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CANADIAN WOMEN'S ARMY CORPS

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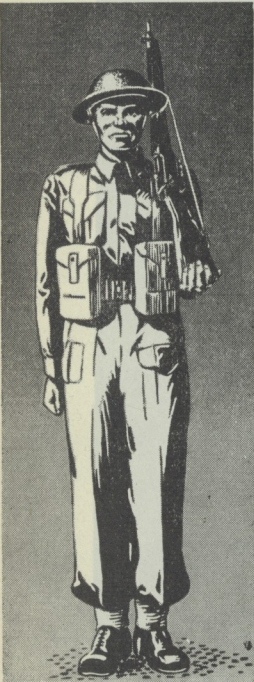
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THE CANADIAN WOMEN'S



Canadian Army Photo

Lt. Col. D. I. Royal, O.B.E.

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ARMY CORPS

With the outbreak of World War II came the realization that nothing short of an all out effort would be necessary if the forces of the Axis were to be overthrown. Canadian women were more than anxious to shoulder their share of this burden and the fall of 1939 found many of them banding together in various Voluntary Units across the Dominion. Some 17,000 women thus enrolled gave many hours of their free time to the study of Administration, Signals, Cookery, Driving and Maintenance, Drill, Physical Training, etc. They studied, worked and waited for the day when they would be called upon to serve Canada in a full time capacity.

Out of their determination, strengthened by the growing need for men in the fighting lines, the Canadian Women's Army Corps was born. Since August 1941, the members of the Corps have replaced the equivalent of a Division of men for service in the field. In replacing men, the CWAC has become closely affiliated with the other Corps of the Army, and members have developed a tremendous esprit de corps and pride, both in their own Corps and in the Unit with which they serve.

The CWAC has been employed in some 50 different trades and while that service has kept the majority in Canada, about 2,000 more fortunate members have travelled to the United Kingdom, Italy, North-West Europe and the U.S.A. in the performance of duty.

The story and progress of the CWAC is one of determination and a strong sense of responsibility. Through the tireless efforts of all its members, the Corps has established an enviable record of useful and efficient service during the war. Now, with the coming of peace, and the decreasing need for our services, we are returning to our peacetime occupations with the knowledge that the sisterhood of the CWAC will continue long after peace is ensured and will be a great power for good in the future of this great Canada of ours.

S. I. Royal

EDITORIAL

PLANNED TRAINING

"To train or not to train—that is the question." (With apologies to William Shakespeare.)

Surely such an idea is running through the minds of many officers, and particularly those who are charged with the responsibility of commanding Reserve Force units.

Many problems face us in the coming year, and they either directly or indirectly have a bearing on training. In one way or another, they must be met and solved before a sound training plan can be made.

The ultimate goal—the Reserve Force "Utopia"—is undoubtedly the stage where all War Establishments are full, there is adequate training equipment and everyone turns out for every parade and indulges in a progressive and interesting programme of training.

Will such a state ever be achieved? Probably not, but it's nevertheless a grand mark to shoot at!

However, one thing is certain, and that is that not even a near approach to this military Utopia can be made unless time is taken to plan. The great battles of history were fought and won only after careful planning. Some were fought and lost, and beyond question the reason was lack of adequate planning.

Surely the year 1946-47 must be considered as a year of planning, of building and development; a year in which the training machine is put together carefully, piece by piece, and lubricated with knowledge and experi-

ence. The result would be an organization geared to the task of accepting and training men in an efficient and interesting manner.

"To train or not to train—that is the question." And surely the answer is:

1. To train, but confine that training to the preparation of an adequate and efficient cadre of instructors who can plan and carry out the future training programmes.

2. To study the problem and build up the organization during this coming year.

3. To develop interesting programmes.

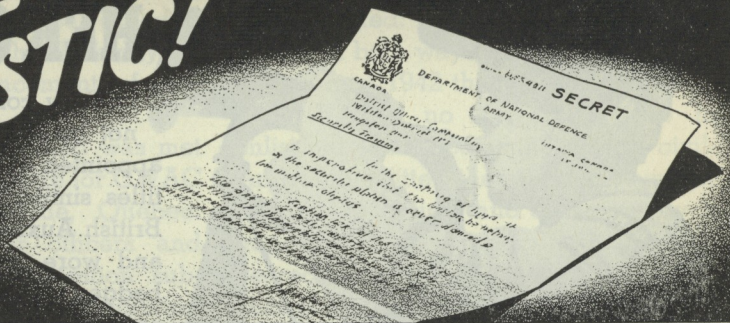
4. To install syllabi so they will fit into training time which local conditions demand.

