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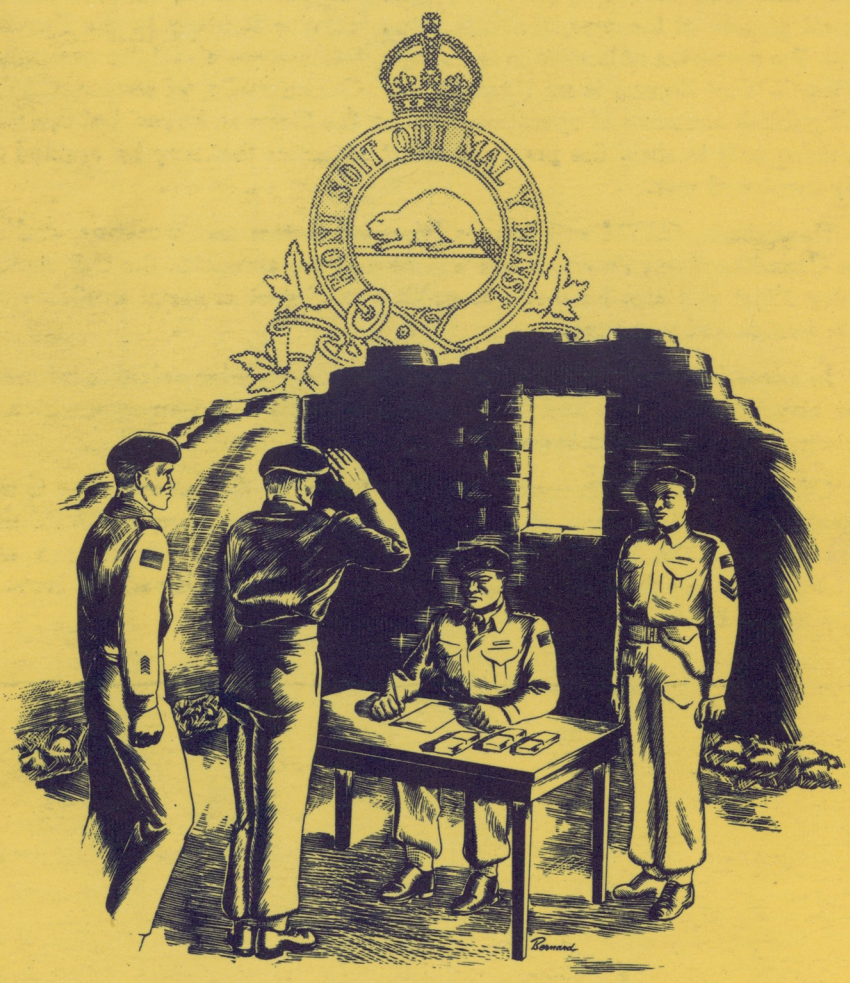
NUMBER 52 JULY 1945



THE ROYAL CANADIAN ARMY PAY CORPS

ONE MINUTE, PLEASE!

In line with CATM's policy of keeping Canadian Army officers posted on all phases of the war, the July issue features fighting in the Pacific. With the cessation of hostilities in Europe, information about the campaign in North-West Europe is no longer vital. Occasionally, of course, CATM will publish accounts of operations against the German forces, but this will be done only to show the practical effect of tactics that may be applied in any theatre of war.

Henceforth, CATM will feature Japanese tactics and weapons, and as the Canadian Army Pacific Force will be fighting alongside the U.S. Army, every effort will also be made to publish the latest material available on U.S. tactics and weapons.

In accordance with this policy, the July issue contains valuable information about the Japanese and their methods in battle — information which is obtained from authentic sources.

Of special interest to members of the CAPF at the present time is the organization and insignia of the U.S. Army. In this issue of CATM the breakdown of the U.S. Infantry Battalion and the insignia of rank are published in the form of a "tip-in" which may be removed for lecture purposes.—*Editor.*

ALLC HEADER INFORMATION

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CATM

Canadian Army Training Memorandum

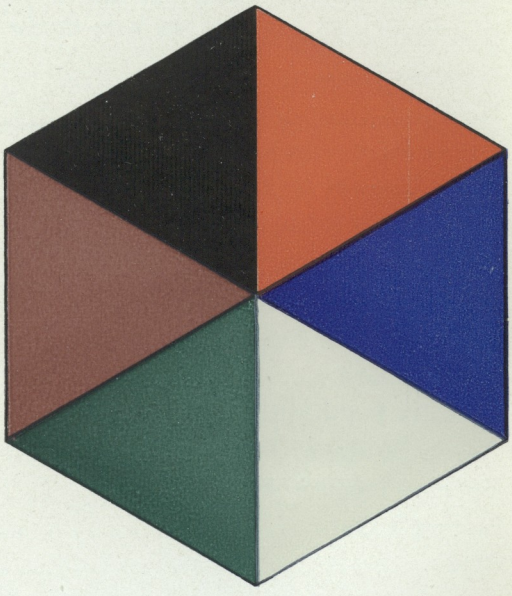
JULY 1945 NUMBER 52

CONTENTS

Maj. Gen. F. M. Hoffmeister, C.B.E., D.S.O., E.D.
Commander, Canadian Army Pacific Force

CAPF BATTLE PATCH

This is the hexagonal patch of the Canadian Army Pacific Force. Viewed clockwise, the six triangles are red, blue, French-grey, green, maroon and black, representing respectively the five Canadian Divisions which served in Europe and the Canadian Armoured Brigades. Miniatures of this patch (half-size) are issued to all soldiers volunteering for the CAPF, and are worn on both sleeves three inches below the shoulder seams, with the division between the black and red segments at 12 o'clock.



The new patches are worn superimposed on divisional and formation patches previously authorized. The full-size battle patch will be issued to the soldier when he is posted to a unit of the CAPF. The patch is two inches wide and three inches deep.

A Message to Pacific Volunteers

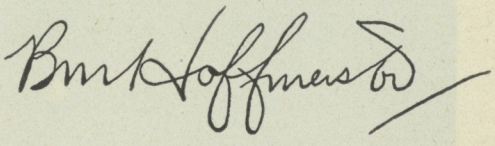
War itself is a relatively clear-cut and simple business. One is never confused in war as one can be confused in civil life. Everything —your friends or your enemies, your tasks or your objectives, your work or your play — is so clearly defined that you are rarely in doubt as to where you stand.

It is my privilege and honour to command the Canadian Army Pacific Force, and as your commander I feel it is my duty to define clearly our position as I see it.

We Canadians are still very much at war. Our objectives and our tasks are still clearly outlined, and therefore our thoughts must not be selfishly confused with side issues. There must be no doubt as to where our duty lies; there must be no hesitation in deciding where our effort is to be concentrated.

Our *enemy* is the Jap, our *objective* is to attack him with all our strength, and our *task* is to destroy Japan as a military power, even as Germany has been destroyed. Until such time as this has been utterly and completely accomplished, you and I as Canadians and as members of this new crusade cannot afford to rest or relax.

Remember, there is nothing so unimportant as yesterday's victories —the important victories are those that lie ahead.



Major-General

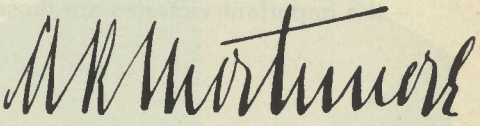
The Royal Canadian Army Pay Corps had its origin in the "Pay Service" of 1865, when the Volunteer and Service Militia of Canada was first organized in Lower and Upper Canada. District Headquarters with their staffs were established in the principal centres of the Country and District Paymasters were first appointed to these staffs in that year.

The Corps was given its present designation in the year 1920. His Majesty the King graciously approved the grant of the title "Royal" in recognition of the services rendered by the Corps during the War 1914-18.

The Paymaster-General, as head of the pay service, is responsible for the general supervision of pay and cash services for the forces in Canada and in the field as laid down in Financial Regulations and Instructions, and he is adviser to the Adjutant-General and to commanders of units and formations in regard to the financial aspect of all questions of pay and allowances.

The role assigned to the Corps does not provide an opportunity for adventure or glamour, but it is nevertheless an important one in the army.

Many members of the Corps served in the pay service in the last War and have reached responsible positions of warrant and commissioned rank in the same service during the present war. This personnel plays a most important part in the financial administration of the army overseas and in Canada and their influence will continue until the termination of the present emergency.



ARMY PAY CORPS

Brig. A. R. Mortimore
Paymaster General

PAY SERVICES IN OPS

Wherever the Canadian Army operates, personnel of the Royal Canadian Army Pay Corps are there to carry out the various duties assigned to them.

The Paymaster-General is responsible for the administration of the Pay Services of the Canadian Active Service Force and the distribution of Pay personnel. In each Military District throughout Canada there is a District Paymaster who supervises Unit Paymasters and Accountant Officers in his District, and is responsible through the District Officer Commanding to the Paymaster-General for the proper performance of the duties with which he is charged.

The Chief Paymaster, Overseas, is responsible for the administration of the Pay Services of the Canadian Active Service Force, Overseas. The Paymaster, Canadian Troops (in the Field) administers the distribution of funds to the troops under the direction of the Chief Paymaster, Overseas, and is responsible for the pay and accounting for all services connected with the Force throughout the area of operations.

Currency of Country

There is a Field Cashier in each Division, responsible to the Paymaster, Canadian Troops (in the Field) whose duties are to supervise the Unit Paymasters in the Division and to supply them with necessary cash in the currency of the country in which the operations are being carried out.

The duties of the Unit Paymaster in a theatre of operations are many and varied. The Unit Pay Office staff usually consists of a Paymaster (Captain) and a Pay Sergeant. The Paymaster's first concern is, of course, the issue of pay to the men of the Unit and keeping up to date the pay books of the men as well as the various pay accounts and documents that make up the pay records. However, in addition to those duties he may be called upon to assist the Unit Adjutant in certain "A" matters. The additional duties usually include:

(a) Completion of casualty returns from information received at Battalion HQ and as reinforcements are received.

(b) Maintain Unit nominal roll to be kept up to date from casualty returns.

(c) Completion of weekly field returns from information contained in nominal roll, record of tradesmen, etc.

(d) Checking reinforcements on arrival at the Unit from nominal roll received with the drafts from reinforcement units.

(e) Part II Orders as received from 2nd Echelon are checked against casualty returns.

In order to carry out the above additional duties the Paymaster is provided with a unit clerk. In normal circumstances the extra duties of a Unit Paymaster in the Field are as outlined above. However, in an emergency the Paymaster will be prepared to carry out such additional duties as he may be assigned by his Commanding Officer.

Every Unit Paymaster is provided with a vehicle in which to carry his office equipment as well as his own personal kit and that of his Pay Sergeant. This heavy utility office vehicle contains a portable table and serves as the pay office whenever other accommodation is not available. Office equipment for a normal unit pay office in the Field usually consists of a portable typewriter, a stationery box containing all the necessary pay forms and a second

box which holds the pay office filing system, trades pay records, nominal rolls, regulations and other various pay documents. It will be seen that the equipment of a pay office in the Field is restricted to bare essentials.

Normally the Unit Paymaster travels along with and sets up his office at Unit "B" Echelon. He must maintain close liaison with Battalion or equivalent HQs by visits at regular intervals in order to check the nominal roll of the Unit maintained by the Commanding Officer, with his own, and ensure that arrangements for the reporting of casualties and checking reinforcements are satisfactory.

Soldier's Pay Book

When a Unit or draft leaves Canada and proceeds Overseas, the Individual Pay Accounts of the soldier (M.F.M. 346) maintained in the Unit pay office are closed off and in their place Individual Pay Books (M.B.M.1 Part II) are brought into use. Wherever the soldier goes he carries this pay book on his person. In the case of officers Overseas, their pay accounts are kept by the Canadian Treasury (Overseas) and pay is deposited at the end of each month to a bank account opened in their names. When the officer proceeds to a theatre of operations where cheques are not negotiable, he is issued with a chit book (M.F.M. 505) and if he wishes to draw pay he presents a completed chit to his Paymaster for encashment.

When the Unit is in a static position, Pay Day is usually held on or near the 15th and 30th of each month. If the Unit is on active operations and it is not possible or practicable to hold a unit pay parade, arrangements are made to pay the men as soon as they return to a less active area. In special circumstances, such as when personnel proceed on leave or reinforcements arrive at the Unit who have not received their regular pay, a casual pay parade is held. Paymasters of some units who have their men located over a wide area find pay day is a three or four day job, necessitating many miles of travel over all types of roads.

The Paymaster is available at all times to answer the queries of personnel in the Unit with respect to their pay problems, and correspondence regarding Dependents' Allowance and Assigned Pay can be handled with the least possible delay.

(Continued on Page 8)

FLASH AND SOUND

(U.S. Tactical and Technical Trends)

Reports from two widely-separated areas of Burma reveal that the Japanese for the first time are using flash and sound simulators in an effort to increase the apparent strength of their artillery and cause Allied troops to expend artillery shells uneconomically.

Experienced observers, utilizing both flash spotting and sound ranging, have reported three or four guns firing from the same position on numerous occasions. Examination of the ground, however, showed no more than gun positions close together.

A different method of using sound and flash simulators has been discovered in Central Burma. Although enemy guns had been definitely located in an area, the Japanese attempted to confuse sound rangers and flash spotters as to the exact location of the guns.

Simultaneously with firing the gun the enemy ignited a sound and flash simulator approximately 1,500 yards in front of his gun in the line of fire. This ruse was discovered when the sound ranging recorders picked up a non-characteristic gun wave.

PAY SERVICES IN OPS

(Continued from Page 7)

The soldier generally finds that his normal pay entitlement is more than enough to meet his requirements while in an active theatre and as a result he usually draws a small part of his pay on pay day and leaves the balance to accumulate in his account. Remittances of cash from such accumulations may be sent to anyone in Canada or Great Britain. This practice of sending money through the pay account increased considerably when our troops proceeded to an active theatre of operations. It was also noticed that many of the men increased assignments of pay to their dependents because they did not require all the money being credited to their pay books.

Personnel are instructed to carry their pay books on their person at all times for this is the only record of their pay account which is maintained in the Field. If the pay book is lost a temporary one can be issued but the credit balance standing in the account cannot be reflected in the temporary book until a statement is obtained from the Chief Treasury Office, Overseas.

Cheques in Sterling are continually being received by men Overseas from their relatives and friends in Canada as gifts or in payment of outstanding debts. In the United Kingdom it was an easy matter to dispose of these cheques either through the Paymaster or a recognized bank, but as soon as they proceeded to a theatre of operations and banking facilities were not available, it was impossible for the men to have their cheques cashed. The system put into effect, therefore, was to have the Paymaster enter the cheque as a credit in the man's pay book and dispose of it through established Pay and Treasury channels.

The Paymaster in operations shares the dangers of the front line with his Unit and is often subjected to shell-fire and dive-bomb attacks, consequently there have been battle casualties in the Pay Corps which are proportionate in number with those suffered by other branches of the Service.

JAP REACTIONS TO WEAPONS AND TACTICS

(This article shows that Japanese reaction to attack by various types of weapons is, in general, normal as opposed to his reaction to tactics, in which his performance in set battles is of an entirely different class from his performance when surprised. It was extracted from ATM—Australia.—Editor.)

Statements that the Japanese "can't stand mortars", or "panics when shelled", or "won't face the bayonet", or is unusually affected by any particular weapon, should be accepted only with the greatest reserve. Japanese troops are of varying quality, and there have undoubtedly been isolated instances in which they have reacted badly to this or that weapon.

Moreover, it is true that the Japanese, like any sane man, dislikes being heavily shelled, bombed, or mortared, particularly when he has no means of replying. But it cannot be stated too strongly that there is no convincing evidence of a general, unusual, and significant fear of any particular weapon which is peculiar to the Japanese.

Normal Reaction

In general, Japanese morale is more likely to be peculiarly affected by the circumstances of an attack than by the weapons employed. This observation does not mean, of course, that weapons with a high morale value against, say, German troops have no value against the Japanese. The point is rather that his "likes and dislikes" amongst weapons appear to be fairly normal, and just about what one would expect from any troops of high morale.

On the other hand, his reactions to certain circumstances are definitely not "normal" by our standards, and most reported instances of undue sensitiveness to the use of certain weapons prove, on examination, to be reactions to the circumstances of the attack. Thus, when we hear that the Japanese is liable to panic if mortar fire is brought down on him suddenly, the operative part is not the fact that it was mortar fire. He will put up with that well enough in other circumstances. The important point is that it was sudden.

The cardinal fact that emerges is that the Japanese, if he is physically capable of doing so, will usually fight with the greatest stubbornness and tenacity in any "set piece" formal battle, in which his job, however difficult, is clearcut and obvious. It will usually apply however much he may be outnumbered, and however hopeless his tactical position. But, conversely, if surprised, "caught on one leg" or in any position that calls for hasty decision, improvisation, or change of plan, he will often perform quite surprisingly badly.

Thus, a platoon of Japanese in a dug-in position will often fight to death against overwhelming odds, even if completely cut off. But the same platoon, if ambushed, may panic or

react very stupidly and slowly. This tendency can be traced to early training. The Japanese is trained to make an appropriate formal response to formal situations. Where there is no formal situation and he is thrown upon his own initiative, his tendency to stick to rigid rules of conduct becomes a handicap. This rigidity is the price that he has to pay for his reliance upon set rules of conduct, and it represents the characteristic feature of Japanese morale which, in the past, has led to much misunderstanding and many misleading statements by Western observers.

We cannot understand why a man who is (by our standards) a very brave soldier in some circumstances should act (again by our standards) like a very bad one in others. The answer is that the Japanese is trained to an extremely high sense of duty, and as long as he sees what he is called upon to do, he will do it. But when there is, so to speak, "nothing in the book" to cover the circumstances in which he finds himself, he is generally at a loss.

