

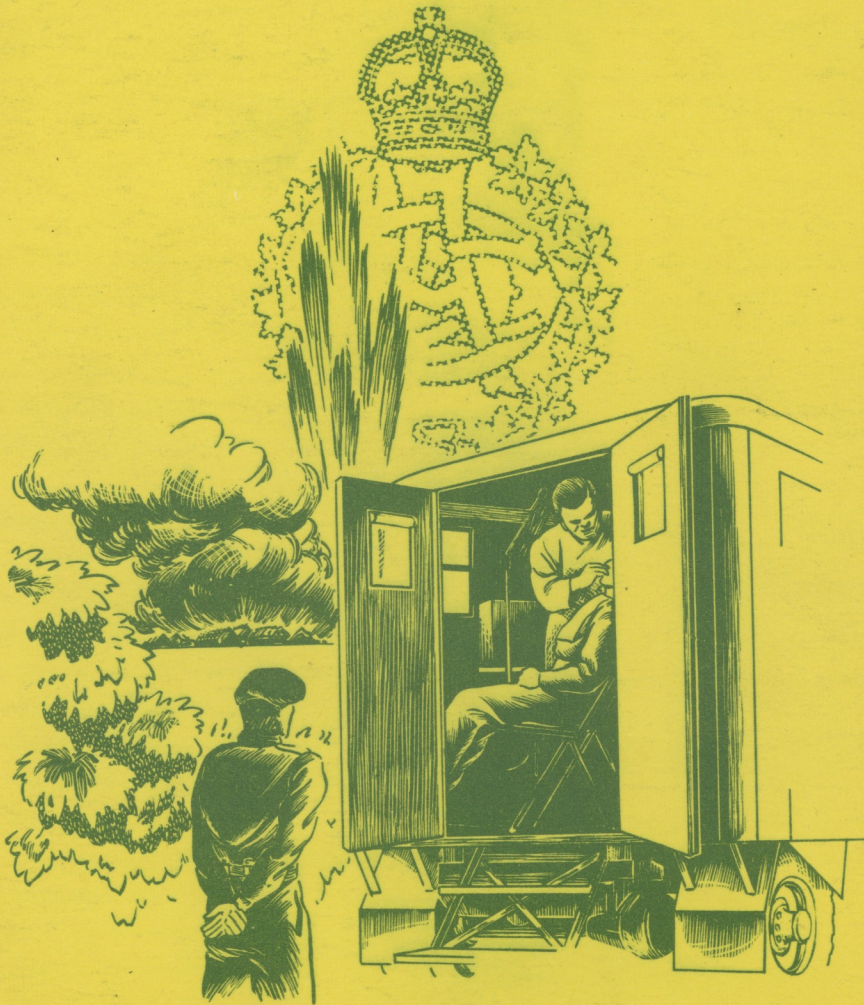
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NUMBER 53

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THE CANADIAN DENTAL CORPS

CATM



Canadian Army Training Memorandum

AUGUST 1945

NUMBER 53

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THE CANADIAN



Brig. F. M. Lott, C.B.E., E.D.

Director General of Dental Services

DENTAL CORPS

Authorities recognized in 1939 that oral disease was the most widespread disability in Canada—that it was responsible, directly and indirectly, for more ill-health and unhappiness than any other form of disease. Something had to be done to eliminate or reduce its toll on the forces in the emergency.

The Canadian Dental Corps was authorized on 1 September 1939 to supersede the Canadian Army Dental Corps. The latter had served well during World War No. 1 but had fallen into inactivity during the peace period.

The organization of the present Corps was based on an exhaustive study of the requirements of an efficient dental service. The resulting report recommended a distinct departure from current practice in the forces of other countries. It formed a basis that has been departed from but slightly since 1939 because experience has convincingly shown the soundness of it.

The Corps is charged with the responsibility of establishing and maintaining the dental fitness of all the forces—the Army, the Navy and the Air Force. There is no dental standard for enlistment, recruits are almost never fit and the tremendous effort necessary to complete their treatment has been a steady challenge to all ranks of the Corps during the whole war period.

It is sincerely hoped that when the story of this war is told, the Canadian Dental Corps will have established a record of service worthy of the highest Canadian tradition.

Implett.

CANADIAN DENTAL CORPS



There has been a prevalent belief in various quarters that it is sufficient guarantee against dental ills during a war to complete the treatment of a soldier during his early training.

This premise is quite incorrect. Dental disease is progressive and affects the individual throughout most of his life. To such an extent is this true that experience has shown that if 100 men are made dentally fit at any time, 50 of them will require further attention during the next twelve months.

The Dental Corps operates on the basis of 1:500 per annum. In other words, it requires one dental officer to complete the treatment of 500 men per annum. But since it was almost impossible to send men to the divisions overseas dentally fit especially in the earlier war years, the ratio was not dropped to 1:1000 on the wishful assumption that they were fit, but, rather, it was held at approximately 1:750 for field formations.

Field Unit

The field dental unit is a Dental Company. Basically, it is comprised of 20 DOs each with a small detachment consisting of an assistant and a driver

orderly. A laboratory group made up of an officer and 8 dental technicians fabricates the artificial dentures and other appliances for the DOs. The unit is rounded out with the usual complement of administrative, stores, transport and other personnel.

All dental units in the field are army troops under the technical administration of an ADDS (Army) responsible to the GOC.

Companies are allotted for duty on the basis of one per division or equivalent group of troops with Corps or Army on lines of communication or at base.

The OC Dental Company is the technical advisor to the GOC. He is responsible for the distribution of his detachments throughout the formation in accordance with the nature of the fighting and other conditions.

Dental personnel are distributed to medical units from Field Ambulances to Hospitals in the same manner as to other units to care for the dental requirements of casualties.

Very similar Companies serve the squadrons of the

RCAF overseas. Another at a United Kingdom base treats RCN personnel on shore or afloat from this overseas base. This method of employing dental units was in use until recently by no other forces. It is significant that the British army has now adopted the unit principle.

A most important factor in this flexible method of the employment of detachments is the dental lorry or mobile clinic with which each detachment is issued.

It provides ready transportation independent of other sources. At every stopping place it represents immediate

clinic space with complete dental equipment including X-ray facilities, electrical and water supply. Similar vehicles house the laboratory. Together, they make possible a complete dental service as close to the line as the character of the fighting renders advisable.

The mobile clinic has been on service in the slush and snow of Newfoundland; the sandstorms and heat of Africa, Ceylon, and Burma; the mud and rain of Italy and the winters of Europe. Improvements in design have been made from time to time as a result of experience in its use. But, from the very outset, it has been one of the greatest assets of the CDC in rendering dental service in the Active theatres of this war.

PROBLEM OF MORALE

(From an article by Maj. Gen. G. B. Chisholm, Director General of Medical Services, Canadian Army, in The Military Surgeon. Extracted for CATM from U.S. Military Review.)

Good morale results from satisfying certain specific needs, or enough of them to a sufficient degree. Among these needs the most important probably is that of a goal, a national goal, an organizational and an individual goal—goals which provide reasons for striving and incentives for self-sacrifice and devotion. These goals can be set up only by planning at various social levels. Other necessities are:

Consistent policy, and confidence in the integrity, sincerity and ability of leaders.

Confidence in the goodwill and devotion to a common cause of the organizational group. Grouping with unwilling or half-hearted allies is a heavy handicap to morale.

Confidence In Services

Confidence in services such as medical and their ability to cope with

all wounds and diseases.

Confidence in fair systems of promotion and preference, with no favoritism on any grounds, and with this a reasonable confidence that merit will be recognized and encouraged by expanding responsibilities.

Confidence in one's own importance to the group based on adequate training and ability.

Confidence in adequate supply and quality of material.

A reasonably satisfactory philosophy of life—whether religious or other—which allows sufficient satisfaction, for the particular individual, or instinctual needs, without guilt, and is sufficiently socially acceptable to avoid trouble with the group sanctions.

A sufficient degree of satisfaction of these necessities will produce good morale through the production of a feeling of security.

ATLANTIC TROOP MOVEMENTS

The majority of Security articles written for CATM have consisted, in the main, of arguments and exhortations for the observance of Security. Don't let the appearance of this one mislead you. For, if at first glance this seems, instead, to argue against Security, be assured that such is not the case.

The reason is to be found in the entirely reasonable contention of those responsible for Security of the Canadian Army — and, consequently, for Security instruction — that it is always sound Security to remove Security restrictions immediately they are no longer required — to maintain and enforce only those restrictions which are essential, rather than clutter the Security picture with unnecessary "must nots" which, consequently would be neither respected nor observed. Security is not a collection of shibboleths and catch-phrases — it is the application, instead, of common-sense preventive measures for each of which there exists a very definite need. And those responsible for Security further believe that, on a common-sense rather than a catch-phrase basis, the need for its strict observance can be made apparent to the proverbial last man in the rear rank. They also believe that if lifting of a restriction, hitherto required and enforced but no longer considered essential, requires an explanation on a common-sense basis to the above-mentioned rear rank soldier, then that, too, is probably all to the good.

Troop Movements

What we're leading up to, not too subtly, is the pained surprise which in some quarters met the recent raising of Security restrictions on east and west-bound Atlantic troop movements.

Let's take stock. Those same Security restrictions were imposed for two paramount reasons — to protect troops in transit and to deny to the enemy information concerning our order-of-battle and

strengths in the European theatre. But Europe is no longer a combat area, eastbound troops are no longer proceeding to an active theatre, U-boats no longer lurk in Atlantic waters to jeopardize their passage. And westbound troops will no longer be used in the war in Europe. Order of battle information is not affected . . . In other words, the necessity for secrecy concerning such movements has passed.

"But", the objection appears to be, "movement of troops are Secret. They've always been Secret. This upsets the whole Security training picture!" Sorry. We just don't agree. In the first place, movements of troops — movements with no strings attached — have not been Secret at any time during the war. Movements of troops affecting Order of Battle have been and still are Secret. Unit movements of non-operational significance in areas in or adjacent to operational theatres have been and still are Confidential. Information concerning moves of non-operational significance in areas remote from theatres of war has "normally" been graded Restricted. The only change, therefore, in the lifting of Security restrictions where Atlantic movements are concerned is to remove from the Restricted category one definite class of movements — movements of personnel to or from Europe concerning which the Jap is thus given no information he does not already possess, even if he were interested in details of such moves.

Sound Security, it is repeated, is more than a mere collection of oft-repeated phrases. Security regulations are, and must be, based on common-sense. The removal of Security restrictions immediately they have served their purpose does not weaken the teaching of Security. Provided the "whys" are properly explained, such action cannot but strengthen Security teaching, instead.

CANADIAN DENTAL CORPS SERVES THREE ARMS

The dental profession of Canada takes justifiable pride in the fact that the first dental services afforded Empire troops were those offered by the Canadian Army Dental Corps which was organized in February 1915. Thirty years have thus elapsed since this initial effort and this is deemed an opportune time to consider the remarkable development of this unique health service which is today so familiarly known to the three arms of the Canadian Forces, everywhere, as the Canadian Dental Corps.

Organization: Although there were no active formations of Dental Corps units previous to September 1939, with the declaration of war by the Canadian Government, the Canadian Dental Corps came into being in a reorganized form. It did not spring spontaneously from the remains of the old unit but rather as the result of years of careful planning by the profession.

The disadvantages of separate dental services in the Forces of Great Britain, United States, Australia and other countries were explained in a report submitted by the present Director General to NDHQ, through the Canadian Dental Association. Thus, when the plan was accepted by NDHQ, the Canadian Dental Corps was formulated to serve, simultaneously, all three arms of Can-

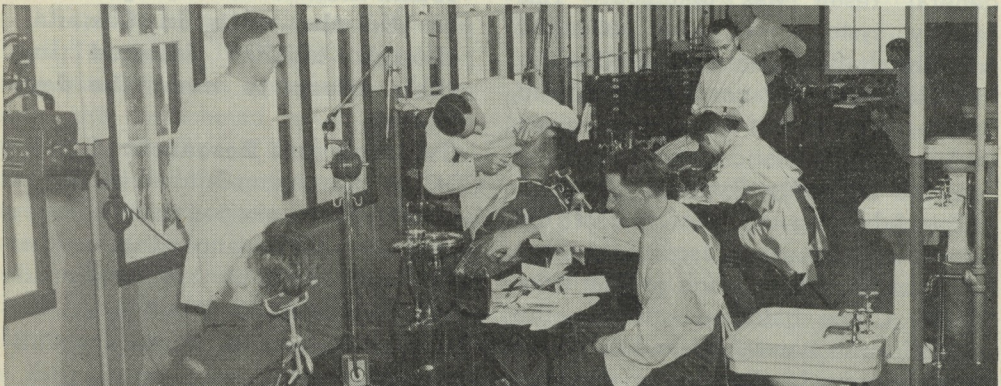
ada's Forces. For this reason, the word "Army" has been omitted from the name of the present Corps, and, although all CDC personnel wear the uniform of the Army, they serve RCN and RCAF personnel with equal effectiveness. In this respect, the CDC is unique among all Canadian Service formations.

Strength: War and Home War Establishments for the Dental Corps totalled at their peak 1626 officers and 4400 other ranks. Today, there are on strength over 1546 officers and over 4000 other ranks. Included in the latter are QM Stores personnel, adjutants, clerks, technicians, instrument repairmen, dental assistants, and general duty orderlies. In addition, in camp areas there are carpenters, cooks, drivers, etc., common to all military establishments.

Portable Equipment: One of the first problems of the newly-organized CDC was to provide stores for its personnel and the means for using them under field conditions.

Instruments and most consumable items were selected from standard designs and brands and the procurement of them was merely a matter of ordering them from the manufacturers.

Equipment presented quite another picture, however, because field patterns



of trunks, operating chairs, lights, cuspidors, X-ray machines, in fact, a few dozen such items were all specially designed at CDC HQ. That these efforts were crowned with success is attested to by the fact that No. 1 Dental Company that proceeded overseas in December 1939 with the First Division had complete kits and was able to operate on disembarkation. There is no need to go into further details of these kits since they have been in use wherever the CDC has functioned since that time. It suffices to say that they constitute a miniature in dental equipment that is second to none of its kind in any dental service.

Treatment: The CDC faced the heaviest demand for service just when it was most difficult to provide, that is, in the early days of the war. At that time, in the tremendous rush of enlistments, there was an accumulation of dental defects that was staggering, particularly among many individuals who previously had not had the opportunity to secure such service.

A priority system of treatment was introduced to meet this condition with an under-staffed Corps. By this method, it was possible to categorize all patients and, through previous examinations after caring for emergent work, call in for treatment those cases that were most urgent. This meant, of course, that some had to be retarded while others were cared for but a very satisfactory general result was obtained. This priority system was later extended whereby drafts of personnel proceeding from basic to advanced training and thence to combat duty were given preference over static units.

Priority System

The advantageous features of the priority system were soon apparent to all concerned; so much so, that even as the Corps gathered strength the principle was maintained and its mechanics improved. By this methodical

approach to the treatment problem, training time was interfered with only to a limited degree and, finally, when the individual was ready for action, usually only a small number of incipient requirements remained for completion overseas.

It should not be forgotten that throughout the war, the ratio of DO's overseas was always maintained on the basis that was as high and often higher than that in Canada. Thus, when the first troops proceeded overseas, in December, 1939, the full complement of dental detachments accompanied them, despite the fact that numerically greater treatment problems had to be faced at home. Consequently, when it is known that the average individual upon enlistment had an average of seven separate dental requirements and, that these were reduced to less than 2 by the time he proceeded to an active theatre, as was the case in the last six months of 1944, it will be granted that the priority system was effective.

