

At School

T. J. Richards.

March 4th

~~May 14th~~

To

April 1st 1917.

Arrived at Teranocast March 4th
left April 3rd

ARMY BOOK 136.

No Particular Number

for this book but

if possible follows
No 222

Wt. W7667/M882. 200,000 Bks. 10/16. C. K. & Co., Ltd.

No 222 A 1

1st Anzac Corps School

March 4th 1917.

Opening Day

Dropping of men & officers
into their sections.

Lecture Col. Ross.

He spoke on the object of
the school and the particularly high
standard to be set thereat. Its
standard well in keeping with the
ability of the Corps. He said
"there is no doubt about the standard
of excellency recognised by the
Army when Colonials were given
such interesting and important
positions to hold as the flanks
during the recent push; the
Canadians on Vimy Ridge and
the Anzacs at Bullecourt."

This speaks for itself and so
to maintain that standard of
efficiency we have got to work

kind and long as the Angou
School. If any officer or NCO.
came here for a holiday or anything
indicating a loafing time he is
going to be very disappointed
indeed. The main object of the
School is uniformity of system
through France. This
system is the outcome of a
conference at which all Allied
nations were represented.

Lecture: Lt. Herd. Bombs.
The rifle is the weapon,
the other arms, bombs Lewis gun
&c. are just a branch that
leads up to the actual use of the
rifle & bayonet, so don't on any
account overlook the fact that
above all and everything stands
the rifle & bayonet.

There are high & low explosives
used in bombs, both the

French & Germans use low explos-
ives in their bombs for different
duties but most all British
bombs are filled with high explosive
with instantaneous ignition and
shattering effects.

Low explosives have not the same
shattering effects. It follows the
least line of resistance and must be
compressed. Cordite is a low explosive
not quite instantaneous, it has a
searching effect and finds the muzzle
the least line of resistance; while
high explosive would tend to burst
the breech and waste power.

Gun cotton & Tonite are low.
T.N.T. (Tri Nitro Toluene
not much used nowadays other
than for Stokes bombs.

Lydite, an acid, has a corrosive
effect on metal and can be
exploded by a bullet.

Ammonat is sensitive to

dampness and becomes useless
 But is very soft stuff to handle, the
 only form of explosion is by detonation.
 Abelite & } are often used in place of
 Saferite } Ammonal.

Fuzes. Buckfords make ~~two~~ two
 kinds of Time fuse N° 10 & N° 11.
 N° 10 is the larger size shining and
 black in colour.

N° 10 is smaller and gray in colour.
 Both burn at a rate of 2 inches
 in 5 seconds or 1 foot in 30
 seconds

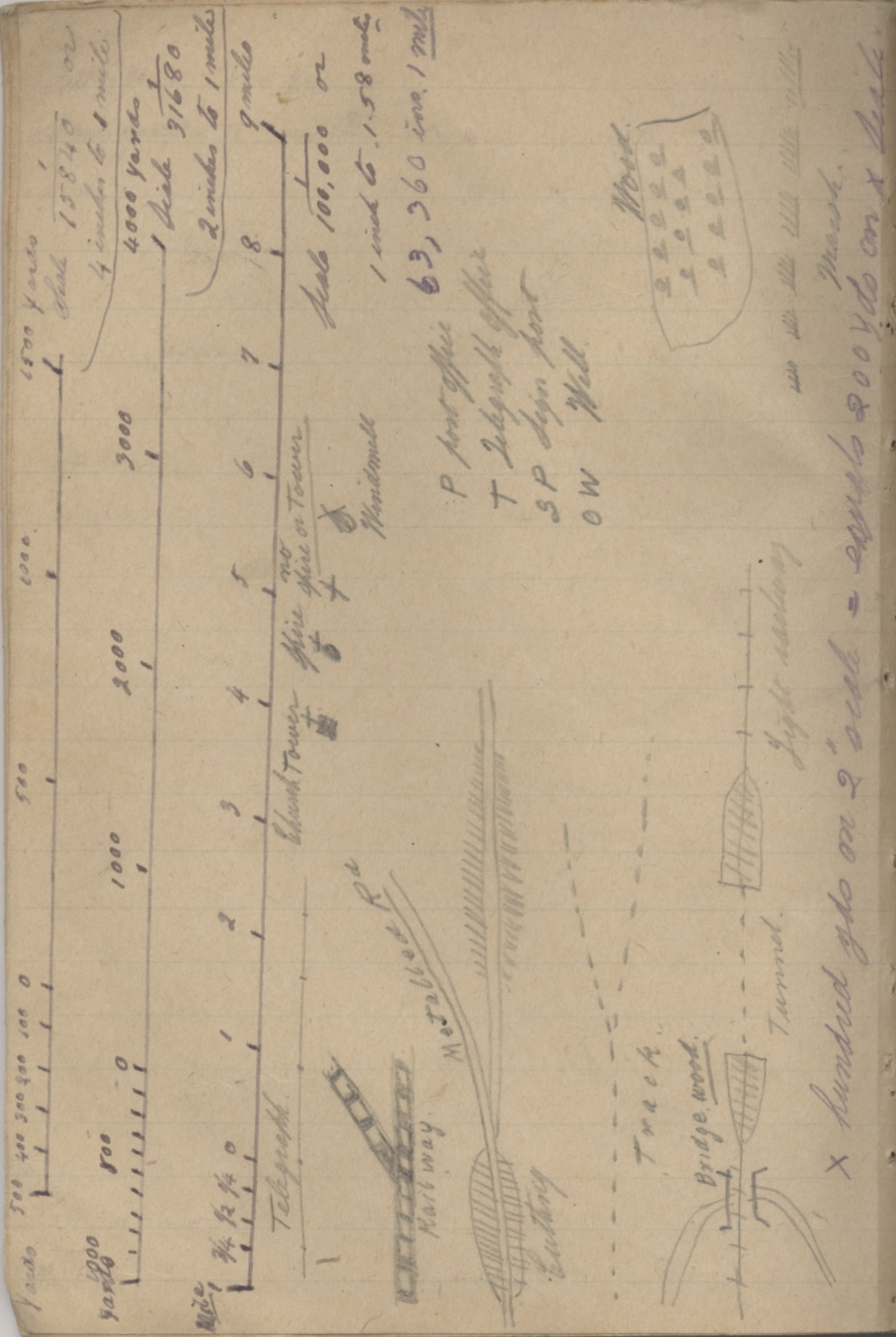
Instantaneous Fuse. is red in
 colour and ribbed roughly so as
 to be felt in the dark, and burns
 at the rate of one mile per minute.

Names of Bombs & Nos.

- N° 2 Hales hand grenade ^{Ammonal or} ^{Ammonal or}
 3 " R.G. 10 in. rod 180 yds " (Pink-
 bent.
 5 Mill's H.G. Time fuse " 166 yds.
 6 Moral effect } T.N.T. Short commercial base
 7 Hospital " }
 12 Hair brush H.G. (Out of date)
 19 H.G. Ammonal
 20 Boneless R.G. 10ⁱⁿ rod 220 yds
 21 Newton " P. 18 in rod ^{range 400 yds} copper gas gut
 22 Improved Newton
 23 Mill's Rifle G. 6 in rod 90 yds Ammonal
 5½ rod 85 yds 8½ rod 120 yds.
 24 Boneless R.G. 10 in rod 220 yds
 Ball H.G. T.Fuse. Ammonal & Mark 7. ^{det.}
 Newton Pitton
 Pitcher H.G.
 Batty or Bethune H.G. Ammonal & Mark 7.
 Egg H.G. T.Fuse Ammonal or Tonite.
 All time fuses are five seconds
 Short rods need a full charged cartridge.
 Long rods a half charge.

Afternoon.

May 14th.



Monday March 5th 1917

Parade in Sam Brown & raincoat with towel & soap for Bath at 8.50 a.m. A good bath and return to Parade ground where the officers were drawn up in line and told how to stand to attention and turn to the right or left by numbers. The instructor was clear and interesting; his remarks and detail being clear and well defined.

We were first shown the correct position of "attention": - Heels together toes at an angle of 45 degrees knees well straightened and held back shoulders well back body braced chest well in and hands to side with fingers loosely closed.

Special stress is laid on the feet knees & chest also shoulders turning by numbers followed. The squad calling loudly the time. This afternoon it was similar.

squad drill commencing with saluting, both to the front and in passing a given point.

Officers were called out of the line later to give commands & detail of "forming fours" marching 30" step short & so. &c. The afternoon was a little tiring but of much value to me even though listening to the older and trained men.

In the matter of getting men to "Quack march" together and to take up their dressing when "falling in" or halted, much instruction was given. The word of command in the "Quack March" is the essential matter. When a halt is made such as all the column not starting out together with the left foot, a halt should be made seeing that the man started off with the front. "Right left and about

turning by numbers, disclosed nothing new but was a welcome refreshment.

At the 1.40 p.m. parade with "drill order" we went, 48 strong, back onto the drill ground where saluting by numbers was carried out and some remarks on the different styles of saluting from a cycle or horse.

Then followed some marching tests, to show up how difficult it is to obtain a uniform step of 30 inches and also to get proper direction. Officers were called out of the squad to give detail of points such as forming fours⁴ and changing directions. It was a good days tuition.

At 5.0 o'clock all ranks listened to a lecture by Capt. Campbell on DISCIPLINE. He was forceful without being dramatic, and clear without any great flow of eloquence. He never lagged at any stage and was entertaining as well as instructive.

I gathered the following notes from the lecture: -

"Discipline in a broad sense means training and common knowledge.

In an Army there are two essentials that go towards the making of efficiency, efficiency; they are organization and discipline.

Organization is for those in higher circles than we are placed in; but discipline comes right home to our own door and it is for discipline that we are entirely responsible for.

From the lowest ranks right up through the N.C.O.s & the officers to the head of the Battalion ~~the~~ lies the road to good discipline. Each section commander must extract ~~it~~ from his section a respect that smooths the way for the Platoon sergeant, and likewise the sergeant helps the platoon commander who is responsible for the platoon discipline to the Colonel.

Historical facts show clearly that good

discipline means success. ~~Alfred~~

The Romans of early times paid strict attention to discipline and by so doing conquered and held the world with ease, until they grew lax, lost their grip over their soldiers and came down the hill of fame.

Oliver Cromwell, England's great & strong man accounted for his success by hard and fast discipline.

The Royalists were overcome by Cromwell's superior discipline and eventually had to give way.

Cromwell was the first man to train & equip a regular army.

It is said Australian discipline, which we must all agree with, is anything but good and is much commented upon by all military authorities in Europe, who have seen them; It should be a lot better.

The personal element will not be injured or spoilt; by instilling better discipline, the opposite, in fact, will be the outcome as the personal element

so valuable to a fighting force is always
there it is part of your nature and will
not be affected by discipline.

Mercantile and commercial businesses,
now run on so large a scale, are
insisting on discipline, in conjunction
with organisation for the success of their
affairs.

What mark distinguishes the quality
of the different troops?

Behaviour and respect for authority.
Too much personal respect for ability
and the man is considered by the
men in the ranks. They must be
taught not to respect the individuality
of their officers; but respect the position
they hold in the army. Australians
always avoid the necessity for saluting
when possible. Well disciplined and
trained troops will always salute properly
and move about with smartness
owing to the sharpness of their uniform
and equipment. The Guards for

example are proud of their look & open
appearance, and proud also to belong
to a Regiment in which discipline is
strict and a pleasure. Good troops are
good on parade. Australians are unwilling
and sluggish on parade. Reluctant to do
their best. It is necessary to
check, and tell regularly, our men about
smartness and appearance. Make them
see to their puttees, buttons, hats &c.
Take a pride in your platoon and see
that the men do also. Make them
feel that their Company and Battalion
should be the smartest and the best
of them all.