May Show Enterprise

It must not be thought, however, that because of this characteristic the Japanese always lacks enterprise, cunning, and initiative. When individual enterprise is obviously appropriate—for example, in an infiltrating action—he may display much of it. It is in unexpected circumstances imposed on him by the enemy that his weakness appears. The Japanese should never be allowed to dictate the circumstances of battle, or, if possible, to fight either offensively, or defensively in the way that he has chosen. It has sometimes been implied that, almost as a point of honour, we should learn to "fight the Jap in his own way". This precept is entirely unsound, since it plays right into the hands of the main Japanese strength.

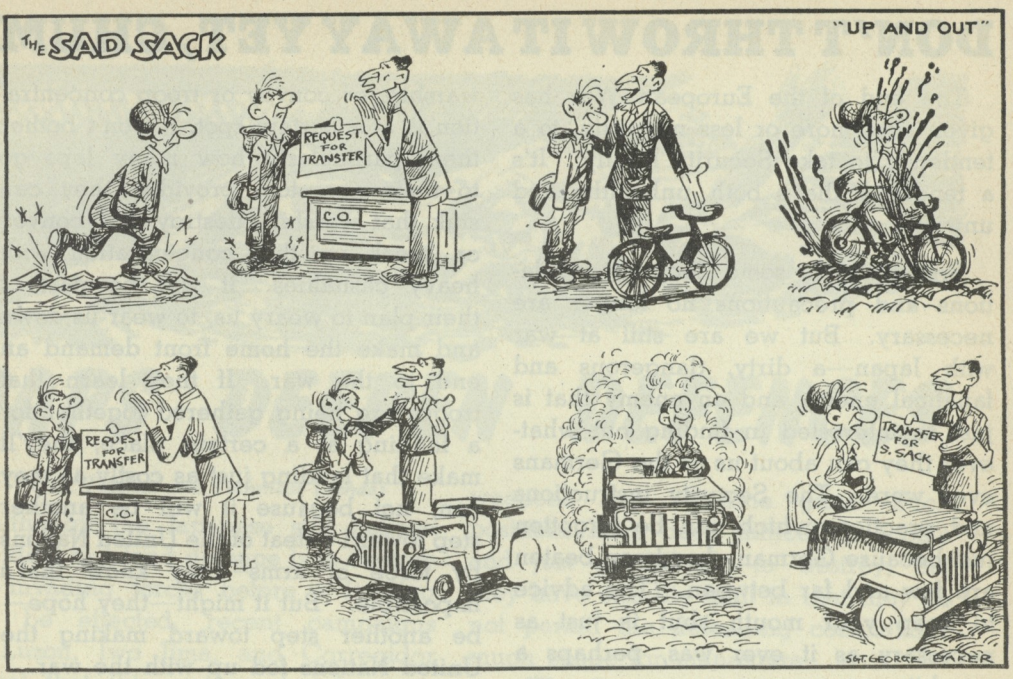
Man for man, the Westerner is a better soldier than the Japanese, but he should not be expected, or allowed, to demonstrate the fact by methods that demand only his courage and endurance, and give no scope for his greater flexibility and adaptability.

In connection with the use of surprise and the unexpected, a word is necessary about the use of bluff and deception. The Japanese is very suspicious. Deception plays a far greater part in his everyday life than it does in that of the Westerner, and he is liable to seek a concealed motive in practically any action. Moreover, because of his rigidity and for reasons of pride, he greatly dislikes changing a plan once made. On the whole, therefore, he is not a very good subject for a straightforward bluff. He is far more likely to make mistakes through ignoring a real danger than through being bluffed by an empty threat.

The point is well illustrated by his reaction (or absence of reaction) to the operations of air-transported troops across his lines of communication during his advance on Imphal. His mistake was not undue nervousness, but overconfidence and refusal to alter his plan when there was a genuine reason for doing so.

Little Flexibility

This obstinate persistence in a plan which has gone wrong is characteristic not only of his strategy but of his minor tactics. Once again, it is a reflection of the fact that he has plenty of formal courage but little flexibility; and in defence it can be made very expensive for him. It should be borne in mind, however, if advantage is to be taken of the Japanese tendency to attempt the impossible, that both the Japanese command and the individual soldier will make extraordinary sacrifices to achieve an object. There must be no



Reproduced by courtesy U.S. Army Weekly "Yank"

confusion between what is genuinely an impossibility and what is merely extremely dangerous and, in our eyes, unsound or uneconomic.

This characteristic is, of course, connected with the tendency to rashness and the delight in the spectacular. It should be remembered that the Japanese is not only willing to "die for the Emperor", but sets a great value on dying with spectacular glory and self-sacrifice in some suicidal "David and Goliath" exploit. Although this sense of glory may cause him heavy losses, it may also cause considerable trouble to his opponent.

The sniper is the commonest manifestation of this tendency to sacrifice individuals. The tank hunter is another. But the principle may extend a good deal more widely. The Japanese commander, for example, is likely to be far readier than his Western counterpart to sacrifice a whole unit, if by doing so he can achieve a success. The conservation of lives, whether his own or those of his men, is not usually an end in itself with the Japanese.

Primitive Idea

In general, the Japanese concept of war is a comparatively simple and primitive one. Although he may be an excellent guerilla fighter, his real interest and desire incline, as has been said, to the "set piece" and more or less spectacular battle.

His strength lies in his belief that war is simply the working out of a divine pattern, with a Japanese victory as its inevitable conclusion. Neither hardship, fatigue, discomfort, inequality of numbers and equipment, nor even the necessity for his own death, will break his morale as long as he can reconcile it with this pattern and this inevitable end. He may panic when surprised and disconcerted, but otherwise it is only when he begins to see a flaw in the pattern which is not only local but unmistakably general, that his fighting spirit is likely to be seriously lowered.

DON'T THROW IT AWAY YET, CHUM

The end of the European War has given rise, more or less naturally, to a tendency to take Security lightly. It's a tendency that's both unhealthy and unwise.

True enough, some Security regulations and precautions no longer are necessary. But we are still at war with Japan—a dirty, dangerous and fanatical enemy and an enemy that is just as interested in finding out whatever they can about us as the Germans ever were. The Security instructions and practices which can be forgotten just because Germany has been beaten are few and far between. The advice to keep your mouth shut is just as necessary as it ever was, perhaps a wee bit more necessary.

Here's Why!

You don't think so? Alright, let's look the situation over. The Japs are going to become more and more desperate as the United Nations turn the screws around Nippon tighter and tighter. One of the few hopes left to the Sons of Heaven is that they might be able to make the war so dirty and costly that we will lose our enthusiasm for it; that we'll be willing to call it quits before gaining our goal of total defeat of Japan. In other words, that instead of having to surrender unconditionally, Japan will be able to make a negotiated peace. Make no mistake, they'll work hard for that and they won't worry about how cleanly they fight.

Even the Germans occasionally hesitated before throwing away lives when the return was doubtful. But the Japs won't. They haven't any scruples. If they learn, for example, that a certain warship, or convoy or troop concentration is at a certain spot, it won't bother them particularly how many Japs go to their ancestors provided they can sink that warship, destroy that convoy or break up that concentration with heavy casualties. It will be part of their plan to weary us, to wear us down and make the home front demand an end to the war. If they learn that troops are being gathered together for a landing at a certain place, they'll make that landing just as costly as they can, not because it will be another step toward defeat of the United Nations by force of arms—they know that's impossible. But it might—they hope—be another step toward making the United Nations fed up with the war.

Keep It Shut

Remember that saying about never giving a sucker an even break? Well, don't give the Japs a chance to say you were a sucker. No matter how great a hardship it may be to keep your mouth shut, it'll be nothing compared to the hardships the Japs may have prepared for you if you don't keep it shut.

And while you're at it, don't overlook the fact that while Germany may be beaten, a beaten enemy still requires information. He may not be able to profit by it to the same extent as he did when hostilities were still on, but the German underground can still turn it to good advantage. Even if information isn't of any particular use to the underground, they can pass it along to the Japs. All the Japanese Embassies haven't gone out of business.

Still think you can forget all about Security?

JAPS DEEPEN DEFENCES

(*U.S. Tactical and Technical Trends*)

Although the Japanese still believe the ideal in island defence is to destroy the invading forces before a landing can be effected, recent campaigns on Luzon, Iwo Jima, and Corregidor reveal that this system of defence is being subordinated to the more practicable system of defence in depth further inland.

Emphasis now is being laid on the construction of well-camouflaged, shell and bomb-proof pillboxes and caves disposed for a defence in depth. This trend away from defending at the beach line has come about because of the great extent of many coast lines and the devastating effect of Allied pre-invasion naval and aerial bombardment.

Certain deficiencies still have been noted, however, the chief fault being the Jap's inability to fight from these defences in depth with any well-organized plan. The employment of artillery and armour also is weak, but there is reason to believe that the use of these arms will improve gradually as the Allies approach nearer to the Japanese home islands.

Particular emphasis is laid on the protection of personnel against aerial bombs and artillery shells. Terrain features are utilized to the greatest extent in the construction of all fortifications. Natural and man-made caves are used as shelters for defending troops and as emplacements for artillery weapons and machine guns. Such positions have been difficult to locate and just as difficult to destroy, but they have one big fault in that they do not permit the defending commander much scope for manœuvre.

The Japanese still appear to view with disfavor any withdrawal movement from these strongpoints. In many cases they could have withdrawn advantageously to rear positions, and there reinforced troops who were already on that next line of defence. Instead, they exacted as many casualties on our forces as they possibly could and then died in their positions.

Defences will still be found on some beaches, but it has been noticed that the Japanese have a distinct tendency toward fortifying strongest those beaches which are the easiest to defend. On some beaches, drums, containing either gasoline or small-arms ammunition and small explosive charges, have been found. These were wired for electrical detonation. On Iwo Jima they were also encountered on the flanks of an airstrip.

Anti-tank Defence

A new trend in anti-tank warfare is the construction of anti-tank strongpoints, sited about 400 yards apart. Each strongpoint, which occupies a frontage of 150 to 200 yards and con-

sists of trench and bunker systems, is completely enclosed by an anti-tank ditch. The strong-points themselves are connected by anti-tank ditches and communication trenches to form a chain of fortified positions, each completely independent and armed with both artillery and machine guns.

An interesting highlight in anti-tank tactics in the defence of Luzon was the use of the Model 90, 75-mm field gun in an anti-tank role. Many of these pieces, placed along roads, permitted our tanks to pass, then fired on them from the rear.

Use of Mines

An increase in the use of mines to cover areas not protected by fire or terrain has been apparent, but the Japanese seem to be paying much less attention to the mining of beaches. This is probably due to the fact that Allied shelling has previously neutralized the mined beaches before a landing. The areas which they have mined in recent operations have shown a marked improvement in their mine-field-laying technique.

Another new departure in their mine-laying tactics is in the use of electrically controlled mines, which have been encountered on a number of islands recently.

Rockets and Large Mortars

The Japanese have been using rocket-propelled projectiles more frequently recently than af any other time before. It is believed that bombs as large as 1,000 pounds are being used successfully as self-propelled aerial projectiles. Rocket launchers mounted on trucks have been used to fire 500 pound general-purpose bombs.

Another novel weapon which has been used is a mortar which fires a projectile 320-mm in diameter. An advantage of this weapon is that it may be broken down into small loads and carried over terrain where artillery, firing a projectile of comparable size, cannot operate. So far, however, the Japanese do not appear to have achieved any degree of accuracy in ranging the mortar.

Suicide Tactics

The use of suicide swimmers was reported in several instances during the recent campaign in the Philippines. The mission of these swimmers is to destroy landing craft, transports, and cargo ships.

The swimmers are generally organized in platoon strength and operate in a variety of methods. Some swim under water in the direction of an approaching landing craft and then surface, throwing a grenade having a 4 to 5-second delay. Another method is to swim toward the landing craft pushing anti-boat mines until contact is made with the oncoming craft. The mines are usually of the horn type and wired to wooden frames.

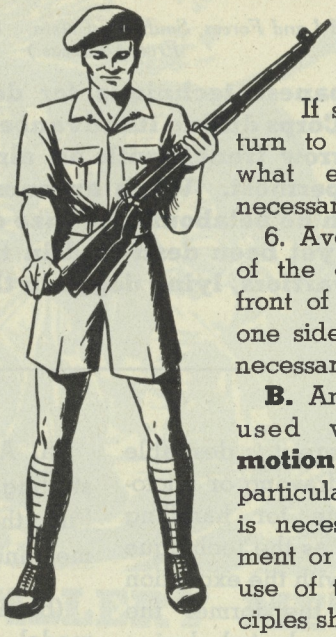
These suicide swimmers have also attempted to destroy anchored transport and cargo ships. The attack is generally made during times when visibility is poor or in hours of darkness. The swimmers attempt to approach the anchored vessel from all directions simultaneously. In one attack, a small bamboo raft was utilized in order to transport demolitions.

Other swimmers are reported to have had explosive charges strapped on their backs while some carried grenades, booby traps, and small explosive charges.

Suicide air attacks have also been encountered in some of the recent island invasions. The Japanese pilot attempts to terminate the dive at the most vulnerable part of the ship's structure.

TECHNIQUE OF INSTRUCTION

VISUAL AIDS



The two most recent issues of CATM have contained short articles dealing with the subject of "Visual Aids" generally. The purpose of this article is to examine the use of certain specific visual aids.

A. Probably the most commonly used Visual Aid in all forms of instruction is **the blackboard.** Here are a few hints to the instructor as to its use.

1. Make your blackboard notes **clear,** bold and **systematic.** Blackboard summaries which are well arranged show the relative importance of various parts of the subject matter visually by means of the indentation from the margin given to headings, sub-headings and, occasionally, sub-sub-headings.

2. Avoid over-much detail in blackboard work. This applies equally to summaries of subject matter or drawings. Your blackboard sketch or summary should show the essentials in bold outline, as the details may be supplied during the explanation.

Prepare In Advance

3. Anything in the nature of a complicated diagram or sketch should if possible be prepared in advance. If it is possible to cover the prepared material with strips of paper to be removed at the appropriate time, the danger of distracting the attention of the class from the point under discussion will be eliminated.

4. Avoid "doodling". A blackboard covered with a multitude of small unrelated notes or sketches is much more an eyesore than an aid. When you have finished with a note or a sketch, erase it.

5. Avoid talking to the board. It may be necessary to add a note during the course of a lesson. If so, add the note, then turn to the class and make what explanation may be necessary.

6. Avoid blocking the view of the class by standing in front of the board. Stand to one side and use a pointer, if necessary.

B. Another very commonly used visual aid is the **motion picture.** Films are particularly valuable where it is necessary to show movement or action. For effective use of the film certain principles should be followed:

1. Before showing a film the instructor should introduce it; that is to say, the instructor should tell the class what the film is about, point out the essential points to be noted and indicate the nature of the follow-up, whether it is to be a practice, a quiz or a discussion.

2. The film should then be shown without interruption.

Follow-up

3. Immediately following the film there must be a "follow-up". This follow-up may be:

(a) A discussion of the film just seen, and if necessary a reshowing of the film in whole or in part.

(b) A quiz or test taken on the subject matter of the film.

(c) A practice involving the principles or lessons taught in the film.

Should time permit, all three types of follow-up are decidedly worth while.

C. The film strip is of particular value where action or movement is not of primary importance. Since the film strip permits a single "frame" to be exposed for a considerable period, it has certain advantages over the film

ANTI-TANK TECHNIQUE

(From HQ, Allied Land Forces, South-East Asia. Extracted from Current Reports From Overseas.)

"A new Japanese technique for destroying tanks was encountered by 4 Corps during its advance to Meiktila. A Japanese squats in a narrow trench with an aircraft bomb between his knees, fuze uppermost. When an enemy tank is immediately above his trench he belabours the fuze of the bomb with a brick. No tanks have yet been destroyed in this manner, but nine of these intrepid warriors, lying doggo in their trenches, have been captured."

proper in subjects where it is desirable to study an enlarged drawing or photograph. The technique for handling film strips is the same as the technique for handling the film, with the exception that in the case of the former the discussion phase is conducted during and not after the showing.

D. Sandtable or Cloth-model: A most valuable training aid when it is properly used is the sandtable or the more easily constructed cloth-model. Its advantages are:

1. It is always available and infinitely adaptable.

2. It can reproduce any kind of terrain which is not usually possible in field exercises.

3. It is not conditioned by weather—fog for example.

4. It can present a wider field of view—e.g., members of a section can get the company and battalion aspect of an exercise.

The uses of the sandtable or cloth-model are many. Some of the most common uses are:

1. To preview or review a tactical exercise:

(a) A short descriptive talk before starting an exercise will put every one "into the picture" and give the exercise meaning and point.

(b) A recap of the exercise on the model or table enables the instructor to point out mistakes made and the results thereof.

(c) During either phase, variations may be illustrated briefly and clearly.

Various Types

2. To represent various types of features in map using that cannot be shown "on the ground".

3. To represent the selection and lay-out of a bivouac area before actual field practice is possible.

In closing this series of articles on visual aids, it is perhaps wise to stress once again the idea that a teaching aid of any kind is in the ultimate analysis merely a "means to an end" and not the end. No aid, however cunningly devised or interesting in itself, can replace carefully planned preparation, systematic presentation and **adequate** practice as the basis of instruction.

JAPANESE ARTILLERY METHODS

(*U.S. Intelligence Bulletin*)

The Japanese Army has neglected to keep pace with other major armies in development of modern artillery techniques. An insight to prevent Japanese field artillery methods is given here. However, this is no guarantee that the Japs will not improve their techniques in future operations.

Although field artillery support often has been a deciding factor in the outcome of a major engagement, thus far in World War II the Japanese have failed to take advantage of the full potentialities of this fighting arm. At best, they have resorted to World War I techniques, for in the past three years Japanese artillerymen who have opposed U.S. troops have not demonstrated an ability to mass fires rapidly on new targets.

Decentralized Control

It is true that, when given the time and opportunity to use their own methods, the Japanese have been able to deliver accurate fire with single guns, sections, or batteries. And, under the same conditions, they recently have proved themselves capable of delivering concentrated fire against such predetermined targets as beaches, or areas in front of long-established defences. However, such targets are registered upon by each battery prior to an anticipated attack, and, once the battle is joined, fire control is decentralized to each battery—a battery usually firing in direct support of an infantry battalion.