The principle of "once fit always fit" is not at all applicable to dentistry, for, besides the fact that practically everyone entering the forces had an accumulation of dental defects, dental disease is of a progressive nature and therefore a recurring problem. Consequently, it is small wonder that overseas CDC units often found themselves hard-pressed as did the units in Canada though neither faltered in their efforts to meet the demand.

Training and Research: That the CDC is not inclined to "rest on its laurels" can be attested to by the new techniques and advancements in treatment methods that are continually being brought to the attention of DO's, through the facilities of its Technical Training Centres.

Dental officers, technicians, and dental assistants are brought to these Centres in London, England, or Toronto, Ontario, for specialized refresher training and small but steady flow of technically trained personnel proceeds from their portals.

Preventive Dentistry

Preventive dentistry is given priority in the field of research. A steady and keen probing into the effect of diet on tooth preservation and maintenance is being carried out constantly. The result of one such study that proceeded over a lengthy period at the RCAF Station, Trenton, Ont., in conjunction with the Medical Service of the RCAF, was the development of a technique for the treatment of periodontal disease including Vincent's Infection to the point where the average dental officer could apply it successfully after a short training course.

One of the major roles played by the CDC in this war is in the treatment of jaw injuries. Specially trained DO's and technicians are attached to all hospitals where casualties with injured jaws are brought for restorative surgery. The DO makes a major contribution here in the fabrication and placement of suitable restorative appliances for the reduction and fixation of fractured jaws.

Post - retirement or Discharge

Treatment: There still remains a certain amount of treatment to be rendered for personnel who are now to be retired or discharged despite the fact that over 16,000,000 operations have already been completed. However, the serviceman need have no apprehension if he is in this category, and has not had the opportunity to have his dental treatment finished. Provision has been made for this treatment to be rendered under the supervision of the Department of Veterans' Affairs.

The procedure at present in force is that every individual is given an

examination at the time of retirement or discharge. Any dental defects are recorded with the recommendations of the examining DO, and a form letter addressed to the Chief, Division of Dental Services, DVA, is given to the individual. At the same time, a copy of the examination is forwarded to DVA.

The ex-serviceman has only to fill in the form and forward it to the DVA **within 90 days of retirement or discharge** to secure the treatment. Upon receipt of this application, the DVA will take the necessary steps to see that the treatment is provided.

The War Against Japan: The first phase of the present war has been brought to a successful conclusion. The CDC will not consider its job completed, however, until the second phase has been thoroughly finished and peace finally achieved.

The objective of the Corps will be to make every individual dentally fit prior to his departure from Canada. It is realized that this may not be possible in many cases due to the extensive training program that is planned for these men. Also, as has been shown, the nature of dental disease and its recurrence will still leave a demand for dental service. Because of this, CDC is planning to ensure that DO's will accompany the Canadian Forces wherever they serve at sea with the Navy and on land with the Army and Air Force.

The Corps has for some time been studying the many problems related to tropical warfare to meet the widely differing climatic conditions under which the three arms of the Service will likely operate. It can be taken for granted that the Canadian Dental Corps will "not flag or fail" and will be well prepared to proceed with our Canadian Forces when they leave for the Pacific Theatre.

JAP RUSES



(ATM)

The Japanese are firm believers in combining trickery with tactics, and though repetition blunts the edge of their cunning, which is not of a very high order, nevertheless there is always a possibility that unsuspecting troops may fall victim to the enemy's stratagem. Some of the more popular brands of Japanese deceit are therefore worth describing.

Use of English and Indian languages: The Japanese often use the language of the troops opposing them to issue false orders, invite surrender, or locate positions; and although their accent is usually indifferent, it has on occasions succeeded in deceiving our troops. The enemy has been heard to shout in English, "Where is the CO?" or, "Number one section, cease fire!"; again, a voice in the night shouts, "Number two section, by the right, advance!" and a burst of fire greets the first sign of movement. On one occasion Japanese ingenuity fairly excelled itself when the enemy put down a smoke screen on our positions during the night and then charged with cries of "Gas!"

Use of the dead and wounded as decoys: Another Japanese trick is to leave the corpses of British and Indian soldiers on tracks covered by their own

machine guns; when our troops move forward to recover the bodies of their fallen comrades they are mown down by heavy fire at close range. At Arakan a party of Japanese actually lay up near one of our wounded in the hope of ambushing the troops who went out to rescue him.

Use of dummies: In the Chin hills and elsewhere the enemy constructed false positions, complete with dummy figures and weapons, with the twofold object of drawing our fire and giving an impression of greater strength. These dummies were dressed in correct uniform, with steel helmets, and were most realistic. The Japanese have also been known to use small parties of men to move about in a defended locality and show themselves from time to time in different places, in order to mislead observers into believing that their strength was greater than it was.

Use of animals: With typical cruelty, the Japanese have found a novel use for dogs. The dogs are systematically beaten and maltreated until they are terrified by the sound of approaching footsteps. They are then tied up so that they shall give a warning of our patrols. Another innovation, the advance behind cattle, has proved less successful, and the Japanese have learned to their cost that once their

infantry have been spotted a herd of panic-stricken cows is apt to prove more of a liability than an asset. Again, in Northern Burma, some Japanese were once seen driving a mule ahead of them with long bamboo poles; the enemy were advancing down a little-used jungle track and it was plainly intended that the mule should have the privilege of stepping on any mines or booby traps that might have been laid on the path.

Use of noise: The Japanese, who are great believers in noise as an agent to deceive and demoralize their enemy, have a habit of firing explosive bullets over the heads of our troops. The sound of explosions coming from the rear and flanks is an alarming experience for untried troops, who are apt to think that they have been surrounded. Wooden rattles to imitate the noise of machine guns, Chinese crackers thrown into our positions at night, and the rattling of rifle bolts are some of the expedients the Japanese have employed to give an impression of strength in the hope of lowering morale and causing a premature withdrawal. Several reports have described how enemy troops have made a noisy frontal advance in order to cover the silent flank attack of the main force.

Use of uniforms and civilian clothing: Japanese patrols have been seen wearing British uniforms and Gurkha style hats in the hope of deceiving our troops, and have also tried to infiltrate through our positions

disguised as local villagers. In Burma they have been known to dress themselves in the yellow robes of priests.

Use of own troops as decoys:

In New Guinea there was an occasion when Japanese, advancing on our positions, turned and fled when they came under machine gun fire. With their usual cry of "After the bastards" the Australians rushed forward with fixed bayonets. Almost immediately the fleeing enemy threw themselves flat on the ground and our troops met withering machine gun fire from concealed Japanese positions. On many other occasions the enemy have approached our positions under cover of a white flag, or with their hands raised above their heads, with the sole object of throwing grenades.

Use of artillery fire: When our infantry are advancing behind a barrage it is a favourite Japanese trick to put down their own artillery fire immediately in front of or amongst our troops in an attempt to give the impression that our own shells are falling short. In this way they hope to undermine the confidence of our infantry and so discourage them from pressing home the attack.

Use of fires: In order to induce our artillery to open fire and so disclose their positions, the Japanese send out patrols to light fires in an area some distance from their own positions, and give the impression that their troops are occupying the area.

LEARN TO LOOK

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

I reckon that I spent nearly two-thirds of my time in battle using my binoculars. Yet in nearly five years of "peacetime" training I was never taught how to observe, nor given any practice. Training in how to observe and how to watch a place "till it hurts" should be given.

TARGET PRACTICE



(The following article has been reproduced from the U.S. publication "American Rifleman". It was written by Lt. Col. George Van Order, U.S. Marine Corps, one of a trio who, by their heroism and dead'y marksmanship, won for themselves the title "The Three Musketeers of Bougainville." It was condensed from Army Training Memorandum for CATM.—Editor.)

Tactics—"what to do"—and technique—"how to do it"—are inseparably essential to the efficiency of a soldier in combat. Tactics—"the science whereby weapons are brought to a point from which they may destroy the enemy"—are of small value without the technique necessary to the handling of those weapons.

The accurate delivery of destructive fire by individual marksmen is always the culmination of the several phases of a victorious engagement. A battle in the jungle always develops into a situation where the individual soldier comes face to face with his enemy. To hesitate, to stop to think what to do next, to run for cover, to do aught else but kill that enemy instantly with a bullet, is fatal. To close for hand-to-hand combat is senseless if it is possible to hit him with a bullet. To the man who faces his enemy in the jungle, this moment is the beginning and the end of combat so far as he personally is concerned. The man who first gets a bullet in the other fellow's hide is he who lives to tell the tale.

For the individual, then, this is the absolute minimum of essential knowledge and skill required: that he be capable of accurate delivery of fire, excellent battle marksmanship, and intelligent collective action. No definition will better describe what constitutes "excellent" battle marksmanship than the statement: "You generally get only one chance. If you miss you're a gone duck!" The only sure-fire pass mark for performance in combat is 100 per cent. Anything less is dangerous.

To attain that standard, the soldier must be thoroughly trained in marksmanship against fixed targets at known distances, in marksmanship against moving objects, and in the technique of the rifle squad.

The soldier who has been skilfully instructed in every phase of target practice, who has been brought up to a satisfactory standard of performance by competent instructors, has, as an individual, been trained in the basic technique of the rifle in all forms and conditions of combat and is now, and only now, technically ready for battle.

Why only "technically" ready for battle? Because up to this point we have considered only the technical value of target practice. There is another value which, though

at least equally, and perhaps even more important in its effect, is seldom if ever, considered — and that is the psychological value . . .

Many have heard tell of the "expert rifleman" who failed in two tries to kill a bandit who was charging him from 20 yards, and was unable to get in his third shot because in the meantime his head had been lopped off with one stroke from the bandit's machete. And the story of the "champion police pistol shot" who emptied his revolver at a murdering bank robber at close range and succeeded only in killing an innocent bystander. What was the matter with these men? They certainly had the ability to hit their opponents—but they didn't!

Is this, then, a condemnation of target practice, that two men who were so skilled as to win honours on a range could not hit an easy mark in combat? No. These failures were due to just one thing; those men did not have the moral qualifications of a fighting man. They couldn't take it. When pressure was applied, they cracked. They had the ability to hit a mark on the range target, but they didn't have what it takes to stand up to the dangers that accompany the hitting of a mark on the battlefield.

They Came Through

Everyone knows, too, such stories as that of the man who charged a bunker single-handed and killed 19 Japanese with 20 rounds from an automatic rifle; and of the machine gunner who stuck to his post and killed 74 out of 75 of the enemy who were trying to turn the flank of his battle position. What of these men? They, too, were experts. Their "scores" are prima facie evidence that they had the technical skill with weapons. They, too, had made fine records at target practice. But, when the heat was turned on, these two came through.

What were the differences between these four men? One thing, and only one thing: two of them had military character, and two of them did not. Military character made the difference. Some people call it "the fighting heart." Others call it "guts." Our enemies, the Japanese, call it "bushido." Whatever you call it, it is the distinctive moral qualification of a fighting man.

A man of great military character who has no skill with his weapon is almost as worthless in battle as is the superb technician who has no military character. If the Japanese spent the effort in developing bushido through rifle marksmanship that they have spent developing it through the sword, there would be an entirely different story to tell of the effectiveness of their military forces in battle. No deficiency in the training of the Japanese soldier equals in importance the condition described by the old veteran who said, "Them Japs look good but they can't hit nothin." Japanese soldiers do have "fighting heart." It is too bad for them that they have not a skill with rifles and machine guns and cannon and bombs, along with the bushido of the ancient Japanese warriors.

Greater Dividend

If it is your privilege to train men for combat, do not approach target practice from the angle that such training is for the sole purpose of teaching men how to manipulate a weapon. Recognize instead that its benefits reach out to every extremity of military endeavour and that it yields a greater dividend in relation to the time and effort expended on it than any other practical means of developing combat efficiency.

Use target practice as the means to build up the confidence and courage of the men you will lead into battle. Watch that confidence and courage

MAJ. GEN. C. VOKES, C.B.E., D.S.O.

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

Born in Armagh, Ireland, in April 1904, Christopher Vokes came with his family to Canada at an early age and received his elementary education in Canadian schools. He graduated from Kingston Collegiate and entered Royal Military College in 1921. His father, an Engineer officer, was on the staff of the college and it was quite natural that the son should choose as his corps, on graduation, the Royal Canadian Engineers.

He was commissioned in the RCE with effect July 1924, and was posted for duty with the District Engineer Officer of Military District No. 3, at Kingston. Later he was posted to No. 6 Detachment at Halifax and spent a year at the School of Military Engineering in that city. In the autumn of 1926 he attended



McGill University and in the spring of 1927 graduated with the degree of Bachelor of Science.

After obtaining his degree, he assisted in Engineer training in Canada

TARGET PRACTICE

(Continued from Page 13)

blossom from the day that the soldier on the target range comes to know he can hit what he shoots at, and that his weapon is capable of meeting his every demand . . .

Give him a chance to practice. Make him get out and shoot. A man learns only by experience. And make him do it right. Make him satisfy himself that it's only the 100 per cent performance that hits the mark. Prove to him that 99 per cent or less just isn't good enough.

When he's got the knack, exercise him frequently in interesting, worthwhile, realistic, sensible problems that will improve his skill. Stop him and correct him when he suffers a slump. Fight mediocrity like a plague. Give him an incentive to strive for perfection. And then watch him start to acquire the

life-saving habits that will control his reactions when he comes under the stress of combat.

Watch these good habits gradually supplant the bad. There are in most men many instincts to do things the wrong way. These must be overcome—from the reflex of flinching to meet the recoil of the rifle to the reflex that leads a brave man to attempt to win the war single-handed. Individual courage must be harnessed to a plan. If it is not, it may be as harmful as the cowardice that causes a man to cringe in his hole in a state of abject submission. Once these reflexes are controlled, you are close to your goal.

There is only one more thing to be put across, and sometimes you can't make a man believe it in training. But he'll find it out in the first five minutes of combat! That is: "It's only the hits that count." When he believes that, your work is done . . .

and later attended the School of Military Engineering at Chatham in England. He returned to Canada in the spring of 1929 and was posted to Military District No. 10 as Works Officer and in the same year was promoted to the rank of Captain. In March 1931, he was posted to Regina as District Engineer Officer for Military District No. 12, and the following year took the Staff College preparatory course at the Royal Military College. In January 1932, Captain Vokes married Miss Constance Waugh of Victoria, B.C., and a son was born in December of the same year.

Finishes Staff Course

After completing his course at Kingston, he returned to Military District No. 12 to supervise the extensive development at Dundurn camp and later filled the appointment of camp superintendent. In December 1934, he again went to England as a student at the Camberley staff course. Upon graduation from the staff course, he returned to Canada and was appointed Army instructor with the Royal Canadian Air Force first at Camp Borden and later at Trenton, Ont.

In July 1936 he was promoted to Major and appointed District Engineer Officer of Military District No. 3, at Kingston, where he remained until 1938 when he was posted to NDHQ as a member of the Navy, Army and Air Force Supply Committee, and in 1939 joined the Adjutant General's staff at NDHQ.

In December 1939, Maj. Vokes went overseas as DAAG at CMHQ and in the spring of 1940 was promoted to the rank of Lieutenant-Colonel and to the appointment of AAG (Personal Services).

Later in 1940, Lt. Col. Vokes left CMHQ to take the appointment of AA & QMG of the First Canadian Division, and a few months later moved from the A & Q side to the General Staff as GSO 1 First Canadian Division.

Late in 1941, he commanded the PPCLI and shortly thereafter was promoted to the rank of Brigadier to command the Second Canadian Infantry Brigade.