Endurance is brought out by discipline
and training. During the American
Civil War the young bloods of the North
formed themselves into keen armies but
when they set out without training
for the front they soon emptied their
water bottles got tired and went to
rags along the road a struggling, useless

mob. Men must be taught to carry
and reserve their actions as well as
take urgent care over their water bottles.

Australian marching is mostly ragged
and disjointed. Men fall out as well
solely from the want of endurance instilled
into them through discipline. With the
possibility of open warfare now being
brought in, there is a greater need than
ever for officers to have absolute control
over their men. Australians will have
much difficulty in retaining their fighting
name in open war as they are so
likely to get out of hand.

Obedience - Instant obedience is
essential and shows the power which
the officer has over his men. Men
must not hesitate or show a reluctant
-any.

Individuality must be strong enough
to efficiently hold men. This must
be got through firmness in handling
the men. The proper use of

authority is a factor in a good platoon.
Don't be sarcastic or nasty it
irritates the good men & the bad ones
take no notice of it. Jump right
into them and tell them the correct
way to do things and quietly check the
faults by details & patience.

Knowledge an officer or NCO must
have he can't possibly have too
much of it and they must know
all about their work and more
about it than the men underneath.

Book learning is good, but there
must be observation, thought and
careful study to complete one education.

The least thing to rely upon for
discipline is punishment, such as extra
parades and fatigues etc.

Don't have likes & dislikes for particular
men treat them all alike. Officers
must hold themselves above other ranks
and have a dignity in keeping with
the position they hold. Bad language

To the men only display to them
your own ignorance. Be careful
of your own behaviour in your
leisure hours especially when outside
or in the presence of lower ranks.

Close order drill is the better for getting
good discipline.

The behaviour of your men either on
the parade ground or on the streets
is a reflection of your own teaching.

Dinner at 6.30 p.m. and the evening
is free.

Tuesday

March 6th 1916.

Morning 9 a.m. to 12.30 p.m.

Squad Drill & Physical Drill:—

A whole lot of time was spent in checking
the bumping and gaps that occur while on the
march or in changing alignment of almost any
kind. While on the march it is often necessary
to move from fours to two and even single
file. When getting back into two or four
always halt on march time in front so as
to allow the back men to get into their places
in comfort and in a good humour then
see that they all move off together at the
command "Quick March". Especial notice
must be taken of the blank file in the
forming of fours. I haven't quite
a lot of points about squad drill and
also physical drill.

Afternoon Lecture on Map Reading
by Major Harris. from 2 p.m. until 3 p.m.
Then followed the making of a sketch in
one own fashion only that it must include
the features lay down by our instructor, such

as a Road crossing a River, a Railway crossing the river with a tunnel and cutting. a village with Wells, Church and Post Office. Trenches with wire & communication trenches as well as anything else one wishes to insert.

At 4 p.m. musketry with rifles by our instructor. He went over the rifle carefully and pleasantly.

5 p.m. a lecture on Trench Warfare by Major Harris. Taking for his main lines the following -

N° 1. Protection

- a Advanced posts
- b Patrols

2 Reports & Sketches

3 Mapping up

- a sentry posted on each dugout ^{cellars} &
- b clear up dugouts.
- c Search for Machine Gun positions
- d " " Mines.

4 Consolidation

- a conversion of trench & construction of new line.

- b. communication trenches
- c. fortification of forward & strong post
- d. bomb blocks
- e. dumps
- f. dugouts

5 Connection

6 Exploitation & putting patrols

7 Information: - documents & prisoners

8 Salvage: - cleaning up &c.

The Major started by explaining that the formation of a platoon or company in attack is now undergoing alteration and can not be clearly dealt with just now.

After a trench is captured, however, protection must at once be considered and carried out. This will be done chiefly by pushing advanced posts ahead and in turn protecting them by patrols. These advanced posts may be required to be connected to make up a new spring line as the enemy will have the artillery range of same to perfection. Patrols should

be accompanied by an officer who will make sketches and take notes to send into the Coy. commander, also, he must be clear in his detailing of the position occupied by his platoon. The Coy. commander in turn will must report to Br Sigs. and if possible submit sketches, in a rough way. These sketches can be made up before the attack commences & then be filled up afterwards. Later on a more complete report will be sent in by Coy. commander.

Mappers up must look carefully about for dugouts post a sentry and then get busy clearing them out. Another party of mappers up must look for machine gun positions (hidden probably) and keep a check out look for wires which may be connected with mines.

Care must be taken in holding an enemy's fire trench. Firstly the artillery will bombard it, and it may not on the other hand hold a good fire position.

So that in most cases it is advantageous to make a new line altogether in advance.

A strong post is not necessarily forward of the line, it may be behind as long as its field of fire is good, and will enable a counter attack to be checked.

Block up the enemy's communication trenches for 40 yards, so that he cannot throw bombs, with old wire or anything that will take a lot of digging out again.

Put a squad of bombers against the block and behind them a Lewis gun to prevent the enemy crossing the block.

Defensive tactics are the basis of what consolidation really means.

A good supply of bombs must be on hand.
Exploitation: - Prisoners have often stated that the British have missed big opportunities by not pushing further ahead when attacking.

Therefore it is essential to exploit the ground ahead before settling down.

Salvage: - This would come in later by collecting carefully all equipment and loose material to prevent wastage and from dumps.

Wednesday

March 7th.

Parade with rifles on the old Roman camp site. A Cockney Sergeant gave us a hard, but good time at physical exercises. He never legged at all, and yet kept us going hard the whole time. I will follow his course closely.

Rifle exercises by our instructor, Capt. Mallett followed physical drill.

One point, that of closing the pouch after taking a clip of cartridges out is done after the loading is completed not immediately after the clip is taken out, as A. Coy. were taught to do. I learnt a lot of good information this morning even if I did blunder over the "slope" present & others a little.

There was a cold wind blowing making the fingers very stiff.

Afternoon was given over to a football match, Victorian code of game. The Cadets played and beat the Officer by a large score 6 goals to 2 goals.

The lecture on Aeroplane Co-operation for 6 p.m. did not take place.

Thursday

March 8th.

Morning Parade: Bayonet fighting by Sgt Smith. The instruction was based out over a course; firstly in parties of 10 we jumped into a fairly deep trench, got out over the top on command and charged the bags of straw, N^o 1, lying on the ^{lines} ground, N^o 2, 15 yds. away suspended, withdraw and jab the high bag representing the throat, pass on for 20 yds, jump into a shallow trench, stab a bag on the parapet and rest on 5 yards & rest.

This was strenuous work but good exercise. I am very used at bayonet work; but after having my right shoulder damaged yesterday I was almost lame to-day.

There followed squad drill with arms and a discourse on musketry.

Afternoon: - Short lecture on Map Reading by Major Harris: Followed by each officer enlarging a section of regulation maps. This is rather pleasant and valuable

practice. Half an hour on musketry followed; with "standing load" and target pointing. I am awfully backward here, but to improve myself I cannot obtain the book "Musketry 1" to help me along.

The ~~1st~~ evening lecture by a R.F.C. Officer on "Aeroplane Contact".

The only machines doing contact work for the Aztec Corps are monoplanes so that when you notice one hovering about during an attack or shortly afterwards it is looking for information to take back to Corp Hdqrs.

It is easily distinguished by a broad black band on ^{each} both of the wings and tags flying out behind from the wings.

Its duty at all times is to patrol around the front lines of both sides and pick up any information to take back to Hdqrs.

In an attack it acquaints Hdqrs. as to the new position our troops have taken up and also notes the strength of the German

resistance. During the ~~1st~~ first two hours of an attack two machines are on duty afterwards two hours there is only one.

Here are three methods by which the infantry can communicate with the contact plane. ~~1st~~

- 1st Flares (Red preferred)
- 2nd Ground signaling sheet
- 3rd Signaling lamp

The most successful method is the first one. Flares should be lit in groups of three one yard away from each other and 50 yards between groups.

A succession of A's from the horn of the contact machine means that flares are urgently wanted. Should the position arise in which there are neither flares or ground signaling sheet to be got it is advisable to make as much movement in the trench as possible. Such as waving hats and shaking water proof sheets in the bottom of trench or shell hole.

It is often arranged that attacking troops

will light flares at a certain hour.

But should this specified time arrive and there is not aeroplane in sight, on no account light the flares. Even if the machine is there don't light up until the machine calls for them as he may not be in a position to see just then.

Flares are often damp and will not light with the striker; if this happens just loosen the end a little and use a match to set it burning.

When using the signaling sheet never attempt more than 6 words per minute making full dots and long dashes. Each letter will be acknowledged when read by a blast of the horn.

Question asked.

There are no monoplanes in use about the Somme but our contact aeroplanes.

The German do not use monoplanes!!

Wireless messages are sent from the plane but not received!! Photographs are usually taken at an height of from

7,000 to 12,000 feet. Enough of the country is then taken in to allow proper identification of the locality. The best cameras in the service are made with the lenses taken from German aeroplanes!!

Big gun flashes are plainly seen!!

Shells are bursting very close when they can be heard from the machine!! The Germans don't use sharpshooters at planes!!

The clock system of directing gun fire is used and is both clear and effective.

The target is taken as the centre of the clock, whether visible or not to the artillery, the 12 hour & 6 hour figure representing due North & South. for example: -

sent in
as "2.Y."

This clock system is also used by Hq. Bn. when calling for a barrage on a certain place on the line.



The centre is the mark each of the circles represent 10 yards & are known by the first letters.

1 The shot landed at the cross X the airman wires to the gun 10. A. 2. 3 only and they know just how to range the next. 4 But should it land 10 yds away to the right it would 5

The more important parts of a Rifle.

Backsight bed
" " ramp
Extractor ~~rod~~
Bolt rib
Extractor seating
Bolt lug
Tongue of locking piece
Retaining catch
Resistance shoulder
Cut off slot
Body socket
" boss
Lever bolt breach
Lug seating
Long cam groove
Short " "
Bolt head
" " tenon
" " Spring
Bolt head hook
Striker
Locking piece
Striker collar
Safety catch
Ejector
Sear
Trigger
Magazine

Friday

March 9th.

Morning: - 9 a.m. to 12.30 p.m.

Physical by the Cockney Sergeant was very good; I hope to learn a number of good exercises from him.

Musketry by Capt. Nobley. He dealt with the correct method of aiming from the prone position, and explained the respective position of the two sights in relation to the target by pieces of cardboard. One representing the target bull's eye, one the fore sight and one the back sight.

These pieces are slipped in behind one another and clearly show the ~~the~~ faults of bad aiming.

Afternoon: Route march & Squad drill. The instructor had me out giving command to the squad. He was very (always is, in fact) patient and shows considerable interest in his work which reflects upon the officers and makes them keen and interested also.

Lecture by Col. Stephens on
COURT MARTIAL

The Commonwealth Defense Act provides for all troops to be tried under Military Law for all & any crimes committed while a soldier from the moment they sail from Australia under the command of a British regular. But where the death sentence is passed such cannot be put into effect without the sanction of the Governor General of Australia. There are also other modifications.

There are three different grades and formations of Courts Martial; but the one most common to us here in the field, is the Field General Court Martial it mostly consists of three officers, one at least of its members should rank a Captain or Major. This form of court cannot try an officer. An officer must arrest an officer.

Non commission officers may arrest non commission officers. A Lance Corporal cannot arrest a private even he must go to the orderly sergeant or to the sergeant major.

18 hours notice must be given a prisoner to prepare his defense before his case can be called at 7.30 A.M.

The charge sheet is first carefully examined to see that it is in proper order before the prisoner is called in.

The accused is asked if he has any objection to the formation of the court or to the members thereon. Everyone is then 'sworn in' and swear that they will not discuss the case or any of the evidence given outside of the court.

If the prisoner pleads guilty the case is decided upon the summary evidence. If 'Not Guilty' the summary evidence is not to be used other than to prevent witnesses from contradicting evidence, and as a check

The prisoner can either make a statement ^{without being sworn} or give evidence on oath. He cannot be cross examined on statement, but on oath carries more weight in the court.