This antiquated technique emphasizes the principal difference between U.S. and Japanese field artillery methods. To date there has been no evidence that the Japanese make use of the fire-direction centre—a central command post which gives fire commands to all batteries of a battalion — for rapid registration of massed artillery units upon targets of opportunity.

The fact that they have been unable to use their field artillery in mass in a mobile situation may have influenced the Japanese to adopt a peculiar technique: The Japanese often detach a gun or a section from a battery and use it as a roving

unit separated widely from other guns or sections.

Frequently guns of different calibre are mixed within battalions, batteries, or sections, and, since most Japanese field artillery originally was horse-drawn, artillery units encountered in jungles and islands far from the Empire have been found without organic transportation for their guns. The recent enemy tendency, however, has been to rely more and more upon trucks and tractors as artillery transport.

Although the Japanese often have selected battery positions that are conventional by our standard, the frequent splitting of batteries sometimes emplaces sections as much as 300 to 1,000 yards apart. It is not unusual for the guns of these sections to be emplaced in depth within the section position. Although this dispersion of pieces helps to conceal and protect the guns, it further hinders rapid registration for mass fire. It also had led to field guns being emplaced in unusual positions—in caves and pillboxes, on ridge crests, and, during the battle for Manila, in the upper stories of buildings.

Observed Fire

To all appearances the Japanese use observed fire methods almost exclusively, unobserved fire being used on the comparatively rare occasions when guns have been ranged previously by observation. There are indications that single batteries or sections may use a forward-observer method similar to U.S. practice, but, although experiments with air observation have been reported, there have been no known attempts by the Japs to conduct fire from planes.

A common Japanese practice, particularly during a defensive or static situation, has been the use of bilateral observation with an observation post established on the gun-target line, and one established to each flank. This permits the centre observation post to adjust for deflection, while the flank observation posts adjust for range. This method is slow, but accurate. Single observation posts also are used—preferably situated on the gun-target line, as close as possible to the battery or section. Conventional observation techniques are used, but under the Japanese system only one battery at a time can be registered on a target.

Few At a Time

With the exception of such instances as counter-landing fire—and the fire delivered in support of a land defence line, as was done near Naha city on Okinawa Island—the Japanese usually fire only a few guns at a time in any one sector. Even in sectors occupied by an artillery battalion or regiment, fire may be delivered by no more than a single gun or section firing at any one time.

Generally, volleys are not fired; instead, the guns of one section will salvo at a given rate. On occasion they may fire only one round each, and then cease fire for several minutes while other sections fire salvos in turn. Thus a steady harassing fire is kept up. Also it is not unusual for the guns of a single battery to engage two or more targets at the same time—different fire missions having been allotted to different guns or sections. By our standards, relatively few rounds are expended on any one target, but those that are fired usually are accurate.

It is not unusual for the Japanese to attempt to keep gun positions concealed by withholding fire until the moment U.S. guns are fired. This common ruse also tends to mislead U.S. infantry troops into believing their own shells are falling within their own lines. The Japanese also may be expected to fire harassing missions by one battery to conceal the fact that another

battery is registering simultaneously on a new target.

If Japanese artillery is to be used in close support of infantry during night operations, the guns usually will be registered during the preceding afternoon, unless, of course, range data has been determined previously by observed fire. Such support fire in advance of small-scale night or early dawn attacks may be expected to commence from 45 minutes to 1 hour before the assault.

Counter-battery fire apparently is undertaken by the first battery or section to locate the enemy's artillery positions. Because it is usually observed fire, it may be counted upon to be accurate during daylight — a typical counter-battery mission consisting of from 10 to 15 minutes of salvo fire. There has been no indication that the Japanese reserve some guns solely for counter-battery missions. Counter-battery at night usually is based upon previous daylight observation.

In the Japanese artillery regiment or battalion, fire control duties during a battle fall principally upon the battery commanders. Control by the regimental or battalion commander is exercised before the engagement, and extends only to the giving of such orders as the fire support plan, method of observation, location of battery positions, and the method of displacement.

Supports Infantry

Theoretically, the Japanese artillery battalion, like its U.S. equivalent, supports an infantry regiment in battle. But, because the Japanese do not make use of the fire-direction centre, Japanese artillery support generally breaks down to the point where one battery supports one infantry battalion, and is not readily available to join a companion battery in rapidly adjusted mass fire upon a single target. Instead, each battery, or even each section, has its own observer and is concerned only with fire on targets appearing within its assigned sector.

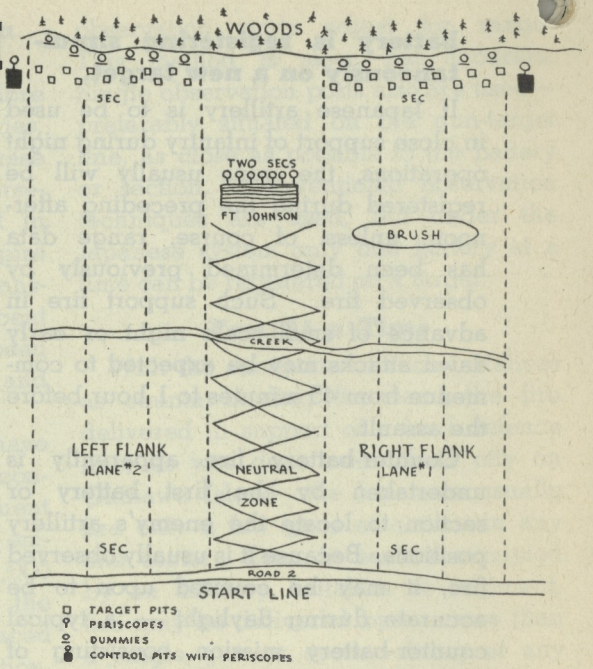
Because the fire control of each battery is decentralized in this manner, the commander of a Japanese artillery battalion or regiment, in order to mass the fire of all his batteries on one target, must register each of his batteries independently on the target before firing for effect. This method is antiquated and slow, and eliminates the possibility of delivering mass fire by surprise.

Although Japanese artillery technique thus far has lagged behind our own methods, it would be wrong to underestimate the Jap artilleryman. When left to the efficient application of his own methods, he is capable of delivering accurate and deadly fire. Although Japanese use of massed fire has been limited to date, and restricted by outmoded techniques, it is entirely possible for the enemy to improve his methods, and, in the future, to adopt more modern practices.

VICTOR AND VANQUISHED

Often, indeed, after a successful war, the victor has fallen asleep in a fallacious assurance of his superiority, while his opponent, striving to work out the causes of his defeat, struggles to recover from it. Hence the victor of today becomes the vanquished of tomorrow.—*Turrene*

THE CASEY PROBLEM



An original American battle practice known as "The Casey Problem", involving the use of rifle and LMG fire in an applied fieldcraft exercise, may be readily adapted for use in Canadian Training Centres and Units. Any suitable field firing area may be utilized for this purpose.

The enemy is represented by 24 (or other suitable number) of figure targets, elevated manually from pits in the target area. Twelve bayonet dummies are placed in pits beyond the targets.

Intention:—To practice the individual soldier in:

(a) Fire and Movement.
(b) Fieldcraft.
(c) Section Control.

Method:—(a) The course is divided into three lanes as shown on the diagram. One section operates in each outer lane, while the centre lane is neutral ground. A deep redoubt (Fort Johnson) is situated at approximately the 200 yard line in the neutral zone. Sections which have completed the practice will be stationed in this redoubt to observe with periscopes the actions of the next relay. This exercise, should if possible, be conducted on a competitive basis.

(b) It is recommended that platoons concerned in this exercise provide their own butt parties, as follows:

With two platoons partaking, section dispositions will be as follows:

(i) Two Sections on start line.
(ii) Two Sections in butts.
(iii) Two Sections in rear of start line.

Rotation

On (i) completing the course, the section will move to Fort Johnson to observe (iii) run-the-course. On completion of the course by (iii), (i) will move to the butts, (ii) will move to the SL, and (iii) will move to Fort Johnson. Working on this rotation all sections will have a turn in the butts.

(c) In the target area 24 slit trenches conceal the butt party, each target detail being equipped with one figure target. The raising of these targets is controlled by telephone from observers pits at the outer flank of the target group of each firing lane. The observers are equipped with periscopes, blank ammunition, and assisted by a telephone orderly.

(d) Competing sections will advance down the range from the 600-yard line in tactical formation suitable to local conditions. Scouts will come under observation of the observers at the 400 yard line. Observers will simulate enemy fire with blank ammunition. At this point the sections will advance by fire and movement, utilizing every form of cover under control of the section commander.

Sections will fire on any target raised in their line (10 second exposures). Advance will not be maintained when

JAPANESE BOOBY TRAP ON BOUGAINVILLE

(MGRA Monthly Letter—Australian Military Forces)

A 75mm gun captured in the Mosigetta area 25 February 1945 was found to be booby-trapped. The trap consisted of seven 75mm fuzed shells with safety wires and safety segments removed. The shells were found standing upright on the gun, and both gun and shells were covered by a thin layer of soil. The trap was set up so that on removing the soil the fuzes would be trodden on, or tapped with tools. A pressure of approximately 10 pounds would fire the detonator.

two or more targets are raised. A co-ordinated assault will be launched at 50 yards from the target area, at which time, sections will advance without firing and bayonet dummies in the pits beyond the targets.

(e) If the observer for Lane 2 observes No. 3 man of the section operating in his lane make a tactical error, he will ring No. 3 pit of Lane 1, where a target will be raised and exposed for 10 seconds, during which time all the troops in Lane 1 will have the opportunity to fire at the target. Thus No. 3 man, who has violated some principal of concealment, theoretically comes under enemy fire. Each hit will count one point. A review of the exercise will be held at the conclusion of each relay and each man will have an opportunity to inspect his representative target in the adjoining lane.

Umpires: (a) Senior umpire (officer) in Fort Johnson with telephone communication to each observer.

(b) One umpire (NCO) with each section "running" the course.

Safety Regulations:

1. Normal precautions for field firing to be observed.
2. Minimum depth of observers pits, target pits, and redoubt to be 6 feet 6 inches with suitable overhead protection.
3. A red flag to be available in each observer pit.
4. One man with a white flag will be stationed at each end of the redoubt to regulate advance of sections, and to be under control of Chief Umpire.
5. No forward movement will be made when a white flag is moved near a lane.

Administration:

(a) Dress: Battle order.

(b) Weapons: Rifle, LMG only.

(c) Ammunition: (i) 20 rounds .303 ball per rifle.

(ii) 2 magazines per Bren.

(d) Periscopes: Pit observers 2. Redoubt spectators 20.

(e) Targets: 24 German Figure No. 1 (unless Jap figure targets available).

Intercommunication:

D5 phone from Lane 1 observer to have 2 targets.

D5 phone from Lane 2 observer to have 1 target.

D5 phone from observers to redoubt.

Note: All personnel in butts to be on continuous watch using head phones. Hand phones to be available in case questions from observers have to be answered.

MAJ. GEN. E. L. M. BURNS, D.S.O., O.B.E., M.C.

(Condensed from a biography prepared for CATM by the Historical Section, NDHQ).

Maj. Gen. Eedson Louis Millard Burns was born in Westmount, Que., 17 March 1897, and attended school in St. Thomas, Ont., and Lower Canada College. In 1914 he entered RMC.

The Great War found him, therefore, a cadet at RMC; after one year's academic work he was granted a "war commission" in the Permanent Force, RCE, and in March 1916 proceeded overseas with the 3rd Divisional Signals Company. Later he joined the 4th Canadian Divisional Signals Company with whom he went to France in August 1916.

He was awarded the MC in January 1917 while still 19 years of age; he was wounded at Vimy in April and again in September; but on both occasions remained on duty. With this fine regimental record, which was spent mostly associated with the 11th Canadian Infantry Brigade, he was called to the 9th Canadian Infantry Brigade as Staff Learner in March 1918, and was posted in August to HQ 3rd Canadian Division.

Highest Commendation

He became staff Captain (A & Q) of the 9th Brigade in October and in February 1919 went to the 12th Brigade as Staff Captain (I). He received the highest commendations from his commanders. He had become Brevet Captain in March 1919 and in April was back in England and was in Canada before his 22nd birthday. He was posted to MD 7 at St. John, N.B.

Later he took a special supplementary course at the School of Military Engineering at Chatham, England, and on his return to Canada he was posted to MD 6 (Halifax). In October 1922, he was transferred from his adjutancy to the work for which he was best known before the outbreak of the current war —he joined the Topographical Survey,

Geographical Section (GS) at NDHQ. In September 1924, he was posted to RMC as instructor in Military Engineering. He went to England the following year and visited most of the experimental establishments in aerial photography, searchlight training, engineer training and survey and bridging. His reports on these visits were of great value to NDHQ.

On his return he followed his usual training programme and found time to qualify as Interpreter (French), also to pass his preparatory examination for Staff College and to assist in the revision of "Regulations For Engineer Services (Canada)." During 1927, now a Major, he wrote an article "A Theory of Military Organization" which was published in the Army Quarterly.

In December 1927 he married Margaret Eleanor Mary Phelan of Kingston, and immediately afterwards they left for England en route to India. After two years at the Staff Course at Quetta, Maj. Burns arranged for a tour of Wazieristan on the North-West

Frontier, and for a return to Canada through Calcutta, Singapore and Hong Kong, where he spent a little time.

On his return to Canada, Maj. Burns was active in lectures to Military Institutes and similar informed bodies across the country. He was posted as District Engineer Officer at Quebec and applied to Valcartier Camp certain ideas which he had formulated by his intimate knowledge of Petawawa. In April 1931 he was again appointed Assistant Director of Surveys at Ottawa.

Varied Interests

His interests were varied; in 1931 he had been second in the annual essay contest for the Bertrand Stewart Prize conducted by the Army Quarterly, and in 1932 he was the first Dominion Officer to win the prize with his study of "The Relations Between a Commander-in-Chief and the Government: Lessons From The Wars of Marlborough and Wellington". His historical interests are reflected also in an article he wrote for an American publication on "The Soldier's Uniform". His own technical efficiency won for him positions on several committees and executives; he was in personal touch with civil and military survey and photographic authorities and establishments in the United States; and he visited some of these in January 1933 to study for the Canadian Service the most recent developments in the reproduction of maps by means of air photographs taken by multilens cameras. He did a reconnaissance of the Trenton area in 1934. By this time several sheets of the Geographical Section (GS) showed the results of Maj. Burns' scientific and practical knowledge with his great skill in making recent technical development serve the cause of translating ground to map.

In 1935 he went to England and France with the Surveyor-General of Canada, Mr. H. F. Peters of the Topographical Survey, to attend the conference of Empire Survey officers at London, and the International Photographic Congress at Paris; before returning to Canada he attended two exercises of the 6th Infantry Brigade at Aldershot where the British were trying out a new Infantry organization of the brigade, and Maj. Burns put himself in touch with other tactical developments. His own skill as a lucid, forceful and absolutely independent writer and speaker has always made his services invaluable in passing on his own fund of knowledge to others either as an instructor or lecturer or as a writer; his criticism is vigorous. Particularly for his improved methods of map making he received the OBE in 1935 when he became a Brevet Lieutenant-Colonel.

At Defence College

In December 1936 he left the Geographical Section to become GSO of MD 4 at Montreal. In 1938 he was sent to England as a candidate at the Imperial Defence College. He was just completing his course when the present war began. He was to have succeeded Lt. Col. (later Brigadier) L. C. Goodeve as GSO at RMC, but the war changed these plans and he remained in London as principal Staff Officer at CMHQ.

Col. Burns (he became full Colonel in May 1940) later in 1940 was appointed Assistant Deputy Chief of Staff under Brig. K. Stuart (later Lt. Gen. K. Stuart, CGS) with Gen. Crerar as CGS.

In February 1941 he was promoted to Brigadier and for a short period was Brigadier General Staff, 1st Canadian Corps, in England. He then returned to Canada to command the 4th Canadian Armoured Brigade and took that formation overseas. In May 1943 he was promoted to Major-General and appointed to command the 2nd Canadian Infantry Division. In January 1944 he was transferred to the command of the 5th Canadian Armoured Division which had just arrived in Italy.

(Continued on Page 26)

JAP TENACITY

(U.S. Intelligence Bulletin)

Japanese soldiers must be watched as carefully as a dangerous, hunted animal. This has been emphasized in an incident which occurred at Kohima, Assam: After Allied troops had cleared the enemy from Kohima and had destroyed many bunker positions, three of our men, who were passing some of these wrecked positions, noticed a slight movement in one of them. When they paused to investigate, they saw the point of a bayonet protruding from the debris. Gradually the bayonet enlarged a hole, out of which came the head and shoulders of a Jap officer. The soldiers were confident of a good capture. But as the Jap came out of the bunker — where he must have been buried for several hours — he attempted to throw a grenade and was promptly blown to bits. On another occasion, when Jap soldiers in a large, deep dug-out refused to surrender, pole charges were used to collapse the dugout and bury its occupants. Two days later Allied soldiers opened this dugout to look for maps or other useful papers. They found the "bodies" of 12 officers and men. While these "bodies" were being removed, two of them came to life, and in spite of their weakness and exhaustion, these Japs also tried to throw grenades.

SOCK BOOBY TRAP

(U.S. Intelligence Bulletin)

A U.S. Army captain returned from Saipan has told of a clever booby trap used by the Japanese to take advantage of souvenir-hunting soldiers. Some of the Japs on Saipan apparently carried their personal possessions around in a sock, and American soldiers overrunning a Jap bivouac area became accustomed to picking up these socks and shaking out the souvenirs. However, on some occasions — instead of chop sticks, a Jap flag, and ten-yen notes — the sock would contain a U.S. hand grenade with the safety pin pulled

MACHINE-GUN TRICKS

(U.S. Intelligence Bulletin)

A battalion commander in the Philippines has reported a machine-gun trick that the Japs recently used against his troops. The Jap machine-gunners would emplace their guns on the crest or forward slope of a hill in such a way that the fire was directed into the U.S. perimeter. When the Americans reacted with artillery, the Jap gunners retired to deep foxholes on the reverse slope of the hill, but continued to operate their guns by means of long strings tied from the triggers to the foxholes. On other occasions, the gunners would pin the U.S. soldiers in their foxholes, and then raise their fire enough to allow the Jap infantry to creep up on the perimeter. In this way they took astute advantage of the tendency a man has to keep his head down as long as lead is flying by overhead.