5. To prepare lecture rooms and demonstrations.

With the war at an end we stand on the threshold of a new phase in the eternal struggle for survival. No small part of this new phase is the building of a sound military structure capable of defending the rights and privileges of the people of Canada against the designs of those who might seek to destroy us.

We as officers are charged with that responsibility, and in particular it is our duty to prepare the manhood of Canada to face the aggressor. Plan carefully, therefore, as this is a task which must be done with the highest possible degree of efficiency.

LET'S BE REALISTIC!



Cessation of hostilities has brought no change in safeguards required for the care and handling of classified documents—and this lack of change is not the result of oversight or of any unwillingness to amend outdated regulations. To the contrary, Security restrictions have, in the interests of sound Security, been promptly removed whenever possible and have been relaxed whenever they could safely be relaxed when complete removal has not been feasible.

This lack of change in regulations governing classification and handling of these documents results, then, from deliberate intent. These regulations have not been amended because there is no reason why they should be amended, because there is every Security reason why they should remain as they are. Just as you safeguarded a classified document or file in war time, so, then, do you safeguard it today. There was no excuse for carelessness then—there exists none now.

Proper Classification

It is to be noted, however, that, if the rules for handling these documents have not changed, the regulations governing classification and downgrading have not changed either. It is still the responsibility of every officer handling a classified document to assure himself that the document is properly

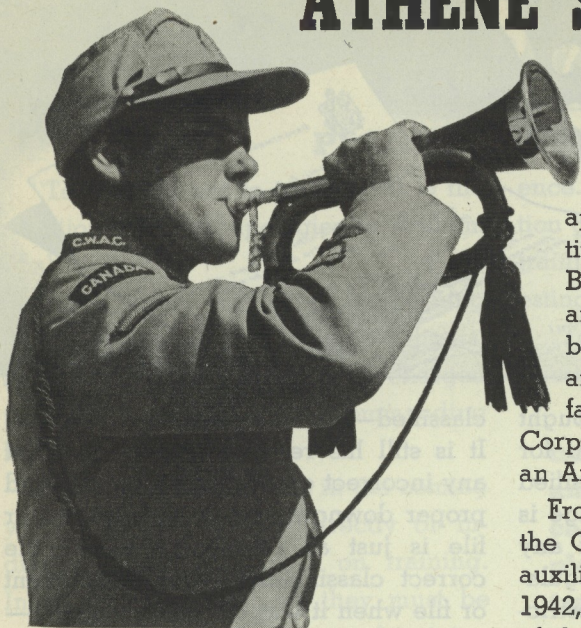
classified—not too high, not too low. It is still his responsibility to see that any incorrect grading is rectified. And proper downgrading of a document or file is just as important as was the correct classification of the document or file when it was originally created—a fact all too seldom realized. Either way, the officer's course is clear.

In view of the above, therefore, any officer is doubly remiss in these responsibilities if, believing a document or file is too highly classified, he takes no corrective action and then, because of the believed overgrading, accords the document or file lesser safeguards than those to which it is entitled in view of the classification it bears . . . If it is overgraded, take necessary action to have the grading corrected but at all times accord every classified document the Security safeguard to which, by its grading, it is entitled. There is no other safe course.

Four Categories

Responsibility for proper grading—and downgrading—is fixed by C.A.R.O. 5861. Procedure for proper care and handling of documents in each of the four Security categories is also provided in this Routine Order. C.A.R.O. 5861 was not promulgated for others only—the responsibilities it fixes are yours. Study it now and let's be realistic—and adult—in our handling, grading and downgrading of classified documents.

ATHENE SERVES HER COUNTRY



“There shall be organized in Canada a Corps to be designated THE CANADIAN WOMEN’S ARMY CORPS to be composed of such officers and other ranks as are appointed, enrolled, trained, employed, clothed, equipped and paid, as set out in these Regulations. The primary role of the Canadian Women’s Army Corps shall be to replace Army personnel in non-combatant activities for the purpose of enabling the latter to perform other duties and generally to make available trained, efficient and disciplined female personnel for duty in various branches of the public service in time of war.”—(CWAC Regulations, August 1941.)