Witnesses can be recalled to give fresh evidence only. The court is cleared for the court to discuss the charge.

If the prisoner is found "not guilty" he is at once presented before the court and dismissed. But if "guilty" the sentence is written on charge sheet, though the prisoner is not informed until the evidence and papers connected with the case is confirmed by Div. Hqs. Civilian witnesses can be called.

An officer can defend the accused and cross examine all witnesses; but a ~~V. H. B. or~~ other ranks can only instruct prisoner and ask questions through the accused. Not direct questions to either the court or witnesses giving evidence.

If the accused has good grounds for objecting to be tried by the different courts, his case can go right up to the King for hearing.

After dinner to-night the officers after two days warning were called upon to speak upon on the "Care of Arms". Lieut. Sampson was first called and he dealt satisfactorily with the subject as lay down in "Musketry No. 1". Several others were called upon and showed that they were more familiar with the subject matter than they were with speaking.

I am gaining much information; but there is so much to grasp that I fear my practical work will suffer in consequence. We get so very little time to study at all. At night time there is no convenient place to read or write.

Saturday

March 10th

After a short march around the block we were all taken into the lecture room where Col. Stephen spoke upon "Sentinels & Guards" for 30 minutes; we then retired to the parade ground and carried through the ceremony of changing guards and posting a guard.

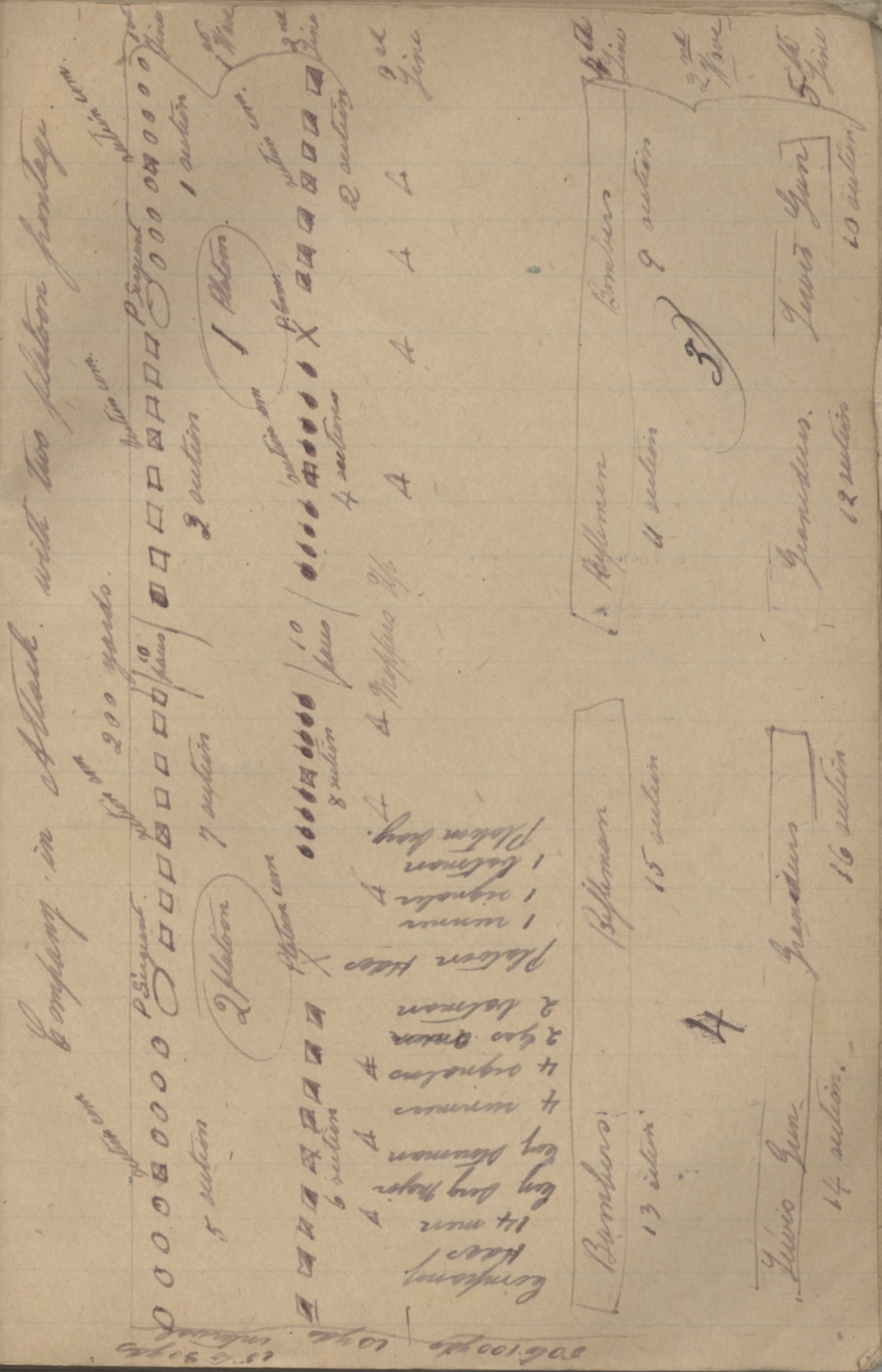
After which there was some "standing loading" with live cartridges, and later squad drill.

My shoulder is very painful and any exercise down with the right shoulder is slow and very sore.

Afternoon:-

A lecture by Major Harris on the new formation of a company in attack. It differs a little from the formation practiced by the Bn. but in the main features it was similar.

After the lecture it was practiced in the mud as a drill movement and was very simple.



Position of sections in trench
14. 13. 6. 5. 4. 3. 2. 1.

14. 13. 6. 5. 4. 3. 2. 1.

1. 5. 9. 13 Bombers
2. 6. 10. 14 Jews gun
3. 7. 11. 15 Rifleman
4. 8. 12. 16 Rifleman
10 9. 2. 1.

In carrying out this system of attack it seemed to work splendidly. Each section is trained to take any special work. The bombers are not essentially bombers, but really bayonet men until the trench is taken then if there is bombing to be done they are called out to do it. This will most likely be on either of the flanks therefore they occupy the outside position.

At 5 p.m. Capt. Melly lecture on "March Discipline" is very good, & clear style.

He said that food, water, dress, smoking and pace, ^{regulation} are the foremost features to consider on the march.

Platoon commanders should see that the men wash their feet after a march and see that their boots & socks when issued fit properly.

No compliments are given on the march. If two platooniers pass a salute from the commander is sufficient.

Sunday March 11th.

Parade was held an hour later this morning. With the officer in Sam Browns and the men "drill order" we marched onto one of the numerous parade grounds nearby, and with Colonel Stephens in charge, ceremonial work was carried out.

It was very instructive indeed.

From 10.30 the day was free, so I went with Sampson and Bennett into Amiens by the 11.20 returning by the 18.20 from Amiens with a number of parcels.

Monday,

March 12th.

Morning parade:—

Section drill

Musketry

Games & Sentinels.

We were on the "Roman Camp" parade ground. I was called out to drill the section, under ~~the~~ direction from the instructor which is a much more difficult matter than drilling a section at ones own leisure.

Owing to the damaged shoulder I was unable to do musketry.

Afternoon parade

Lewis Gun demonstration ^{one hour}

Squad drill.

The stripping and explanation of the Lewis gun was very good.

1930 Lecture "Intelligence" by Army Corps officer.

This lecture was of one hours duration, but never at any period

failed to hold the attention of the listeners.

In an easy, even tone the lecturer dealt with the form of "Intelligence" that would be needed in open, or semi-open, warfare which was likely to present itself through out this summer.

Each department Division, Battalion and Companies should have properly trained and reliable observers to follow every movement in the enemy lines. To study the ways and habits of the Germans ~~and~~ so as to note any change that he might make.

Patrols must be always out watching the enemy; to find out if possible the strength of his trenches the number of men in them and whether he is showing any signs of a further retirement. Reports must be sent in immediately anything worth reporting is seen and one cannot

be over careful in noting the little things that on casual thought might be considered of no importance.

As valuable information would be useless without proper means of communication we must deal with communication at once.

Telephone is out of consideration so messages must be sent by runners or through signallers.

The daylight signaling lamps appear to be the quickest and most reliable means in reasonable weather.

Maps should be carefully read & studied before going into the war zone so that the observers or are familiar with the names of roads the direction of same, and the position of the villages.

Search parties should be carefully selected to look over the newly captured ground for papers or documents of any kind. Recently

a German order was taken showing that all evidences of their occupation in paper form must be systematically destroyed. Names on walls or names on directing posts to trenches or must be obliterated. This, they are doing so that information is very difficult to obtain now.

A dirty looking and poorly made map was recently handed to Coops. which turned out to be of utmost value showing as it did 12 machine gun position. Prisoners are

of vital interest in the obtaining of information so they should be hurried back as quickly as possible. Care should be taken that officers or N.C.O.'s are not allowed to converse with these men, as they may influence them not to talk.

Time fuses and shell directions are especially valuable as we then know the range and if the guns are being removed back preparing for a further retirement.

Tuesday

March 13th

A lecture with Visual Training for the subject will be given by the officer after dinner to night. In the practical work I fancy my work would pass. But theoretical work as laid down in Musketry F will probably beat me if called out to speak upon it to night. I will fight on, however, and have gathered together the following:—

The foremost point appears to be the stimulation of each soldier's powers of discernment and recognition of changes and distances. Visual training will include a general study of reconnaissance. Targets must be recognized by word of mouth or as to acquaint men with an easy mode of description which may necessitate the use of more or less technical terms.

Owing to the different formations of the country here in France, such as villages, woods, valleys and

plains, each day or hour bringing forward a change of light effects continual study is essential in the ranging of sights and the recognition of objects. Men trained on the plains of Australia in observing and judging the distances of wild turkey will be lost in the forest and scrub country near the coast or over water and hills.

The tendency of modern warfare is invisibility. The uniforms are made of colours that coincide with the natural surroundings, and men are also trained to take advantage of same. Smokeless powder adds to the difficulties of observation.

In our army there are two kinds of men—the city, and the country man. The former is considered the more intelligent, but he has not been trained to look long distances ahead and to be as

observant or as good a judge of numbers or distance as is the country man.

Glasses have the advantage of examining what the men have seen with the naked eye; and therefore are useful in checking their faults in disengagement.

Four very important headings should be remembered in connection with "Visual Training" they are B.O.E.R. and man respectability Barrack training. Open air training, Explanation and Recognition.

Morning parade

Platoon drill 1 hour

Musketry 1 "

Bombing 1 "

Afternoon Parade.

Jewis gun parts & stripping
Company in attack, practice.

Lecture by Colonel Hore at 5-30
on ~~the~~ "Machine Gun Tactics"

The Colonel was well up with his subject and explained clearly on the blackboard the best positions for the most effective use of a Vickers gun in some open warfare and how ground that cannot be covered by these big guns should be covered by the Jewis gun, or wire barricades built to turn the raiders or attackers onto the zone of fire.

Concealment is the essential point & guns should be used on the flanks.

as far as is possible.

One Vickers is equal to 50 men and with it there is not the same difficulty as with rifles in the concentration of fire.

The Vickers has a great advantage over the Lewis in that it has a revolving platform and is water cooled. The Lewis holds an advantage in being easily handled and carried about; particularly in an attack. Here it can be employed as an offensive weapon while the Vickers is a defensive weapon. Only under extreme condition can it assist in an attack, that is when the objective is up the side of a hill or ^{fast} rising slope; then it can keep the enemy's heads down until our men are upon them.

Wednesday,

March 14th.

Morning Parade.

Physical training & Bayonet fighting.

Musketry.

Platoon drill.