JAP RIFLE TECHNIQUE

(U.S. Intelligence Bulletin)

The fire technique of some Jap riflemen has been reported by an infantry lieutenant who has fought on Guam and Leyte. He has observed that when the Japanese soldier entrenched himself in a foxhole, the Jap zeroed his rifle on a spot — such as a trail intersection or a patch leading out of the bush into a clearing — which was likely to be traversed by U.S. soldiers. It is the lieutenant's opinion that the Jap did this because his foxhole was so small, and so well camouflaged, that only a small hole was left through which his rifle could be sighted. The Japanese soldier would wait patiently for an American to walk in front of his sights. For this reason, the Lieutenant said, it was dangerous for a man to run out and try to aid a wounded soldier. In one sector four of the lieutenant's men were shot in this manner when trying to aid a wounded comrade.

JAP COMBAT INSTRUCTIONS

(This article, extracted from Notes From Theatres of War, contains instructions by Japanese commanders to their soldiers. It will interest CATM readers, since it reveals Japanese tactics in combat.—Editor

The enemy is thoroughly materialistic and trusts only in the power of material things. On the offensive he relies entirely on fire power for his advance and very rarely attempts to charge. Against such an enemy our spiritual power is most fully manifested. A bold resolute swift moving surprise attack on his undefended position is strongly recommended, and when a frontal attack is necessary, the neutralization of the enemy's fire power has to be accomplished systematically and the concentration of our own fire carried out to perfection.

In a frontal attack, the field of action is generally in the woods, and the field of fire very limited. Therefore, we should make a specialty of the fact that there are many occasions when we can keep our movements well concealed and take up positions for a single, sudden onslaught. For this it is necessary to make thorough preparations. Especially must the co-ordinated fire of each type of the infantry's heavy weapons be properly planned and pre-

(Continued on Page 27)

GEN. BURNS

(Continued from Page 23)

In March 1944 he was appointed to command the 1st Canadian Corps and it was therefore under Gen. Burns that brilliant attacks by the Canadians took place, resulting in the breaking of the Gustav Line and the Hitler Line and the advance of the Fifth Army beyond Rome.

The 1st Canadian Corps then moved across the Adriatic and Gen. Burns again directed his troops in some of the worst terrain in Europe. His outstanding service was recognized by the award of the DSO in October 1944. In December a further re-organization of the Canadian Army took place and Gen. Burns was appointed to command Line of Communication troops and 1st Echelon in North-West Europe. In December last he was honored by the French government and appointed an officer of the Legion of Honour.

For the administrative support of the whole First Canadian Army in the last few months of the war in Europe, Gen. Burns' headquarters was largely responsible; thus his organizational knowledge as well as his technical and tactical experience found active expression in the zone of operations.

Independent, uncompromising, intellectual, unsmiling and thorough, Gen. Burns takes a high place in the team of Canadian General Officers who have commanded our formations in Europe.

pared, and of course the artillery is to be employed the moment that preparations for the assault and the co-operation with the fighting in the positions have been perfected. Without organized support of our fire power attacks on positions will often fail.

Attack Rear Flanks

In attacking the enemy, direct your attack as far as possible against the rear flanks of his strong points, and concentrate on the places where his fire power organization is weakest.

In night attacks you must bear in mind that even when only a surprise attack has been planned, there are times when in the midst of the attack it must be changed into an attack in force; so the disposition of supporting fire should not be fixed, but should be adjustable to circumstances and no opportunity should be lost to silence the guns of the enemy, particularly those guarding his flanks.

It is often advantageous to make a frontal attack on the enemy with a part of your force, as a diversion, while directing your main forces at his rear flanks. This is especially effective where the enemy is holding a narrow pass, as on the coast.

As the enemy often uses the tops of trees for sniping or for observation, it is necessary first to sweep the tops of suspicious looking trees with fire and shoot any enemy soldiers there.

Cutting down the enemy's material power, or cutting off his supplies, is an effective way to make him lose his will to fight. Therefore, it is advantageous for us to watch for the chances to make surprise attacks on his airfields, which are the heart of his military strength, and on his tanks, artillery, trench mortars, and rear units, and to cut his lines of supply.

Only to defend is not enough; always to attack is going too far. Even in cases where our mission is only to defend, if we fall into a purely defensive attitude no matter how many thousand men we have it will not be enough. In such a case we would just suffer great losses, and the enemy, with no power to make a charge on us, would undertake to destroy us by artillery fire alone. To rest on the offensive is death. When the enemy comes, you must smash his offensive organization with a brisk, vigorous attack, and instil fear in him. Then the enemy, out of fear, will have to keep his distance. On such an occasion you must keep in mind not to display all your strength on the front line, but to save man-power for an attack, and when the time comes, direct it against the enemy's rear flanks.

Change Position

Even at night, when we fire the enemy immediately begins to return the fire with trench mortars. Therefore, it is well to change the position of heavy firearms immediately after firing. For this purpose it is essential to have extra positions ready.

It is of advantage to draw the enemy's fire with dummy positions, false defensive structures, and dummy soldiers.

As it is easy for the enemy to go around us in the jungle, it is well for us to break up the enemy before this happens, or to frustrate any such plan by changing our positions.

When stopping in an area, it is absolutely necessary to dig trenches against air attack. If these preparations are thorough, there will be a few casualties, no matter what the concentration of fire or bombing.

Since prisoners often furnish profitable information, after examining them in the unit as to the unit in which they belong, they will immediately be sent back to higher headquarters. Especially is this to be done when an important enemy officer is captured.

ENEMY MINES AND GRENADES

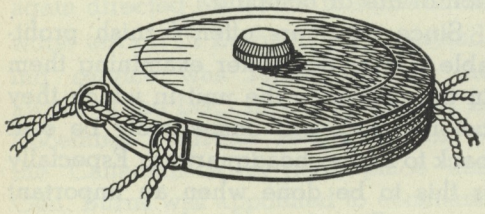
(Lt. Col. R. C. Williams, Jr., in U.S. Infantry Journal)

It is reasonable . . . to assume that the Jap will appreciate the value of mines and employ them on a much larger scale as our operations move closer and closer to his homeland and his more vital areas. There are already many indications which lend weight to this assumption. In the Marianas, for example, the increased use of mines was very noticeable, although their employment indicated little or no training on the part of the Jap troops.

On Los Negros, the Japs used hemisphere mines, bar mines, magnetic mines, and the tape-measure mines, as well as anti-personnel mines.

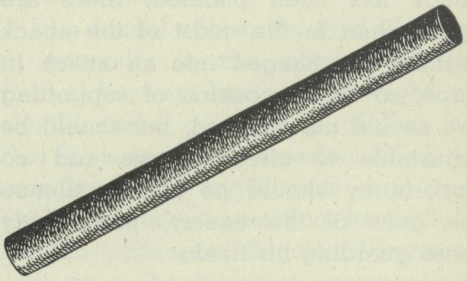
In that operation just south of the Native Skidway the Japs provided one for the book when they attacked and then withdrew through their own minefields. As our own troops pushed forward to seize the Salami Plantation, they ran into hemisphere-type mines in an ideal location. The road at this point was bounded closely on both sides by swamps. At Momote, the rain smoothed out the dirt and coral covering the mines and as a result our troops suffered casualties from bouncing anti-personnel mines.

Let us first determine what the infantryman should know about recognition of Jap mines. There are four common Jap antitank mines.



Tape Measure Mine

The most commonly used Japanese antitank mine is the Model 93, often called the "tape-measure" mine because of its resemblance to a tape-measure case. It is a small circular-shaped mine seven inches in diameter, one and three-quarter inches high, and has four metal rings on each side for carrying or tying the mine in place.



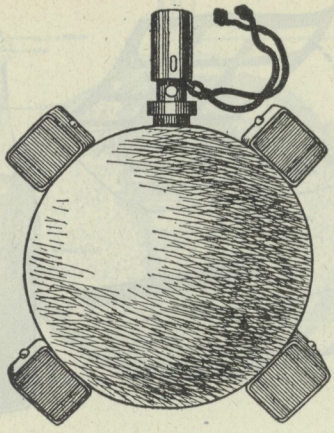
Yardstick Mine

No booby-trap wells are found on the 93. It weighs three pounds, and has two pounds of explosive in the tin shell. It is usually painted olive drab, although some have been found that were yellow and dull brown. The pressure plug on top is painted red and can set off the mine with either seventy pounds pressure or 250 pounds, according to which of the two Jap fuzes is used.

How to Disarm

To disarm the 93, simply unscrew the pressure plug, unscrew the whole fuze inside, and lift it out. The Japs have found that the 93 is not too effective and in several instances have laid two normal 93s back to back with nitrocellulose or gelignite planted in them.

The next mine that the Doughboy should be acquainted with is the Jap yardstick mine, so called because of



Armour-piercing Mine

its length—exactly 36 inches. Olive drab in color, oval in cross-section, and having four fuzes or pressure points, this mine has eight ¾-pound blocks of explosives in its tin tube. It is primarily an anti-vehicular or anti-tank mine.

Extreme care and caution must be exercised in handling this mine. To defuze it, first look carefully to see that it isn't booby-trapped, then lift the entire mine out of its hole. Remove both of the oval-shaped end caps from the tube, push the explosives in on one end, and the fuze will come out the other. Don't let the fuze drop. If the mine is bent or damaged, it is advisable to detonate it in place and not attempt to disarm it.

Armour-Piercing

The third is the Model 99 armour-piercing mine. This mine also has other names—the magnetic anti-tank bomb and the magnetic armour-piercing hand grenade. It is a small circular mine, four and three-quarters inches in diameter and one and one-half inches high, with four permanent magnets fastened to its side by khaki webbing to hold it in place against a metal surface until detonation takes place. It weighs two pounds eleven ounces. The fuze sticks out of the side of the mine like a finger.

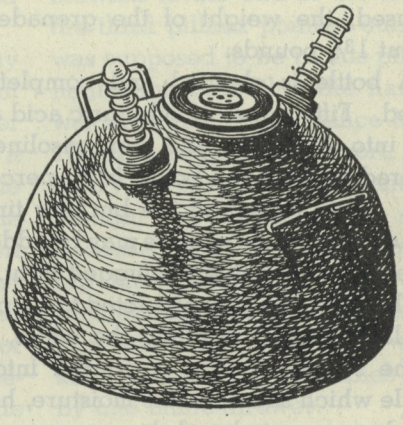
To disarm the 99 first put a piece of heavy wire in the safety-pin hole which is easily found on the fuze. Then unscrew the fuze and remove it. If the fuze is already depressed, leave the mine alone and have it detonated in place.

Incidentally, at least three methods have been employed successfully in combat to protect tanks against this type of mine. One of these is for infantrymen on foot to advance with the tanks and close to them, thereby making it impossible for the Jap to dash up to the tank and attach one of the mines to it.

A second method is to paint the tank with a thick coat of GI paint which has been mixed with gravel or heavy sand. This serves to reduce the metallic attraction and the mine will not stick to the tank. The British have found that if wire netting is placed over flat surfaces of the tank, especially horizontal surfaces and at least four inches away from the surface, the bursting space provided will make the damage to the tank negligible in case a mine is thrown or placed upon the tank.

Beach Mine

The last mine commonly used by the Jap is the Japanese beach mine.



Beach Mine

The double horn beach mine has two fuzes sticking out of what appears to be a huge teakettle. There is also a smaller single fuze type with the fuze upright on top of the mine. The larger hemisphere type weighs 106 pounds with 46 pounds of that weight in explosives, while the smaller type weighs 66 pounds and contains 22 pounds of explosives.

A push or pull of two hundred pounds pressure will detonate the mine. When these mines are found they should be marked and left alone for the ordnance personnel or engineers to remove or detonate.

INCENDIARY GRENADE

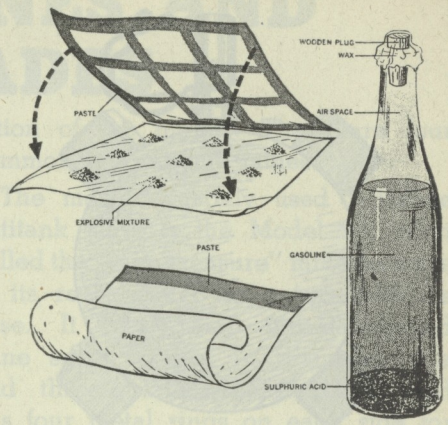
(U.S. Intelligence Bulletin)

Improvised frangible incendiary grenades, made from materials easily obtained in the field, may figure prominently as a Japanese emergency weapon in the future, and variations may even be used by Japanese civilians in any last-ditch stand. Here is an example of such a grenade — one intended primarily for use against Allied armored vehicles and fortifications.

The grenade consists of inflammable paper and a bottle containing an inflammable substance. For several grenades, a single container bag is provided. If a typical Japanese cider bottle is used, the weight of the grenade is about 1¾ pounds.

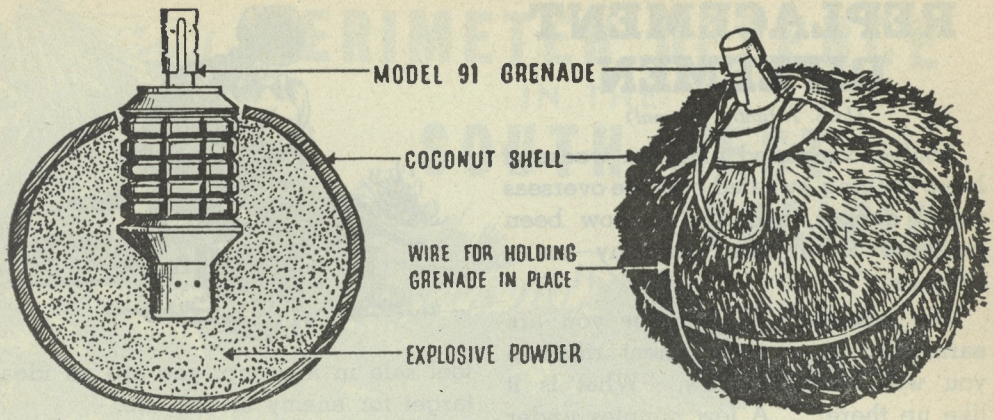
A bottle is cleaned and completely dried. Fifty grams of sulphuric acid are put into the bottle, and then gasoline is poured in until the bottle is 80 percent full. Also, to extend the burning time, some waste oil or creosote may be added. After this, the bottle is plugged tight.

The Japanese are instructed to be particularly careful in filling the bottle, for if the sulphuric acid is poured into a bottle which still contains moisture, heat will be generated and damage may ensue. Furthermore, if the bottle is completely filled with gasoline, the vaporization pressure will cause the bottle to break.



For the plug the Japanese try to select a material that will not become permeated by the gasoline and sulphuric acid. When the grenades are not to be used for a long period, the Japanese may close the bottle by forcing a wooden plug into the mouth and then sealing it with wax or parafin.

The explosive agent is a sheet of paper, chemically treated, which is wrapped around the bottle before the grenade is thrown. In preparing this paper, the Japanese mix approximately equal amounts of potassium chlorate and charcoal powder — adding some sulphur and sugar, if possible. Small quantities of this mixture are placed on a sheet of paper, about 1 foot square, as shown in the drawing. Paste is spread on another sheet of paper in such a manner as not to come in contact with the mixture when the second sheet is laid over the first. Thus, when the two sheets are pressed together, the mixture is sealed into a number of small pockets. Paste is spread along one end of either of the sheets, and the sheets are rolled into a single cylinder and sealed. Each cylinder is made so that a bottle can be slipped into it without undue forcing. A "good fit" is the objective. The cylinders are stored in packages of 50.



COCONUT MINE

(ATM—Australia)

The coconut mine was a simple but not particularly effective device. The Japanese had taken a large quantity of coconut shells hollowed them out and then filled them with black powder. A Model 91 hand grenade was imbedded in the powder, with only the grenade's 5-second pressure detonator exposed. These makeshift anti-personnel mines were used as pressure-detonated booby traps, and were easy to camouflage in natural surroundings. An observer has reported that these improvised demolitions also served the enemy as hand bombs when whirled and thrown at the end of a 3-foot fibre rope. On detonating, they made a terrific explosion but did little damage.

FLAME-THROWER AT MAFFIN BAY

(From LHQ Chemical Warfare Staff Notes—Australia)

"Our attacking infantry was pinned down by three pillboxes. Two medium tanks (M4) machine-gunned and fired 75-mm shells at short range into ports without reducing these strong points. At this point the tank commander was killed by a sniper and the tanks buttoned up and departed.

"The flame-thrower at the company CP was called for. A CWS lieutenant put on the flame-thrower, and, under cover of BAR and rifle fire, crawled to a ravine near the largest pillbox. The thickness of the undergrowth hid the target, but a sergeant marked the port with tracer bullets for the flame-thrower operator. A few short bursts were fired at the target and then the operator moved to the left and fired a three-second burst at the other port. The Japs could be heard screaming in the pillbox.

Does It Again

"The operator then crawled to a log near the middle pillbox and fired a four-second burst, knocking it out. He then crawled to the end of the log and had the third pillbox pointed out. One Jap was supposed to be in this pillbox. The lieutenant knew that the flame-thrower was about empty but, since he was only 10 yards away from the port, he decided to try to reach it. Evidently the Jap thought the flame would reach him, because when the burst was fired the Jap blew himself up with a grenade. Incidentally, the flame fell short. Five Japs were definitely killed and an unknown number of probables were killed by one flame-thrower."

REPLACEMENT RIFLEMEN

(U.S. Infantry Journal)

You've completed umpteen weeks of basic training, sweated over the overseas reppo deppos, and you've now been assigned to a rifle company—as a rifleman.