THE CORPS IN CANADA: The CWAC was formed to meet a definite need—to replace category A and B soldiers who were employed in administrative and maintenance duties within the Army, and who were required for duty in field formations to fill the ever-growing need for reinforcements to build up Canada’s overseas force.

Accordingly, in August 1941, authority was granted to form a Women’s Corps on a military basis, to be under

military control, but which would not be within the army. Officers appointed to the Corps were given titles similar to those in force in the British Auxiliary Territorial Service and wore specially designed rank badges. These differences in ranks and badges were a contributing factor towards treatment of the Corps as a separate Army within an Army.

From September 1941 to March 1942 the Corps continued to function as an auxiliary to the Army. On March 13, 1942, the Corps officially became a Corps of the Active Militia of Canada, and its officers were commissioned and took army titles and rank badges into use. From this time on the Corps has become more and more closely integrated within the Army.

Early Months

During the early months the training of the women volunteers was left very much to the discretion and goodwill of the District in which they enlisted. Consequently, in some Districts, excellent basic training courses were held from the beginning. In others, where the need for releasing male soldiers was considered to be more urgent than the training of women who were to replace them, recruits were placed in jobs with no military training at all. In addition to this, the CWAC officers themselves were appointed to commissions with no military training of any kind, though a number of them had carried out some training in military subjects with volunteer organizations. This lack of training was a hardship on the officers concerned for it meant that they had to learn the hard way—by experience—with no background of training to equip them for their jobs. It placed them in the

position of being very dependent on the assistance of the male officers, most of whom were themselves overworked in the stress of the dark days of 1941 and the commencement of war with Japan.

Early in 1942, this situation was met by opening a training centre for CWAC at Ste. Anne de Bellevue, Quebec. Courses were held for officers and selected NCOs in administration subjects, and a centralized basic training course was started there for Junior NCOs and privates. Once having put all the officers and NCOs through this course, the centre turned to basic training only until June 1942, when a cadet training course was held to qualify new officers.

By July 1942, the intake of recruits had increased to such an extent that one training centre could not cope with the numbers who had to be trained. A second centre was opened at Vermilion, Alta., to train recruits from the four western Districts, and this was followed by the organization of a third centre at Kitchener, Ont., which gave training to the recruits from MDs 1 to 7. When the two basic centres were in operation, the training centre at Ste. Anne de Bellevue was used for advanced training only, including, for a time, a trades training wing.

The summer of 1942 saw the Army fully appreciative of the value of the service given by members of the Corps. Even the older soldiers, who had viewed with some concern the advent of a woman's corps, seemed to be won over by the keenness to learn and willingness to serve displayed by all ranks. Demands for CWAC replacements in Canada increased rapidly, and from overseas came a request for several hundreds of CWAC personnel for employment in static units.

To meet the increasing need for women personnel, wholesale recruiting was adopted. The age limits were extended both ways, and between April and August 1942 the Corps doubled in size. It was no longer possible to enlist only those personnel whose civilian training fitted them for employment in military duties, and consequently a trades training program was evolved, geared to the recruit intake. The assistance of the newly-commissioned CWAC Army Examiners was called for, and every effort was made to select and train the numbers required to fill the urgent demands.

The period up to April 1942 could be considered Phases I and II of CWAC history. In the first phase the Corps was a new toy, it was not part of the army, its members were women, nobody was quite sure what orders and regulations applied to them. With the



Canadian Army Overseas Photo

Here is the first detachment of CWAC personnel to arrive in Italy.