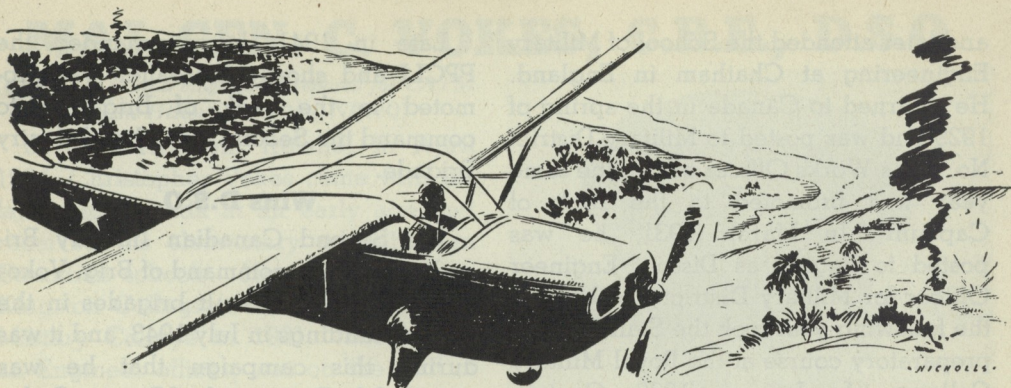
Wins D.S.O.

The Second Canadian Infantry Brigade under the command of Brig. Vokes was one of the assault brigades in the Sicilian landings in July 1943, and it was during this campaign that he was awarded the Distinguished Service Order for gallant and outstanding leadership.

Brig. Vokes continued in command of the Second Brigade through the assault upon and subsequent campaign in Italy until November 1943, when he was promoted to the rank of Major-General and to command the First Canadian Division in succession to Maj. Gen. G. G. Simonds. He continued in command with the First Canadian Division through the heavy fighting in breaking the Hitler and later the Gothic line, and for his outstanding ability in these operations was created a Commander of the Order of the British Empire. Later he was honoured by the Government of France by being made an officer of the Legion of Honour and being awarded the Croix de Guerre with palm.

Late in 1944, Maj. Gen. Vokes was moved from his command with the First Division in Italy to command the Fourth Canadian Armoured Division in Holland, and he was in this command on V-E Day. For his work with the Fourth Canadian Armoured Division during the bitter fighting between Maas and the Rhine and the subsequent pursuit across the Rhine, he was created a Companion of the Order of the Bath.

Since V-E Day, Maj. Gen. Vokes has been selected and has taken over command of the reorganized Third Canadian Division, and will be the Commander of the Canadian Army Occupation Force in Northwest Europe.



EARLY LUZON EXPERIENCE

(Condensed from an article by Capt. J. Richard Hearn, FA, in U.S. Field Artillery Journal.)

These few notes are written by a 155-mm M1 Howitzer BC in a Corps Artillery Battalion with the hope that they may be instructive for those . . . on the way to join us. This is what we have found this war to be like after one month of campaigning.

Movement: Little or none after dark, especially in forward areas. No occasion for night displacements or occupations.

Observation: Almost exclusively done from the air. Lack of ground opposition to Cubs enables observer to hover right over target, making shooting extremely simple and accurate. This is true of targets at any range that the present weapons can reach. Targets are very hard to find from plane, but if location is definitely known on the map, adjustment is simple and certain. Sound ranging, I am told, has resulted in some excellent results during night counter-battery fire.

Communications: After one month of campaign, we have yet to run an OP line. As a result our communications within the battery have been quite simple. The usual procedure, which has worked well, has been to bring the 3/4-ton wire truck forward with the BC's party. Often the CP can be pointed out as we pass. As soon as possible after reaching the position area, I select the switchboard position. The

direct FD line can then be run by truck using W-110. In the meantime the local line to the perimeter defence guns, executive post, battery CP, and sometimes the kitchen are run in, using W-130. We always try to pick up our W-110, but the lighter wire in the local setup is not usually recovered as it is needed until the last minute for control and defence against infiltration.

Use of Radio

Radio, used only for displacements and for air-ground communication, has worked excellently when used. There is nothing new or difficult about its use here—the simpler the better. By the way, we have made a practice in many danger spots of servicing no wire outside the battery perimeter, after dark. We simply revert to radio until dawn. Things which move outside the perimeter after dark are viewed with great distrust.

Firing battery: Much of our work is counter-battery and calls for extreme accuracy. The excellent aerial observation, in addition to the flat terrain and green fields, gives the observer certain knowledge of the performance of the gun crews. Each round leaves a doughnut in the ground and the doughnut remains as evidence of bubbles that were not levelled, aiming posts that were not in line, and similar offences against the laws of good shooting. These things were pointed out very

early to the gun crews and I know that being convinced by one who actually saw the results on the ground and could graphically describe them, did a lot to make the men take more care.

We have fired Charge Seven almost exclusively and as a result have run into considerable displacement. Experience has taught my executive that the actual realignment of the aiming stakes, even for only small amounts of displacement, pays off in both results and reputation with the air observers. Leaving all the petty mathematics aside, as well as the position and distance of the stakes from the gun, every fraction at the gun shows up many times multiplied 15,000 yards out.

Visual Control

Some outfits I've seen seem to use the telephone lines to the pieces for exec control to quite a degree. My exec and I are firm advocates of visual control under all possible circumstances, as nothing else gets the proper results. There are few instances here, even at night, where visual control is not possible and preferable.

By keeping the GP radio on the airground channel, the exec can listen in on the observer's sensing and transmit to the gun crews immediately the accuracy of their firing and sometimes the results. Nothing is of greater morale importance in the whole battery than getting the news as the results of the shooting of a section, battery, or battalion. It will do more for the functioning of the firing battery than all the checks and pep talks ever made.

THE SECRET

To move swiftly, strike vigorously, and secure all the fruits of victory is the secret of successful war.

Housekeeping: This department I consider a unique contribution and probably as important as all the previous departments together.

The battery CP, tent, foxholes, beds and mosquito bars, firing charts, clothesline, washstand, musette bag racks, and whatnot go in at the same time and with the same speed and efficiency as the firing battery occupies position. Positions for the men to pitch their cots and shelters are selected with great care and exactness, taking into consideration neatness, nearness to guns, camouflage, shade, and defilade.

Each section follows its own SOP in putting in these installations. Ammo is scrupulously cleaned, oiled, and prepared for firing. Everything must be off the trucks and off the ground. That means everything—including helmets, carbines, musette bags, and what-have-you.

Keep Clothing Clean

All clothing must be kept clean all the time and must be changed daily. Count on building a washing machine and fixing up a portable shower during the first break you get after hitting the beach, and then be sure that both of them are operating as per a published schedule within a few hours of the time you hit each new position.

Windshields are wiped off immediately after the vehicle is used, and each time. The motor officer reports within a matter of a few hours after each displacement, that all motors have been thoroughly checked, lubricated, and cleaned — and I really mean cleaned just as you mean it back in garrison. Everyone must wear a complete and proper uniform at all times except when sleeping with proper authority. That means a shirt, too.

WAR NEWS IS HOT NEWS!

(CATM appreciates the privilege of publishing this article on Public Relations work by Col. Richard S. Malone, O.B.E., Director of Public Relations (Army). In this "piece" he tells of the work of the Soldiers Of The Press who are entrusted with the important duty of maintaining morale on both the fighting and home fronts through the medium of their despatches telling the daily story of the war.—Editor.)

The Chicago Tribune had not heard a word from its War Correspondent covering the Russo-Japanese War of 1905 for almost six months. Practically all that was known of the progress of the war was whispers and rumours, and inspired stories issued by the governments of the warring nations on the other side of the world. Suddenly, as if from nowhere, a despatch crackled laboriously over the hand-operated telegraph set in the news room. It told the dramatic story of the capture of vital Port Arthur in a surprise assault by Japanese Naval forces; the story of an action that stunned the world with its daring conception and won the war. The battle had taken place four months previously!

On his own initiative the enterprising Chicago correspondent had bought a ship and by as much good luck as good management had witnessed the fighting. Then he had to steam back to a mainland port, sell the ship and return to a neutral capital before writing his epic story and entrusting it to the precarious systems of transmission to America.

Churchill's Ingenuity

A few years earlier, despatches telling the stories of the daring raids and fierce engagements of the Boer War also took months to reach newspapers and, through them, the folks at home. Even the ingenuity of Winston Churchill himself, one of the leading war Cor-



Col. R. S. Malone, O.B.E.

Prior to the outbreak of the Second Great War, Col. Malone had some 15 years' experience with Canadian newspapers and was formerly a member of the Parliamentary Press Gallery, Ottawa. He enlisted early in the war and trained at an infantry training centre in Winnipeg. For a short time he was staff secretary to the Minister of National Defence and then, on completion of a staff course, he rejoined his former militia regiment, the Queen's Own Rifles, in England. Subsequently he was appointed Staff Captain in the 5th Canadian Armoured Division and later Brigade Major with the 2nd Canadian Infantry Brigade.

Landing in Sicily with the 2nd Brigade on "D" Day, Col. Malone distinguished himself a few days later by capturing the first Italian general. He was wounded in Sicily when his carrier ran over an enemy mine; he was mentioned in despatches for his services in Sicily. Recovering from his wounds, he returned in time for "D" Day in Italy and served during part of that campaign as Field Marshall Montgomery's personal liaison officer. During the winter of 1944 he took command of the Mediterranean Public Relations group and founded the "Maple Leaf," Canadian Army newspaper. He was awarded the O.B.E. for services in Italy.

Col. Malone returned to England to organize the press services for the Normandy assault, and throughout the campaigns in North-West Europe he commanded No. 3 P.R. group, which established a high record of service.

respondents of the time, could not overcome the delays of the Blimpish hold-up of the official news and communiques or the unreliable—and often unavailable—transmission facilities of the day.

In World War I there was only a handful of War Correspondents to tell the story of those long years of hard fighting. And seldom did those newsmen get beyond General Headquarters, for they were not welcome in any spot close to the fighting. Their stories were long out of date by the time the details had sifted through to cautious Staff Officers at GHQ who had their own ideas of what should and should not reach public prints.

Today, however, war news is hot news — military security alone delays despatches of War Correspondents. Through Public Relations Officers, War Correspondents have a close liaison with G Branch. Before important operations the Warcos are given a complete briefing by the senior Commander of the operations, and sometimes more detailed briefings by commanders of junior formations taking part.

All facilities are provided by the Army so that accurate, well-balanced stories are insured. The Warcos are trusted completely, and looked upon by senior commanders as a type of Staff Officer entrusted with the important duty of maintaining morale on both the fighting and home fronts by the medium of their despatches telling the daily story of the war.

On the Western Front with First Canadian Army, highspeed wireless sets capable of an average of 160 to 200 words per minute flashed news back to London from the actual battle scene. It took but a few minutes to transfer this pre-censored copy to commercial cable companies and have it on the way to Canada and the rest of the world: Direct radio hook-ups brought the sound of battle with the eye-witness commentary of radio war correspondents to homes in Canada while the fighting was still in progress.

Front-line photographers, using the top priority granted Public Relations, had their films flown back to the United Kingdom the same day the pictures were taken. Quickly developed and censored, the pictures appeared in the next day's paper in London, and, radioed across the Atlantic, appeared in the comparative editions of papers in Canada.

Efficiency of PR

The present efficiency of Public Relations evolved through hard-won experience in both operations and training and by constant exchange of ideas and experiments by British, United States and Canadian PR units. The system in operation in North-West Europe started with planning long before the invasion.

Based on the G (Propaganda and Psychological Warfare) Branch at Main HQ, 21 Army Group, the British pattern is in two sections. Under Publicity comes the Film and Photo Section, War Correspondent Conducting Sections, troops newspapers such as The Maple Leaf, short stories on local men for newspapers in Canada of small circulation, and general Army Publicity work. Then a special PR signals section, manned by R.C.C.S. personnel, operate the teleprinter lines, high speed wireless circuits, and lately special Press aircraft for flying recordings and films have been used as part of PR. Also attached are press censorship bricks, Intelligence trained officers, sometimes, naval and air representatives as well as Polish, French and Dutch speaking Officers. Other sections specialize in radio broadcast and staff trained officers work on the preparation of official daily communiques.

Under the Psychological Warfare section of P&PW are the two types of propaganda in the field: combat propaganda through the use of amplifier units, leaflets and radio broadcasts designed to lower morale and the will

to fight off the enemy behind its own lines, and consolidation propaganda, making use of much of the same equipment, educating the liberated population and lifting up their morale with the truthful news of our progress so that they become a greater help in cooperation along our lines of communication.

Public Opinion

The results have been that the World War I feeling that the Press and War Correspondents were to be avoided has been broken down. This has come none too soon. Long before the war Hitler and Mussolini realized the value of Press and worked their Doctor Goebbels' overtime. Even Napoleon is quoted as saying: "A hostile press is more to be feared than five army corps." The importance of publicity at home and abroad, however, has now been recognized, and the Allied press has been allowed to play a full part in the war effort through the facilities granted by the Army for it to tell the whole story and keep public opinion firmly behind the field forces.

Senior Commanders were quick to realize that War Correspondents must be entirely "in the picture" so that well-balanced accounts of the various operations on all parts of the widespread battlefield in Europe could be integrated intelligently in the newspapers at home. Their stories could not be guess work. Mutual trust between newsmen and commanders quickly followed. The results—an accurately informed general public and well-publicized troops — were gratifying to both Army and Press.

Army Public Relations in both the Mediterranean and North-West Europe theatres of operations were based on PR Groups to co-ordinate policy, facilitate administration and transmission together with censorship clearance.

High records were set by these Groups. The first allied news

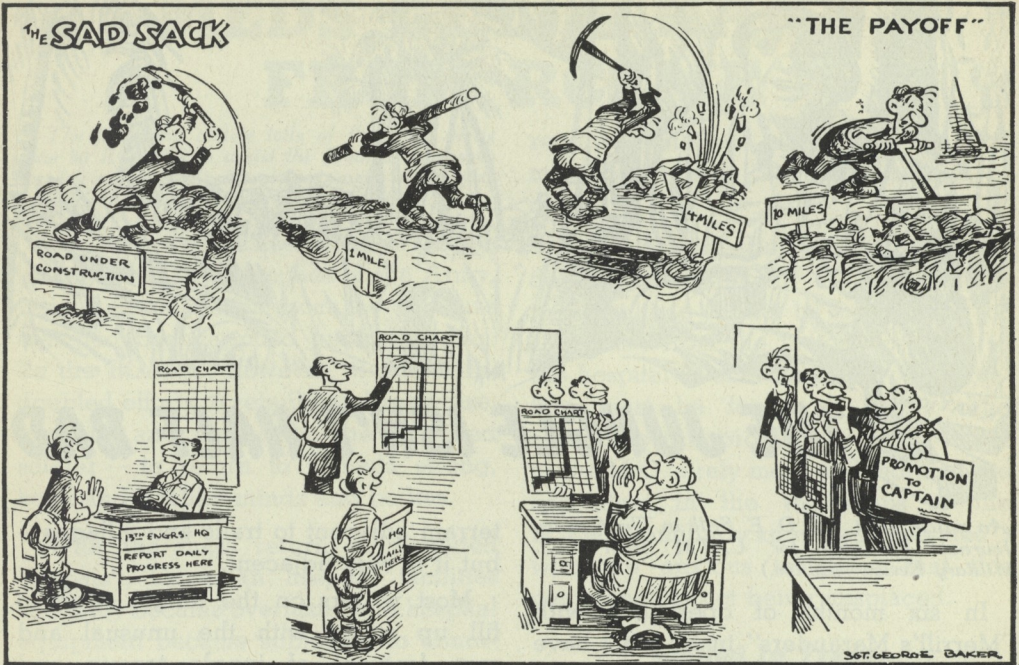
despatches out of Sicily came from Canadian PR detachments, and again, Canadians scooped the world on the invasion of Italy.