The moment you discover you are earmarked as a replacement rifleman you will want to know, "What is it like up there?" A few minutes under fire will soon settle you down to the job of being a combat Infantryman.

A mistaken idea is that replacement riflemen are always just thrown into combat. This is not so in our outfit, for we receive replacements only when we are off the line in support or reserve. When a replacement is assigned to my squad, I make every effort to inquire about his training, check his equipment, and make him feel that he is no longer "just a replacement" but a much-needed addition to our team.

Learn Tricks

While the outfit stays in reserve, you will have an opportunity to get acquainted with the oldtimers. A good practice is to team up with a buddy who has had similar IRTC or divisional training but who has already been under fire.

Here are some battle-tested tips for you:

(1) Dig in fast, when you're supposed to. A good practice is to carry your entrenching tool on your cartridge belt so you can easily reach for it.

(2) Get to recognize in-going and out-going artillery and you won't be constantly asking "Is that ours?"

(3) Keep your rifle clean! You will soon discover that an infantryman has sometimes only his M1 and a prayer.

(4) Don't bunch up! While you may

feel safe in a group, you are an ideal target for enemy mortar fire.

(5) C and K rations keep you going! After a few weeks' diet of cold field rations you will lose your appetite, but you must eat to stay in fighting shape.

(6) Maintain contact! Keep up with the man in front of you. Especially at night don't straggle, for in moving up a mountain in single file, one straggler can impede the progress of the whole company.

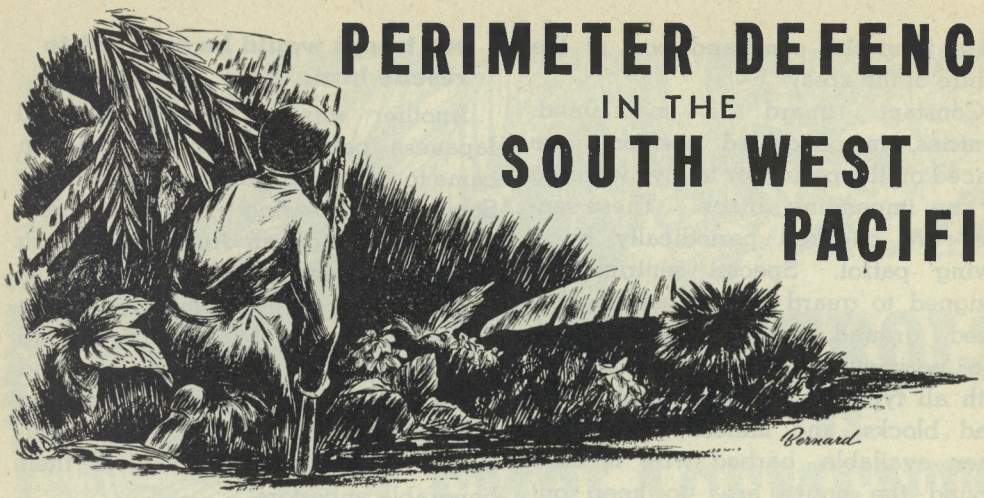
Keep Your Ammunition

(7) Don't throw ammunition away to lighten your load! In one instance in taking a hill, riflemen threw away their extra bandoleers and after fighting their way to the top they were forced to make a costly retreat when the enemy counter-attacked and they were caught without extra ammunition.

(8) Go on forward in the attack! The heaviest casualties, many times, are from enemy mortar and artillery fire inflicted on the rear groups. The attacking force, being close to the enemy, receives little artillery in the fire fight.

(9) After taking a position don't loiter around examining enemy equipment. Immediately set up a defensive and be prepared for counter-attack.

(10) Leave souvenirs alone! You may have your heart set on a Luger or P38 pistol, but remember that training film on booby traps.—*Staff Sergeant, 85th Infantry Division.*



PERIMETER DEFENCE IN THE SOUTH WEST PACIFIC

(T/5 H. L. Kronstadt, Q.M.C., in U.S. Quartermaster Review)

"Hey, Bill, come quick," "Help, help, I need help," "Gimme some water, they got me." To a GI new to the ways of the Jap and the jungle, these plaintive pleas, breaking the stillness of the night, could mean that a buddy was in distress. But, for the battle-tried jungle fighter, who knows the Jap for the treacherous, tricky fighter that he is, the answer to these fake calls for help is a swift slash of his 18-inch machete blade.

Credit for cunning in the jungle must be given to the Japanese soldier. Endowed with many animal qualities and primitive concepts, he adapts himself to life in the wilds better than most other modern soldiers.

Tough and Tricky

In operations on Leyte the Americans met the toughest and trickiest Japs. At Palo, for example, a group of 75 Japs carrying bundles like those of refugees called out in the black of night: "Don't shoot, we Filipino gorillo." As they came closer to the main square of the town, the Japs opened their bundles, took out machine guns, and began to shoot at our troops. Our men, in returning the fire, had to be careful not to hit their own men and the Filipinos sleeping in the plaza. Nevertheless they killed sixty Japs. The remainder fled to the woods.

To prevent Jap infiltrators from stealing into Quartermaster installations, tactical commanders have ordered the establishment of perimeter defences in the Southwest Pacific Theatre. These are encircling outposts which surround the guarded area, preventing surprise attack, infiltration, and the outflanking of the unit.

Basic Plan of Defence: The perimeter defence plan is nothing new in military science. The early frontiersmen used the same plan when they placed their covered wagons in a circle around their camping grounds to keep marauding Indians from creeping into the area during the night.

The perimeter plan is a tactical defence. It is based on the premise that modern armies are mobile, and that defence positions cannot be completely stationary, but must remain flexible at all times.

Layout of Perimeter

In the layout of the perimeter, natural terrain features, such as gullies, steep embankments, mountains and hills, are taken into consideration. In small island defences the sea often acts as one side of the perimeter defence. The ring of the perimeter defences varies in size according to the nature of the installation, but may be 10,000 yards or

more from the command post at the centre of the area.

Constant guard is maintained. Sentries, in concealed positions, are placed on the perimeter to give warning of any impending attack. These sentries are checked periodically by a roving patrol. Special sentries are assigned to guard against air, mechanized, ground, and chemical attack. The perimeter is strongly reinforced with all types of obstacles: tank traps, road blocks, and mines. Sometimes, when available, barbed wire is used around the entire area to keep out marauding Japs.

Life is cheap to the Jap: The Jap soldier has been taught that life itself is without value, and that only in dying for the Emperor can he attain great honor. That is why so many Jap soldiers commit harakiri, rather than permit themselves to be captured. Jap soldiers are even ordered to die for the sake of making us expend ammunition. One observer related that Jap officers force their snipers to tie themselves to trees, so that when they are killed they will not fall to the ground. Propped up in trees, and seemingly alive, they cause every patrol of ours that passes that point to shoot at them and thus waste ammunition. Another favorite trick of the Japs is to fire captured weapons to give the impression that our troops are at the places from which the weapons are fired.

Our men are warned to be on the alert for trickery, for the Japs are known to use any and every form of ruse to get inside our lines. That the Japs are masters of deceit is attested by observers who saw them at work in battles on New Guinea. One eye witness told how the Japs dragged a dead United States soldier close to our lines and propped him up against a tree, expecting that a group of our troops would be sent out to rescue him.

Another witness tells of a small Japanese patrol of eight men which came to within 300 yards of our position. Some were wearing Australian shorts and one had on an Australian slouch hat. They waved at our men to come over to them. When some of our men waved back, two of their party started to come closer. When the Japs had come within 100 yards of our lines, the ruse was discovered and a few well-aimed shots sent them to join their honorable ancestors.

Disposition of Troops: As in all defence tactics, maximum use of manpower and firepower must be made in a perimeter defence. All defenders of Quartermaster installations are assigned specific defence positions or duties. Quartermaster soldiers are as well trained with machine gun and rifle as with their specialized tools. Quartermaster units co-ordinate their defences with those of adjoining units. Although each Quartermaster unit forms its own defence set-up, it keeps in constant touch with supporting units, and may call upon them for assistance.

The Importance of Digging In: In a perimeter defence pattern, the command post is usually approximately in the center of the area. Gasoline drums filled with sand reinforce the sides of the CP dugout above the ground. A blackout canvas covers the dugout and conceals the inside light. Other dugouts are constructed to shelter the staff and officer personnel. Similar dugouts are provided for the use of the men as they take turns at resting.

To care for the wounded, a First Aid station is established in a well constructed dugout, also in the centre of the circle. The dugout is lined with sandbags and covered with logs. First Aid men and stretcher-bearers are assigned to each platoon.

PATROLS VS EMPLACEMENTS

(The following report concerning the operations of a battalion in Burma is published to emphasize the value of aggressive patrolling.— Extracted from ATM—Australia).

The battalion was ordered to exert as much pressure as possible on certain Japanese positions in order to assist a divisional attack. The area included some of the worst jungle country in the world. It was not only thickly wooded with a maximum visibility of 20 yards, but full of inaccessible precipices of which the tangled contours of a map can give no true picture.

Two companies were employed for the task, with a third company in their rear to form a firm base. The leading troops quickly established themselves in the vicinity of the enemy and began patrolling immediately, seeking to probe the best lines of approach.

Sentries Asleep

A small patrol from "D" Company got into an enemy position by climbing up a precipice with the help of rifle slings. The Jap sentries were asleep. The patrol killed six of the enemy and came back with captured weapons and valuable information of enemy dispositions.

This was Jap tactical error No. 1. Apparently they slept between 1000 hours and 1600 hours.

It was appreciated that an attack on the positions would be costly, requiring air and artillery support. The Jap LMGs were numerous and sited in depth.

Patrolling went on more vigorously than ever. One Jap LMG section was destroyed, the barrel being shot clean off the LMG.

The Jap now made tactical error No. 2. Worried by the constant patrolling, he sent out a platoon forward of his positions. This platoon was surrounded by a platoon of "C" Company. Eight corpses and other wounded were counted after the action. The platoon brought back to "C" Company a British Bren complete with magazines and ammunition, and, amongst other booty, the Jap platoon commander's satchel containing valuable papers and identifications.

The two companies gradually increased their pressure. Patrols going forward at many points soon located a continuous line of Jap emplacements on features which were riddled with trenches. The company commanders described it as very well planned with excellent interlocking and defensive fire.

(Continued on Page 36)

JAPANESE SUICIDE AIR ATTACKS

(A report received from an Allied source and extracted from Current Reports From Overseas)

Although Japanese propaganda, for both home and Allied consumption, has long been at pains to stress the significance of suicide air attacks, it is only recently that such attacks have given rise to concern.

Deliberate crash-dive attacks were first made against American ships in the great naval battle that took place off the Philippines last October, when repeated attacks, courageously pressed home, resulted in the sinking of an escort carrier and a destroyer, besides doing extensive damage to other ships. Torpedo bombers, dive bombers and fighter bombers took part in attacks which, in contrast to previous unpremeditated attempts by Japanese pilots to crash their badly damaged aircraft on to American ships, appeared to have been deliberately planned.

Although, in comparison with other forms of Japanese air tactics, suicide attacks have so far been limited in number, and have only rarely caused severe damage, the potential menace of such attacks is none the less a very real one. It is true that most aircraft are shot down but a philosophy of "death dives" would seem to be entirely in harmony with Japanese military psychology, and the enemy will doubtless have little difficulty in finding men who are willing to sacrifice their lives in carrying out such attacks. The enemy's situation is now growing desperate; orthodox air tactics have proved incapable of doing more than harass the steady advance of the Allies, and it is not improbable that as the war is brought closer to the Japanese mainland, the number of suicide attacks will increase.

PATROLS VS EMPLACEMENTS

(Continued from Page 35)

The Jap now made tactical mistake No. 3. He was getting so jittery that he started putting men out as standing patrols to cover his emplacements. They made easy targets.

He made tactical error No. 4 by counter-attacking a fighting patrol, which was well covered by the fire of another section, and he lost heavily.

By this time it was clear that a costly attack on the positions would not be necessary. The requisite pressure had been achieved by the success of these patrolling tactics alone and, in any case, the Jap emplacements were so numerous that there were insufficient men to hold them, even if taken.

The Jap was now so jittery that he was opening fire whenever he saw anything at all. So the companies carried on mopping him up, plastering his loopholes from short range. The men had complete ascendency and enjoyed themselves.

During the whole operation, 29 Jap corpses were counted, and 30 seriously wounded. These were certainties, but there were many more.

Battalion casualties were negligible—only a few men lightly wounded.

The main lesson here is the conclusive value of aggressive and determined patrolling. In this case it achieved the object of a considered full-scale attack, nullified the necessity for such an attack at all, and saved many casualties. That patrolling of this nature can and will achieve such results against the Japs has been proved on more than one occasion, and it serves to emphasize the very great importance of patrolling in operations against the Japs.

WHY WE LOST

(A post mortem by a German commander condensed from U.S. Intelligence Bulletin. There are many lessons for Canadian officers in this article.—Editor.)

A Panzer Grenadier regiment on the Italian Front launched an attack which proved a complete failure. Afterward, the regimental commander prepared a detailed analysis of the battle conduct of the units in his command, sparing no one in his criticism. . . . The commander then outlined what he considered the specific reasons for the failure of the attack.

Companies, he said, were not given enough time to fit themselves adequately into the tactical picture—"and, in fact, never did get into it."

Proper time schedules were not established, or, if they were, they were not adhered to.

Companies allowed themselves to become scattered as a result of Allied artillery fire. They were drawn off into a flanking sector, and then attacked where they had no business to be.

Scattered elements pushed ahead without bothering to maintain contact and communication with their unit commanders, or else they stayed where they were and attempted no further action, thus permitting themselves to become targets for artillery and heavy infantry weapons.

Contact Platoons

Company commanders failed to designate contact platoons—"if, in fact, they gave any orders at all," the regimental commander added. As a result, considerable sorting-out was necessary.

Light machine guns were not so sited as to enable the attack to follow through.

No Very lights were sent up. As a result, battalion commanders, artillery, and support units did not know the whereabouts of forward troops.

Company commanders failed to rally their assault squads after these had become disorganized; or, at any rate, the commanders did not muster the remaining elements for further attack, but wandered about without any apparent plan or objective.

Battalion commanders went forward in the proper way to try to remedy the confusion; however, they left behind some of the most essential means by which their commands might have been carried out, and at the same time deprived their companies of radio sections and light machine guns.

Battalion commanders changed their headquarters "far too soon, and far too often" with the result that subsequent action by the artillery and self-propelled weapons lacked order and co-ordination.

Officers commanding heavy companies were not at battalion headquarters to ensure co-ordination of fire at all times, and to take command in the absence of the battalion commander.

Observers Failed

Insufficient use was made of the artillery. Forward observers were not forward at all, but were back at battalion headquarters. Also, individual forward observers had failed to exchange frequencies.

Executives either had been given no clues at all regarding their commanders' intentions, or were deprived of communication with the commanders, and could not report, take action, or even get into contact with companies.

Troops often ran straight into Allied fire without even trying to deliver fire from their own weapons.

Owing to the bad state of communications, the heavy weapons were unable either to concentrate their fire or to support individual forward thrusts.

Because of inadequate means of intercommunication, direct and indirect fire were in no way related to each other.

Companies which were echeloned to the rear came forward into the outpost lines much too soon, and without orders from the battalion commander. As a result, battalion commanders had nothing in hand, and were obliged to commit their assault platoons prematurely, to achieve even the slightest gains.

Defence areas in front of the two objectives had not been decided upon beforehand in conference and made known to the gunners and supporting infantry, as a protection against counter-attacks.

"Neither battalion executive nor company commanders, let alone platoon commanders or squad leaders, can read a map," the regimental commander stated flatly. "At best, only a rough or an incorrect check is made on the ground, but generally none at all."

No Clue

Where there was no line communication, battalion and company commanders did not avail themselves of the lateral radio link, but instead, made inquiries first at higher headquarters. The regimental commander added, "Many an officer is without a clue as to the technical aids at his disposal, their capabilities, and their potentialities. This ignorance is detrimental to combat efficiency."

From this chronicle of mistakes the regimental commander drew the following lessons, and ordered that they be used as a guide in all subsequent actions.

"The shorter the time allowed for the preparation of an attack or other operation, and the weaker the forces at your disposal, the more painstaking the briefing must be, and the more carefully the preparatory orders must be given and executed.

"From the old main line of resistance, all commanders must acquaint themselves with the terrain over which they are to attack. At the same time definite bearings must be taken for finding direction, and check points must be selected.

"Routes to the objectives or report lines must be outlined by battalions, and must take into consideration the opposition that may be expected and the difficulties that are likely to be encountered in covering the ground.

"Orders must make quite clear just what action, if any, is to be taken when (1) companies run into Allied defences, (2) Allied fire is opened from the flank, (3) an Allied counter-attack is mounted, (4) objectives are reached, (5) companies appear to be scattering, and (6) part of a company pushes too far or gets held up.

"For each expected phase of the battle, a fire concentration and co-ordination of heavy infantry weapons and artillery must be planned beforehand.

"Weapons must be detailed to deal with hostile flanking fire—that is to say, the heavy machine guns of the rearmost company and some of the mortars or heavy mortars.

"In accordance with the anticipated extent of Allied resistance, a fire plan must be agreed upon, to assist the advance of companies and assault squads.

"Detailed orders will be given for companies to employ Very lights in case communications break down."

JAP CAVE FORTIFICATIONS

(U.S. Tactical and Technical Trends)

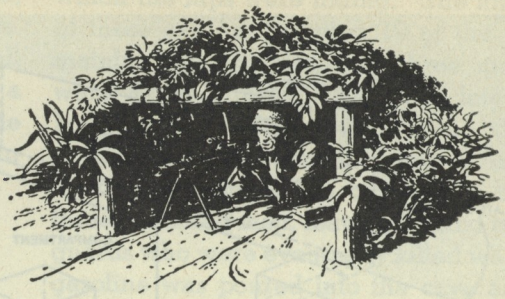
The extensive use of cave fortifications by the Japanese on Pacific islands in the past leaves little doubt that similar defensive positions will be encountered in future operations whenever natural caves or easily tunneled hills exist.