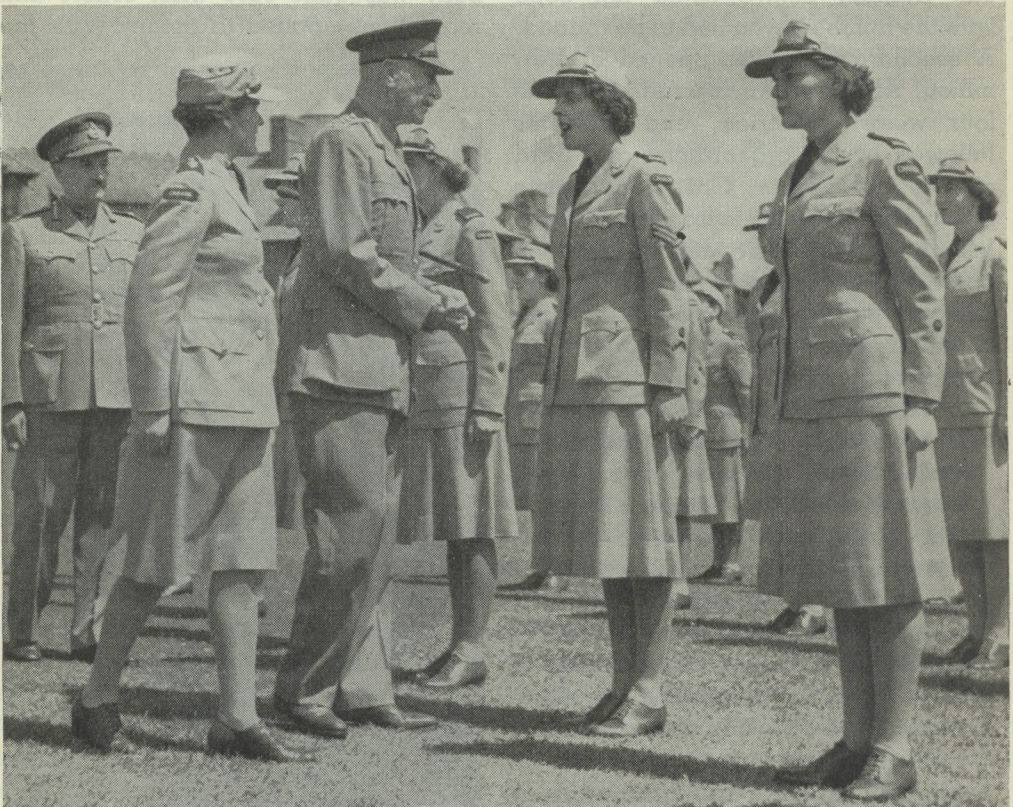
rapid expansion of the Corps in 1942, Phase II commenced. The Corps had become part of the Army, the women were soldiers, and it was felt that they should be treated as such and should not be given any special amenities that were not given to male soldiers. While Phase I was confusing to all concerned, Phase II was responsible for heartbreaks and hardships. It had not been fully appreciated that though a woman was replacing a soldier, there was still a vast difference between her type of service and his. The male soldier was serving with one end in view—combat. He was being progressively trained and toughened to condition him for the rigours of the battlefield, moving all the time towards his ultimate goal.

In the woman's case it was different.

She was being trained to replace a man in a static job. Her work might keep her for years in one place. She was not going to have to work in a combat zone—therefore, if it helped her general morale and efficiency and increased her happiness to have curtains in her barrackroom, why not let her? Her life, and those of her comrades, was not going to hang on her ability to command in battle, so that regimentation—always more irksome to a woman than to a man—need not be taken to such lengths.

Middle Course

Phase III began in 1943 and has continued up to date. A middle course was adopted between Phases I and II; the realization that while women can be treated the same way as soldiers in many ways, there must always be certain



Canadian Army Photo

His Excellency, the Rt. Hon. the Earl of Athlone, K.G., Governor-General of Canada, inspects the CWAC at Ste. Anne de Bellevue Advanced Training Centre, Quebec.

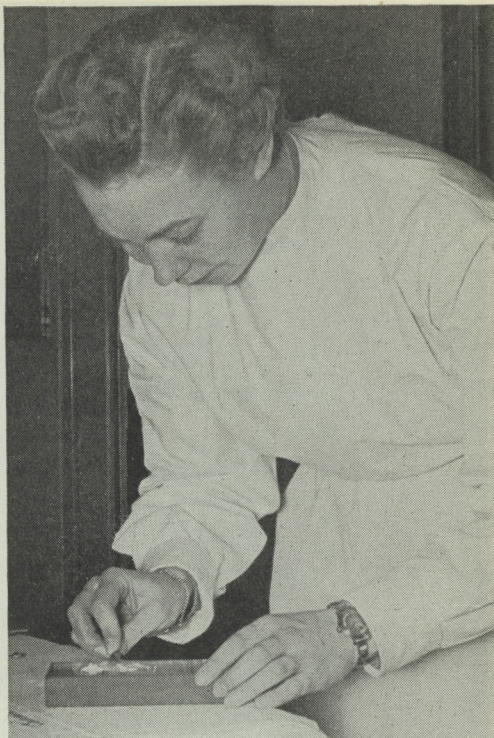
special regulations which apply to them, has helped to maintain the standard of efficiency and morale which has brought the Corps the reputation it holds today.

