FROM FIELD OPERATIONS.

4. (I). This generally takes place in approximately four phases as follows:

(a). The attack of an entrenched position has been held up at varying from 200 to 500 yards and the firing line have been compelled to dig themselves in rifle pits.

(b). These rifle pits are connected up into a continuous trench and at the same time the firing line advanced and dug in as far as possible under cover of darkness.

(c). This position is then counter attacked by the enemy and probably part of the line lost and again re-established by a counter attack during the second and third day.

(d). This line having resisted counter attack is then consolidated and then held over a period extending from days to weeks prior to a general assault.

(II). During the first and second phases, while the assaulting line is being established, and dug in, groups of men will have been established, in advanced positions offering natural cover from fire, which must be connected up to the main line without delay, while other men will have established themselves in advanced trenches with their flanks in the air resulting in gaps in the line. These gaps must be closed up and the flanks made secure by digging additional trenches at the earliest opportunity. A case of this kind occurred after the battle of NEUVE-CHAP-ELLE where one regiment occupied a trench with its left flank in the air and 150 yards in front of the rest of the line. The attempt of the enemy to get behind this trench at night was only anticipated just in time by the construction of a combine communication and flanking fire trench connecting the two. The enemy actually attacked the digging party while at work, but were driven off.

This may result in the establishment of a general front line of the most grotesque shape which may have to be altered and adjusted later, usually by digging new lines of trenches at night.

ATTACK OF AN ENTRENCHED POSITION.

The attack of any entrenched position usually takes place in four phases as follows:

1. Deliberate advance up to within assaulting range.
2. Obtaining a lodgement in the enemy's net work.
3. Maintaining the lodgement in the enemy's net work.
4. Extending the lodgement in the enemy's net work.

1. Deliberate advance:

Should the front main trench previously held not be within assaulting distance of the enemy's position, an advanced position must be taken up within the range, before any attempt is made to carry the position by assault. It stands to reason that the fire swept zone across which an assault is made should be as short as possible about 100 to 150 yards. If the distance is much less than 100 yards it is impossible to bombard the enemy's front line without risk of serious loss to one's own men. This range may possibly be reduced in view of the more extended use of high explosive shell in place of shrapnel.

An alternative method is to establish a trench within 50 to 60 yards of the enemy and withdraw the garrison during a bombardment.

This, however, is attended with serious difficulties in launching the actual assault at the correct instant, unless it is carried out from a retired position in the rear, necessitating the crossing of the front trench which, however well bridged will form a very effective obstacle to the assaulting line.

Another advantage of establishing the front line as close as possible is the difficulty the enemy will experience in strengthening their obstacle. If 200 or 300 yards of glacis are left between, the enemy can continue improving their obstacle at night with steel posts, etc., till it is almost impossible to destroy it. There are two methods of taking up this advanced position.

(a). By means of night advances and entrenching under cover of darkness.

(b). If the above is not practicable, by alternative saps and parallels as fully described in the text books on Siege and Fortress Warfare, having established and consolidated this advanced position, the second phase commences.

OBTAINING A LODGMENT.

(This also consists of two phases).

- (a). Preliminaries.
- (b). The actual assault.

PRELIMINARIES.

(a). Before any assault can be launched against the enemy's front line, five points must be carefully attended to before-hand, as follows:

(I). Covered communications must be established across the glacis so as to enable the garrison of the captured trench to be communicated with as soon as possible after the assault has been launched. This can usually be done by running saps out as far as possible immediately opposite any of the enemy's advanced posts or saps, so as to shorten the amount of work to be done afterwards.

(II). The enemy's strong points, keeps, and above all his machine guns and their emplacements must be located before hand by every means at the disposal of the staff.

(III). Guns and troops must be massed beforehand, behind the front to be attacked without giving warning to the enemy. Men have to be massed 4 to 5 per yard and under cover from shell fire. To assure this it is necessary to construct several successive lines of trenches containing small shelters behind the front line.

To prevent the construction of these trenches giving warning to the enemy, similar dummy trenches may have to be constructed on other portions of the front.