Holed-in Japs have been met thus far on Okinawa, Luzon, Peleliu, New Guinea, Biak, Saipan, Guam, and Iwo Jima, where U.S. troops have employed a variety of methods to blast them loose from their advantageous positions.

Flame-throwers and heavy demolition charges have proved successful weapons in most of the campaigns. An unknown number of Japs were buried alive in Luzon caves where demolitions were used to close all tunnels and air holes, and flame-throwers and explosives were used together on Peleliu so effectively that only six of more than 1,000 Japanese escaped alive from one series of caves.

Cave Compartments

Japanese fortifications encountered by U.S. troops in the hills east of the Marikina River on Luzon Island consisted of a number of rather large cave compartments, each about 20 feet wide by 30 feet long, dug in separate hilltops. Each compartment housed about 25 men and was connected to the surface by a vertical shaft and four or five lateral tunnels. The vertical shaft, large enough for a man to descend, was usually approximately 10 feet deep with a rope ladder down one side. The shaft connected with the central underground compartment. Each tunnel led to the surface on the side of the hill, making two sharp turns near the outside entrance to prevent shell fragments and direct fire from reaching the central compartment. (See sketch Page 40.)



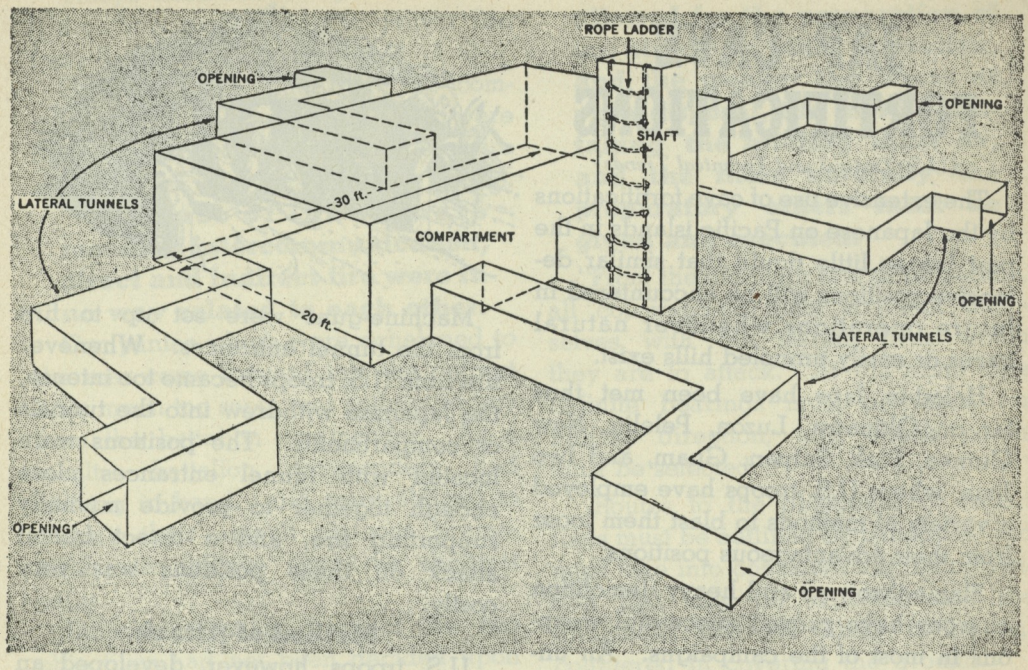
Machine-guns were set up to fire from the tunnel entrances. Whenever fire from U.S. troops became too intense, the Japanese withdrew into the tunnels or compartments. The positions were located with tunnel entrances close enough together to provide mutually supporting fire, and a direct frontal attack on these positions was very costly.

Method of Attack

U.S. troops, however, developed an effective, if slow, method for dealing with the defenders of the Japanese caves. The ground attack on the positions was preceded by an artillery and air bombardment, forcing the Japs to retire to the inner recesses of their caves while U.S. troops approached. When artillery fire was lifted, the Japanese were kept back in the tunnels by the use of hand grenades and flame-throwers directed against some of the entrances. Large charges of explosives were set off in the other entrances, sealing the exit tunnels. Successively, the entrances to the shaft and all tunnels for each cave position were sealed and the Japanese left to suffocate or commit suicide. Which course they chose is not known.

The effectiveness of this procedure is illustrated by a report from one U.S. division which blew up 446 outlets of 137 caves in 2 days without suffering a single casualty.

Larger caves which were more difficult to neutralize were encountered by U.S. Marines on Peleliu. However, attacks with flame-throwers, tanks, small arms, and demolitions over a period of



Layout of Japanese cave compartments on Luzon Island

five months killed all but six of more than 1,000 Japanese trapped in one extensive series of caves and tunnels on Peleliu Island. The following story of what happened within the cave has been obtained from partially confirmed enemy sources.

A Japanese naval air force unit withdrew to the caves after their airport was knocked out by U.S. naval shelling and air bombardment. This withdrawal took place on 3 September 1944, nearly 2 weeks before D-day. The series of caves in which the unit sought shelter was a part of the cave system in which the Japanese made their last stubborn defensive stand on Peleliu.

At first there were over 1,000 men in the series of caves, including many construction workers and other nonmilitary personnel sent there for protection while awaiting evacuation. However, apparently no Japanese were evacuated until after the U.S. Marines landed on 15 September, and then only some of the wounded were taken off the island by barges.

On 28 September all the military personnel were organized for an attack on the American forces holding the hill directly over the caves. The Japanese rushed out from all nine entrances and succeeded in driving the U.S. troops off the hill, but only at the expense of heavy casualties. When the Japanese reassembled in the caves, there were only about 50 military men left. The naval lieutenants who had been in command in the caves did not return and were presumed to have been killed in this Banzai charge.

The Japanese survivors moved their wounded into the three largest tunnels in the rearmost section of the cave system. The construction workers occupied the central caves and tunnels, while the military personnel were established near the cave entrances at the brow of the hill.

The morning following the Japanese attack, U.S. forces assaulted the main entrance to the caves in which the Jap military personnel were located. The

attack was carried out with a tank, machine guns, and flame throwers. The Japanese counterattacked and all military personnel were killed except a few who remained behind a barricade in a branch tunnel or who were in lower passages.

The U.S. flame-thrower penetrated into the caves and was reported to be the most effective weapon used, since in this first attack alone it reached points more than 100 yards from the cave entrance, killing some of the construction workers in the central tunnels.

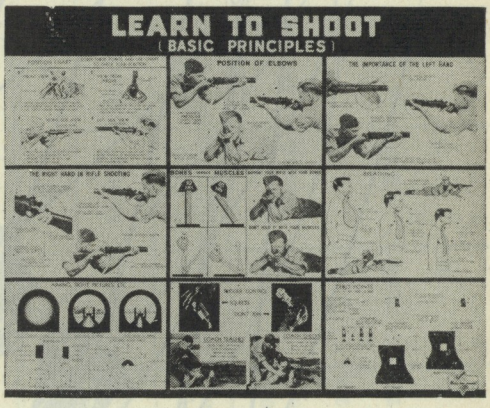
Later the tank and flame-throwers were used at most of the other entrances along both sides of the hill and when U.S. forces finally withdrew, only 30 Japanese were left alive. The U.S. Marines had discovered the entrances to the tunnels where the Japanese wounded were located and flame-thrower attacks had killed all the wounded. Most of the men who survived had taken refuge in a tunnel which branched off from the main entrance where the U.S. forces had first attacked. There was also a direct entrance at the side of the hill to this tunnel, but it was so well hidden that the Marines did not discover it.

The U.S. forces at least partially blocked all entrances and the Japs remained holed up in their caves. Occasionally the Japs would fire upon U.S. soldiers who wandered inside the entrances not completely closed. These sniping activities brought renewed U.S. attacks with flame-throwers and demolitions. However, the surviving Japs were safe in their undiscovered tunnel.

About 1 January 1945, very large explosive charges were set off in all the entrances except that for the tunnel in which the Japs were hiding. The force of these explosions killed 19 of the remaining 30 Japanese, and three more were badly injured. Near the last of January the hidden tunnel was discovered and the survivors moved into another section of the caves with the three wounded men, leaving behind two guards who were eventually killed when gasoline was poured into the cave and ignited.

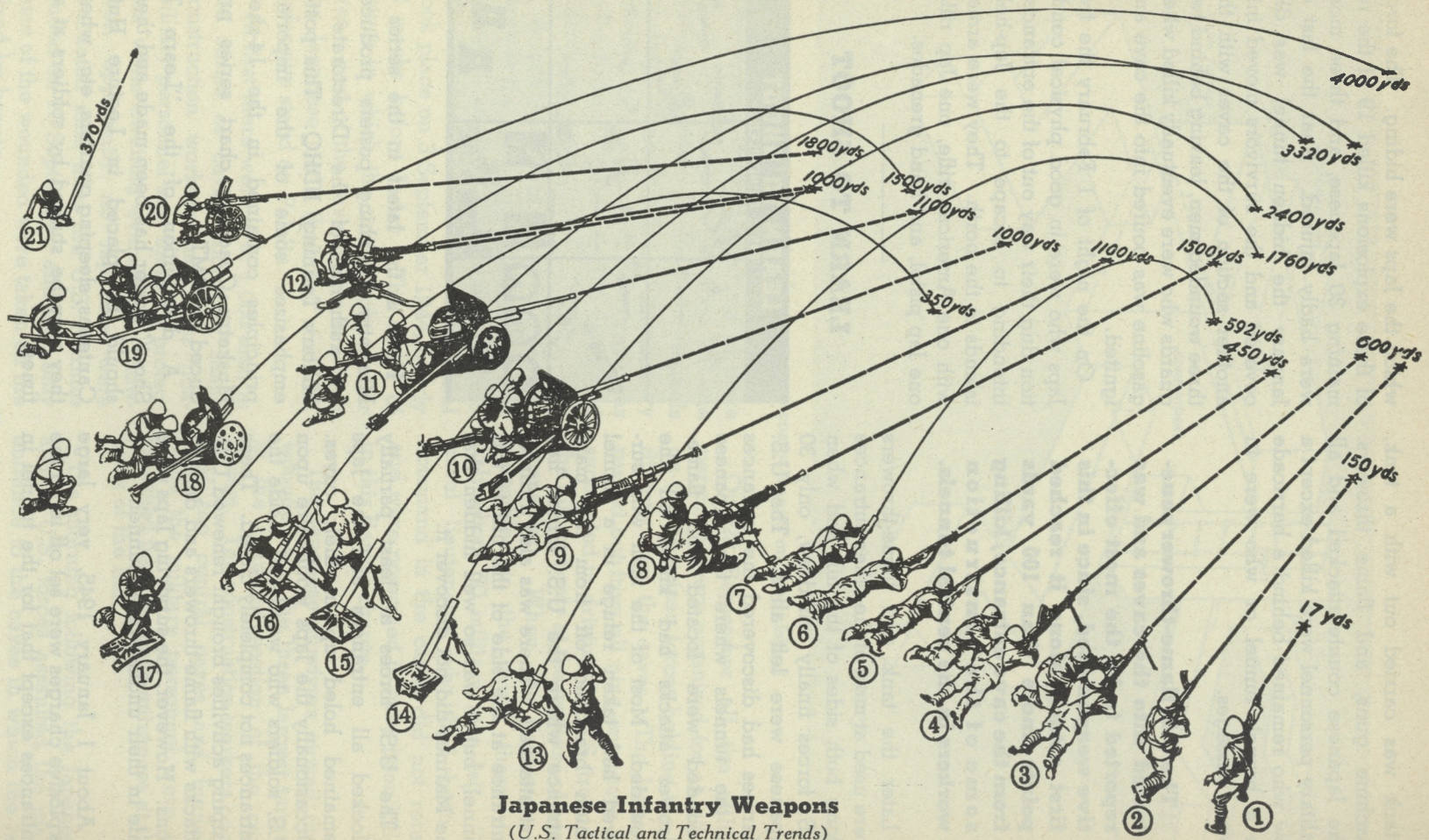
On the night of 1 February the five Japs who were in good physical condition dug their way out of the entrances, intending to escape to the Jap-held islands to the north. They were armed with one American rifle, one Jap rifle, one Jap pistol, and hand grenades.

LEARN TO SHOOT



Here is the latest in the series of Musketry Coaching posters produced by authority of the Directorate of Military Training, NDHQ. This poster emphasizes some of the important principles contained in the 14-sheet Musketry Coaching chart series produced by DMT.

A distribution of the "Learn To Shoot" poster has been made and these should be placed in Lecture Huts, Canteens, sleeping quarters, etc., where they may be studied by soldiers at all times.



Japanese Infantry Weapons

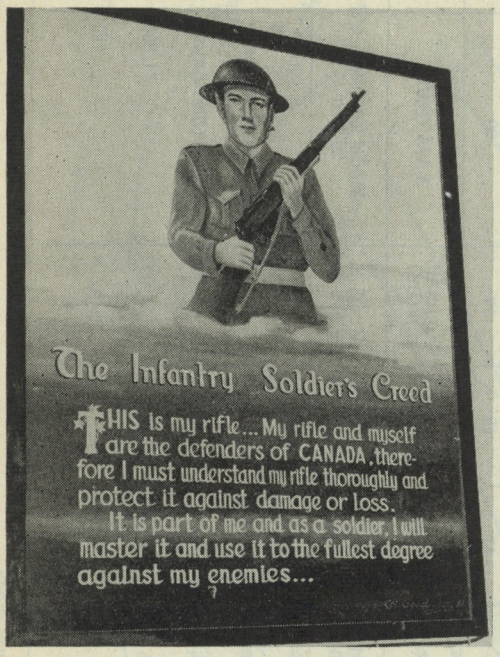
(U.S. Tactical and Technical Trends)

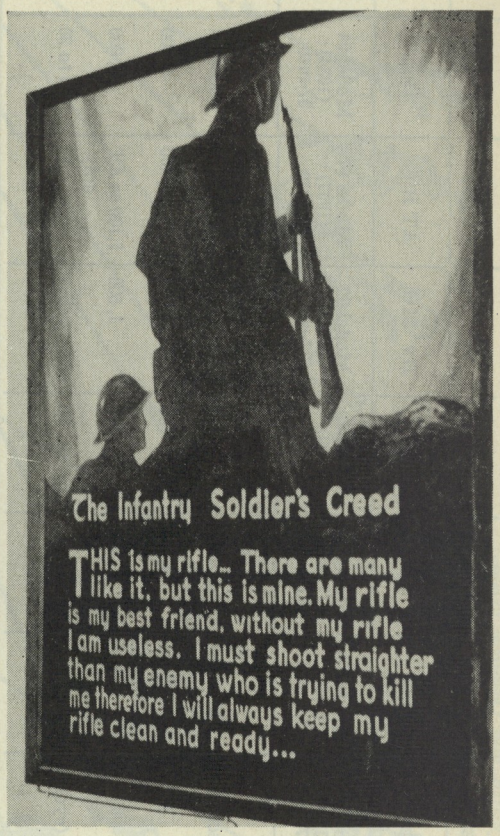
	1	2	3	4	5	6	7	8	9	10	11
	Pistol	Submachine gun	Light MG	Light MG	Rifle	Rifle	Grenade discharger	Hv MG	AT Rifle	Gun	Gun
	Model 14 (1925) 8-mm	Model 100 (1940) 8-mm	Model 96 (1936) 6.5-mm	Model 99 (1939) 7.7-mm	Model 99 (1939) 7.7-mm	Model 38 (1905) 6.5-mm	Model 89 (1929) 50-mm	Model 92 (1932) 7.7-mm	Model 97 (1937) 20-mm	Model 94 (1934) 37-mm	Model 1 (1941) 47-mm
Weight (pounds)	2	8	19.25	22	8.8	8.8	10.25	120	150	714	1,660
Action	Semiautomatic	Automatic	Automatic	Automatic	Manual	Manual	Manual	Automatic	Automatic	Manual	Manual
Maximum range (yards)	547	*600	3,800	3,800	3,800	4,400	740	4,700	5,450	5,000	*4,000
Effective range (yards)	*17	*150	600	600	450	450	592	1,500	1,100 as AT only.	1,000	*1,100
Rate of fire (rounds per minute)		750 (cyclic)	550 (cyclic)	500 (cyclic)			up to 20	450 (cyclic)	12	10 to 20	10

	12	13	14	15	16	17	18	19	20	21
	Twin Hv MG	Mortar	Mortar	Mortar	Mortar	Mortar	Howitzer (Bn gun)	Mountain gun (Inf)	AA/AT gun	Barrage mortar
	Model 93 (1933) 13-mm	Model 99 (1939) 81-mm	Model 97 (1937) 81-mm	Model 97 (1937) 90-mm	Model 94 (1934) 90-mm	Model 98 (1938) 50-mm	Model 92 (1932) 70-mm	Model 41 (1908) 75-mm	Model 98 (1938) 20-mm	70-mm
Weight (pounds)		50.8	145	233	353	50	468	1,200	836	
Action	Automatic	Manual	Manual	Manual	Manual	Manual	Manual	Manual	Automatic or semi-automatic	Manual
Maximum range (yards)	4,000 (horizontal)	2,200	3,000	4,150	4,150	438	3,000	7,800	5,450 (horizontal)	370
Effective range (yards)	*1,000	1,760	2,400	3,320	3,320	350	*1,500	*4,000	*1,800	370
Rate of fire (rounds per minute)	450 per barrel (cyclic)	12	20	15	15	2	10	8 to 10	120	15

*Not confirmed. Effective mortar ranges computed on basis of 80 percent of maximum range.

PASSING IT ON





INFANTRY SOLDIER'S CREED

The accompanying photos show two paintings illustrating the Infantry Soldier's Creed which have been placed on either side of the Drill Hall stage at A16 CITC, Currie Barracks, Calgary. These posters are designed to promote interest in good shooting and proper care of the rifle.