The training picture for officers and NCOs has changed considerably from the early days. With the first mad rush of the organization and administration of a new Corps in a rapidly expanding Army, there was a tendency to lay too much stress on the "paper" side of an officer's duties, rather than on the human or welfare side. Too often officers were turned out from the training centre weighed down with knowledge of routine orders and KR (Can), but with little practical training and experience in woman-management. Realization of the error of this led to modification of the training to ensure that every means was used to give newly-commissioned officers the background and knowledge of human nature essential to their duty of caring for the welfare and general happiness and well-being of their women.

THE CORPS OVERSEAS: As far as numerical strength is concerned, the CWAC picture overseas has been comparatively small. Approximately one-tenth of the Corps formed the overseas contingent, who have been the envy of the majority of their sisters left in Canada. However, the calibre of those despatched made up for the small numbers, and the official historical booklet on the Canadian Army overseas states:

"Of many innovations that the war has brought to the Canadian Army, the organization of the CWAC is one of the most completely successful . . . today the CWAC has proved itself not the least valuable element in the complex fabric of the Canadian Army Overseas."

Preceded by a CWAC staff officer



Canadian Army Photo

A CWAC dental assistant at work.

who made the arrangements for their reception and employment, the first contingent (just over 100 strong) arrived in the United Kingdom in November 1942. Practically all the other ranks had reverted one or two grades to go overseas. They were followed at intervals by other drafts until June-July 1945, when the largest contingent to be despatched from Canada sailed, bringing the total of the CWAC overseas up to over 2,000 all ranks.

Arrangements were made to train a number of Canadian women living in the United Kingdom who wished to enlist in the CWAC, and over 200 were taken into the Corps. Training was also arranged for selected other ranks who were suitable for commissions. At first this training was given at a special course conducted by the Canadian Army. Later, candidates were trained at the ATS Officer Cadet Training Unit, and received certain



Canadian Army Photo

A CWAC sergeant checks Bren guns at the Army's Conditioning Centre, Brampton, Ont. She is on the only inspection unit composed of members of the CWAC.

additional instruction in Canadian administration.

In May 1944 a detachment of selected personnel was despatched to Italy to serve with the Canadian Section, GHQ, 1st Echelon. Later in the year others went to France on duty with the 21 Army Group, SHAEF, etc. These women, moving towards the frontiers of Germany with the army, roughed it like old soldiers and saw real active service. Other groups followed—some with Army Show Units, some to work in Leave Centres, Army HQ and other formations. That CWAC personnel working in operational areas have carried out their duties even better than was expected of them is borne out by the number who have been mentioned in despatches. Their chief reward, however, has been the unique experience they have under-

gone as "specially" selected volunteers.

Mention has been made above of the sharing of ATS training facilities. In addition to their use by personnel who were serving on permanent duty overseas, a system was introduced by which CWAC officers were despatched to the United Kingdom on attachment to the ATS. The first group proceeded in the winter of 1942 and was followed by other groups, each serving approximately three months overseas during which time they saw ATS units and attended ATS schools. In April 1944 the idea was extended, and a group of ATS officers arrived in Canada on exchange duty with a group of CWAC officers who proceeded overseas on three months' attachment. Three such exchanges were held, and the consensus of opinion has been that the

value of these exchanges extended well beyond military bounds, and inspired a mutual interest, exchange of ideas and broadening of knowledge which should carry on into the years of peace. These temporary attachments were a "life-saver" to many a CWAC officer who craved service overseas, but who, owing to the small number of vacancies available there, was compelled to serve in Canada.