Afternoon Parade:—

Spots (Football)

March 15th

Reconnaissance

Subject prepared for after dinner lecture
by officers:

Aeroplanes play such a valuable part
in reconnaissance work at the present
time that patrol or scouts parties have
not the same scope, or is their so
much need for their endeavours,
with air photography ~~is~~ developed to
such a ^{so} remarkable and reliable point.

Nevertheless, there is yet a whole lot
of personal work that company or
battalion scouts will be required to do,
more especially with the possibility of
some open warfare.

Infantry scouts work on foot and
usually operate near the force to
which they belong. The value of
the work done depends largely upon
the orders they receive; ~~it~~ specially
defined objectives must be given
them, and it will be impressed upon
the scout leader the actual questions

he will be expected to answer upon
his return. Scouts parties will
avoid combat with the enemy as
far as possible but they must be
prepared to fight at any moment.

They should be sound physically
and in good condition.

Be able to form sound conclusions ^{from}
signs, such as clouds of dust, footprints
Understand the various forms of signalling
and give in concise reports as well as
sketches showing full detail.

Thursday

March 15th

Morning Parade:—

Platoon drill; and inspection

by General Walker.

A lecture "Administration" by

Col. Footh.

Afternoon Lecture "Artillery

Co-operation" by General Cox.

Physical training

Lewis Gun (mechanism)

5.30 p.m. Lecture by Col. Stephens

Battalion Interior & Formation.

After dinner the lecture by officer
on "Reconnaissance" was not called
for by the Colonel.

Colonel Footh, said that he
wished to have a chat, more so, than
a lecture with the Officers.

Administration in all its branches
came under his department other than
while the Battalion was in the trenches.
He dealt with his department as

though it was to the troops what
the invisible working of a clock
was to the clock itself.

The word discipline makes you
all think of crimes & punishments;
but really it was the opposite; Good
order and discipline was arrived at
and maintained by being firm
and patient. Let the men know
clearly what was expected of them
and see personally that they did it.

The word discipline is from disciple
and simply means followers, so
that good discipline is a state of
following not being driven.

Make the men clearly understand that
that crime is a disgrace to the
Regiment and a slur to the uniform
they wear. Put it in so clearly

that the thoughts of disgrace would
keep them straight. Pay especial

attention to the cook house and the

latrines, let the men see that

you are looking after their interests
Be particular as to the mens cloth-
ing, see that it fit them properly
and see also that they look after
their clothes sew on buttons &c.

Garments can be changed at any
time by handing in old garments.
Salvage cloths and have them
exchanged, we will always give
garment for garment at a moment's
notice

Platoon leaders should know their
men and their ability. When in
action any feat of gallantry should
be reported at once. The details
should reach Division in less than
one fortnight. Cleanliness is
next to gallantry in war time
next to impossible.

Salvage on a big scale will go
far towards winning the war.
I think the war will stop from inside
poverty. The German trenches will

be fully maned from the sea to
Switzerland when peace is brought
about by ~~economic~~ ^{economic} difficulties.
or that by a good system of salvage
we are going to strengthen our
position.

"Artillery Co-operation" by Gen. Cox.
Co-operation of artillery and infantry
is essential to success, particularly in
this as in attack.

Artillery is divided into three ^{principal} ~~types~~
^{field guns} (15 lbs) Medium guns (4-7
60 lbs.) Heavy guns (9-2 + 12 ins.)

Then comes a distinct line of
artillery, ^{2nd} Howitzers. Light 4-5.
Medium 6-0 Heavys 8 to 9-2 in.

Artillery is used in much the same
way as a golf player uses his variety
of clubs. That is in accordance with
the lay of the country.

Mortars ^{3rd} make the third arm and are
also divided into Light, Medium & Heavy
classes.

Infantry get mixed up between Guns & Howitzers. There is really no such thing as high velocity guns they are Guns, Howitzer & Mortar. Guns have only one driving charge Howitzers have a varying range of charges to alter the angle of descent.

The chief shells used are shrapnel & high explosive. Shrapnel cannot be used over long ranges as there is not a sufficiently long enough time fuse to carry the distance.

It must be clearly understood that guns are not rifles and are subject to gun error.

Howitzers in firing reach to an altitude of 6,000 ft. Aeroplanes have been shot down by accident.

Gun error with 18 lbs. covers 180 yds. under and over the target.

4-7 & 50 lb. guns are mostly engaged in counter attack work on

enemy batteries and nothing else.

When officers report shell fire in their area they should say the size of shell falling, its direction, if possible the time it takes from the report of the gun, state the time that shelling started, and more important still is to say immediately when shelling stops.

Because the enemy may have three or more batteries that shell the same area; the counter battery guns will then have to shell these in turn to find out and stop the batteries,

so that when shelling is stopped we want to know so that we can stop our counter batteries and save shells as well as find out which of the batteries was doing the firing.

Sound ranging from the report of gun to shells exploding.

18 lbs. do wire cutting but when the 100 fuse are perfected & supplied this will be trench mortar work

In wire cutting with big guns
the ground is to much cut about
for the rapid advance of infantry: so
that the 18 lb. is now the best.

But the 100 fuse will be able to
cut and break down wire without
breaking up the ground in the slightest.

We don't usually fire on Observation
Post. nor do they fire on ours.

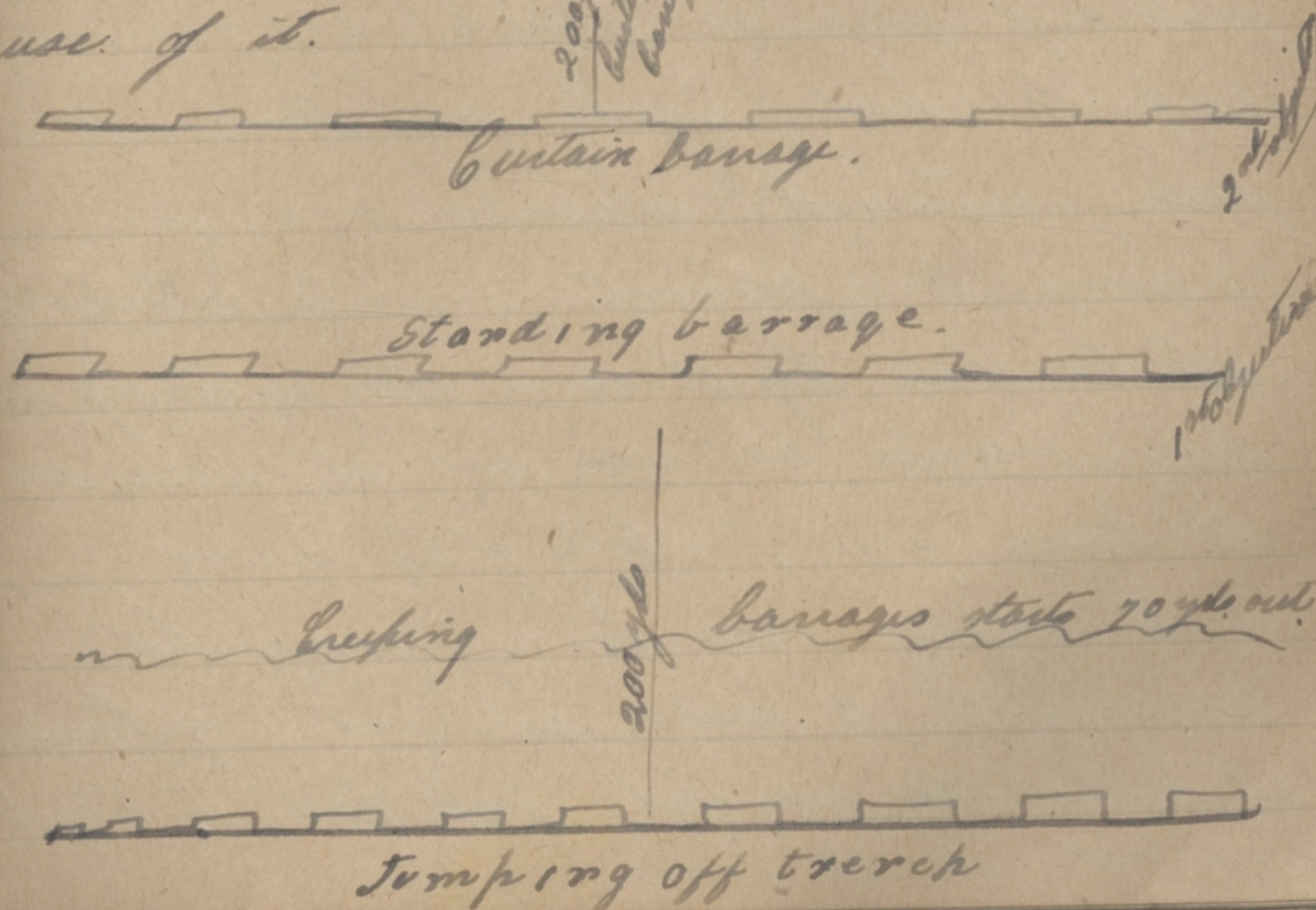
The idea is that it is better to know
where they are so as to reduce them
on some eventful day. Then keep
blowing them out and having to
find them again.

Light hows. work on cooking
places, ration parties & dumps.

12 in (14,000 lb. weight) 9-2 (20,000
yards range) are used for the large
dumps and to annoy troops billeted
behind.

A creeping barrage of 100 yards in
3 minutes is only used when the
trenches are 200 yds apart.

Particulars as to the density and length
of barrage are arranged and orders
given long before an attack is laid
down to commence, so it is impossible
to make any alterations or changes
at the last moment. After the
barrage has commenced you may want
it to move more quickly or return to cut
wire that was missed; this, however,
can't be done at all, once the fire
commences they will go through with the
previous arrangements and the infantry
will have to make the best possible
use of it.



15 yds is given per gun in barrage work.

The artillery accept no responsibility for accidents if the troops are nearer than 70 yds to the barrage, as this allowance is made for gun error. But men have followed our barrage at 30 yds at Pozieres for instance.