On the Normandy landing, the first six news despatches to come from the actual beachhead were cleared over the Canadian portable wireless set and the first still and motion pictures came from Canadian PR photographers and were radioed and flown to the United States and Russia. Canadian photographers had dropped behind the lines the night before by parachute.

When Paris was liberated, a Canadian portable wireless set was erected on the roof of the Hotel Scribe and cleared the first flashes within a matter of minutes of the Allied occupation of the French capital. On all of First Canadian Army assaults from Normandy to Germany, the Canadian PR Group participated. Depending on the type of assault—whether it was the combined effort on Walcheren Island, or a large-scale operation "Veritable" which cleared the Western Bank of the Rhine—the Canadian PR Group devised ways and means of getting the news out. The news never stopped. Despatch riders covered hundreds of miles night and day to make plane connections and reach wireless transmitters. A total of more than 70 Allied war correspondents were assigned to the Canadian Army during operation "Veritable." They represented countries in all parts of the globe.

A Lot of Work

Employment with PR was no ride on the "gravy train." Between operations there were always detailed stories and pictures and broadcasts explaining the way in which the previous battles had been co-ordinated and carried out, and stories of individual units to be sent home so that credit was due. Inspections of the formations by the King and



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many other "VIP's" (Very Important People) brought good publicity for the Canadian war effort in the world's press. And during operations PR worked a full 24-hour day.

Airborne operations were covered by trained paratroops and glider-men detached from the PR Group; through close liaison with G Ops, no major operation was missed and practically every minor job was covered by one or all of the three major media of public information—press, radio and photograph.

Casualties, particularly in the Film and Photo section, were high for a camera is no answer to a mortar or sniper's rifle. Normal wastage, too, was comparatively high, because of the constant work under high pressure. Vehicle casualties likewise were heavy due to the great distances in-

volved covering all sectors of the front. Within less than a week after D-day in Normandy every PR vehicle on the beach-head had been struck by enemy fire.

Due to long-range planning, anticipation of future obstacles as the Army drove far into Europe, and ceaseless effort on the part of PR personnel, the world was given a day-by-day account of the victory march from Normandy to Berlin. This accurate, speedy, daily—and sometimes hourly—story of the progress of the war played a great part in maintaining morale at home and was certainly not lost on the fighting troops themselves who knew their efforts were being carefully followed by the folks in Canada. The other side of PR work in the field namely Psychological Warfare or propaganda is a separate story.



THE JUNGLE ISN'T HALF BAD

(An article by Lt. Col. D. E. Still in *The Cavalry Journal*. Extracted for CATM from *U.S. Military Review*—Editor.)

In six months of operations with "Merrill's Marauders" in Burma I have seen two snakes (garden variety), one scorpion, and that is all. Without even trying, anyone could do as well in one afternoon along the Texas border. At certain seasons of the year the jungle is a bit warm, but it is certainly not any hotter than Fort Clark in the summer, or for that matter, Fort Riley in August. There are, however, quite an assortment of trees, bushes, and vines. In fact, for the most part, on careful inspection, one finds that the Burma jungle is composed of that and little else. To this there is one important exception: there are trails, villages, and clearings.

These latter terrain features are all important. No one (not even the natives) does much fighting, carousing or loitering in the jungles proper; that is, not for any extended period of time. Everyone travels on the trails, makes his living off the clearings, and lives in or near the villages. Likewise, most all of the fighting is on or near roads, trails, and villages. Of course, during the excitement of battle, and for tactical reasons too, a certain amount of fighting occurs in jungle

terrain adjacent to trails and villages—but it is very adjacent.

Most writers on the jungle seem to fill up space with the unusual and rare features of jungle terrain and jungle fighting but fail to mention the commonplace and day-to-day usual items.

Limitations

As far as fighting is concerned, the Burma jungle imposes limitations on the usable range of weapons, increases the relative importance of short-range automatic weapons, and increases the difficulties of observation for artillery and mortars. Manoeuvre is restricted, of course. Usually, troops move more slowly and for shorter distances. Obviously, negative air information must be closely checked.

He who controls the trails, towns, and watercourses controls all the rest of the local scenery. If the Japs prefer to forsake these and go in the jungle, don't become impatient. They will get disgusted and hungry enough to come out. If they stay in the Burma jungle long enough, and in sizable numbers, the Emperor will probably be forced to form another new cabinet.

As for living off the Burma jungle, forget it. Stick to K or C rations, however mono-

MEDS GET A HAND FROM RCEME

The following article tells of the work being done by RCEME to assist the Medical Corps in keeping much-used medical equipment in working order for the treatment of "Repats."—Editor.)

The cessation of hostilities in Europe meant, for many branches of the Army, relief and relaxation from the pressure that had been applied for long years. To the RCAMC, however, it meant redoubled efforts to rebuild and revitalize, mentally and physically, the wounded soldier — to return to Canada strong, keen and healthy minds and bodies.

With the mass return of wounded "Repats", Canadian hospital facilities suddenly became overtaxed and hospital equipment became subjected to abnormal wear and tear. When hospital equipment fails the Medicos must search for a quick solution. Their patients

require immediate attention — not next month, not even next week — but at once.

Time cannot be wasted shipping defective equipment to the factory; precious time cannot be lost waiting for specialists from the factory to travel to the hospital to effect repairs. The solution must be found at hand. The answer to this problem is being found as the M.O.'s rely more and more on the specialists in the workshops of the RCEME (familiarly known as "Ree-mee") who are anxious to prove that this confidence is not being misplaced.

Skilled In Trades

Highly-skilled technicians have been developed during the war period — specialists in radar, wireless and other electronic devices, specialists in welding, machining and blacksmithing, men skilled in carpentry, sheet metal working, painting and kindred trades. These are the men who have the solution that the M.O.'s are looking for. There are some types of repair that cannot be effected, but for a determined and willing workshop, these are few and far between.

An excellent example of this spirit is found at Camp Debert where, during the past few months, close collaboration between RCAMC and RCEME has been developed. The problems have been many and varied. "Ree-mee" has been called upon to repair everything from sterilizing tanks to ironing cords, meat slicers and toasters; to modify and rebuild tray racks and servidors for the kitchen, to service X-ray and diathermy equipment, to revamp bicycles, sewing machines and lathes into "Rube Goldberg" - like apparatus for the all-important occupational therapy wards.

THE JUNGLE

(Continued from Page 22)

tonous. If bad becomes worse, bum some chow off the natives. If lost, and unable to find your way around, blame yourself for not learning basic scouting and patrolling, which is as applicable in Burma as in Kansas or Texas. Then, after this period of self-recrimination, swallow your pride and ask directions of a native as you would of a San Antonio traffic cop or a local farmer in Louisiana.

Seriously, all that one has to do to survive the jungles of Burma is to be sensible, adhere to basic principles, and snuggle up close to your own artillery and air support. If you do this, you will find that the jungle isn't half bad.

JAPANESE MINE FIELD PATTERNS

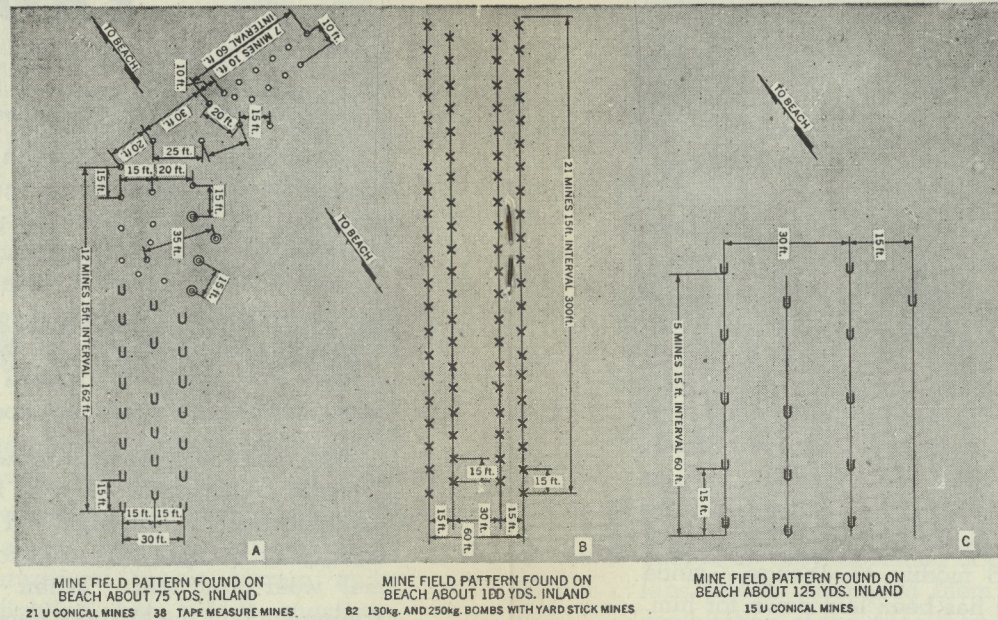
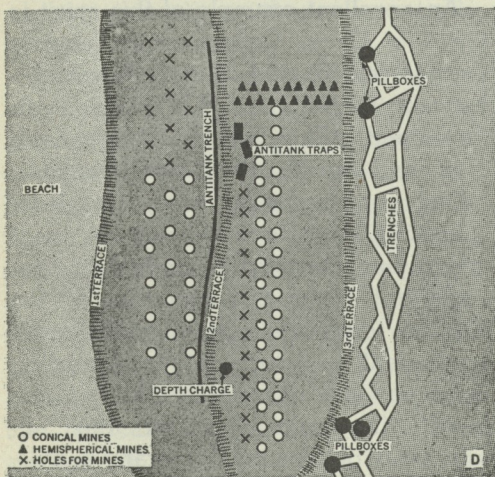
(U.S. Intelligence Bulletin)

When U.S. Marines stormed ashore on Iwo Jima, it was soon evident that this small island contained the strongest minefield defence yet encountered in the Pacific. The Japanese, who had anticipated the attack, had made extensive preparations to meet the assault. From the nature and condition of the minefields, it was clear that they were planned with much thought and permanently installed.

A study of the Japanese minefield technique used on Iwo indicates that in the last year the enemy has made substantial progress in the use of this method of modern warfare. It also discloses some significant minefield patterns and trends that may well be considered as a standard for other Jap minefields which may be encountered under similar circumstances in the future.

Landing Sites

The most heavily mined areas on Iwo were, quite naturally, those adjacent to the southeast and southwest beaches—the logical landing sites. Parallel to the entire length of the southeast beach was buried a double row of 500-pound aerial bombs. To each bomb a yardstick mine



had been flashed to act as a booster charge should its pressure fuze be actuated.

A typical minefield of this type is diagramed in pattern B. In this case four rows of bombs were plated to form a minefield 60 feet deep and 300 feet long. The bombs within each row were spaced at 15-foot intervals. In adjacent rows, the bombs were staggered so as to cover the intervals between the mines of the neighboring rows.

On the southwest beaches, the only mines found were the standard hemispherical anti-boat mines. However, the area immediately adjacent to, and the roads and logical routes from the beach, in general were thoroughly mined. Besides the bomb-yardstick combination, nearly all of the standard Japanese land mines were found in use in this area. Among these were the hemispherical anti-boat mine, the conical anti-boat mine, the yardstick mine, the tape-measure mine, the pottery mine,

the magnetic anti-tank mine, and numerous wooden box mines—some improvised and some prefabricated. (See July 1945 No. 52 Issue of CATM.)

Patterns A and C are typical of minefields laid with the conical mines. Although it was by no means standard, the Japs seemed to have had a tendency to lay many of these mines at 15-foot intervals in rows, 15 feet between adjacent rows. The staggered pattern of the mines of one row covering the intervals in another is again repeated. However, in pattern A, the regularity of the minelaying is discontinued when tape-measure mines, which contain a smaller explosive charge, are used to finish the upper portion of the field.

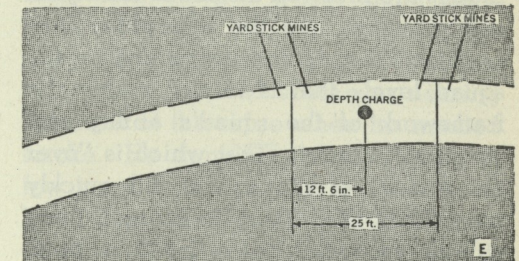
In spite of the more regular mine-fields found, not all of the mines laid on Iwo conformed to a pattern. In many instances, mines were laid haphazardly with no pattern whatsoever. Roads were liable

to be mined in spots—a typical case is illustrated in pattern E. Here an anti-submarine depth charge was planted in the road and fixed for pressure detonating.

Generally speaking, the mines on Iwo Jima were well buried or concealed. Because the metallic soil prevented the use of standard mine detectors, it was necessary to construct passages through many fields by hand probing and removal methods. However, for the first time with any consistency the Japanese defenders had covered many of their minefields with protective fields of fire. A minefield covered in this manner is illustrated in pattern D. This defence was located on a portion of the southwest beach.

Used First Time

Of further significance is the fact that the Japanese used anti-personnel minefields for the first time in the Central Pacific. These minefields, constructed in irregular patterns, consisted of pottery mines fixed for detonation by pressure or tripwire. The mines were scattered in pairs, each pair from 6 to 8 feet apart. Many of these mine pairs were connected with trip wires of green gut stretched above ground. Anti-personnel mines of this type also were found in abandoned trenches.



TECHNIQUE OF INSTRUCTION

The Creation and Maintenance of Interest

One of the major problems to confront the instructor is that of how to create and maintain the interest of the squad in the particular task at hand. Many authorities on the art of instruction rate **interest** as the most important single factor in the success or otherwise of instruction.

At least four major factors are involved in this problem: these are the instructor himself, the squad, the subject matter and the time and place of instruction. Each of these factors must be considered in deciding how interest may be awakened and how best it may be retained. Let us look at each in turn.

Three Qualities

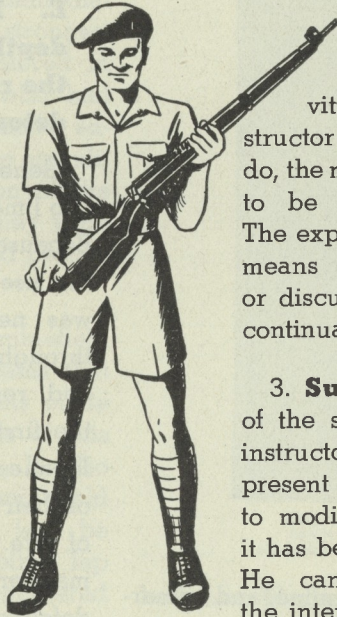
1. **The instructor:** Probably no single factor contributes so much to the interest of a lesson as the personal energy and enthusiasm of the instructor. The good instructor is a combination of teacher, actor and salesman, and it is the last of these qualities that arouses the interest of the class. The good instructor not only sells his product—he sells himself. He needs to remind himself constantly that while his subject may be an old, old story to him, to the squad it is new and fresh.