GENERAL: That the CWAC has carried out its primary role there can be no doubt: the Corps has replaced the equivalent of a Division in the field. Probably more than any other Corps the CWAC has a closer association with the other Corps of the Army, since its personnel are serving with practically all of them. The personnel are proud of their own Corps, and this esprit de corps also embraces the unit with which they work. No soldier is

prouder of his own Corps than the CWAC volunteer who took a fighting man's job in Canada so that he might go overseas.

Goddess of War

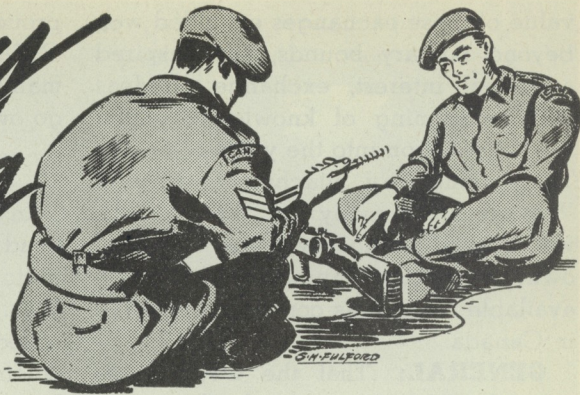
In the Greek legends, Athene, whose head appears on the crest and Corps buttons of the CWAC, was Goddess of War. Whenever the storm of war raged most fiercely she appeared; but, when the storm was over, she laid aside her armour and set to work to encourage and foster skill and industry during the brightness and serenity of the years of peace. Soon the modern Athene will lay aside her khaki uniform and renew her peace-time occupation. Alongside her male and female comrades in arms she will carry on the high endeavour of her wartime service towards building a lasting peace and a prosperous Canada.



Canadian Army Photo

CWAC cooks in training receive instruction in meat cutting.

Military Training



ARTILLERY INSTRUCTION

This article on the War Office Method of Instruction Team as applied to artillery training will be of interest to readers in view of the great strides made during the war in Methods of Instruction for the Canadian Army. It was written by Lt. Col. K. C. Boswell and extracted for CATM from the publication "Australian Military Forces.—Editor.

INTRODUCTION:

The aims of War Office Method of Instruction Team (Royal Artillery) are:

1. To apply certain well-established principles of instructional technique to the problem of RA Training, both individual and collective.

2. Generally to assist in raising the level of knowledge in instructional technique among both officers and NCOs who are responsible for the day-to-day training throughout the Regiment.

3. To ensure that developments in instructional technique generally are made known, and where possible applied to the problem of RA training.

4. By personal contact to ensure that these principles are operating successfully.

5. To take method courses in units

whether training or operational. These courses—about 15-20 NCOs on a course of five days—are held at the unit's location, to avoid having to send men away from their unit, and to enable the practical application of WOMIT doctrine to be seen on the spot.

6. To keep in close contact with the Schools of the various branches of the Royal Regiment, to ensure that the instructional technique suggested by WOMIT (RA) does not interfere with or run counter to technical consideration.

7. WOMIT (RA) is in no way concerned with the technical aspect of training, and is purely advisory and without executive powers. Any concrete action taken rests entirely with the CO or other responsible officer.

"Cutting Out The Cackle"

1. WOMIT (RA) advises the abolition of the lecture technique as the normal medium of indoor training. It is urged that the word "lecture" be not allowed to appear on training programs and is even removed from huts, i.e., "Lecture Huts" become "Training Huts." The aim is to remove the inactivity and stupor among the trainees which inevitably follow from listening to a lecture however admirably delivered. The ear is the most fallacious of the senses and is worn out by the lecture.

2. A general rule suggested is that no trainer should ever talk longer than

from 6-8 minutes without stopping, and testing orally or practically so as to determine whether his instruction is understood.

3. Supervisors of training are urged to keep time analyses of squad activity as compared with trainer activity. Every effort is to be made to ensure that all three senses, i.e., aural, visual and tactile are fully employed. The main phases in RA Training where too much cackle by the trainer prevailed were Weapon Training, Gun Drill Detail, Ammunition Training, Equipment Training, Miniature Range and Signalling.