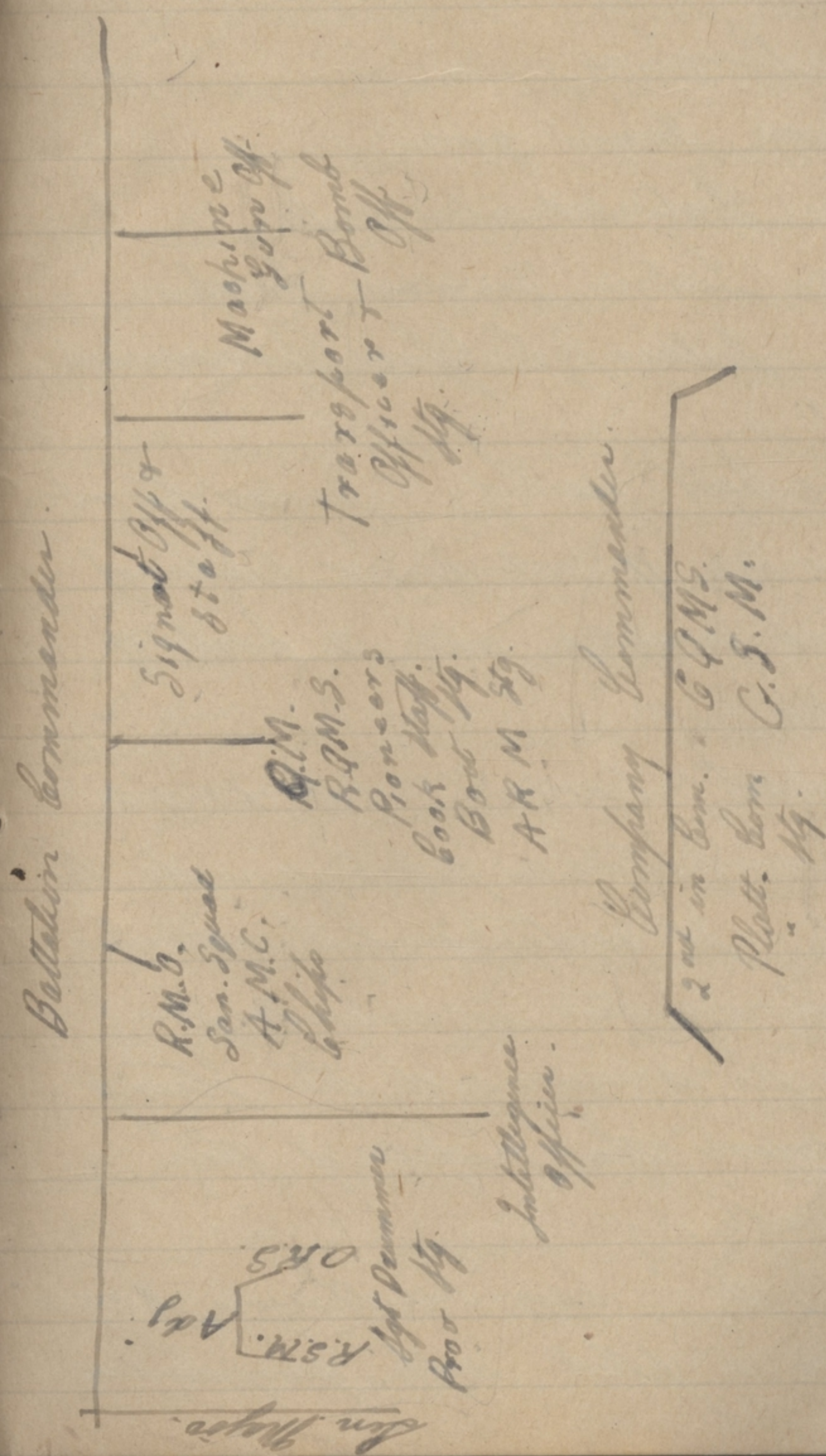
The moment a creeping barrage is started, a standing barrage is settled on the first objective and thrown back onto the 2nd objective as the creeping barrage relieves it. When the 2nd objective is passed a continuous curtain of fire is placed 200 yds in ahead to keep back reinforcements and continued more or less, for 13 hours to prevent counter attacks.

All the time the above work is going on our counter batteries are at work on all known gun positions of the enemy.

Heavy: - have been dismantled broken into 3 loads conveyed by tractor 12 miles ~~to~~ reerected and have its target registered in 12 hours.

March 15th

Lecture by Col Stephens on Battalion formation and administration



Friday

March 16th

Morning parade

Platoon drill

Musketry 35 yd. range

Bombing

Afternoon Lewis gun

Extended order drill

5.30 Lecture German bombs

7.00 Lecture by the Officer "Reconnaissance"

Lecture by Capt. Melby. German Bombs

There are 9 well known kinds of German hand grenades, and 2 kinds of rifle grenades

"Stick grenade" weight 1 lb. 10 ozs. ^{complete}

There are no bullets or pellets inside the tin can. It contains high explosive only. The ignition is caused by friction on the drawing of the string running down the centre of the wooden handle.

"Cricket Ball" can be thrown 30 yds.

The interior is filled with gunpowder

and on exploding by time fuse the cast-iron casing breaks up and gives a shrapnel effect.

Egg grenades. 11 ozs in weight German books say they can be thrown 50 yards, but at the school here they have often been thrown 65 yards and a good cricketer could throw them 90 yards. It contains a small gunpowder charge, and because of its lightness and smallness is not to be feared very much.

Oyster bomb. weighs 13 1/4 to 15 ozs.

It is a percussion bomb only. Its flatness caused it to be thrown a long distance. It is not a very destructive, being made of light plain iron there is no metal to injure one. It is mostly used by men in attack, as when thrown edgewise there is no danger in coming right up behind it. Bursting right end left as it does.

Hairbrush bomb. It is a long
can packed around the sides with
pellets, the centre containing the explosive.
The bomb is attached to a stick.
It is one of the first bombs used by
the enemy, but are still being
slightly used. Time on possession.

The rifle grenades have a range
of 400 yards. To reduce the range
a washer is placed firmly at the
top of the iron rod. This has the
effect of bringing the range down
very much.

In extended order work there
is the word retire to be forgotten.
In all infantry work the word retire
should never be used. It seems
to throw the men into confusion when
on a fight. On the Somme
front a German wounded shouted
Retire, and valuable ground was lost.
It has caused much trouble on other
occasions also.

Saturday March 17th.

Morning parade
Baths 2 hours
Lewis Gun

Afternoon parade
Physical T. & Bayonet fighting
Section drill.

5.30 Lecture on Venereal Disease.

Dr^r Appleyard after a few words on
precaution against venereal decided to
postpone his lecture as he had no time
to complete it thoroughly. We were
expecting to gain a lot of information
and advice to transmit to the men
in camp as Major Harris announced
the lecture yesterday and laid special
stress upon the great good it would
do.

X X X
We have a new physical instructor,
he rolled into us like a whirlwind,
and in bayonet work talked the
spirit and religion of the bayonet.

preaching blood, guts and ginger.

He revelled in his work and gave us a rough time. Talking the whole time like a "chip jack". He is however going to teach us a whole lot of good stuff.

The Lewis Gun instructor mentions that there are three stoppages only with a Lewis gun.

N^o 1. stoppage: - Cocking H. in forward position
a Empty space in magazine.

b Worn or broken feed pawl & spring

c Worn or broken striker

d Broken pawl spring.

N^o 2 stoppage. C. H. over thumb piece on empty catch.

a Friction in gas cylinder or working part.

N^o 3. stoppage: C. H. behind front piece on empty catch.

Faults in feed due to breakage or weakness, or faulty action of cartridge springs.

Sunday

March 18th

Morning parade: -

1 1/2 hours ceremonial drill.

Last Sunday we were instructed in taking Post on a Battalion Parade.

To-day it was marching post a saluting base. It is all very instructive and valuable.

Monday

March 19th.

Morning parade:

Company drill.

Bayonet fighting

Bombing in squads up a trench.

Afternoon parade:—

Reconnaissance (report & sketch.)

Skirmishing.

Lecture "Grenades."

5 o'clock lecture on "Supply" by

Major Milne D.S.O. of A.S.C.

To-day is my turn as Orderly Officer. I seem to have done my duties to satisfaction, though not with the confidence with some of knowledge and a soldierly bearing.

Company drill controlled by Major Harris was a very good lesson to me.

The report and sketch of a block piece of country was a difficult task and seemed to trouble all of the officers. Mine attempt did not please me a bit

but the time was very limited and there was no strong features in the area for reconnaissance and report.

The lecture was a distinct feature that is as far as learning anything new about "Mills grenades."

Major Milne seemed to have a nothing in the way of an explanation to make showing that his Supply Department was a marvelous organization and no shortage of ration could on any account be traced home to his part in the business of getting up the rations from the "Base" at Hove.

He certainly showed us that there were many difficulties surrounding the feeding of so large a body of men. And explained away some indefinite points.

He gave the daily ration per man and told us that we get this ration, which is ridiculous. If the ration is not issued it is due to stealing and ~~neglect~~ negligence on the part of the Q.M.

Daily Ration "as it leaves the Base"

- Meat 1 lb. fresh meat or 9 ozs Bully $\frac{3}{4}$ tin per man
60% of this ration is provided only per day and made up by Bully, Gardenes, etc.
- Bread 1 lb of bread or $\frac{3}{4}$ lb of biscuits
75% is drawn only 25% biscuits
This is the prevent wastage in the event of large casualties.
- Bacon 4 ozs daily.
- Cheese 3 " "
- Jam 3 " for 6 days, dried fruit one day.
- Sugar 3 ozs.
- Milk $\frac{1}{12}$ tin per man.
- Vegetable 2 ozs dried or $\frac{1}{2}$ lb. fresh.
- Rum $\frac{1}{4}$ gallon
- Butter 2 ozs. 3 times week.
- Salt Pepper Mustard Pickles, Mashed
- Tobacco & cigarettes 2 ozs weekly.
- Extra trench rations tea & sugar 2 ozs soup.
- Iron rations 1 tin bully tea & sugar 1 lb biscuit.

Special stress was placed on the necessity for preserving iron rations and holding onto them until the last possible moment. particularly now that the lines of communication are being lengthened.

Tuesday March 20th.

- Morning parade.
- Company drill.
- Bayonet fighting.
- Bombing (live bombs)

- Afternoon Parade:—
- Musketry. range finding
- Rapid Loading
- Platoon in attack

1700 Lecture. Wood & Village Fighting
Staff Major Smythe.

In defending a wood, there are different systems, according to the size of the woods to be employed. High Wood, Burnafay & Delville Woods are small ones. The German never defends the front edge of a wood or the back edge either. The best way seems to be by putting your strong line of trenches 150 or 200 yards in front and built support lines back 50 yds or more into the Wood. Digging of complete trenches will be extremely

After dinner lecture by
 Officers on:
 Trenches

difficult amongst the roots so
a strong redoubt system is
the best way with ^{but} ~~trunks~~ ^{were}
amongst the trees to ~~turn~~ the
enemies onto the strong points.

Behind the Wood some 100 yards
or more a reserve trench should
be placed, and from which
counter attacks could be made.

The formation of the country will
practically decide the position in
which trenches should be placed.

Behind the crest of a hill is a
good place as it will be out of
enemy observation.

In a wood lanes should be cut and
undergrowth removed and trees that
are fallen should be done so as
to fall towards the enemy. They
make good protection from observation
and with the branches wired an excellent
barrier is made. Artillery fire
directed against a wood has a

serious tendency to knock down trees
and block the whole wood up with
fallen timber.

In attacking a wood the defender is
mostly very nervous concerning his
flanks being out of his touch and
in the open. Always move
your men across open country in
open line, and in "close" country
keep in close formation. But when
moving a body of men always keep
them under your direct command
in close column as long as is
possible. Heavy shell fire will be the
only reason for applying open or
artillery formation.

In screening an attack upon a wood
have the "men" of men close enough to
see one another.

In getting onto the other side of the
wood always move carefully as
there is sure to be an enemy trench
covering the fringe of the wood.

Advance through undergrowth firing
freely. Snipers may be in trees; at
any rate by firing freely the enemy
becomes upset and likely to over-
rate the advancing party's strength.

Men always have a tendency to bunch
together: try and avoid this.

Villages are usually taken into the
general line of defense as there is
good protection for the men, good
positions for observing purposes and
also a good water supply.

If the village is smashed by gun fire
the attack will be in waves as on the
average line of trenches.

The "Leap-frog" system of advancing
will be employed through villages.
Choose flanking methods of attacking
a village if possible.

Men should be spread out over open
country when being shelled. Spread them
forward 200 yds. and lateral range
25 yds.

If you bury your men try &
give them a rest in a sheltered place before
attack.

Wednesday March 21st
Morning Parade:—
New attacking formation lecture
practice.

Company drills.
Afternoon Parade:—
Rugby football match.
Officers v. N.C.O.'s
One try each.

17.00 Lecture Bayonet Fighting
by Capt. Hood Army Instructional Staff.

"It has been a very great surprise
to me to actually see for myself what
little some of the 1st Aust. Division
know about bayonet fighting; their
attempt at both the 'long point' and
the withdrawal are bad.

An infantry unit has at its
command three weapons.

- | | | |
|-----------------|-----------------|---|
| 1 st | Rifle & bayonet | } Each of
importance in
the named order |
| 2 nd | Grenades | |
| 3 rd | Lewis Guns. | |

While you officers and N.C.O.'s are
at school special attention

should be given to your bayonet work so that you will be able to correct errors on your return to your company. Teach your men to make good points and proper withdrawals.

There was a time when bayonet fighting was practiced by numbers. It looked very nice too. I've known bayonet exercises to be practiced keeping time to the regimental band. (laughter)

But it was all nonsense and from the commencement of the war right down to the present time we have been taking notice and improving our system of training.