2. **The Squad:** Two principal techniques are involved insofar as the squad is concerned. In the first place it is necessary to keep the instruction on the squad level—that is to say, within the framework of the squad's ability and previous training. That which is "over the heads" of the squad will quickly bore them; that which is beneath them will be regarded as an insult to their

intelligence. Men resent being talked down to. The second vital principle to

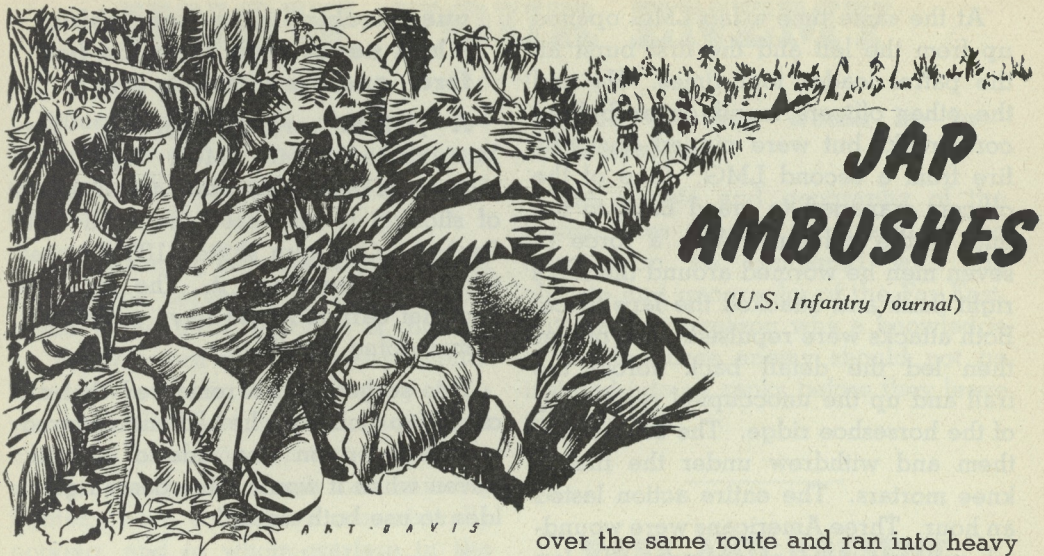
remember is that interest is directly proportional to activity. The more an instructor can get a squad to

do, the more likely is the squad to be interested and alert. The experienced instructor by means of questions, practice or discussion keeps his squad continually "in the picture."



3. **Subject matter:** Much of the subject matter that an instructor is called upon to present is beyond his control to modify or change, since it has been laid down for him. He can, however, increase the interest element in one or two ways. He should aim always at stressing the practical side of any bit of instruction and at bringing out constantly the battle purpose involved. A second means of adding to the interest is by the use of supplementary material. A great deal of supplementary material is now available in the form of notes from operational theatres, CATM's and various bulletins which can be of great value in adding life and interest to the material found in the regular pamphlets.

4. **The physical set-up:** Physical discomfort will destroy interest quicker perhaps than any other factor. If a soldier's feet are like two blocks of ice, his attention is naturally centred on his feet—not on the subject matter of the lesson. It follows then that the squad should be made as comfortable as possible, and particular attention should be paid to seeing that all members of the squad can **see** and **hear** without undue strain.



Despite the many opportunities the jungles of the South West Pacific Area offered for the ambushing of patrols, the Japs seldom attempted them and their exploitation of the ones they did set up was usually inadequate, if not inept. A rifleman of the 41st Infantry Division told of one attempted ambush of a patrol on Biak Island.

"The Japs tried to ambush our patrol by moving the sound-powered wire we had strung behind us. Their idea was that on our return we would follow the wire into the thicket where they were hidden. But we weren't sucked in. We could tell from the change of direction that the wire had been moved. It was the Japs that got surprised." A strong commentary, incidentally, on the necessity for remembering direction.

Japs Erratic

The Japs are erratic and it is not easy to fathom the reasoning behind their tactics. A platoon sergeant in commenting on this trait of Jap character recalled an experience that is not unusual, but never failed to have an impact on the men who went through it.

"We were out on patrol one day and didn't run into a thing," this sergeant reported. "But the next day we went

over the same route and ran into heavy Japanese fire. Apparently the Japs had been there all of the time and had let us pass unmolested the first day. One of our new men said to me after the fight, 'Yesterday I sat right under a tree and ate a chocolate bar while that Jap monkey looked right down my neck. After this I'm going to take cover any-time I stop.' "

A description of one well-prepared Jap ambush on Biak reveals both the strength and weaknesses in Jap tactics. The ambush was set on the left of a trail that ran through typical Biak Island terrain: steep terraces and ridges of coral paralleling each other at about 50 yards, and covered with rain forest. Visibility in such a country is limited to a few feet.

Scout Wounded

A 16-man combat patrol, including three officers, followed this trail (see sketch) swung over a low bridge and then went down a gentle slope for a hundred yards and up between the wings of a horse-shoe shaped hill. At 1100 hours the lead scout was nearing the crest of the ridge when he smelled smoke. He signalled the fact back. A few steps farther on he was wounded by a Jap rifleman who fired from a position 20 yards to the left of the trail.

At the same time a Jap LMG opened up from the left and the first burst hit the patrol leader four times. He and the other officers found cover behind coral rocks but were pinned down by fire from a second LMG. One of the officers managed to crawl back to the end of the column. With a force of seven men he wormed around the Jap's right flank and attacked the Japs twice. Both attacks were repulsed. The officer then led the detail back across the trail and up the unoccupied right wing of the horseshoe ridge. The enemy saw them and withdrew under the fire of knee mortars. The entire action lasted an hour. Three Americans were wounded and one died of wounds. No Jap bodies were found.

The survivors agreed that this ambush was as well prepared as any they had seen. One scout remarked that "it was done as well as we could have done it. They had prepared an alternate position for

one machine gun, something I had never seen them do before—and they used it, too."

A platoon sergeant agreed: "The Japs shifted their LMGs repeatedly instead of following their usual habit of sticking to one fire lane until out-flanked. One gun shifted 180 degrees when we threatened it. The Japs we had met earlier would have pulled out before doing that."

This sergeant also remarked that all of the Jap ambushes he had encountered were set up on one side of a trail, "even when it would have been a good idea to use both sides."

A squad leader voiced the opinion that if the Japs had held their fire a few moments longer they might have been able to inflict more casualties. This seems to be true of most Jap ambushes. As a general rule they fire on the lead elements of a patrol and make no attempt to cut off and annihilate the whole patrol.

A PROCESS OF ELIMINATION

(By the commanding officer of a field regiment in Burma. Extracted from Current Reports From Overseas.)

The brigade with which my regiment was working undertook four more attacks, each involving one or two companies with a tank squadron in support, as well as several purely infantry actions. The net result of these operations was that three or four hundred more Japanese joined their ancestors, and we pushed on to within six miles of Chauk on the Irrawaddy.

The two main areas cleared were those of Monakon and Milaungbya, and enemy tactics were similar at both places. In the first phase of the attack the Japanese stood up to our tanks in well-dug positions, were over-run and finally mopped up, yielding a "bag" of more than a hundred. In the second phase, a day or two later, the "back end" of the area was attacked; but this time the enemy ran as soon as

the tanks appeared.

Plans Altered

Since an initial concentration from the field regiment only, plus a few from a medium shells regiment, could not kill many Japanese in their deep bunkers, nor had it the weight to stun them, we altered our fire plans to suit the changed tactics of the enemy. Thus, when we came to the last attack, we put down a thin, diversionary concentration at H hour, and, with an air observation post overhead, sat ready to unload our quota of shells on a series of pre-arranged targets in rear as soon as the enemy should break and run. All went according to plan. An entire Japanese company fled the moment the tanks appeared, and we got among them good and proper.

KNOW YOUR ENEMY

(ATM)

Unless the enemy's characteristics are learned during training, ignorance of them will cost units dear the first time they go into battle.

The Japanese, because of his oriental outlook and perverted upbringing, possesses a mentality which it is difficult for the Western mind to comprehend. Thus it was that in the early days of the war in the Far East there was an almost universal impression that the Japanese was an abnormally tough and cunning fighter, who could live on virtually nothing, and to whom warfare in the jungle came as second nature. The facts are very different.

Often Stupid

It is true that the Japanese soldier is tough and possessed of great powers of endurance, and that he has the self-destroying bravery of the fanatic; but far from being cunning, he is often unbelievably stupid in his military behaviour. Contrary to the once common belief, he cannot live indefinitely on the proverbial handful of rice, and many of his defeats, both in Burma and in the South-West Pacific, have been due to the breakdown of his supply organization. Lastly, he is by nature no more at home in the jungle than is a London bus driver. But the Japanese had been trained for jungle warfare, whereas the bus driver had not.

The operations of the past year have proved that we are more than a match for the Japanese in every type of country. There are plenty of cockney bus drivers now fighting in Burma who, because they have been trained to know the country and their enemy, and to fear neither, are almost as much at home

there as they would be in Cheapside.

The climate and geography of the British Isles can by no stretch of the imagination be compared with the climate and geography of the Far East, but that is no reason why a knowledge of the Japanese enemy should not be instilled into all ranks before they leave this country.

PAST AND PRESENT

(ATM)

William Garrard, "The Art of Warre," 1591 — "Let the pikeman march with a good grace, holding up his head gallantly, his face full of gravity and state and such as is fit for his person; and let his body be straight and as much upright as possible; and that which is most important is that they have their eyes always upon their companions which are in rank with them and before them, going just one with another, and keeping perfect distance without committing the least error in pace or step. And every pace and motion with one accord and consent they ought to make at one instant of time. And in this sort all the ranks ought to go sometimes softly, sometimes fast, according to the stroke of the drum . . . So shall they go just and even with a gallant and sumptuous pace; for by doing so they shall be esteemed, honoured, and commended of the lookers on, who shall take wonderful delight to behold them."

A commander-in-chief, 1945 — "Drill has always been recognized as one of the very best means of fostering pride and self-respect. No item of drill is better for this purpose than smart marching."

HOW No. 6 COMPANY DID IT

(This article tells of the success achieved by No. 6 Company, RCEME, with HQ at Halifax, N.S., in giving tradesmen their 130 hours of training per year, as authorized by Circular Letter 1383 issued by the Directorate of Military Training. The accompanying photos depict various phases of drill and other training taken by this company.—Editor.)

The functions of an RCEME District Company may be set out as follows:

1. To carry out all technical work allotted to them in a "smart and soldier-like" manner: This entails the training of tradesmen who can work at their trades for long hours or at any time of the day or night under any conditions which may arise.

2. To train personnel or maintain their state of training so that they can take their place if required in any RCEME unit: This includes the basic training or the re-training of all ranks in the basic syllabus laid down for RCEME.

Train for Efficiency

3. To train officers and NCO's to be efficient shop supervisors and foremen. This is extremely important to the proper technical functioning of workshops: Very often the best tradesmen are poor NCO's. The best way to turn a good tradesman into a good shop foreman is first to train him to be a good parade and training NCO. An NCO who is accustomed to being obeyed promptly and efficiently on a training parade demands the same standards of obedience in workshops in his technical function of shop foreman. On the other hand, an NCO who has been promoted for his technical skill and is lacking in regimental training usually falls down as a shop foreman. This results in loss of production, because the best "producers" become poor supervisors and their productive capacity is lost to the unit.

The establishment of RCEME units is based on a yardstick calculated from the quality of equipment in the area

requiring repair and maintenance. It is expected that a unit up to establishment and properly trained will handle the required workload by working a 45-hour week. Training must be carried out in hours allotted additional to this 45-hour week.

To complete the required 130 hours of training, all ranks should average 3 hours per week of training time.

In No. 6 Coy. RCEME it was formerly attempted to do this training in two ways: first, by holding a 15-minute parade every morning, to include forming up, inspection and a short march to workshops and, secondly, by one training night a week, held either on the parade square or in a suitable drill hall, where the balance of the training time required was put in.

This attempt at training was useless, as the state of training did not improve and workshop production fell off. The day on which the drill was to be held always produced a large sick parade and the day after produced another large sick parade and workshops full of tired and grouchy tradesmen. The quality of the training was also very poor as the company did not have a sufficient number of competent training NCO's to carry it out when the whole unit paraded for training.

A change in method was introduced in April 1945, which has overcome most of the above difficulties.

How It Was Done

It was decided to carry on with the morning parades, but to improve them by training all NCO's properly to handle their own men on or off parade or in workshops and to organize a pipe band to improve the marching. These morning parades would occupy 50 hours of the required 130 hours of training time and did not cut into the 45-hour working week.



The second 50 hours of the 130 were to be carried out by withdrawing 10% of all ranks from production for a period of one week for a week's intensive training, this withdrawal to continue for 10 weeks until all personnel had completed this training time. This phase was to be known as Spring Training and extended over the last week in April, all of May and June.

The final phase of 30 hours was planned for September, October and November, to consist of small arms range practices carried out Saturday afternoons and Sundays.

In No. 6 Coy the personnel are distributed between four detachments stationed at Halifax, Debert, Sydney and Goose Bay. Training at Goose Bay was carried out satisfactorily under local arrangements. For the other three detachments, however, it was considered that this training should be carried out at Debert for all three detachments.

Before this phase of training was started six NCO's were selected all of whom had had previous experience as Assistant Instructors. These NCO's were given a two-week refresher course by a W.O. instructor borrowed from District training staff. The first week's batch of 60 NCO's and men were then concentrated at Debert and formed into two training platoons of 30 men each, with an instructor to each ten men. The whole scheme was supervised by the R.S.M., and the Regimental Officer.

In Own Hut

The training platoons were quartered by themselves in their own hut. For

some of them it was their first experience of barrack life and routine, as they had been quartered on subsistence in their own homes for the whole of their service.

A special syllabus was drawn up, which particularly stressed discipline, drill and small arms training up to completion of Tests of Elementary Training. This syllabus worked very well and met with very little criticism.

The training was carried out by all ranks in the spirit of "a change is as good as a rest," and a number of them were most enthusiastic about it and returned to their normal work, rested, refreshed and ready to carry out their ordinary duties more cheerfully and efficiently.

The effect on production was negligible, because the productive time lost by 10% of the men was more than made up by over-time worked by the remaining 90%. During the training period workshops worked, five hours per week overtime in two periods of 2½ hours Tuesday and Thursday evenings. This five hours' over-time worked by 90% of the men exactly balanced the 45 hours lost by 10% of the men. The overtime was carried out cheerfully and willingly by all ranks.

Summing up the results of the training, it is felt that it will result in increased production of workshops, due to better production of workshops, due to better NCO's resulting from the training. It has already resulted in a better state of discipline in the unit and a unit which is smart and proud of its appearance on parade.

DISCIPLINE

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

Officers joining a unit for the first time are liable to suffer from a feeling of inferiority and inexperience, and are therefore apt not to enforce discipline as they have been taught. And when a low standard is accepted at the start, the proper standard is extremely difficult to recover.

JAP TREATMENT OF RETURNING PRISONERS

(War Office Weekly Intelligence Review)

Japanese prisoners of war, unlike those from other countries, are usually anxious that their identity shall not be reported to their own authorities. This is because they believe that nothing but disgrace and punishment face them in case of an eventual return to Japan.

Captured documents demonstrate that there is considerable basis for this fear. Enemy doctrine on surrender and capture remains uncompromising. For those who depart from this doctrine, specific punishment is provided.

The general Japanese attitude on the subject is exemplified in a lecture given at the Japanese Staff College on the subject of airborne troops. This specifically discusses the merits of the Western idea that surrender is legitimate when units are "left in a position where they are incapable of further resistance." This idea—which, according to the lecturer, derives from Christian condemnation of suicide—must be "categorically rejected by Japanese."

Suicide Lessons

The lecturer goes on to say that instruction in methods of suicide is most necessary. He concludes that "the method of committing suicide by means of a hand grenade is an infallible device which proves successful even under confused conditions and should by all means be learned before graduation from the Military Academy."