Removing Inactivity by the Squad:

This has been due in some cases to shortage of equipment, but this should not really apply in present circumstances. Too frequently the trainer is exhausted at the end of a period of training rather than the trainee. By ensuring that the maximum amount of stores is used by employing the imitative principle rather than the "watch me" principle, activity can be realised. It is such an obvious truism that boredom is the inevitable result of inaction, that it is hardly worth mentioning, except for the fact that WOMIT (RA) finds this inaction on the part of the trainee one of the most widespread shortcomings in method. Activity, activity, activity, and away with the "unemployed fifth" are the cries.

The "Single Relic" Tradition:

This is frequently due to shortage of equipment. There was a fairly widespread idea that one of a thing was enough for training purposes, with the result that many trainees never touched the weapon, equipment or whatever it was they were being trained in. Every effort is being made to increase the allocation of stores for training purposes.

Learning by Watching:

Far too much value is placed upon demonstration as a means of training.

Manipulative skills are not acquired through the eye alone. If it were so, one would train men to ride a bicycle by riding up and down in front of them, pointing out what was being done, followed by "is that quite clear"? and a belief that the trainee had acquired the skill of riding a bicycle.

Frequently the trainer will show the correct way, but the man is not made to do it himself, which is the only test that he has acquired the correct way himself.

WOMIT (RA) stresses that the best way to build up self confidence in a trainee, and to remove the idea that training consists of standing in what WOMIT (RA) calls the "prepare to receive information" attitude, followed by the "prepare to receive abuse" attitude, is invariably to get the trainee to criticise himself.

Gun Drill:

In gun drill for instance, normally the trainees having done a phase of drill have all their sins of commission and omission pointed out to them by either a critic and/or the trainer. Frequently the trainee himself knows he has made a mistake, and it is much better for the trainee to know that fact than it is for him to know that the critic knows.

Also it is better psychologically for the man to admit his error. WOMIT (RA) urges that in Gun Drill, Weapon Training, Shooting, Signal Training, in fact in all phases of training, the first person to open his mouth when the "curing" process has started should be the trainee. Where this principle has been practised it has been remarkable to see the added interest shown and the self-confidence developed by the trainee.

Simplicity of Language:

Simplicity of language is urged on all occasions. It is essential to destroy the idea that there is any virtue in

mystifying the trainee. It is very easy to utter jargon, but it can have disastrous consequences. There is no need to develop this point further.

Question Technique:

This is frequently the weakest aspect of a trainer's make-up. "Any questions" followed by a nil return on the part of the trainee is far too frequently taken to mean that the knowledge is there. WOMIT (RA) therefore wishes to abolish "any questions" and has suggested the following simple rules for question technique:

1. Every trainer should come to every period of training with questions already prepared, designed to test whether the piece of training has got home, i.e., if it is of the kind that admits of oral testing.

2. Don't ask questions the answer to which is "yes" or "no."

3. Don't test skill by question, i.e., never say "How do you load?" but "Show me how to load."

4. Don't ask the general question which gets a mass answer. Remember you are training individuals.

5. Never forget to clear up the reason why a trainee gave the wrong answer.

6. Don't answer the question yourself.

Note-taking:

There was a very wide-spread belief that note-taking, particularly dictated notes, was evidence of industry and sound training. It is WOMIT (RA)'s belief that most trainees require a minimum of note-taking. This, of course, does not apply to courses for instructors and the like.

The trainee goes into battle, not with a note-book, but with certain skills. If he has frequently to refer to a note-book, it is probably a very good sign that his training has been inadequate.

Recruit Training in Gun Drill:

A wide experience in watching gun drill training over a large number of units in all parts of the Regiment has

convinced WOMIT (RA) that the normal method of teaching gun drill to recruits is not the most effective. The main defects are that:

1. Too much time is still taken up in detailing the drill, and with consequent inaction by the squad.

2. The normal procedure of teaching what is to be done in the drill, and at the same time trying to do the drill, is ineffective, as drill conditions are not the most suitable for acquiring knowledge of what is to be done.

3. Relying on "change round" to ensure that all numbers are performed by the individual trainee does not work, and trainees frequently wriggle through phases of drill which they never do.

In teaching the duties of each man at the gun, the instructor should try to do so by demonstrations rather than by a long explanation in words. By means of questions and answers he should try to draw from the recruit the correct description of his duties.