(IV). Vast quantities of various kinds of stores must be collected in depots as near as possible to the firing line for use the moment the assault has been launched, consisting of:

- (a). Small arm ammunition.
- (b). Grenades.
- (c). Sand bags.
- (d). Portable obstacle frames.
- (e). Barbed wire.
- (f). Timber planks.
- (g). Corrugated iron sheets.
- (v). Arrangements must be made for the rapid delivery of the assault from the trench by,

(a). Clearing gaps in the home obstacle.

(b). Making steps in the front wall of the trench to facilitate rapid exit.

(c). Arrangements as an alternative to the above two for enabling the troops to start the assault from in front of the home obstacles, as often done by the French. This can be done in two ways.

(I). By digging a small trench over-night in front of the obstacles connecting the saps, which pass through it.

(II). Filing out and lying down in front of the obstacle during the preliminary intensive bombardment prior to the assault.

(B) THE ACTUAL ASSAULT.

The actual assault again consists of 3 phases.

- (a). Destruction of enemy's obstacles.
- (b). Suppression of enemy's fire.
- (c). Actual delivery of the charge and crossing of glacis and obstacle residue.

(a). By gun fire both shrapnel and high explosive.

(b). Mining, firing of grappels, chain shots, bombs, gun cotton, etc. These methods are slow and deliberate and cannot be carried out rapidly.

(c). Rifle fire, through an entanglement maintained continuously for several weeks completely destroy its value as an obstacle, thereby leading to the necessity of continuous repair against this form of wear and tear.

(b). Suppression of fire (two phases.)

(a). Preliminary suppression of fire, usually by artillery either simultaneous with or immediately following the destruction of the obstacle and just prior to the delivery of the assault.

(b). Simultaneous suppression during the actual infantry assault and while the glacis and obstacle are being crossed and its destruction completed by hand.

(a). Preliminary suppression attained by the delivery of:

I. An intensive bombardment of the enemy's front trench, keeps and strong points, particularly machine guns, and:

II. The establishment of a curtain of shrapnel covering all approaches, and:

III. The suppression of the enemy's artillery fire by long range guns.

(b). Simultaneous suppression: an unsolved problem.

I. Interrupted bombardment.

II. Hand grenades thrown by the first assaulting line as they reach within 20 or 30 yards of the enemy's trench.

III. Explosion of a mine under enemy's trench, as was done at Hill 60.

IV. Asphyxiating gasses.

V. Liquid fire.

VI. Discharge of 3 or 4 salvos of heavy bombs and rifle grenades from trench mortars and rifle grenades over the head of the assaulting lines while it is crossing the glacis and obstacle residue.

(C). CROSSING OF GLACIS AND DESTRUCTION OF OBSTACLE RESIDUE.

To ensure success the following points must be arranged for:

(a). The whole assaulting line must rise simultaneously on a given signal. Sufficient attention has not been paid to this yet.

(b). The front line must be equipped with:

I. Hand grenades.

II. Cutting tools to complete the destruction of the obstacle residue.

III. Means to cross residue where it has not been possible to complete its destruction, such as light foot bridges, etc.

(c). The first line may be all wiped out so a second must follow similarly equipped but perhaps without foot bridges.

(d). A third line should be thrown in to deceive the issue of the Melee or nullify the effect of an immediate counter attack, and to push on and occupy the enemy's second line which will be probably safer from counter attack by shell fire.

It will thus be seen that the assault in line must contain at least 3 men per yard who have to be housed under cover as already indicated. To this must be added another 1 or 2 men per yard to hold the original main trench in the event of failure or counter attack.

3. MAINTAINING THE LODGMENT.

A position following the assault as follows:

The major part of the enemy's front line will have been occupied having here and there short portions still in the enemy's hands.

Portions of the assaulting line will have passed behind the enemy's first and succeeded in capturing a second and perhaps a third line. Just the converse of the enemy's first line i.e.:

Some will have penetrated too far, others not far enough, resulting in the existence of two parallel lines of trenches in the enemy's network occupied by both sides as follows:

First line mostly British, partly German with Germans on both outer flanks, forming the limits of the position attacked.