In spite of this traditional preference

for suicide, the enemy has been forced to define the official attitude towards soldiers who, whether because of wounds or otherwise, do fall into Allied hands. A pamphlet issued by the Japanese Expeditionary Army in China asserts that the two alternatives for captured Japanese are death or escape. In case of escape the prisoner, gathering useful information en route, is to report to his unit. Then he is to make a full statement, in a spirit of penitence for his misdeed, and await the decision of superiors. For officers "usually the only course . . . is to commit suicide." Other ranks are to "await the opportunity to cleanse their disgrace by death in combat."

Punishment

Guidance for officers reviewing cases of returned prisoners is provided by official directives of the Japanese Army and Navy. War Ministry letters of 7 August 1942, addressed to China theatre commanders, direct that immediate inquiries are to be held into all cases of escaped prisoners. Even "persons who are considered innocent by the Court of Inquiry, or obtain a verdict of not guilty, will undergo severe corrective punishment." Evidently punishment can never completely obliterate a prisoner's disgrace: "In order to safeguard the future of persons who have completed their punishment, arrangements will be made for them to be allowed to live in countries outside Japan according to their choice."

FORCE OF HABIT

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

The Japanese though now fighting in open country, still went straight for any clump of trees that there might be in the neighbourhood; their positions thus became well defined targets.

LATEST JAP

DEATH PILOT

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

One of the latest Japanese "desperation" weapons—a piloted, rocket-propelled bomb—has been captured on Okinawa. Despite the claims of Jap propagandists, this midget suicide aircraft is probably not overly popular with Jap pilots. The U.S. designation for this plane is Baka, meaning "idiot" or "fool."

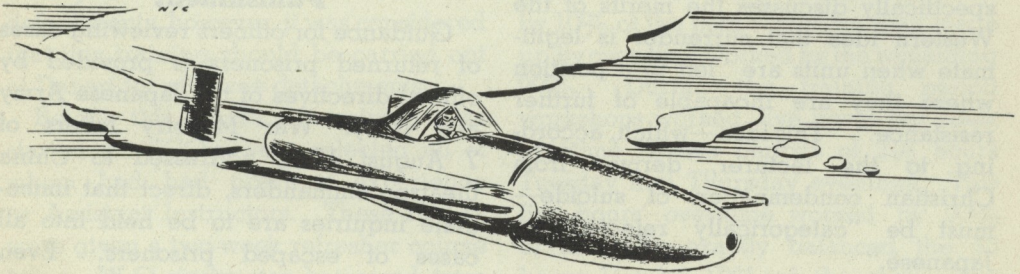
The payload of this plane—a 2,600 lb. bomb—is carried in the nose of the 20-ft. fuselage. In effect, the weapon is a high explosive rocket with wings and a human pilot. The plane is launched from a "mother aircraft" approximately 30 miles from a selected target. Using

tion, while a number of others apparently were demolished by gunfire and aerial bombardment.

Of the five rockets used to propel the aircraft, three are located in the tail-end of the fuselage, while one is mounted near the tip of each wing. An electrical switch is located on the instrument panel in the cockpit for firing the rockets. With the power provided by these rockets it has been estimated that the aircraft might have a speed in excess of 450 miles an hour due to the high wing loading and small control surfaces.

Mother Aircraft

There are many features which indicate that the aircraft is designed to be



the power from five rocket motors, the pilot then guides the winged bomb over the target and continues with it to the end of the final dive. If he misses, it's too bad. He doesn't get another chance.

The sub-surface counterpart of the flying bomb is the suicide, one-man submarine, which carries a torpedo in its nose. Like the aircraft, the midget submarine is built with no provision for the escape of the pilot.

Found On Okinawa

Several of these piloted bombs were found on the Katana Airfield on Okinawa; three were recovered in excellent condition and two in good condi-

tion, while a number of others apparently were demolished by gunfire and aerial bombardment. Among the features supporting this theory are the speaking tube, heavy rods for locking control surfaces in neutral positions, the nose fuze for which the arming wire is probably attached to the "mother plane" and the "walk-around" oxygen bottle which would permit the pilot to leave the larger aircraft and descend into the suicide plane through the bomb bay or other access door.

In addition, the light construction of the fuselage would not withstand rocket launching and the small craft has no wheels or skids and no provisions for attaching any.

● ANESE WEAPONS

ANTI-TANK LUNGE MINE

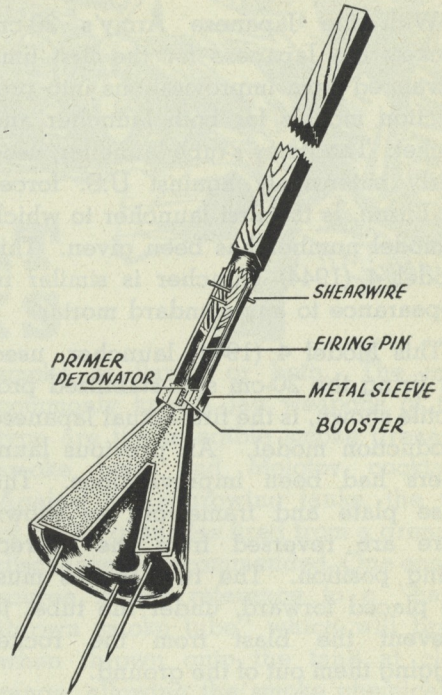
(U.S. Tactical and Technical Trends)

The Japanese lunge mine is another in the series of suicide anti-tank weapons. A cone-shaped, hollow-charge explosive at the end of a pole, the lunge-mine derives its name from the manner in which it is wielded by the tank-attacking Jap soldier.

In outward appearance, this explosive weapon resembles a large funnel attached to a broomstick — the small end of the funnel being fitted to the end of the stick. The mine, which is 8 inches in diameter across the base of the cone, and which is 11.6 inches high, is fitted onto the stick handle by means of a tube-like metal sleeve fastened to the small end of the mine.

The detonator for this mine resembles an ordinary blasting cap set in the narrow end of the mine. It is actuated by a nail-like striker set into one end of the pole handle. The striker end of the handle is fitted into the metal sleeve, and is held immobile by a safety pin and a shear wire, both of which are driven through the sleeve into the handle.

As a weapon, the lunge mine is used by anti-tank close-combat soldiers whose sole mission is to get close enough to a U.S. tank to push their lunge mine against the tank armour and so detonate the armour-piercing charge. Jap lunge-mine soldiers are instructed to follow this procedure: before starting the attack, remove the safety pin. At the opportune moment, charge the tank, and while doing so, grasp the centre of the pole handle with the left hand, and the end of the handle with the right hand. Make the charge with the mine held bayonet-fashion in front of you. When you reach the tank, place the mine legs against the tank armour and then lunge forward with your weight on the pole.



Suicide Attack

If these instructions are carried out, the mine is detonated when the weight of the attacker breaks the shear wire, thus forcing the handle further into the mine sleeve where the striker is driven into the detonator. As evidence of the result to the attacker, the Jap instructions state bluntly: "Best method is to make a suicide attack; therefore, without losing footing, make contact squarely."

According to the Japanese, experiments with this mine at Manila demonstrated that, when head-on contact was made, steel plates of 150-mm (6-inch) thickness could be penetrated. With contact at a 60-degree angle, steel plates of 100-mm (4-inch) thickness could be pierced.

MODEL 4 (1944) LAUNCHER

(Condensed from U.S. Tactical and Technical Trends.)

With the Japanese Army's 20-cm rockets the Japanese for the first time advanced from improvisations into production models for both launcher and rocket. The Army's tube launcher, used fairly extensively against U.S. forces on Luzon, is the first launcher to which a model number has been given. This Model 4 (1944) launcher is similar in appearance to any standard mortar.

This Model 4 (1944) launcher, used for firing the 20-cm spin-stabilized projectile shown, is the first actual Japanese production model. All previous launchers had been improvisations. The base plate and framework as shown here are reversed from the correct firing position. The two spades must be placed forward, under the tube, to prevent the blast from the rocket digging them out of the ground.

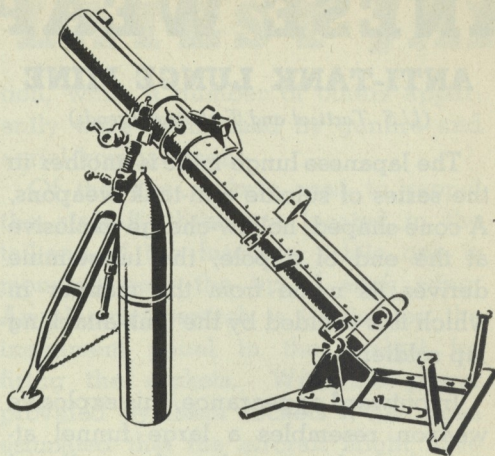
Lightweight Weapons

The Japanese Model 4 apparently has been designed to provide a lightweight weapon to fire a heavy projectile as accurately as possible, and it may be intended as a substitute for an 8-inch mortar.

The Model 4 launcher is a simple, sturdy, mobile device, capable of fine adjustment for accurate fire. Preliminary firing tests and inspection of areas the Japanese have bombarded with these rockets indicate that the launcher is quite accurate.

The launcher has the general appearance of a large trench mortar, consisting basically of a tube, bipod and base plate; the three parts together weigh approximately 500 pounds. A collimator sight, similar to the type used with the standard 81-mm and 90-mm mortars, is used and a quadrant rest is located near the breech of the tube.

The normal crew for this rocket



Model 4 (1944) Launcher

launcher includes 10 men, 4 of them ammunition handlers.

Over 3,000 Yards

Preliminary firing tests indicated that the maximum range of the Model 4 launcher is over 3,000 yards. The rocket gives off a 20 to 30-foot blast of flame upon firing. The projectile makes a fairly loud swooshing sound. It is easily followed in flight and appears to be very stable. Combat troops have reported that these rockets sometimes start out with a loud screeching sound and it has been found that if half of the central stick of propellant is removed the rocket will scream in flight. There is reason to believe that the Japanese do remove half or all of the central stick of powder at times to secure variations in range.

The 20-cm rockets have been found provided with Model 100 selective instantaneous-delay mortar fuzes. One area was examined where approximately 50 rockets had been fired by the Japanese. The shells had all used the instantaneous fuze setting and the bursts had a distinctly "daisy cutter" effect. The craters were approximately 18 inches deep and 4 to 6 feet in diameter. Deep grooves cut in the turf by the fragments radiated in all directions from the center of the crater.



CLOSE COMBAT WITH TANKS

(U.S. Intelligence Bulletin)

The firepower and comparative invulnerability of U.S. tanks has driven the Japanese Army to rely more and more upon the suicide attack by individual Jap soldiers as a means of countering U.S. armor.

To all appearances, this tactic originated as a field expedient of frustrated Japanese troops who were among the first to meet the M-4 tank in jungle and atoll fighting. However, there now is evidence that suicide anti-tank fighting has attracted the attention of the Imperial General Headquarters in Tokyo to such an extent that so-called "close-quarter combat tactics," as principal means of combating tanks, may be standardized throughout the Japanese Army.

Men Deployed

Before engaging a tank, a Jap close-combat unit leader deploys his men in depth across as wide a front as possible. A typical disposition is an inverted "V," with the neutralization team facing an oncoming tank, the track-attacking team located to the right and rear, and the demolition team to the left rear. The unit leader takes his position in the centre of this formation. A normal distance between groups is 30 yards.

A close-combat unit of this type opens its attack with the neutralizing team trying to impair the visibility of the tank crew. This may be attempted with

smoke or flame, or both. The most commonly known Jap weapons of this type are the frangible smoke grenade, smoke pots, and Molotov cocktails. Against flame-throwing tanks, the use of smoke grenades fired from a grenade discharger is recommended. One enemy source makes reference to a "hand-thrown smoke tube" which will break when thrown onto the tank at close range, allowing the smoke chemical to adhere to the tank and envelop it. Flame-throwers also are recommended.

By such tactics, the neutralizing team tries to blind the tank gunners and cause the tank driver to slacken speed. The neutralizing team also may throw conical hand mines against the tank periscopes and guns, in an attempt to put them out of action.

At this point the track-attacking team approaches and, taking advantage of any slackening of speed and offensive reaction from the tank, will try to destroy one of the tank tracks. Usually one track only will be attacked, its destruction being sufficient to immobilize the vehicle. For this purpose the track-attacking team will be armed with explosives lashed to the end of a pole.

As soon as the tank has been crippled, the demolition team moves in to

make the kill. Specifically, its mission is to destroy the engine and to kill the tank crew. For this work the Japanese recently have developed a number of demolitions, most of them designed around the hollow-charge explosive principle of piercing armor plate. Some of these—for example, the "lunge mine"—are pure suicide weapons. Other weapons, such as satchel charges, and the familiar Model 99 "magnetic" mine are actuated by delay igniters.

Since the advent of the lunge mine and the conical hand mine in Jap anti-tank fighting in the Philippines, there has been accumulating evidence of Jap developments in other hollow-charge anti-tank weapons designed specifically for close-combat units. These are the 5-kilogram, hemispherical armor-piercing mine, and the 3-kilogram, cone-shaped armor-piercing charge.

Penetrates Eight Inches

The Japanese claim that the 5-kilogram, hemispherical armor-piercing mine is capable of penetrating 8 inches of armor plate, or of killing or injuring a tank crew by concussion alone. This charge resembles a small version of the hemispherical anti-boat mine without the chemical horn detonators. It is actuated by the same type of delay fuze used in the Model 99 magnetic mine.

According to the Jap Army Engineer School, demolition teams may use the

5-kilogram mine either as a pole charge or as a "suspension-type" mine. As a pole charge, the mine is lashed to a wooden handle so that it may be held or placed more easily against the side or top armor of the tank. When used as a suspension-type mine, the 5-kilogram mine is tied to the end of a rope, while a sandbag weight is tied to the other end. In this form the mine is used primarily in attacking the side armor of a tank. The demolition team soldier armed with a suspension mine approaches the tank, places the flat base of the mine against the side armor, and then slings the weighted rope across the top of the tank. The sandbag weight will then allow the mine to dangle against the tank side until the mine detonates.

Circular Grid

The 3-kilogram, cone-shaped armor-piercing charge is reputed to be capable of penetrating armor 6 inches thick. This charge is built into a wire frame, and a circular wire grid is fastened to the bottom of the cone. This grid, which is larger in circumference than the base surface of the explosive, keeps the charge from tipping over when it is placed on the top or hung on the side armor of the tank. It is used in the same manner as the hemispherical mine.

Close-quarter anti-tank combat is hazardous, at best, but it is ineffective against tanks that operate with proper infantry or mutual support.

WE ALL MAKE MISTAKES

(By a British infantry officer in Burma. Extracted from Current Reports From Overseas.)

When patrolling features that we intended to occupy later, we made the mistake of allowing our patrols to come off the feature before we had occupied it in strength. When the occupying troops arrived they found that the Japanese, who seemed to be well informed about our movements, had already slipped men on to the feature and so gave us a warm reception.

BATTLE EXPERIENCES IN THE PACIFIC THEATRE

(This is a digest of an observer's summary of battle information gained by the experiences of a cavalry division operating in the Pacific Theatre. Extracted for CATM from U.S. Military Review—Editor.)

Cavalry-Artillery Co-ordination:

An artillery liaison officer was detailed to and was with each rifle troop on the front line. These officers rendered most valuable assistance in getting artillery support when and where it was needed. Wire communication was maintained between units being supported and supporting units regardless of size. Very close co-ordination was maintained between division headquarters and division artillery headquarters.

Weapons: The 81-mm mortar and the BAR proved to be the most popular weapons.

Morale: Morale was high all the way through. Even the toughest going failed to break it. This division believes in itself and goes in to win regardless of consequences.

Communication: The runner or motor messenger proved to be the most reliable. Due to excessive rains, telephone lines went out many times. However, the telephone proved to be very efficient even under those adverse conditions.