Now bayonet fighting is not taught through the ear; everybody must learn through the eye & brain.

On guard position the left arm is slightly bent. The man must stand straight, leaning back a little but on no account to

be bent forward.

Practice controls must be taught and properly controlled in getting through, or over, obstacles.

The enemy trench must be rushed by as many men at one time as is possible; therefore the men must be controlled to come forward in a line so as to throw its whole weight into the trench at the same moment.

The bayonet must be used with force. It must be made to kill.

The breast on each side is a good mark, but its disadvantages are that the bayonet might get fastened between the ribs.

The belly is a fatal spot but being guarded by equipment or it should be avoided. Either of the groins are the most useful places to point as the arteries pass close to the surface and are

easily severed. When the enemy
is running away the kidneys
are the most certain point.

The parry must be kept done
without the bayonet point being
taken off the enemys body.

Butt strokes may be useful but
should only be taught by way
of ~~an~~ a light exercise. Men
should use their knees and feet
when in close quarters.

Attention should be paid to physical
training. Games are not
part of the training but simply
to break the monotony.

Troops in attack should not be hurried
to the extent of arriving at their objective
"blown". As in bayonet work the men
must be fresh and in proper condition
to go on with the fighting.

~~Monday~~
~~Tuesday~~
Thursday

March ~~21st~~
22nd

Morning Parade.

Company drill.

Attack & Defense of a Wood

Afternoon Parade.

Sketch and report of Defense

Scheme of Wood

Lecture on Message sending

1700 Lecture on Prismatic Compass.

by Colonel Blamey.

He had a whole lot to say in describing
the compass, but otherwise there was
little to be learnt from the lecture.

Friday.

March 23rd

Morning Parade:—

Attack of a Wood. ^{Practice} ~~lecture~~ ~~practice~~

Afternoon Parade:—

Trench Reliefs, ^{lecture} ~~major Harris~~

Musketry 100 yds. range.

1700 Lecture "Construction of trenches"

By Major Harris.

After dinner lecture "Night Operations"
by officers.

On the morning parade we marched
out about 2 miles, formed up
into an attacking formation and
went through the thick under-
growth with a section of Riflemen
in line, a section of Rifle-bombers
in single file near the left flank
Bombers in single file near the
right flank and a Lewis Gun
section in line on the extreme right

Lewis Gun.

Calibre.	30.3 inches.
Weight	25 1/4 lbs.
" of Bipps.	2 1/2 "
Magazine empty	1 lb. 11 ozs.
" full	4 " 5 "
Magazine holds	47 rounds

It is worked by two fans:— in
the action of the ~~gas~~ Gas resulting
from the explosions.
The Return Spring.

Parts.— Stationary

- Butt
- Pistol Grip
- Body Cover
- Body
- Radiator Casing
- Radiator.
- Barrel

Gas Chamber

Gas Regulator & Key

Gas Cylinder

Barrel Mouth Piece

Clamp Ring

(Moving parts are.)

Piston

Bolt

Feed arm Actuating Stud

Feed Arm, Pinion, Return Spring

Description of Parts (Stationary)

Butt

On the front end is the Butt
Cap which has on it a boss, with
four lugs to lock in the rear of the
Body. On top is a flange which
prevents the Body Cover from coming
to the rear. On the bottom
is a recess for the Butt Catch.

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Pistol Grip

It has a wooden grip shaped for the fingers. On the top it has two channels to fit underneath the Body. It is also grooved out to take the Trigger, Sear, Plunger & Spring. On the front end is a recess for the Pinion Pawl & at the rear end is the Auto Catch.

Body Cover

Underneath it has three lugs on either side, to lock in the lugs on the Body. On the front are two Pawls called the right and the left stop pawls N^o. 1 being the left. N^o. 2 the right.

They are both worked by the one double action spring. On top of the Body Cover is a Tangent Sight which is dovetailed on & held by a

It consists of a

with an aperture sight worked by
milled head & screw. On the
front end is the tongue which holds
the Cartridge Guide Spring Body.

Body
It screws into the end of the
Barrel with a square thread.
It is drilled internally in two
ways, one is for the Bolt & the
other for the Piston. The Bolt
Way is grooved to form a cruciform.
On the front end of this is a
recess to take the lugs of the
~~XXX~~ Butt. On the left
side of the Bolt Way is the Ejector
which has a spring cover. On the
right ~~xxx~~ side is the Ejector
opening through which the empty
cases pass. The Piston Way has
a flat bottom to take the flat of the
Buck. This has three openings
at the rear.

near to engage in the bent in the
 back. The round one is a
 clearance for the Plunger & the
 front one allows the Pinion to
 engage in the Rack. It is
 also grooved out to take the
 Pistol Grip. On the front end
 is a housing for the Body
 Locking Pin. At the rear of
 this is the Hinge pin, on which
 the Pinion bearing hooks. On top
 of the Body is the Magazine
 Post. Behind this is the
 Cartridge Way. On either side
 are three lugs which lock with
 the Cover. On either side of the
 Body are side plates which act
 as safety catches.

Barrel

It is tapered from rear to front &
 fits into the Radiator. It has four

On the front end is a left handed thread to take the Barrel Mouth-piece. Four inches from the end is a hole called the Gas Port.

On the rear face is the Cartridge Rim Stop, which prevents the cartridges from going into the Chamber too far. On top at the rear is a positioning stud, which insures that the Barrel is in a correct position. There is also a square thread to screw into the Body.

Radiator

It is made of aluminium for two reasons. Its lightness & it dissipates heat. It has 17 flanges, thus having a greater cooling surface to the air.

On top at the rear is a flat, which allows the magazine to revolve. Underneath it is grooved to take the Gas Cylinder, in front of this is

square hole to take the Gas Chamber. It is split from end to end to allow for the expansion of the Barrel.

Gas Chamber

It is attached to the Barrel and which fits over the barrel at the Gas Port. The interior of the chamber screws into the Chamber and a nipple fits into the Gas Port. The Gas Regulator screws into the chamber and has a large and small hole with the letters L. & S. to show which hole is in the rear. The Regulator is held in position by the Gas Regulator Key. The Gas Cylinder screws into the rear face of the Chamber under normal conditions the small hole of the Gas Regulator should always be to the rear.

Radiator Casing

It is in two parts front and rear. They are both milled & crowned so as to deflect the light. The front portions tapered to allow the gas to form a partial vacuum. The rear portion at the rear has three openings, the large one being for the Barrel one for the Gas Cylinder and the small one for the housing for the Body Locking Pin. At the front underneath are two openings: —

Clamp Ring

It fits over the Radiator Casing and binds. The ends protect the fore sight which is dovetailed onto the block.

Piston

Me

Moving Parts.

Piston

It is in two parts held together by a movable joint, which allows for any want of alignment between the Body & the Gas Cylinder.

The front end is called the Rod and has a cupped head to receive the Gas & behind it is four Annular rings which tend to lessen friction & prevent the escape of Gas.

The rear portion is the Crank which has to teeth to engage on the teeth of the Pinion. At the rear of the Crank is a bent in which the rear engages.

On top at the rear is the Striker Post which carries the Striker & the Bolt. Underneath is the slot for the Locking Handle.

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Into the rear of the Bolt screws
the feed arm actuating stud.

This has four lugs which work
in the Curviform of the Body
On the top lug is a boss which
works in the groove of the feed arm.

The Bolt also has four lugs
which turn into the recess of the
Bolt Way & take the shock of
discharge. There are two
Extractors which are sprung into
the side also the Cam slot of the
Bolt in which the Striker Post
works. Two openings of the head
of the Bolt. The small one on the
left is for the head of the
Extractor & the other for the passage
of the empty case & there is
also the Striker Way.

X 10 yards behind the front line
The object of the whole scheme
was to maintain direction through us
out. This was easily done by
keeping the sun on the right
shoulder. There were several
Bides in the Wood which we came
up against on an angle. There
being two way of crossing it to
avoid machine gun fire. One
was keep our direction and cross
over at the double one after the
other. The other way was to stop
on the edge form up in line &
all go over together. We tried
both methods and found that by
all jumping across together there
was a small target which no
riflemen could fire on quickly
enough. On the other hand, by
going across one at a time there
was a considerable amount of
warning given and a rifle could

have inflicted many casualties while a machine gun would have created havoc.

Trench Reliefs.

Careful organisation of reliefs is very necessary. To get it over quickly cheers the men and shows them that their leaders can be relied upon.

Men waiting about to receive become fatigued and irritable.

Here is the difference between a good relief and a bad one.

By 9 o'clock a good relief is completed and everybody settled down comfortably. One Battalion I know (Major Harris) came along in the afternoon to look about but thought it was quite unnecessary to bother about plans and sketches as the Coy. was well disciplined and could be drawn up in a few moments. The result was that we had not completed the relief by

2 o'clock in the morning.

A system must be set down to the most minute detail. 24 hours before the relief takes place the advance party consisting of N.C.O.s and guides with one or two officers should be there to find out all about the trenches and to take over the Trench Stores.

One must be extremely cautious in taking over stores and see that nothing is missed. One officer in taking a list put down '61 boots rubber' well it took weeks to straighten out whether it was 61 pairs or 61 boots.

Officer in charge of party must make a sketch of the trenches showing the different posts and communication ways, accompanied by a full report. Give complete details of working parties and any special work in hand. The guide will make

themselves acquainted with each of the flank Companies and investigate the communication and tracks of carrying & return parties. Officer will visit personally every portion of the trench advance posts &c. Find out all about water supply, rations and cooking arrangement.

In marching by night to the trenches the pace should never be more than $\frac{1}{2}$ miles an hour and the head of Coy. But make the pace continuous don't stop at all. No hats.

On completing the relief Coy commanders should report at once to Battalion.

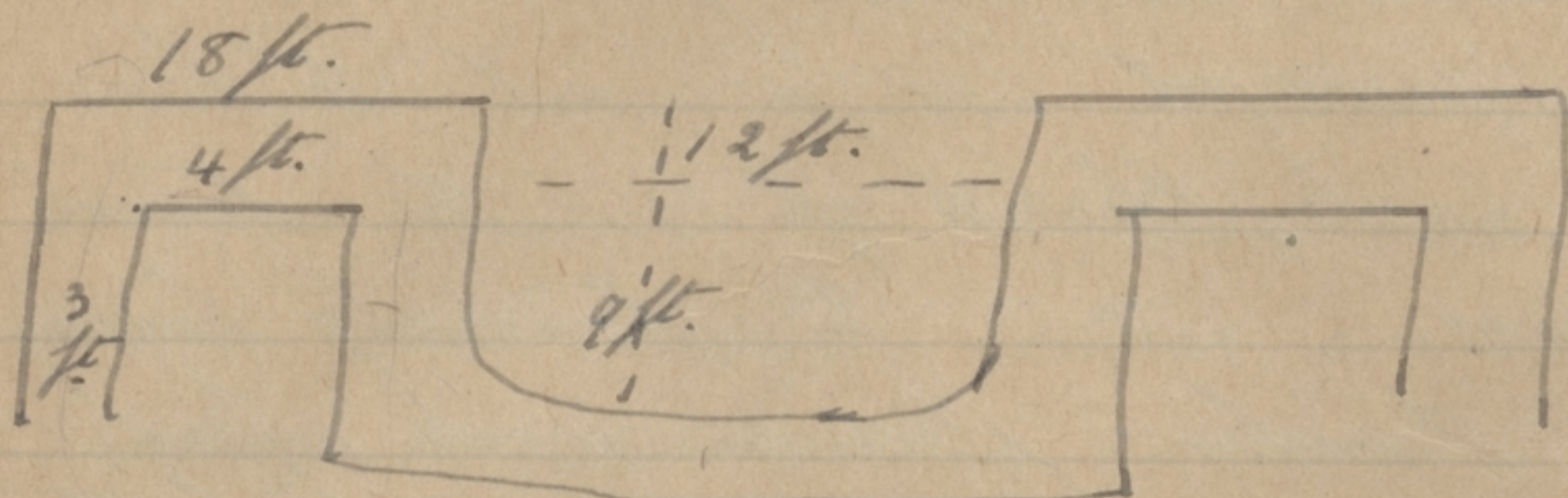
The Coy holding the front line are responsible for the maintenance of the trenches and should be keeping them ~~at~~ always in good repair.