Second line. Mostly German, partly British. Once operations have come to a standstill, arrangements must be made at once to hold the work already captured against counter-attack which must be expected as an absolute certainty.

B. FEEDING THE GARRISON.

Garrison if it holds its own must be supplied with:

I. Ammunition, both small and grenades.

II. Stores for making barricades and reversing the trench

III. Machine Guns.

IV. Reinforcements.

V. Communication for messages.

VI. Possibly food and water.

There are 3 ways of carrying this out

I. Where the fire has been suppressed or can be kept under, or under cover of darkness, ordinary communication trenches can be dug by normal entrenching.

II. Where there is flanking fire from one direction only as would occur in the vicinity of the flanks of the captured position a sand bag breastwork and shallow sap can often be thrown up rapidly with cover on one side only.

III. Where fire is delivered from both flanks simultaneously a shallow sap must be dug sapping both back from the enemy's position and our own throwing up parapet on both sides. No end cover to the sap is however essential in this case as in ordinary sapping.

C. MEETING COUNTER-ATTACKS.

(a). Trench barricades must be established in the enemy's communication trench and wherever the enemy happen to occupy portion of the same fire trench, as in the flanks of the captured position.

(b). Reversing the enemy's trench, i.e.: converting parades into a parapet, must also obtain shelter from shell fire by pushing along and capturing the second or supporting trench.

(c). Temporary obstacles.

4. EXTENDING LODGMENT IN THE ENEMY'S NETWORK.

(a). Laterally.

(b). In depth.

A. LATERAL EXTENSION.

1. By bombing along the trench.

Send an expert bomb team preceded by a party armed with rifle and bayonets until stopped by coming in contact with enemy.

The position of the enemy is then located and bombs are thrown over the head of the bayonet men and the next traverse into that portion of the enemy, probably around the next traverse.

Should a double block be met with while bombing along a trench the best remedy is to organize an assaulting party to attack the barricade across the open from the enemy's rear side for preference. The Germans usually install a machine gun at such points and it stands to reason that if the assault is carried out rapidly the machine gun which has been fixed to fire along the trench cannot be brought into use across the open in sufficient time. This method may not however always be possible if the

enemy commands the open ground all around the trench, in which case the following improvements might prove effective as a general method for lateral extension.

I. An intensive artillery bombardment of a 50 to 100 yards length of trench to be rushed, followed immediately by:

II. A bomb attack along that trench as already described covered simultaneously by:

III. Concentrated machine gun and rifle fire from our own original front as if preparing for a frontal attack assisted by:

IV. Simultaneous machine guns and rifle fire from machine guns pushed up into advanced saps or the enemy's old communication trench.

The position of the bomb party must be clearly indicated by holding up colored discs, flags, or signals, showing the extent to which the party have advanced.

B. EXTENSION IN DEPTH.

In attack of an extensive network of trenches two methods may be adopted:

(a). The "Hooresh" method which is typically British in which three or four lines of trenches are rushed one after the other in rapid succession following the general assault on the first line. Depends entirely for its success upon the previous location of the enemy's strong points and keeps, and if these have not been marked down absolutely completely before the assault is organised it is only courting disaster to attempt it.

(b). The systematic method which has been adopted of late by the French, and which is the only possible method in attacking a well organized and extensive network.

In this method one definite objective and one only, as for instance the enemy's second trench is given to the attacking troops, this is usually made absolutely certain of and held against all attempts at recapture. Then once this objective is well consolidated a second one is chosen and treated the same way. The hold on the network being gradually extended by degrees from day to day, the whole being carefully wired in, enclosing telephones and officers shelters, magazines, ammunition, stores, and all other important features, the loss of which might result in serious consequences. The trenches at the limits of this strong point should be carefully double blocked and the traverse in the fire trench carefully loopholed.

The construction of keeps, the modern term for entirely closed works situated from 200 to 300 yards behind the front line and built up by degrees so as to form absolutely impregnable forts containing machine guns, emplacements, lockouts, shelters, and a complete double ring of obstacles and parapets to all trenches.