The radio was in and out. Sometimes it worked nicely—at others it was useless. The SCR-300 proved itself to be very useful. The field artillery SCR-608 frequency modulated set is a very efficient set so long as it is not interfered with by hills or other obstructions. Teletype and telegraph were highly efficient.

Tanks: Tanks were used but little. The terrain in general was highly unsuited for them. It was either a swamp or a mountainous area . . .

Medium tanks appeared to be able to go any place that a light tank can and seem to be far more effective.

Methods of Combat: The division followed the book. Methods outlined in training manuals and field service regulations were found to be sound. It is true that these methods must be applied practically. The expression, "Throw the book away," did not apply in this operation. Simple, carefully thought out plans worked, and brought highly satisfactory results.

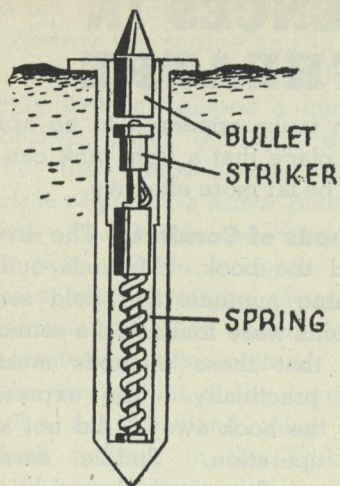
Jungle Supply Methods: The division must be trained and ready to use ground, water, and air facilities for supply.

The supply problem was very acute. Roads were scarce, traffic demands were tremendous, and many times troops were miles from any road. Water supply by amphibious truck, LVT and LCM . . . facilitated this matter very much. Air drop made it possible to get supplies to troops which were so isolated that all other means including native carrier were inadequate. Air-ground co-ordination in this method of supply was very difficult.

Observers Used

The jungle is so thick that the use of panels cannot be considered. Smoke is uncertain. Map co-ordinates are so unreliable that they are worthless. The only method which brought satisfactory results was to fly an observer, who knew where the troops were, over the troops in the field artillery liaison plane. After seeing what the terrain looked like from the air and picking out a spot to make his drop, put this same observer in the plane which is to make the air drop.

In general, the supply of rations, ammunition, clothing, medical supplies,



JAPANESE PENCIL BULLET BOOBY TRAP

(ATM—Australia)

This miniature mine (see diagram) consists of an outer tube $5\frac{1}{2}$ inches long by $\frac{5}{8}$ inch diameter, the closed end of which is forced into the ground. Pressure on the bullet releases a striker and the bullet is fired out of the ground.

and gas and oil were adequate. K. and C. rations were used almost exclusively. They are satisfactory . . . By careful conservation, the division artillery was able to give field artillery support when and where needed . . . Curtailment of ammunition supply continued throughout . . . the operation.

Transport

The supply of spare parts for motor vehicles was reasonably good. Vehicles were kept running. Poor roads, constant rains, and the resultant mud made the operation, maintenance, and upkeep of motor vehicles a very difficult problem. Wear and tear on these vehicles were so great that nearly all will have to be replaced in the very near future.

Training: For an operation of this nature, physical conditioning and hardening are the most essential factors. Unless troops are in the best physical condition and able to withstand hours on hours of the most rigorous marching and climbing, they are useless. Strength and endurance are taxed to the maximum.

Next in importance comes scouting and patrolling . . . The successful ac-

complishment of the division's many missions was made possible by excellent training in this work.

Combat is largely confined to small units, troops and platoon. Therefore training in combat of small units must be thorough and complete. The division proved itself to be highly efficient in this matter.

All officers and men must be thoroughly grounded in technique of weapons. Reduction of stoppages and stripping and assembling of the various weapons must be so thoroughly understood that they are accomplished without thought. Likewise, selection and occupation of position must be understood by all. Division training in these functions was thorough and complete.

Troops, squadrons, and regiments must be indoctrinated in overhead fire. When artillery and mortar support is being given, front-line elements must keep as close behind the area on which fire is being placed as is possible. Only in this way can success be obtained. This training had been emphasized in the division and excellent results obtained.

WEBFOOT ARTILLERY



(Condensed from an article by Lt.-Col. B. S. Waterman, Field Artillery, in *U.S. Coast Artillery Journal*.)

Spurred by necessity, our armed forces have developed amphibious warfare to a level beyond the wildest dreams of military men of a few generations ago.

Each operation has resulted in improvement of technique, until our early Pacific efforts seem very clumsy indeed when compared with the clocklike precision of the Okinawa landing. Nevertheless, the artilleryman's problem, especially insofar as medium and heavy artillery are concerned, has yet to be reduced to a formula which will fit all cases.

The method which has been evolved for getting the doughboy ashore seems irresistible in its awesome power and suited to almost all cases, since the Alligator with its load of infantrymen can go almost anywhere, and the terrible blanket of naval gunfire and air bombardment effectively stifles any counter-effort on the enemy's part until the infantry is safely ashore. A good all-purpose solution for the rapid provision of light artillery for close support has been discovered.

My experience, however, has been entirely with medium and heavy artillery and here it is well to confess that no blanket solution is at hand since every landing in my limited experience has been entirely different from those preceding it.

Amphibious Training

Several very fine amphibious training centres have been established in the Hawaiian Islands. Their preoccupation has been with the landing of infantry, and to some extent the landing of artillery in small craft, and their observers have been present at each new operation to gather new ideas and seek solutions for old problems, but when our battalion began preparations for Saipan little doctrine was available in the Central Pacific on the landing of artillery from LSTs (Landing Ship Tank).

The landing beach was fenced off with a reef some 300 or 400 yards from shore, with an intervening lagoon, varying in depth from a foot and a half to five feet. The points which impressed themselves most deeply on us were these:

(1) Know your lagoon. Time spent in careful reconnaissance for the shallowest route across the lagoon and in waiting for the minimum tide will be a remunerative investment.

(2) Do not attempt to drive the small vehicles ashore. Load the $\frac{1}{4}$ ton jeeps in Dukws or Alligators and tow the $\frac{3}{4}$ -tonners behind bulldozers.

(3) Service all vehicles which have been in the water at the earliest possible moment.

Another difficult aspect of the Saipan problem, and one which was later to prove equally as difficult on other beaches equally as renowned, was the

PASSING IT ON

SMC PRACTICE

Excellent use is made of the German Figure Target No. 1 by No. 60 CI(B)TC, Yarmouth, N.S., for Sten Machine Carbine Familiarization Practice.

As shown in the accompanying photos, the target consists of a frame of 3-inch by 3/4-inch lumber. Leg pieces are 4 1/2 feet long with cross-pieces 3 feet long, on which is tacked a 3-foot square of Canvas Hessian. The silhouette of the German Figure Target is then cut out and pasted on the Hessian with cold water paste.

No. 60 reports that this target is good for at least 500 rounds before a new silhouette is required.

The Familiarization Practice is carried out by the Platoon Commander under supervision of the W.T.O. with up to 10 men per relay in the following manner:

1. SMC's are placed on empty sand-bags at five-pace intervals at the starting



point, which is approximately 30 yards from the targets.

2. All relays are issued with 15 rounds of ammunition behind the starting point and each man loads a magazine.

3. The first relay covers off the Stens



at the starting point, the remaining relays observing.

4. Command: "Take up Steps", "Load", "Advance". (The men advance about 5 yards at the trail, coaches moving with them slightly to the left rear.)

5. Command: "Ready", "Five rounds at your target", "Fire".

6. Command: "Same target", "In bursts", "Go on", "Stop", "Unload".

7. Weapons are reported in succession by numbers.

8. Command: "About turn", "To starting point", "Quick march", "Ground arms". (The first relay moves off starting point and the second relay moves up into position.)

DOUBLE EXPOSURE

(Extracted from CAM)

When we heard how many projectors were coming into Wireless Workshops for repairs we didn't believe it. These conveyors of Bugs Bunny, SNAFU and the like just don't stop flickering without reason. A big reason for their failure seems to be oil trouble. Not too little, as one might suspect—but too much.

Over-oiling the Bell and Howell projector results in slipping clutch plus oil smeared all over the film and lenses. When this happens the unit must be sent to the workshop for stripping and cleaning.

There are three oil cups on the B and H machine. "B" and "C" (see Fig. 1 in accompanying sketch) only require one drop of oil after every 16 hours of operation, oil cup "A" should be fed one drop after every four hours of operation. This is the correct dose—no more—no less. And don't forget to record your lube job in the log book so that your side kick doesn't repeat the treatment.

How You Do It

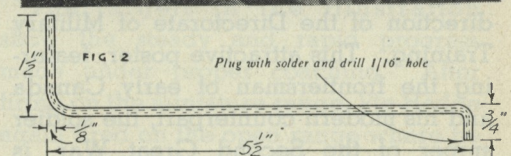
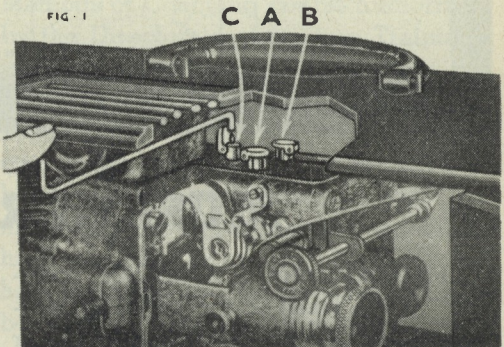
Because these oil cups are in an unhandy spot, here's a little idea that

may help you to make sure only one drop gets in the oiler at each lube job. Scrounge eight inches of $\frac{1}{8}$ " copper tubing from an M.T. shop and bend it so it looks like the one we show here (see Fig. 2). Plug one end with solder, then drill a $\frac{1}{16}$ " hole through the solder.

To use this piece of tube instead of an oil can, wipe the outside of tube clean, dip the soldered end in the oil bottle, then place your thumb over the top end and you'll trap a quantity of oil in the tube. Wipe the excess oil from the outside of the tube, then ease up with your thumb on the top end and a drop of oil will form at the soldered end. Aim so it will drop into the correct oil cup and the problem becomes no problem at all.

Spick and Span

Some projection equipment is still coming in for repairs in a filthy condition and this shouldn't be. These machines must be kept spick and span or the film life will be reduced. Carbon "tet" can be used not only for films but for all the film handling parts, sprocket teeth, pressure plate, aperture plate, etc.

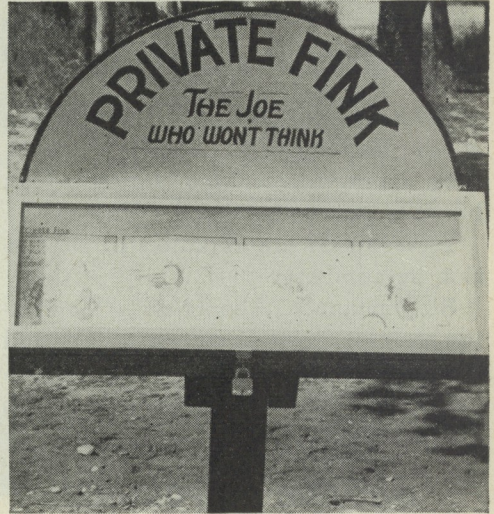


CARTOONS TEACH LESSONS

Panels with the caption "Private Fink—The Joe Who Won't Think" are displayed throughout the lines at A19 CASC TC, Camp Borden, with a view to giving soldiers a laugh and also teaching them a lesson.

The panels contain amusing cartoons drawn by Sgt. L. G. Whalen, the cartoons being changed every two weeks. The accompanying photos show the construction of the panel stand and the method of placing the cartoons in a glass case.

"Private Fink" as the Joe Soap who always does the wrong thing in the comic strips really puts some lessons across, and according to A19 he's a topnotch teacher.



MUSKETRY POSTER

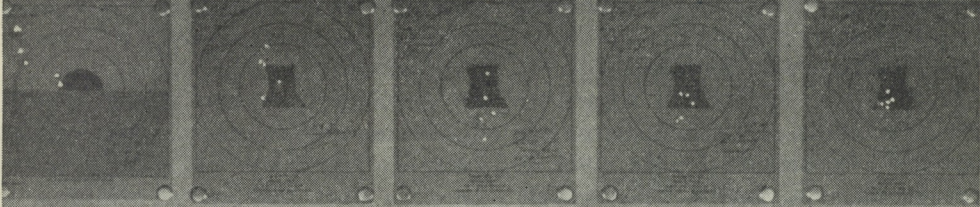
"Marksmanship—A Canadian Tradition" is the latest in the series of Musketry Coaching posters prepared under direction of the Directorate of Military Training. This attractive poster, featuring the frontiersman of early Canada and his modern counterpart, the soldier sniper of the Second Great War, is

designed to foster further interest in good rifle shooting.

Distribution of this poster will be made in the near future. Training establishments should give it prominence by posting it where it will attract the soldiers' attention. ➡

YOU TOO CAN SHOOT

BELOW ARE TARGETS SHOWING SUCCESSIVE IMPROVEMENT... FIRED BY *Pte. Hodge E.*



NOTE! *Pte. Hodge* was coached by *1st Lt. Bullock, USG*

PTE. HODGE'S SCORE ON OPEN RANGE "143... MARKSMAN" FIRED ON 30 MARCH 1945

1. *Pte. Hodge E.*
 FAILED IN HIS
 FIRST ATTEMPT
 ON THE OPEN
 RANGES
 BECAUSE HE LACKED
 PROPER COACHING

2. *Pte. Hodge E.*
 ... WITH THE AID OF
CORRECT COACHING
 WHICH INCLUDED THE CHANGING
 OF HIS SHOOTING EYE FROM RIGHT
 TO LEFT ... PRODUCED THE
 ABOVE RESULTS

3. *Pte. Hodge E.*
 GIVES FULL CREDIT TO HIS
 COACH - *1st Lt. BULLOCK, USG*
 ASK A QUALIFIED
 COACH IN YOUR COMPANY
 ABOUT EXPERT AND
 MARKSMAN BADGES

ASK YOUR PLATOON COMMANDER ABOUT RECREATIONAL SHOOTING

Pte. E. Hodge was having difficulty in qualifying on the rifle range. He had taken all the regular periods of rifle instruction to which he was entitled in advanced training and he had honestly tried to obey all the rules of rifle firing, such as holding, trigger pressure, sight-

ing, etc., but he could not get his shots where he wanted them. Evidently he was doing something wrong — but what?

Instructors at A15 CITC, Camp Shilo, Man., soon found out, and Pte. Hodge's progress is shown in the accompanying photo of a poster prepared at A15.



Mistakes Discovered

Applying principles learned in the Methods of Coaching course authorized by the Directorate of Military Training, instructors found that the recruit in question was making mistakes of which he was unaware: he was using his right eye, which would ordinarily be correct, but his left eye was his master eye. To make best use of this natural capability he would have to "unlearn" all that he had learned thus far and re-train his body to fire from the left shoulder.

The targets in the illustration show the steady and rapid progress made under proper coaching. After firing on the miniature range, Pte Hodge again fired on the open range where he scored 143 to become a marksman.

ARTILLERY

(Continued from Page 41)

unloading of large quantities of artillery, ammunition, gasoline, water, rations and sundry other supplies.

Encounter Sandbar

After Saipan came Leyte, where we anticipated little difficulty because we were not in the assault, and there was no reef problem to face. This merely serves to illustrate the old cliché that things are never what they seem. To elucidate the point we will quote an observer who arrived at Leyte on an LST in the assault echelon: "... The LST lowered its ramp and the first bulldozer rolled out and disappeared in eight feet of water." Innocent though it appeared, this beach had a sandbar which stopped the incoming LSTs short of shallow water.