"Construction of Trenches" Major Harris
Digging, laying off of trenches must be done lying down.

In trench digging the earth must be thrown well away at the commencement so as not to have the bank blocked up as the trench deepens. In hurriedly laying out trenches place a man every 5 yards lying down to form the line of trench and then each man having his back start on the left hand corner and the work will be completed in a remarkable short space of time.

In the shooting this afternoon I got a very much better target than I expected. There were very few really good targets which surprised me at 100 yards range.

In trench digging each man
for the first hour should remove
30 cubic feet. 2nd hour 15 cu. ft.
3rd hour 10 cu. ft.



Narrow trenches are a grave danger
in burying men.

Saturday March 24th.

Morning Parade

Trench attack system lecture
practice

Musketry

Afternoon Parade

Map Reading

Command practice

1700 Lecture Fire Discipline & Control
by Capt. G. G. Campbell.

Major Harris in his lecture stated that
he thought it best to number the
Sections in each Platoon respectively
1.2.3.4. Anybody might get into
complications with the present system
of numbering sections up to 16 as
at present in this new scheme
of trench attack.

"Proppers Off" will make the third
line advancing in fairly close
formation instead of being scattered
about moreso as their work

necessitated their bunching together at the commencement of their duty in cleaning up a trench.

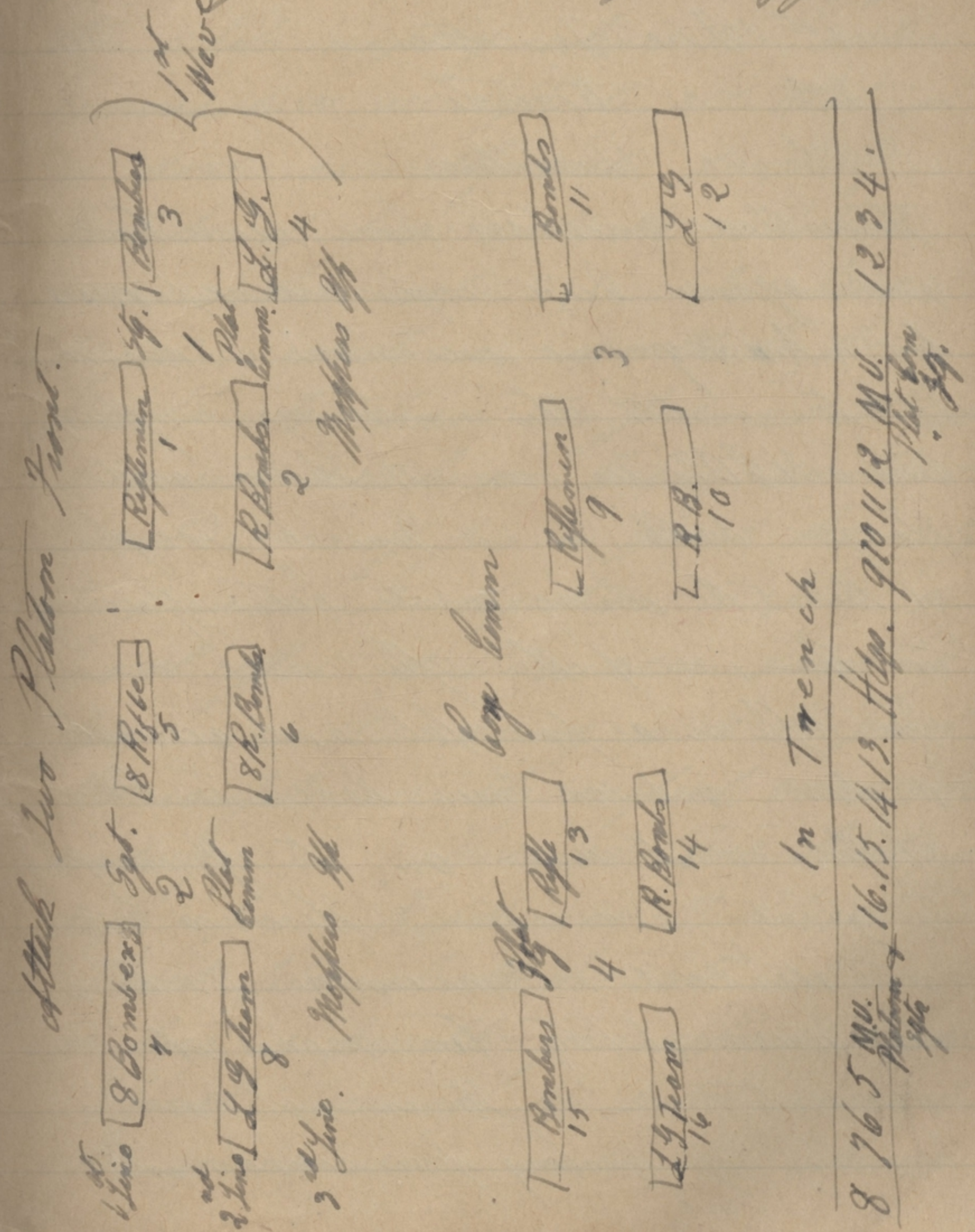
Moppers off may be drawn from another Platoon if the attack is for 2 Platoon. If a Company is in attack the "Moppers off" may be drawn from a different Company but they may also be drawn from the Company's own strength.

The advancing formation and the "jumping off" trench formation remain very much the same as in the attack practiced early in the term with the exception that the first section of each Platoon are riflemen, the 2nd ~~and~~ Rifle Grenadiers 3rd Bombers 4th section Lewis Gun.

We practiced two systems of getting out rapidly from the trench into formation.

Firstly, by keeping the sections together in the trench as per diagram and then by splitting the sections up and placing the men

in the direct front they will advance over. reg. men from 1.2.3.4. sections taking their position alternately. This latter system was not generally favoured.



"Fire Discipline & Control."

by Capt G. J. Campbell.

The essential points come under three headings.

1st Fire Direction

2nd " Control

3rd " Discipline.

These three essentials have been time and again ~~set~~ impressed upon us by Army so we have endeavoured to instill this into you Officers and N.C.O.'s in our Musketry and Range drill. General Gough of the 5th Army wants better efficiency in the use of the rifle.

The rifle is a powerful and accurate weapon and so men have to be skilled in its use or its efficiency is greatly reduced. There is no set standard or maximum as to the users ability to make it accurate. It is not a matter of pushing five rounds into

the magazine and getting bulls eyes even, there must be control & Direction.

Fire may be directed from Coy. Commands down through the whole company where the section commanders are left to see that it is done correctly and properly.

Control of fire will be Platoon commanders duty. To have perfect control it would be ~~it~~ possible to turn on fire as though it were a hose being switched about.

If fire is given too early it fails in its objective. The moral effect of a sudden burst of fire on the enemy will be great.

Be careful not to expend ammunition unduly.

There are two kinds of ~~rifle~~ fire "Rapid" and "Deliberate"

Rapid fire should be held in reserve so long as possible for special targets.

Visual training for section commanders. In giving orders under fire always

use the same terms as the men
are accustomed on the parade ground
men will easily understand.

To get good fire discipline men
must be well and carefully taught
on the parade ground. Observation
of the enemy by keeping the eye always
fixed upon him while loading or
handling the rifle.

70% of shots have been found
to be wasted chiefly by firing at
wrong target and faulty ranging.

For further details 115 to 117.

Infantry Training.

Sunday

March 25th.

Morning parade: — 9.30 to 10.45.

Church Parade.

Leave to visit Amiens from 11.0 o'clock.

I have heard that the only building
left standing at Bapaume was the
old Town Hall. Our troops and
a Comfort Fund people went into it
and five days after the Germans left
it they blew it up with a contact
mine. About 40 persons being injured.

This goes to show clearly that the
German can never be trusted at
any time. So if biscuits are found
for instance rest assured they are
poisoned.

If anything is found
at all just ask yourself the question
as to why he left them behind.

Monday

March 26th

Morning Parade: —

(Raining heavily) Discussion of Attack
& orders of the operation.

Lecture on Orders.

Lewis Gun stoppages.

Afternoon Parade.

Practical laying out of trenches

Visual training & communication

Lecture Capt Malby. German Colour ^{Practice} 98 Marki

Owing to the weather the scheme of ^{orgs.}
a Company in attack was carried out.

The Battalion Operation Order read as
follows: —

90th Battalion

Ref Map ROMAN CAMP 180.000.

Operation Order N^o 17. 25-3-17.

by

Lt Col. R H Fitzgibbon ^{Commanding}

Information. 1. Enemy's front system consists of
three lines of trenches. 1st line is
known as MANGELD Trench.

2nd line WURZEL Trench 3rd
PUMPKIN Trench. These are

connected by two communication trenches
200 yards apart. Mangeld Trench
has been rendered untenable by shell fire
and is unoccupied. According to our
report 2nd & 3rd lines are strongly held.

Dugouts exist in "C.T." a K 2.d. 0.5.90.
and in Pumpkin Trench at K 2.c. 9.5.95.

Intentions. 2. To capture and consolidate
enemy front system. The first object-
ive will be Wurzel Trench between
points 50 yards wide of Roman Fosse.
K 2.d. 25.60. and K 2.c. 70.70.

2nd objective will be Pumpkin Trench
from the road at K 2.d. 35.95. to the
Road at K 2.c. 85.95.

Distribution. 3. B & A Coys will carry
out the attack. B Coy on the right
of Bn sector to K 2.c. 9.7. A Coy.
from this point to left of Bn sector
in the 1st objective.

2nd Objective Coy. front right sector to
K 2.d. 95. A Coy from this point

to left of Bn sector. D Coy will be in support of B. Coy. from the hollow at K 2.c. 8.4.

B. Coy will be in support to A. Coy. in old trench between '3' of 30 + R.A. and 'A' in 100 + R.A.

D. Coy. will supply one bombing section to act as Moppers Up. to B Coy.

C. Coy. will supply two bombing sections to act as M. Up. to A. Coy.

Synchronize (4) Watches will be synchronized at 0815 & 1300. at Bn Hqqs.

Zero (5) Time will be notified later.

Barrage (6) At Zero minus 2 min artillery will place barrage on Mangled trench.

At Zero barrage will lift onto 2nd objective. Zero x. 2. barrage will creep from 1st objective at the rate of 50 yds per min. to 2nd objective reaching 2nd objective at 2.x 5.

2 x 7. barrage will lift to a line 50 yards in rear of objective.

Contact Planes (7) Contact planes will fly over front line at Z. x 15
Z x 30 & Z. x 45.

Medical (8) Casualties to dressing station at Bn Hqqs. in Bombing trench.
K. 2.c. 50. 25.

Reports (9) To Bn Hqqs.

(Signed) Capt & Adj. 90th Bn.
S Downie.

- 1 Copy filed
- 2 War Diary.
- 3 Bn Hqqs.
- 4 to A Coy
- 3 to B. Coy.
- 6 to C Coy
- 7 to D. Coy.
- 9 Signaling Office
- 6 Machine Gun Office

Lecture by Capt. Malby "German Colours & Markings."

2nd Lieut. Plain silver cord, shoulder
Lieutenant (Oberleutnant) do above with one star.
Captain (Hauptman) Plain silver shoulder cord 2 stars.
Major (Major) Twisted shoulder cord.
L^t Col. (Oberstleutnant) do above with 1 star.
Colonel (Oberst) " 2 stars.