The excellent protection from shell fire afforded by good cellars has often resulted in large houses and factories forming

the nucleus of such work, they are usually sited to cover important cross-roads and approaches with a field of fire up to a 100 yards all around, neighbouring buildings if necessary being cleared and the whole rendered as safe as possible from rapid assault.

Each keep should have a defence scheme drawn up for it and a complete garrison told off, with a guard in permanent occupation and kept ready stocked with the following:

I. Copy of defence scheme.

II. Small arm and hand-grenade ammunition.

III. Water, food, and fuel, sufficient for a 3 days siege.

IV. Tools, stores, timber, sand-bags, and other materials.

DEFENCE.

Holding an entrenched position.

1. Interdependence of consolidation and defence.

To enable a position to be held for any period, consolidation is absolutely essential and as this cannot be carried out effectively, unless the position is effectively defended, a superiority of fire maintained, and the enemy's organized annoyance overcome, while on the other hand no effective defence can be maintained unless the position has been consolidated, the two are interdependent and must go together.

The first duty of all Regimental Officers is to commence the consolidation of a position, the moment it is occupied, and to go on consolidating unceasingly and without resting until relieved by another unit. This unit must then carry on the work day and night without ceasing until the position has been rendered absolutely impregnable by the construction of advanced saps, supporting lines and every artifice known to the engineer, particular care being taken to continue the same policy as that adopted by the last unit.

2. Consolidation for defence.

The nature of the work to be done naturally depends upon the nature of attack which is expected and it is therefore advisable to consider each in turn in the following order, which is that they will usually occur:—

- (a). Counter attack.
- (b). Shell fire.
- (c). Assault.
- (d). Daily wear and tear.
- (e). Deliberate attack and bombing.

(A.) COUNTER-ATTACK.

For protection against it 3 things must be considered.

I. Protection from enemy rifle fire and shrapnel fire, which can usually only be obtained by connecting up the rifle pits already dug into a continuous trench of the usual type, three feet by 3 feet with traverses and 18 inch parapet for firing standing.

II. A line of obstacles of any description out of material available sufficient to hold up the assaulting troops, under close range rifle fire.

III. Finally provision must be made to facilitate rapid exit from the trench for delivering the counter charge, should the assaulting troops succeed in passing the obstacle.

(B.) SHELL FIRE.

Must guard against (a) shrapnel. (b) High explosive.

(a). For protection against shrapnel splinter-proof shelters must be constructed:

I. What may be called the collective type of shelter constructed immediately behind the front line to hold 6 to 12 men or.

II. The second or individual type consisting of small shelters constructed in the fire trench itself, each large enough to hold one man lying or two sitting.

When constructing shelters two or three points must be carefully considered:

(I). Roofing timber should always be three to four times as strong as it appears necessary, if they are to last.

II. The sides supporting the roof must be riveted with sand-bags.

III. Ground plates must be provided or the sides will collapse.

Parades give protection against short bursts of our own shrapnel.

(b). As regards high explosives, it is impossible to devise any means for protection against direct hits, the only course adopted so far has been:

I. Locate the effects of bursts, by constructing parades and traverses 4 to 5 feet and if the nature of the soil permits cutting recesses, though this interferes with the construction of shelter under the front parapet.

II. Reducing the size of the target by keeping the trenches as narrow as possible.

III. By general concealment rendering observation more difficult, though the advantage of this method is far less than in field warfare, owing to the close range from which observation of fire is carried out.

IV. Future developments may result in the withdrawal of most of the men from the front trench in order to avoid losses from shell fire, the defence of the trench itself being entrusted more to well protected machine guns, backed by artillery; the men being posted in supporting positions 100 yards or so to the rear, ready to counter-attack at any given instant.

(C.) ASSAULT.

To resist the assault the following points must be kept in view:

I. First and most important of all, obstacles must be provided and the front well wired in.

II. Facility must be provided for enabling the whole garrison to fire over the top of the parapet, unimpeded by head cover. For this purpose a complete fire step riveted through out its whole length, is absolutely necessary.