The wording on one poster reads: "This my rifle . . . My rifle and myself are the defenders of Canada, therefore I must understand my rifle thoroughly and protect it against damage or loss. It is part of me and as a soldier I will master it and use it to the fullest degree against my enemies. . . "

On the other poster the following wording appears: "This is my rifle. . . There are many like it, but this is mine. My rifle is my best friend; without my rifle I am useless. I must shoot straighter than my enemy who is trying to kill me, therefore I will always keep my rifle clean and ready. . . "

Eye-catching illustrations such as these play an important part in training, and the idea might well be tried by other training centres.

TRAINING

(From a British Army Source. Extracted from Current Reports From Overseas.)

"More training is needed in personal discipline and administration, and in the care of weapons and equipment. The treatment of the individual should be more spartan during training."

READY PERCENTAGE RECKONER FOR .303 RIFLE CLASSIFICATION SCORES

Score	%	Score	%	Score	%	Score	%	Score	%
190	100	158	83	126	66	94	49	62	33
189	99	157	83	125	66	93	49	61	32
188	99	156	82	124	65	92	48	60	32
187	98	155	82	123	65	91	48	59	31
186	98	154	81	122	64	90	47	58	31
185	97	153	81	121	64	89	47	57	30
184	97	152	80	120	63	88	46	56	29
183	96	151	79	119	63	87	46	55	29
182	96	150	79	118	62	86	45	54	28
181	95	149	78	117	62	85	45	53	28
180	95	148	78	116	61	84	44	52	27
179	94	147	77	115	61	83	44	51	27
178	94	146	77	114	60	82	43	50	26
177	93	145	76	113	59	81	43	49	26
176	93	144	76	112	59	80	42	48	25
175	92	143	75	111	58	79	42	47	25
174	92	142	75	110	58	78	41	46	24
173	91	141	74	109	57	77	41	45	24
172	91	140	74	108	57	76	40	44	23
171	90	139	73	107	56	75	39	43	23
170	89	138	73	106	56	74	39	42	22
169	89	137	72	105	55	73	38	41	22
168	88	136	72	104	55	72	38	40	21
167	88	135	71	103	54	71	37	39	21
166	87	134	71	102	54	70	37	38	20
165	87	133	70	101	53	69	36	37	19
164	86	132	69	100	53	68	36	36	19
163	86	131	69	99	52	67	35	35	18
162	85	130	68	98	52	66	35	34	18
161	85	129	68	97	51	65	34	33	17
160	84	128	67	96	50	64	34	32	17
159	84	127	67	95	50	63	33	31	16

The accompanying chart is a "ready reckoner" designed by the Directorate of Military Training to aid in the rapid conversion of shooting scores into percentage of highest possible score when making entries in the Soldier's Service Book, MBM 1 (Part 1) or other records. This reckoner is for rifle classification only, but similar sheets could be drawn up by training establishments for other weapon practices.

MEDALS FOR MARKSMEN

Rifle efficiency at All CMG TC, Camp Borden, is the highest in the Camp Borden Command, and for the month of April was second highest in Canada with an efficiency of 82.66%. For the month of May an even better percentage was reported — 84.09%.

Not only do recruits qualify in all their .22 rifle practices, but also in a preliminary course on the .303 rifle, mainly grouping, snap and rapid fired from 100 yards. This gives GMT 1 personnel a sound foundation for their qualifying practices in GMT 11.

In order to foster interest in musketry, a graduation ceremony is held which includes platoon drill, manual of arms competitions, inspection by the GOC or his representative, presentation of rifle shooting awards and a march past. Prizes awarded for shooting are one silver and two bronze medals, a sample of the medals being shown in the accompanying photo.

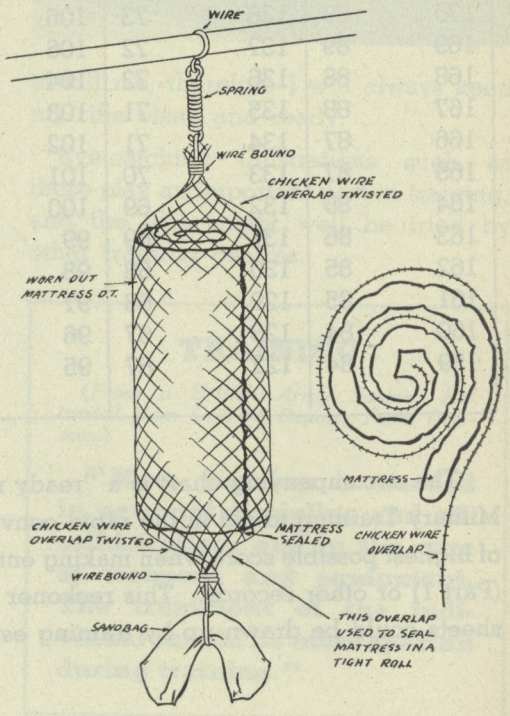
All's program should interest other units in Canada, as it is designed to assist in creating a competitive spirit in rifle shooting and thus increase rifle efficiency in the Canadian Army.

BAYONET FIGHTING

A bayonet dummy that was still in serviceable condition after being stabbed 1,000 times has been constructed by Capt. W. L. Jewell, of General Staff Headquarters, Camp Borden.

As shown in the accompanying illustration, this dummy is constructed of an ordinary worn-out mattress rolled in chicken wire. The wire is overlapped on the mattress, the wire being placed over the mattress and both being rolled up together. This makes the dummy stronger than if the wire were rolled around the outside only.

Here are some of the advantages of this type of dummy, as reported by the inventor: there is little possibility of the bayonet becoming stuck or bent in the dummy; the longer it is used the tighter the filling and binding around the mattress become; it is more realistic in training than the solid dummy or the bundle of sticks. The idea is well worth trying.



TARGET TOWING DEVICE

The accompanying illustration shows a target towing device used at A16 CITC, Calgary, Alta., for towing representative tank targets. The 435-yard cable enables the target to be operated safely from a point outside the danger area.

Designed and built by No. 13 RCEME, Calgary, at the suggestion of A16, this ingenious device consists of an old chassis equipped with a pair of drums driven by a governed Ford V-8 motor. Dog-drive control of the drums enables one drum to wind cable while the other is free, and vice versa.

The cable passes over a deadman pulley 435 yards distant to allow the target to be towed over its run. Sections of the cable are painted red to assist the operator to gauge the length of the target's run.

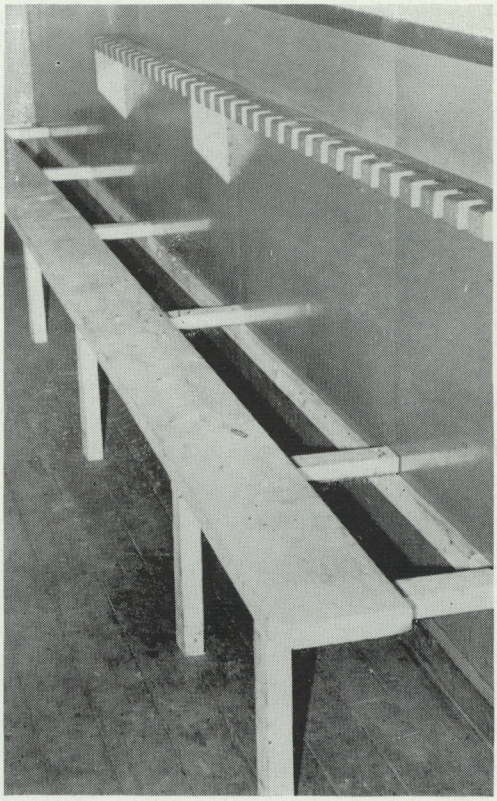
The plan and construction data for this device is available at the Directorate of Military Training, NDHQ.

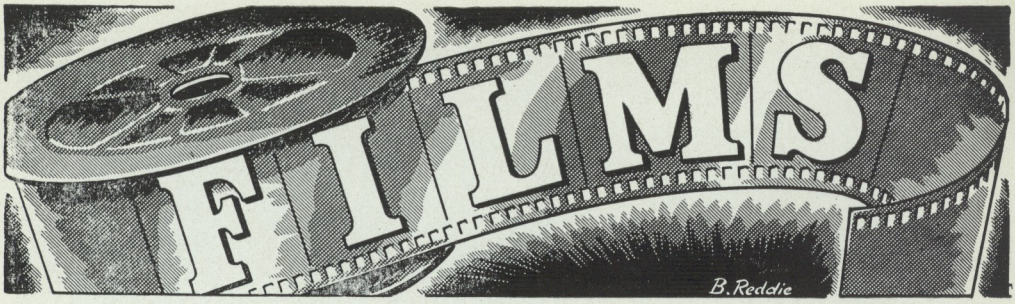
LECTURE ROOM BENCHES

Sufficient space to permit recruits to sit comfortably while wearing haversacks and respirators is provided by the arrangement of benches in Lecture Rooms at No. 44 CI(B)TC, St. Jerome, Que.

As shown in the accompanying photo, benches are attached to the wall and provision of a space of eight inches between the benches and the wall has been made. This space provides sitting comfort for recruits while they are wearing equipment.

This photo also shows the construction of rifle racks along the wall behind the benches.





Some soldiers are under the impression that training films are being made only for the purpose of establishing "breaks" in between training periods. There may be a feeling that films "don't matter much." This state of mind is encouraged by poor preparation on the part of Instructors and Projectionists who act as though their job consists in calling "Lights Out" and "Lights On" at more or less appropriate times. Nobody worries about all those "little" things, a bit of dust at the "gate," dirt on the lens, too little or too much oil, stray shafts of sunlight hitting the screen, tobacco smoke in the air and so forth. Results: indistinct pictures, lack of interest and ineffectiveness of the training films.

Instructors and Projectionists should:

(a) See that the conditioning of the room for darkness is well organized before the showing.

(b) See that both the projector and the screen are properly placed, cleaned and cared for.

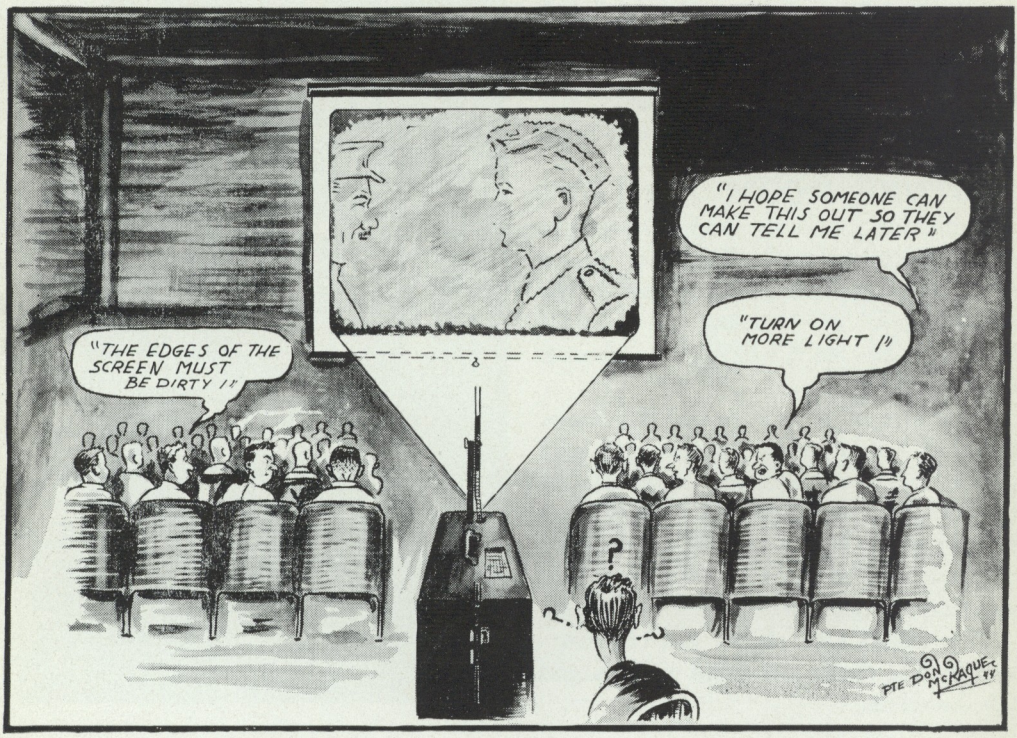
(c) See that the accoustics of the room are the best conditions will allow.

(d) See the audience is seated within the area of good visibility in relation to the screen.

(e) See there is no smoking.

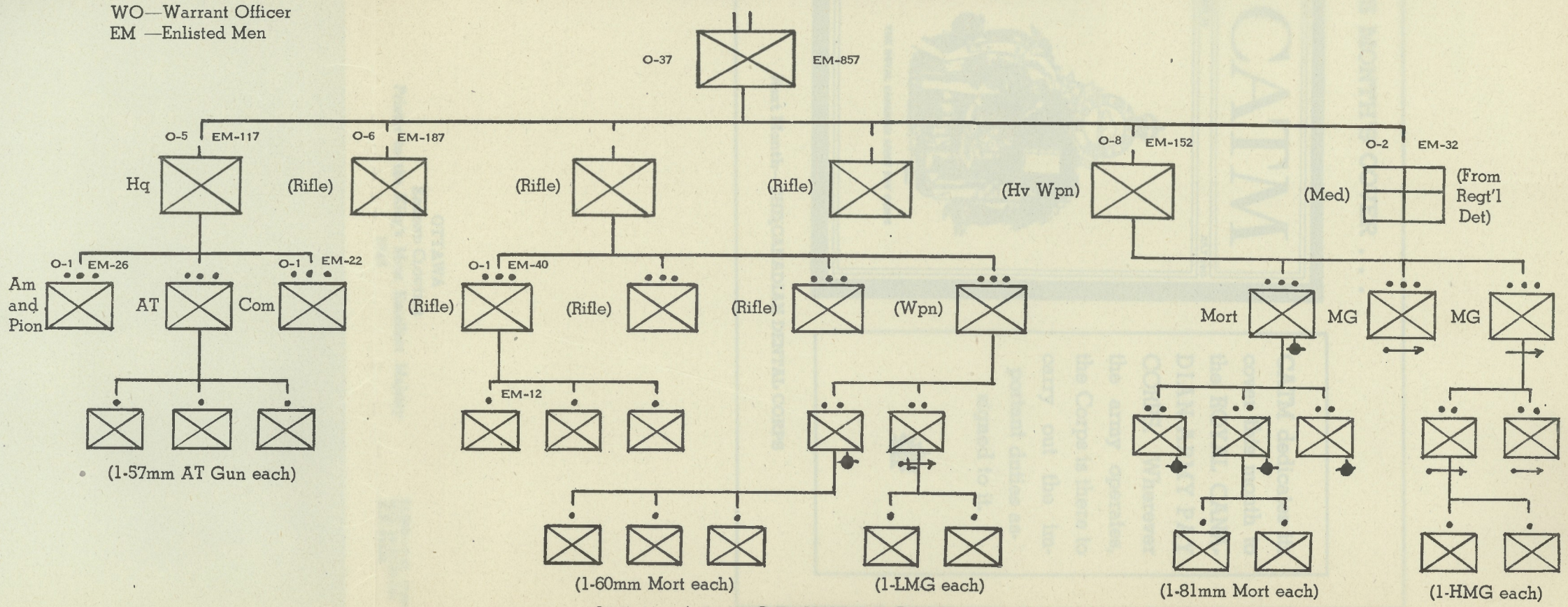
A training film screening is made up of the sum total of many "little" things. None of them may be neglected without seriously detracting from effectiveness.

Remember: The intention is to teach, **Not** to entertain, certainly **Not** to bore.



U.S. INFANTRY BATTALION

O —Officer
WO—Warrant Officer
EM —Enlisted Men



SUMMARY OF WEAPONS

Carbine	219	AT Gun 57mm	3	Pistol	81
Hv MG cal. 30	8	Bazooka	29	Rifle Auto cal. 30	27
LMG cal. 30	6	Mortar 60mm	9	Rifle cal. 30 (M1)	524
MG cal. 50	6	Mortar 81mm	6	Rifle cal. 30 (sniper)	9

In addition the following weapons are held for special purposes: In Bn Hq —2-sub MG cal. 45
6-LMG cal. 30
In Rifle Co Hq—6-sub MG cal. 45
6-Rifle Auto cal. 30

Infantry battalion
Infantry unit
II Battalion (or Squadron)
I Company, battery or troop
••• Platoon
•• Section
• Squad
Mortar 60 (or 81)
BAR (Browning Automatic Rifle)
HMG
LMG

U.S. INFANTRY BATTALION

The infantry battalion differs little in fighting strength from the Canadian battalion. It is commanded by a Lieutenant-Colonel with a Major second-in-command and staff S-2 and S-3. The HQ company commander is the battalion S-1. It has three rifle companies but has a "heavy weapons" company, corresponding to the Canadian Support Company and a HQ company.

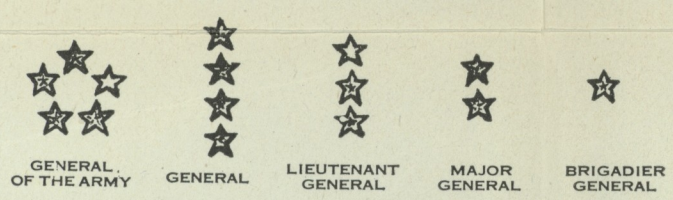
There are, in the battalion, six 81mm mortars and 14 machine guns corresponding to the Canadian MMG.

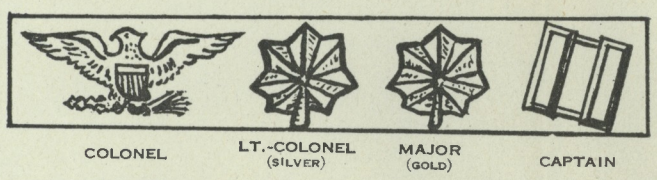
The infantry battalion is primarily a tactical unit and has no supply and administrative functions. The chain of supply and administration is from company to regiment.