Colours

BADEN.	⊙ Yellow Red Yellow.
Wuerttemberg	Black Red Black.
Sax ⁿ	White Green White
Prussian	Blue White Blue.

Infantry field gray with red facings
and red shoulder straps spiked helmet.

Artillery Black facings with ball
top helmet.

Tuesday

March 27th.

Morning Parade:—

Levin Gun ^{Firing Practice} ~~at~~ ^{the} ~~course~~ ^{course}

Baths.

Marking

Afternoon —

Company in Attack, (Practice)

1700. Col. Blaney, "Attack" (lecture)

In attacking a single trench
position the advancing party will be
in one line. Should the artillery
fail in this work or be required to
do further work it would be almost
3 hours to get onto them.

No "Moppers Up" are to be used in
the Leap Frog system of attack.

In the first line going through to
the 2nd or 3rd objectives the "Moppers Up"
will be about 1/3 of the attacking force.

Wednesday. March 28th.

Morning Parade:

Field Firing (At moving targets)

Lewis Gun Stoppages (practice)

Artillery formations.

Afternoon Parade:—

Football match.

This Lewis Gun practice is very good indeed. We must by now all have a good working knowledge of the Gun and its makeup. I find the gun is a wonderful weapon; the manner in which it is put together, is splendid. Its use in either defense or attack can be made very valuable, even more valuable than we had previously believed.

Thursday

March 29th.

Morning Parade:—

Scheme of Defense (lecture)

" " practice & sketch.

Afternoon Parade.

Discussion of this morning scheme by Major Harris.

Football match against 4th Division School
1st won 9-0.

1700 Lecture on Correspondence by Capt. Gray

This morning scheme was laid down as follows. Enemy at St. Saviour.

N. Brigade to hold front from B in Braibly to windmill West of St Vaast.

X. Bn. from right bank of River Jomme to Wood 1 mile South of St Vaast

Y. Bn. on the right of X. B. and W on left.

Ath Coy X. Bn from the right to 100 yds N of La. Chasse. Road.

Bth Coy X. Bn 100 yds. of La Chasse Rd. to C in Roman Camp.

Line to be held at all cost.

After dinner lecture
Principals English

Lecture "Correspondence" Capt. Fay.

Strict attention must be paid to every detail regarding military correspondence. The different forms and kinds of correspondence in military affairs have to be carefully considered. It is very necessary also to keep correspondence down to a minimum, as it must always be borne in mind that Division has some 10 Battalions to deal with and it means an immense amount of correspondence.

All letters addressed to a higher command should be on $\frac{1}{4}$ margin "fool's cap" paper, and at the head of the letter must be stated the roughly what is concerned in the letter body. Also at the top should be written who the letter is from and who to, at the bottom only rank and name should appear. Prompt handing &

answering of letters depends upon how they are addressed and to ensure their getting into the right department right away instead of being sent first from one to the other of the departments for claim and recognition.

Any matter concerning either Brigade or Division should never be addressed to any particular office.

Many mistakes are caused by wrong use of words; for instance, Battalion is commonly used for Battalion or wrongly Bn. so that any correspondence so directed falls into the hands of the wrong department.

The "Astronomer Lecture" was given over to Capt. Hoewels who had considerable trouble in explaining the "Pneumatic Compass". But he did give a whole lot of valuable information concerning same.

Friday

Rank 30th.

Morning Parade.

Lecture on Attack in Open War.

Advance Guards (Practice)

Lecture, Lewis Gun.

Lecture, Intelligence.

Interview by General Walker.

Afternoon Parade.

Examination Paper 3 hours

Company in Attack (open warfare)

by Major Harris.

Starting from a Coy marching in column (just entered into a zone of heavy artillery fire) forming up artillery formation. Three points of

consideration while in artillery formation

Going over a skyline. It is more

dangerous to halt troops than to keep

on moving. If you must halt,

then get into a sheltered corner

or fold ~~into~~ ~~the~~ in the ground, then

men should kneel down so they will

then offer a less exposure to shrapnel fire. H.E. is not very dangerous.

Then, by lying down the men are more difficult to get up again to move on, and there is also a false sense of security.

Once a Coy. is extended it loses very largely all power of quick handling.

1st Phase; The breaking up of a column into artillery formation

2nd Extended Order as the body draws nearer.

3rd Commencing the fire fight, followed by the bayonet assault.

The fire fight may begin at a range of 1300 to 1400 yards but it will frequently

be possible to get within 8, or 900 yards and even closer before opening fire.

Covering fire is best made by the Lewis guns. The best support one

Coy. or Platoon can give another is to advance and ease their pressure

instantly. Rifle strength should

one per yard in attacking or holding a position.

During a fire fight troops should not on account be allowed to dig in as by so doing the advance is delayed and this should always be carefully avoided.

Reorganisation should be at once commenced after an attack which succeeds or not. But be careful not to reorganise on the line the enemy were given from as their artillery will have it marked.

When one line reinforces another line they must not stop but keep on going and be joined up by the forward line moving ahead together.

4 Chief features -

Advance in Artillery formation

Breaker down to Grenadier order

Fire fighting

Bayonet assault.

Lecture on Lewis Gun.

1861 Gatling gun invented

1866 French machine was invented but the war office kept it secret so long that nobody knew how to use it when the war came on. It had an automatic feed with 30 or 40 barrels.

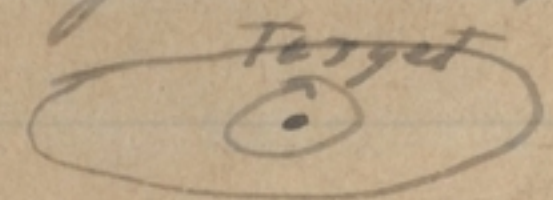
Shields are used on their present guns by most other nations but the British.

These shields in some cases are very heavy, and we find that a gun cannot be effectively concealed or does the shield protect the gun from cross or enfilade fire.

The Lewis Gun can effectively fire 300 rounds per minute. Although its rate of fire per min is equal to 700.

A man only fires 12 shots a minute so that a Lewis Gun is equal in fire strength to 28 men with a distinct advantage in being betterly directed and more effective fire.

Firing at 500 yards range the beaten zone of fire extends over 200 yards represented as follows



At 500	range	220 yards of fire
800	.	170
1,000	.	140
1,500	.	70

At 500	.	2 1/2 ft.
1000	.	5
1500	.	10 ft.

It is always better to sacrifice concealment for a good field of fire

A Lewis Gun can go anywhere that infantrymen can go.

Always consider if, by firing your Lewis Gun and risking the exposure of gun position. If necessary to fire be sure that you get good value for your shots.

"Intelligence" by Capt. Malby

Intelligence section should be carefully organised and drawn from the best men of the ranks. 1 draughtsman 2 snipers 2 observers 1 trained prometic compass expert man &c.

In trench warfare sniping is just as important as artillery fire in killing off the enemy. (In S. Africa it took 2500 rounds to kill one man)

Snipers should be selected for their keenness and ability. They must be truthful and seldom pull a trigger without killing. I have found

that when the enemy are shelling a careful observer can be almost certain of finding the periscope of the enemy artillery observer and the sniper shoot it down. With a good

telescopic sight it is almost impossible to miss. Ammunition varies very much indeed some brands of American small arms are very bad.

The good brands are as follows
K.N. R.L. D.A.

Bad & unreliable brands are
U.S. J.K.

Don't use wet cartridges or allow water in the barrel for sniping as moisture increases the gas volume and liable to expose the position.

General Walker called each officer into the orderly room separately and spoke to them according to the report submitted on the work done by the instructors. Some reports were bad and the officers plainly spoken to by the General accordingly. To me he was very polite and remarked that I had done very well seeing my inexperience and the severe handicap that I have started off with in regards to infantry

work. He remarked that the trouble usually is that we youngsters don't read enough or take sufficient notice of the pamphlets issued from Division.

The examination paper handed to us in the afternoon presented a whole of problems to me. I fought and struggled earnestly with each subject in turn and answered them in accordance with my knowledge and the limited time at my disposal to answer. Some of the questions I could not clearly grasp and could not ask anyone. I made a very grave mistake, now that I can recall the position in a calm atmosphere, but attacking an enemy post from the south and overlooking the fact that there was another enemy post obstructing the way.

The definition of a "Watercourse" beat me badly and as I could not find any

running streams on the map I allowed
it to pass on as a blank.

Other questions I handled badly for
want of time to gather my thoughts
and grasp just what was wanted.

Saturday

March 31st

Parade

Company drill & march for 2 hours

Leave to Amies for a limited number.

I have seen the Report upon my work
here at School. It reads as follows.

Draft Report.

2nd Lt J. J. Richards, 1st Battalion.

This officer has had very little
experience of infantry work & is
handicapped both by this fact and also
by an old injury. He has taken
full advantage of his opportunities &
has made marked improvement

Capt. Malby.

Backward in knowledge but with
more experience and training will
make a good officer.

J. R. O'Harris Major.

Disc. Drill Detail. Comm. Musk Tactics Topgy

VG. VF. V.F. V.F. V.F. V.F. V.F.

Sunday April 1st

In the examination on the following paper. Some time allowed was 3 hours. and no warning of contents given.

Examination paper for Officers at the conclusion of 4th course 1st Aust. Div. Infantry School Terancourt No 24.

Notes

- i Read the whole paper through carefully before attempting to answer any of the questions.
- ii The maximum marks for each question 10
- iii In the first question either (a) or (b) will be answered, not both.
- iv. It is expected that the paper will be finished in 3 hours, but if a longer time is required it will be allowed. In any case the paper should be completed before handed in and in every case the Supervisor will mark on each paper the time taken by the student.
- v Each Officer will be given a number

He will write his number on the top right hand corner of each sheet and each ^{enclosure} ~~enclosure~~, but his name will not appear on any part of the paper.

(vi) Write clearly and on the side of the paper only. Arrange your papers in order and number each sheet consecutively. At the top of the page in the middle, and fasten them together in the left hand top corner.

(vii) Retain the examination paper and hand it to your Company Commander when you return to your unit.

Questions

- 1 (a) What do you understand by the term moral?
By what signs would you detect a decreasing moral amongst your own men, and how would you seek to improve it?
- (b) What are the characteristics which distinguish well disciplined troops from ill-disciplined troops.

2 Show by a genealogical tree the centralisation of control and delegation of command in a Battalion.

What are the chief duties of:-

(a) The Senior Major?

(b) Company second in Command?

(c) Pioneer Sergeant?

(d) Cook Sergeant?

~~##~~

3. (a) What are the best methods of judging distance (including range-finders)?

(b) Under what circumstances are the ranges of objects under-estimated?

4. Mark clearly on the attached map all the watercourses West of the Ancre and North of an East ~~##~~ and West line through Senlis.

5 The bank at V.18 a.5.8. North of Senlis Mill is occupied by the enemy as a post in an out-post line running N.E. & S. ~~##~~ through V.12 central with posts at road

junction V.18. a.40.13 & V.12. d.1.3.

Our outpost line runs through P.29. d. - Senlis. - V.14. c. You are in command of an out-post Company in Senlis. and are ordered to take the enemy's post at V.18. a.5.8. How would you do it?

6 Show in detail on the attached Diagram X one of the normal formations suitable for the attack and capture of the enemy trenches between A. and B. and C + D by one Company.

7 Say what you know about Night Marches.

The following headings will help. General Principles. When & why taken how covered etc. General Rules Guides. Security, noise, formations, precautions, etc.

Guiding columns in open country by night.

8. What are the duties of an Out-post Comd

9 You are detailed in command of
an advance party to take over
a section of trench. What are your
duties?

10 State briefly in order of time as
far as possible the steps you
would take as company commander
after capturing an objective.

There were 38 officers sitting down to
the above paper. and the points
allotted ranged from 82 down to
24. I was if anything pleased
to secure 54 points and thereby come
into a position of 19th. on the list.