III. For facilitating supervision and control a passage behind the first step giving complete protection from the fire while standing upright should be provided. This will develop naturally owing to the instincts of the soldiers to protect themselves.

IV. Finally provisions must be made for rapid exit from the trench which no longer serves any useful object, to deliver the counter charge.

I. More recently assaults have been covered by:

Hand grenades thrown from the front line in an assaulting column. This can be checked by placing the obstacle sufficiently far out to prevent the bomb throwers getting within hand range of their main trench. This is to say not less than 40 yards.

This is an important point which should not be overlooked in placing the obstacle:

II. Recently asphyxiating gasses; this has been met up to the present by the employment of respirators and air-tight helmets.

III. The use of liquid fire jets. Best protection overhead cover with 6 to 12 inches thickness of earth. There is always a danger with overhead cover of the occupants being caught like a rat in a trap principally after a preliminary bombardment of high explosive shells.

IV. Finally provision must be made to facilitate the delivery of a counter-attack from supporting lines if temporarily occupied by the enemy. The success of this depends entirely upon its being delivered absolutely on top of the melee in the front trench, which at once indicates the importance of:

I. Initiative by the Regimental Officer in command of the supporting troops and,

II. The provision of head-cover and therefore of loopholes.

III. The organization of a complete system of systematic annoyance which is dealt with under protection against deliberate attack.

IV. The provision of miscellaneous arrangements for hygiene and convenience such as water supply, latrines, communications, magazines, offices and telephone shelters, etc.

E. DELIBERATE ATTACK AND BOMBING.

For protection against deliberate attack and bombing it is essential first to understand the German methods of dominating our position by sap. Imagine two lines facing each other approximately 200 yards apart. The Germans push out saps to within 20 yards of our lines and so establish what may be termed bomb heads from which they throw hand-grenades into our trenches thus making the majority of our front trench line practically untenable, besides seriously affecting the moral of the garrison. For some time considerable controversy raged over the best method to be adapted to contract this policy and costly sorties were made on the enemy's sap-head without the loss of a man,

but its eventual evacuation with the loss of more than 50% of the garrison owing to their being cut off from all supplies by the uncrossable glacis it is now generally agreed that while occupying position even on the defensive it is advisable to push on the saps as soon, if not before the enemy is seen doing same. It is true that this results in contact being made in half the time and therefore loses that time which it is the object of all defensive measures to gain but on the other hand this method insures contact in the centre of the glacis well out of reach of your own main trench and under conditions of equality for both sides which may not only protect the preliminary contest sufficiently to make up for the loss of time but also protects your main line from continually annoyance and loss of moral and nerve, the inevitable result of being daily pelted with bombs and hand grenades. It is thus now agreed that even on the defensive saps should be pushed on at once to a distance of certainly not less than 40 yards in advance and approximately 60 yards apart with the object of keeping the enemy at arms length and preventing him from approaching and dominating your main position.

When there is a likelihood of the enemy penetrating your own net work it is advisable to loophole the traverses at intervals and establishing double blocks on each side of the threatened length. This will enable you to effectually prevent him from extending his lodgment laterely by bombing along your track.

Bombs and rifle grenades should be employed systematically against the enemies approaching us.

For this purpose however it is essential to have a bomb thrower and rifle grenade which are accurate to within a few inches.

3. RETRENCHMENTS.

(a). They fall into three classes as follows:

The second or bombing line first employed by the Germans against the French. This consists of a shallow trench established 10 to 20 yards behind the front line which is occupied during the assault by second line of infantry with hand grenades the approaching from this front line being blocked and covered by rifle fire.

(b). The second supporting line approximately 100 yards behind the front from which the immediate counter attack would be delivered and which should be as casually built up for the ultimate resistance as the front line and not consist as often happens of series of dug-outs and shelters constructed entirely for the comfort of the supporting troops. This second line should have all approaches from it to the front line carefully double blocked.

(c). Strong points established at intervals in both the front and second supporting lines. These should be located usually at the head of all communication trenches and the routes of all saps resulting in a cross or tree work.