On our arrival at Leyte, we, too came up against this difficulty, plus the additional complication of heavy surf, a condition which may be expected on the eastern shore of most Pacific islands. The problem was partially overcome by persuading LST skippers to make a flank speed approach at maximum high water, thereby shoving themselves a bit higher up onto the shore, and then waiting until low tide to unload.

As the time approached for loading out for Okinawa every organization which expected to load LSTs began to formulate plans to facilitate loading. Beaches were reconnoitered to find those with the best slopes, and two divisions constructed loading piers a short distance out into the water. The piers were of pile construction, and seemed at first blush to be the solution, but such are the vagaries of Nature that she seldom misses an opportunity to help the plans of men go astray.

Piers Too Long

One division soon found that their piers were the least bit too long, and that LSTs which approached them

remained afloat. The rise and fall of the ship in the surf would soon beat the bow ramp or the pier, or both, to pieces, and the idea was abandoned. Another division had more success, having constructed shorter piers, though whether by accident or design is not known. LSTs were able to ground at the proper point so that ramps could be lowered onto the piers, and loading was greatly speeded.

During the Leyte phase of our web-footed adventures the writer relinquished command of his Long Tom battalion, and was assigned to command a group consisting at that time of three battalions of medium artillery. This broadens somewhat the scope of opportunity for observation of various loading problems, since we tried a number of schemes for loading our numerous ships. Nevertheless, the loading of the 155mm howitzer does not present the problems of the Long Tom, since it is much lighter and more manoeuvrable.

Ships Beached

First attempts to load the group were begun by beaching the ships off our bivouac area. We were assigned three LSTs and three LSMs (Landing Ship Mechanized) to lift the group. The sandbar had apparently grown during the interim since unloading, and the first LSTs to approach, though running at full tilt, came to a very sudden halt so far off shore that they could be reached only by Dukw. A causeway was constructed to one LST, using two pontoons. Seas had been consistently heavy, and so violent was the wave action on these pontoons that vehicles could not be run across them... The battalion commander was fortunate enough to obtain the use of a serviceable pier five miles south, and the loading was completed very rapidly.

About eight miles north of our bivouac area there was an abrupt change in the character of the shoreline, and the slope

of the beach was such that an LST can accomplish a nearly dry-ramp landing. It was finally decided that despite the eight-mile haul the loading could be completed there more rapidly than at our own beaches. The ships were moved north for completion of the loading. Even here, however, it was necessary to stop work for several hours at high tide.

Now a word for the LSM. This new little ship, which fits into the scale between the LST and LCT (Landing Craft Tank), proved ideal for lifting a battery. The space is just about adequate for the guns, prime movers, and vehicles of one battery, and the shallower draft permits good beaching under unfavorable conditions. Each battalion was furnished one of these ships, and their loading was accomplished with relative ease.

It will perhaps help to clarify the picture in the reader's mind if we pause now to summarize the results of our observation of loading operations at Leyte. It is apparent that the major obstacles were high seas and poor beaches. The former can be substantially overcome on most Pacific islands by conducting loading operations on the west shore. The construction of piers in the quiet protected waters of a leeshore will dispose of the latter. If good beaches can be found even at a distance from bivouac and dump areas their use will prove economical of time and equipment despite long hauls.

At Okinawa

Okinawa showed us that the more we learn the more we have to learn. Again the beaching conditions were different from any we had previously experienced. This time, however, the differences were mostly for the better.

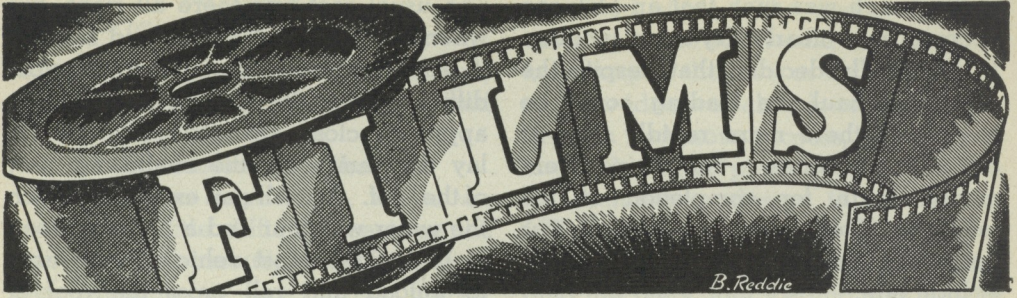
The usual reef was there all right, but when the tide went out, lo and behold, it was completely dry. The principal difficulty was the inability of LSTs to approach close enough to the reef to lay the ramps on the shallowest part of the reef. A small gap existed in which the water was four and a half feet deep at high tide. Most vehicles were able to unload and roll cross the reef at low tide, but we were forced to suspend the unloading of ammunition and supplies as the water rose, except when Dukws were available.

LSMs proved very successful under these beaching conditions. The shallower draft permitted them to approach close enough to the reef so that every vehicle was able to proceed ashore under its own power.

A CORRECTION

In the biography of Maj. Gen. H. W. Foster, D.S.O., published in the June 1945 issue of CATM, the following statement was made on Page 18: "Brig. Foster was recalled from Kiska to Canada on compassionate grounds, leaving Col. Menard in command, but he resumed command of the Brigade Group in October . . ."

Owing to the fact the records were incomplete at the time Gen. Foster's biography was prepared, there is a mistake in the above statement. Brig. Foster, on his return to Canada on compassionate grounds in September, left Lt. Col. R. Beattie, M.C., (now Brigadier, retired), in charge for a month, after which Lt. Col. D. Menard, D.S.O. (now Colonel Commandant A13 CITC) took over until the Canadian troops evacuated Kiska in February. Brig. Foster did **NOT** return in October.—Editor.



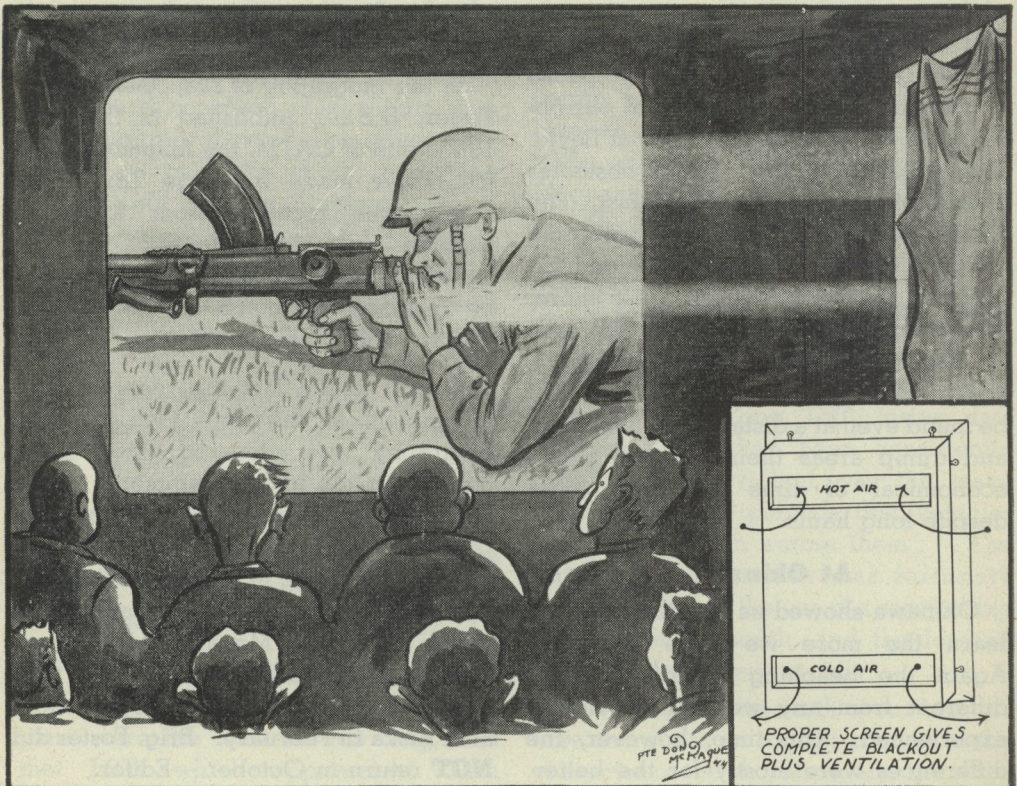
During summer months, when the heat reaches its peak, many ventilation problems are caused by a complete blackout which allows little or no circulation of air. This occurs especially when the screening of training films takes place during daylight hours. As a result of this inadequate ventilation, audiences suffering from the stuffy heat become inattentive and drowsy.

To overcome this, without at the same time completely losing the effectiveness of the screening, different methods of

using motion picture films in other than completely blacked out rooms have been found practicable.

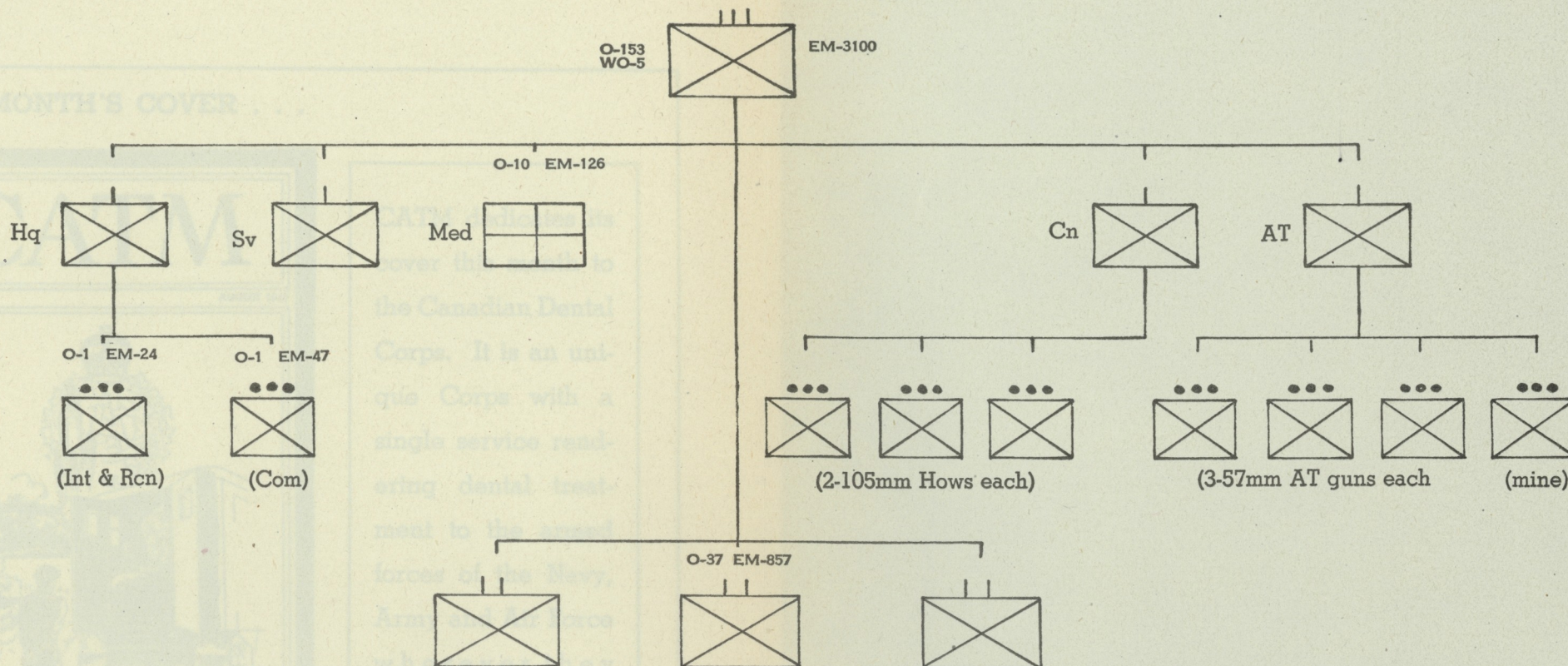
Details in connection with the above are outlined in Appx "A" to NDHQ letter HQ 54-27-45-37 (Trg 3b5) dated 14 Apr 45, which has been distributed to all Commands, Districts and Camps.

However, there is no satisfactory substitute for a well blacked out, well ventilated screening room. The screening room should receive careful thought and attention.



U.S. INFANTRY REGIMENT

O — Officers
 WO — Warrant Officers
 EM — Enlisted Men



Note: Total officer strength includes 3 Chaplains

SUMMARY OF WEAPONS

Carbine.....	836	Mortar 60mm.....	27
Hv MG.....	24	Mortar 81mm.....	18
LMG.....	18	Pistols cal. 45.....	293
MG—cal. 50.....	35	Rifle Auto cal. 30.....	81
AT gun 57mm.....	18	Rifle cal. 30 (M1).....	1831
Inf How 105mm.....	6	Rifle cal. 30 (sniper).....	27
Bazooka.....	112		

In addition the following weapons are held for special purposes:—

In Regtl Hq	—3-sub MG cal. 45
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

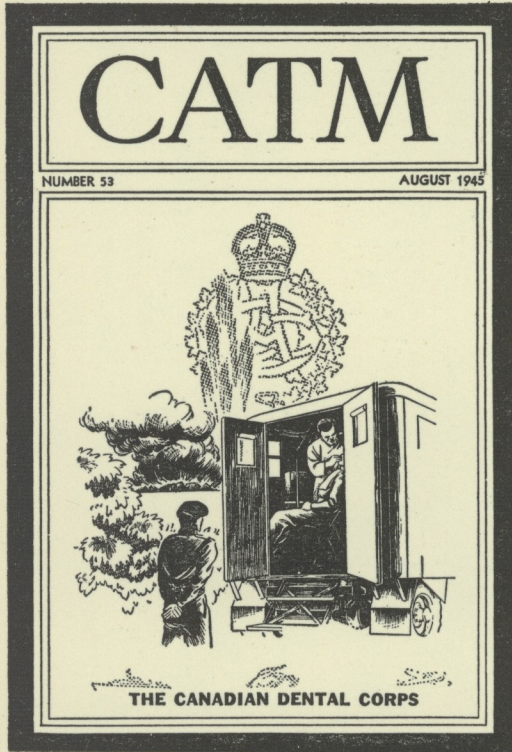
LEGEND

	INFANTRY UNIT	AT	ANTI-TANK
	REGIMENT	CN	CANNON
	BATTALION	COM	COMMUNICATION
	COMPANY	INT	INTELLIGENCE
	PLATOON	RCN	RECONNAISSANCE
	MEDICAL	SV	SERVICE

ORGANIZATION

The infantry regiment is commanded by a Colonel, with an executive officer, a Lieutenant-Colonel who corresponds to the division Chief of Staff and is also second-in-command. The regiment has a staff of four sections termed the S-1, S-2, S-3 and S-4 performing the same functions for the regiment that the G's perform for the division. The regiment corresponds to the Canadian brigade, in that it is composed of three infantry battalions, but in addition has, as part of the establishment, an anti-tank company of nine 57mm anti-tank guns, a cannon company of six 105mm infantry howitzers, a service company and a medical detachment.

THIS MONTH'S COVER . . .



CATM dedicates its cover this month to the Canadian Dental Corps. It is a unique Corps with a single service rendering dental treatment to the armed forces of the Navy, Army and Air Force wherever they might be.

Next Month—THE CORPS OF MILITARY STAFF CLERKS

OTTAWA
EDMOND CLOUTIER
Printer to the King's Most Excellent Majesty
1945

24,000-8-45 (7639)
H.O. 54-27-35-101
K.P. 91843

This Army



"Y'got a minute Sarge?"