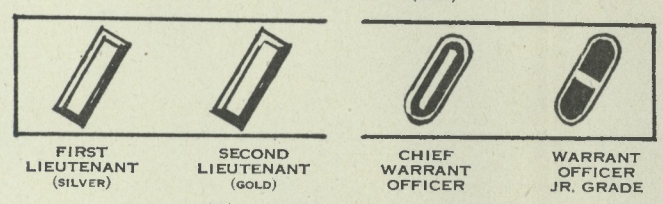
The infantry companies in the three battalions of a regiment are lettered consecutively throughout the regiment: ABCD companies in the first battalion—EFGH in the second battalion and IKLM in the third battalion; DH and M companies being the heavy weapons company in each case.

INSIGNIA OF GRADE, U.S. ARMY

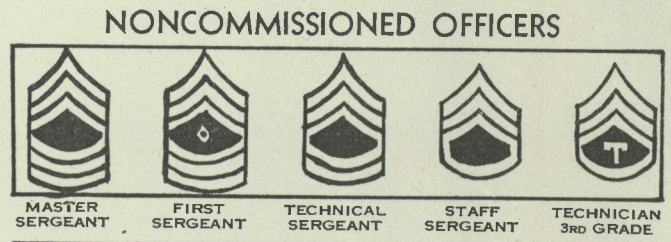
COMMISSIONED OFFICERS

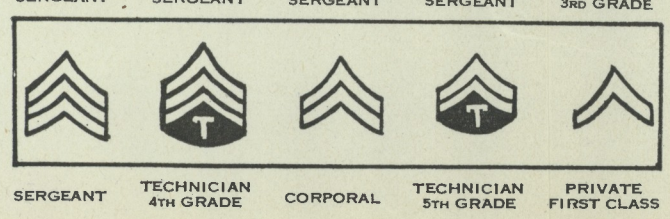


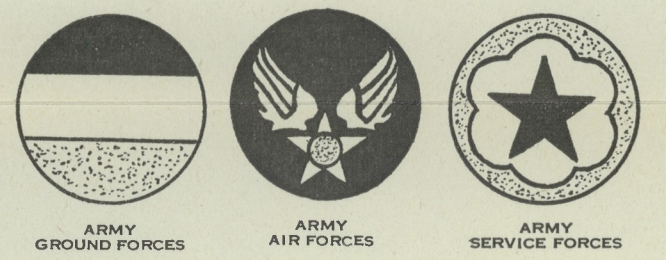




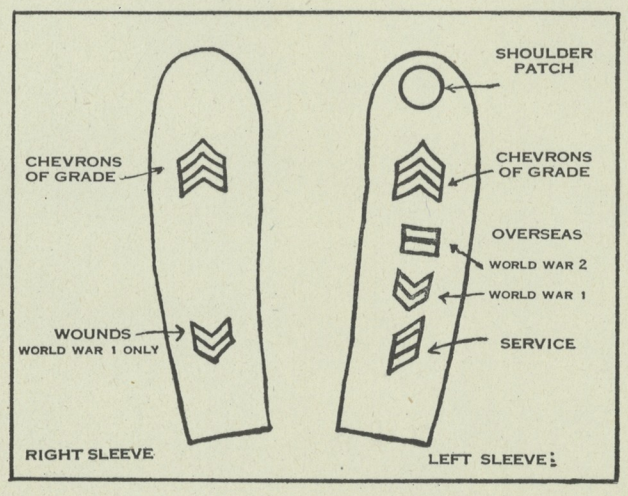
NONCOMMISSIONED OFFICERS







THESE ARE TYPICAL SHOULDER PATCHES



U.S. ARMY RANKS

General Officers: General officer grades correspond to the Canadian and British ranks, except that a Brigadier General is either assistant Division Commander, Army Staff or similar assignment.

Colonel: Corresponds to the Canadian rank, but holds command assignments (the U.S. Regiment, corresponding to the Canadian Brigade, is commanded by a Colonel), and Corps and higher staff assignments.

Lieutenant Colonel: Corresponds closely to the Canadian rank, commanding battalions, and division staff assignments.

Major: Battalion executive officer (2IC) and regimental staff assignments.

Captain: Company, battery and troop commander and battalion staff assignments.

Lieutenants: Platoon leaders.

Warrant Officers: Neither grade of warrant officer ever holds command assignments. All are specialists in communications, maintenance, personnel, etc. Warrant officers are neither commissioned officers nor non-commissioned officers, but a grade between the two. Differing from the Canadian rank, they are closer to the commissioned officer, rate salutes and are included in the officers' mess.

Master Sergeant: Not found in the line, but are, like warrant officers, for the most part specialists in communication, supply, maintenance, etc. Most staff sections have a master sergeant as chief clerk of the section The Regimental Sergeant Major is a Master Sergeant.

First Sergeant: The equivalent of the Canadian C.S.M. They are the same grade as Master Sergeant.

Technical Sergeant: Hold such assignments as Platoon Sergeant, technical section leaders and the equivalent. The term "technical" is a carry over from earlier organization and should not be confused with "technician"

Staff Sergeant: Hold such assignments as rifle squad leaders, weapons section leaders, company mess and supply sergeants.

Sergeants: Hold such assignments as weapons squad leaders, assistant rifle squad leaders and the equivalents.

Corporals: Hold such assignments as company clerks and the equivalent.

Privates, 1st Class: Equivalent of the Canadian Lance Corporal.

Technicians: The equivalent of the Canadian tradesmen. They hold no command assignments and are specialists entirely; cooks, clerks, mechanics, etc. They are in the same pay bracket with the corresponding NCO grade and rank just below the corresponding NCO grade. They are addressed as sergeant and corporal.

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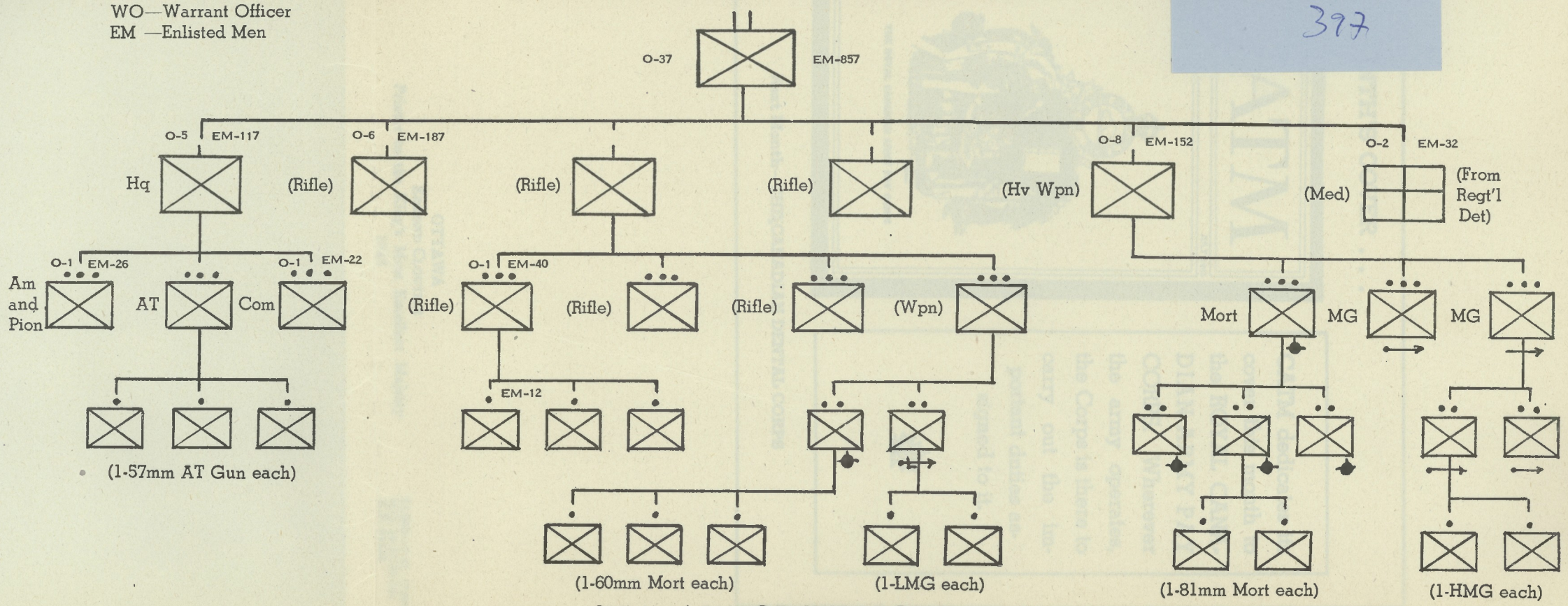

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Mortar  60 (or 81)

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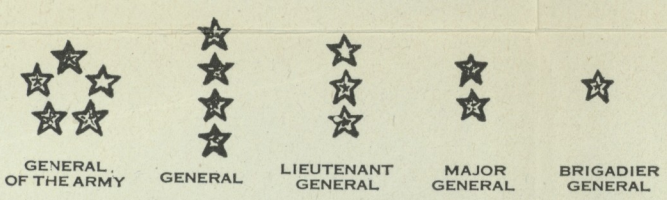
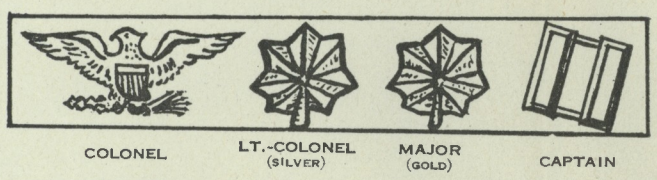
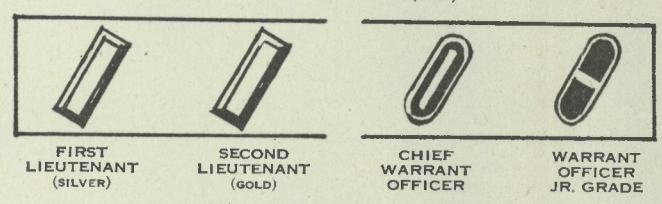
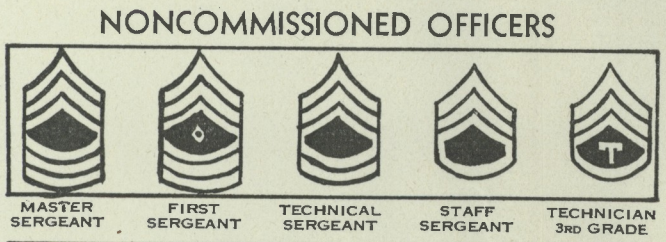
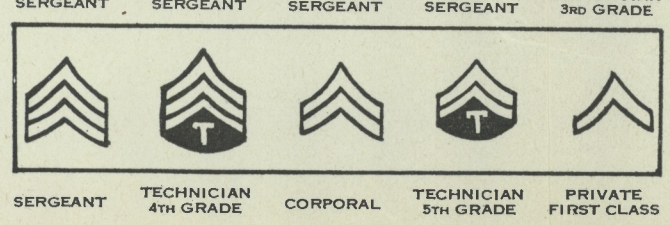


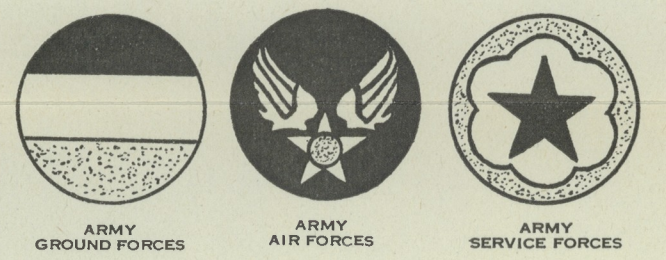




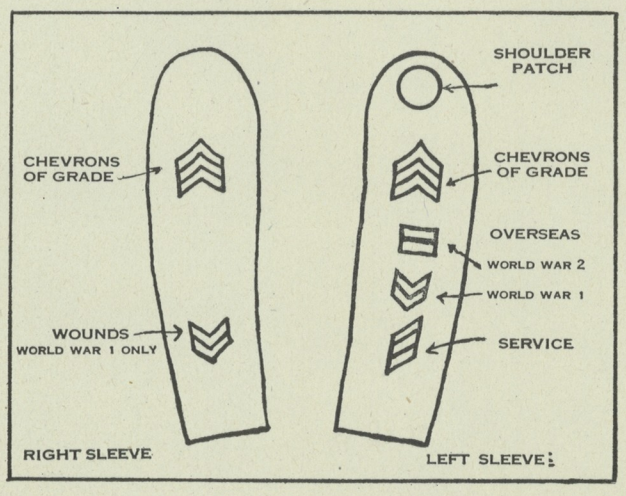
NONCOMMISSIONED OFFICERS







THESE ARE TYPICAL SHOULDER PATCHES



U.S. ARMY RANKS

General Officers: General officer grades correspond to the Canadian and British ranks, except that a Brigadier General is either assistant Division Commander, Army Staff or similar assignment.

Colonel: Corresponds to the Canadian rank, but holds command assignments (the U.S. Regiment, corresponding to the Canadian Brigade, is commanded by a Colonel), and Corps and higher staff assignments.

Lieutenant Colonel: Corresponds closely to the Canadian rank, commanding battalions, and division staff assignments.

Major: Battalion executive officer (2IC) and regimental staff assignments.

Captain: Company, battery and troop commander and battalion staff assignments.

Lieutenants: Platoon leaders.

Warrant Officers: Neither grade of warrant officer ever holds command assignments. All are specialists in communications, maintenance, personnel, etc. Warrant officers are neither commissioned officers nor non-commissioned officers, but a grade between the two. Differing from the Canadian rank, they are closer to the commissioned officer, rate salutes and are included in the officers' mess.

Master Sergeant: Not found in the line, but are, like warrant officers, for the most part specialists in communication, supply, maintenance, etc. Most staff sections have a master sergeant as chief clerk of the section The Regimental Sergeant Major is a Master Sergeant.

First Sergeant: The equivalent of the Canadian C.S.M. They are the same grade as Master Sergeant.

Technical Sergeant: Hold such assignments as Platoon Sergeant, technical section leaders and the equivalent. The term "technical" is a carry over from earlier organization and should not be confused with "technician"

Staff Sergeant: Hold such assignments as rifle squad leaders, weapons section leaders, company mess and supply sergeants.

Sergeants: Hold such assignments as weapons squad leaders, assistant rifle squad leaders and the equivalents.

Corporals: Hold such assignments as company clerks and the equivalent.

Privates, 1st Class: Equivalent of the Canadian Lance Corporal.

Technicians: The equivalent of the Canadian tradesmen. They hold no command assignments and are specialists entirely; cooks, clerks, mechanics, etc. They are in the same pay bracket with the corresponding NCO grade and rank just below the corresponding NCO grade. They are addressed as sergeant and corporal.

THIS MONTH'S COVER . . .

CATM dedicates its cover this month to the ROYAL CANADIAN ARMY PAY CORPS. Wherever the army operates, the Corps is there to carry out the important duties assigned to it.

Next Month—THE CANADIAN DENTAL CORPS

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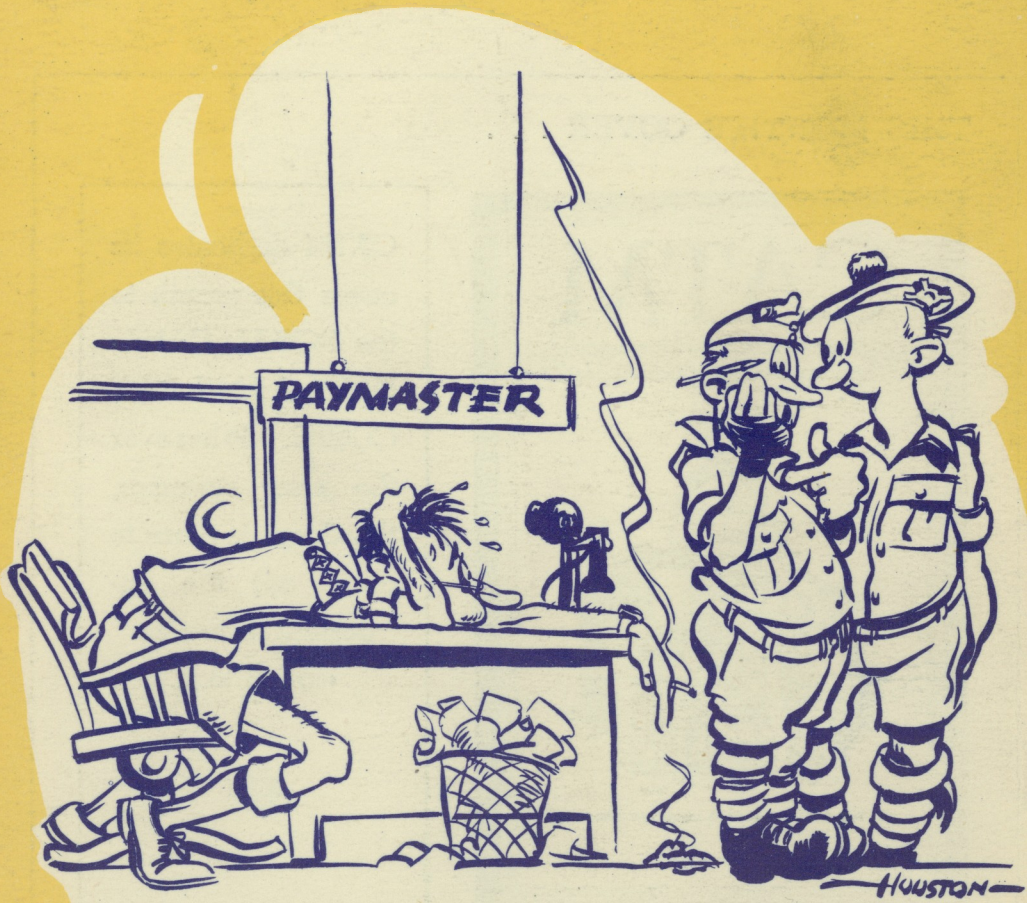

"YA, HE'S BEEN LIKE THIS EVER SINCE HE HEARD
OF THE PAY INCREASE FOR THE BOYS
IN THE PACIFIC."