ORDERLY OFFICER'S REPORT.

Royal Canadian. 191.

Sir,—

I have the honour to report that as Officer on duty on the

Rations. 1. I inspected the rations at previous to issue, which were of quality.

Meals. 2. I visited the Mess-Rooms and Cook-houses at and found everything regular; There were complaints.

Guards, Sentries, Offenders. 3. I visited the Guard and Sentries at o'clock by day and at o'clock by night; also the Offenders in the Guard-Detention Room and found

Canteen. 4. I visited the Canteen at o'clock, and found

Hospital. 5. I visited the Hospital at and found and complaints. I signed the Register.

Gymnasium. 6. I visited the Gymnasium at and found

Wash-room. 7. I visited the Ablution rooms and latrines at o'clock and found them

Workshops. 9. I visited the workshops at and found

Stables. 10. I attended stables at o'clock, and at o'clock and at o'clock, and saw horses watered, fed, groomed and bedded; stables cleaned; harness and saddlery in good order. Horses in health. Forage is of quality.

Stable-Piquet. 11. I inspected the stable piquet at o'clock, previous to mounting, and found it. I visited the stables at by night and found

Parades. 12. I attended the morning and afternoon parades, when were reported.

Tattoo. 13. I received the Tattoo report at o'clock, when N.C. Officers and men were reported.

14. I saw that all unauthorised lights were extinguished at 10.15 p.m.

I have the honour to be, sir,

Your obedient servant.

To the Officer Commanding Orderly Officer.

N.B.—1. In all cases where any duty is omitted an explanation is to be given on the back of report of the cause of omission.

2. In reporting complaints a statement should be made whether any steps were taken at the time to remove the grievance.

3. Paragraphs not applicable to the arm of the service, to be crossed out.

M.F.B.236
H.Q.1772-39-524

Squadron
Battery
Company

Morning Sick Report.

| | | | | | | | | |
|------------|---|----------------------------|-----|-----------|---|-------------------|---------|-------------------------------------|
| Regt'l No. | RANK & NAMES (Christian Name in full.) | Completed years of service | Age | Religion. | Whether for Duty, a Prisoner or Defaulter | Married or Single | Disease | Medical Officer Remarks and Initial |
| | | | | | | | | |

Medical Officer.

M.F.B.236.
H.Q.1772-39-248.

Orderly N.C.O

To Be Discharged from Hospital To-Morrow.

| | | | |
|--------------------------------|--------|------------|-----------------|
| Troop Battery or Company | Corps. | Regt'l No. | RANK AND NAMES. |
| | | | |

(Back of Form)

ABSENTEE REPORT.

Squadron.
Battery.
Company.

| Regt. No. | Rank & Name | When Absent | Hour of Return | In what State | Remarks. |
|-----------|-------------|-------------|----------------|---------------|----------|
| | | | | | |

M.F.B.273.

H.Q.1772-39-446.

Orderly Sergeant

(To be kept by the Orderly Sergeant.)

No.

(Squadron
Battery
Company

Royal
From

To

*Date on last entry or release from
Imprisonment.

Recommended

Commanding

* Not required in case of N.C.O.

MIL. Book 63.

1M.—11.14.

H.Q. 1772-61-32.

(To be handed to the Man proceeding on Pass.)

PASS.

Place

Date

Royal

No.

has permission to be absent from his Quarters from

o'clock the until

o'clock the for the

purpose of going to

(stamp)

MIL. Book 63.

1M.—11.14.

H.Q. 1772-61-32.

Li.-Col. Commanding.

SOLDIERS UNDER SENTENCE CONFINED IN DETENTION BARRACKS OR CIVIL PRISON.

| No. | Corps. | Sq'n. Batt'ry or Co'y. | Names. | Sentence. | Hours Done. | Hours to Do. | Remarks. |
|-----|--------|------------------------------|--------|-----------|-------------|--------------|----------|
| | | | | | | | |
| | | | | | | | |

REPORT OF OFFENDERS, AND SOLDIERS UNDER SENTENCE, CONFINED IN THE HOSPITAL

| No. | Reg't No. | Rank and Name. | Corps. | Sq'n. Batt'ry or Co'y. | Date of Crime. | Days. | Nights. | Remarks. |
|-----|--------------|----------------|--------|------------------------------|----------------|-------|---------|----------|
| | | | | | | | | |
| | | | | | | | | |

..... Commanding Guard.

OBSERVATIONS.

[illegible]

I certify that the observations, thermometer
were taken by me. The
hours of snow and rain reported by the sentry were entered
in the Observation Book in the Guard-room.

Commanding Guard.

ARTICLES IN CHARGE OF GUARD.

[illegible]

SQUADRON, BATTERY AND COMPANY CONDUCT SHEET.

Regiment of Signature of O. C. { Squadron Battery Company } No. of Sheet

| Regimental Number and Name. | | Enlistment. | | Trade. | Former Service. | Good Conduct Badges. | By whom awarded. | REMARKS |
|-----------------------------|-----------------|--------------------|------------|----------|--|----------------------|--|---------|
| No. | Name. | Age on | years mth. | | | | | |
| Joined, Date | Date | Period of | } | Religion | Date of award or of order dispensing with trial. | Punishment awarded. | Date of award or of order dispensing with trial. | REMARKS |
| Re-engaged, Date | Date | | | | | | | |
| Re-engaged, Date | Date | | | | | | | |
| Re-engaged, Date | Date | | | | | | | |
| Left, Date | Date | To be carried over | | | | | | |
| Place | Date of Offence | | | | | | | |
| | | | | | | | | |

M.F.B. 283a.
22m.-8-14.
H.Q. 64-53-1.

FORM OF SUMMONS TO A CIVIL WITNESS.

To

WHEREAS a Court-Martial has been ordered to assemble at on the day of 19..... for the trial of of the I do hereby summon and require you to attend as a witness, the sitting of the said Court at on the day of at o'clock in the Forenoon (and to bring with you the documents hereinafter mentioned, namely) and so to attend from day to day until you shall be duly discharged, whereof you shall fail at your peril.

Given under my hand at on the day of 19.....

(Signature)
Convening Officer (or Judge Advocate, or president of the Court, or Commanding Officer of the accused.)

Mil. Form B. 249.

H.Q. 1772-39-131.

CRIME.

SQUADRON, BATTERY OR COMPANY.

CHARGE against No.

| Place | Date of Offence | OFFENCE. | Name of Witness | Punishment Awarded | By whom Awarded |
|-------|-----------------|----------|-----------------|--------------------|-----------------|
| | | | | | |

Service, years.
Number of good conduct badges.
Date of last entry in company conduct book.
Character.
Date of last entry for an act of drunkenness.
Number of cases of drunkenness within the last 12 months.

M.F.B. 264.
H.Q. 1772-39-99.

Commanding

REGIMENTAL CONDUCT SUBJECT.

Number of sheets
(in words)

Signature of C.O.
or Adjutant

Regimental Number
and Name

Regiment of

Account of

Regiment.

199

1

100

| Place | Date of Offence | Rank | Class of Punishment | Offence | Names of Witnesses | Punishment Awarded | Date of award or order dispensing with trial | BY WHOM | Date of Commencement | Date of Expiration | REMARKS |
|-------|-----------------|------|---------------------|---------|--------------------|--------------------|--|---------|----------------------|--------------------|---------|
| | | | | | | | | | | | |
| | | | | | | | | | | | |

To be carried over.

To be entered on

M.F. H.2623,
20m.—814,
H.O. 64-53-1

MINOR OFFENCE REPORT.

STATION
DATE

comp.

[illegible]

NOTE.—This Report after being completed by the entry in the Orderly Room of all minor offenses disposed of by Officers commanding Troops, Batteries, or Companies, will be attached to the Guard Report of the day.

M.F.B.224-14M-11-14.
H.O.1773-39-398

(Signature)

TIME AND POST ROLL

[illegible]

Commanding Guard

Lowry et al.

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