Demonstrations should deal with the work of each man in the detachment; *and all men under instruction should, in turn, carry out the work of each particular man.*

Instruction in gun drill should begin as soon as *the men are conversant with all parts of the equipment. It is most important that a marked distinction should be drawn between instruction and drill.*

During the former, the language used should be as simple as possible and the meaning of such technical terms as are necessary must be carefully explained. A conversational tone should be adopted, and in no circumstances whatever should anything in the nature of long quotations from drill books be introduced. *The men should be permitted to assume an easy attitude, and their interest should not be allowed to flag. They should be encouraged to ask questions.*

At drill, on the contrary, rigid discipline must be maintained, *orders must be clear and decisive, and the detachment made to work steadily, smartly and rapidly.*

It will be generally advisable to break up the drill into small portions, as, for example, the work of one particular number. Occasionally, however, the work of more than one man must be detailed to enable a particular task

to be performed.

The important point is the clear distinction between the informal instruction before you come to the drill. It is difficult to explain further what inevitably can only be understood by seeing. Nevertheless, the experiments carried out along the lines of the "Notes for Instructors" in 25-pounder, 6-pounder, 17-pounder, and 40mm are sufficiently encouraging to warrant further trials.

MORTAR MOUNT FOR UNIVERSAL CARRIER

A 2-inch mortar mount which enables the new Mark 8 mortar to be fired from the Universal Carrier has been devised and constructed at S17 Canadian School of Infantry, Vernon, B.C.

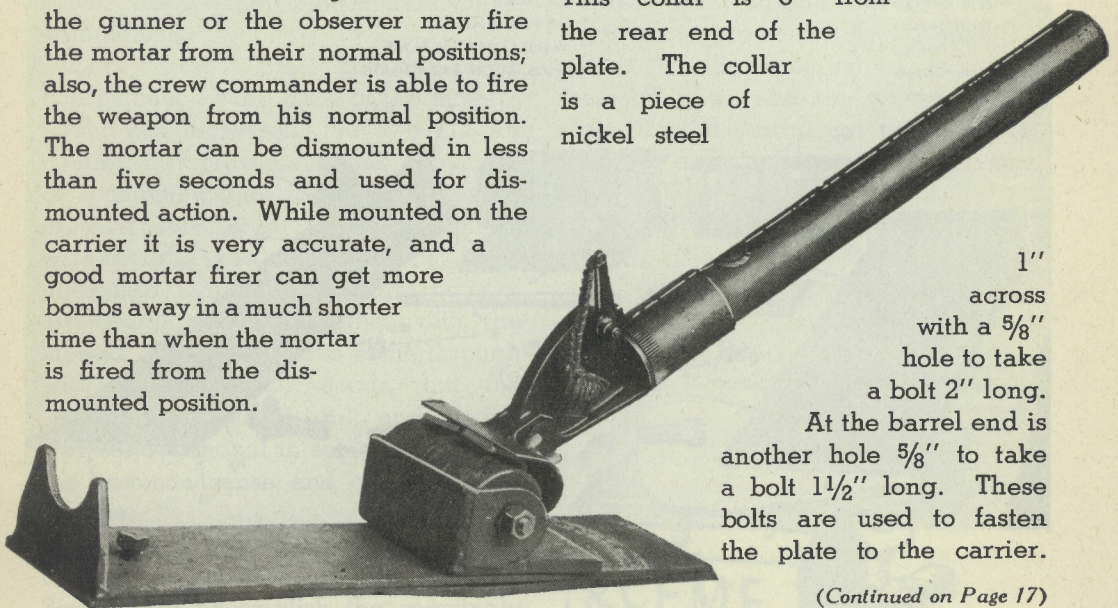
With this mount, the mortar can be fired safely and accurately at any angle either from a stationary or moving carrier. The base of the mount is bolted on the top of the engine cover, and the only alteration necessary is the removal of the fire extinguisher and the drilling of two holes.

The mount is so designed that either the gunner or the observer may fire the mortar from their normal positions; also, the crew commander is able to fire the weapon from his normal position. The mortar can be dismounted in less than five seconds and used for dismounted action. While mounted on the carrier it is very accurate, and a good mortar firer can get more bombs away in a much shorter time than when the mortar is fired from the dismounted position.

Construction

Description of the construction and fitting of the mount, as well as the parts, follow:

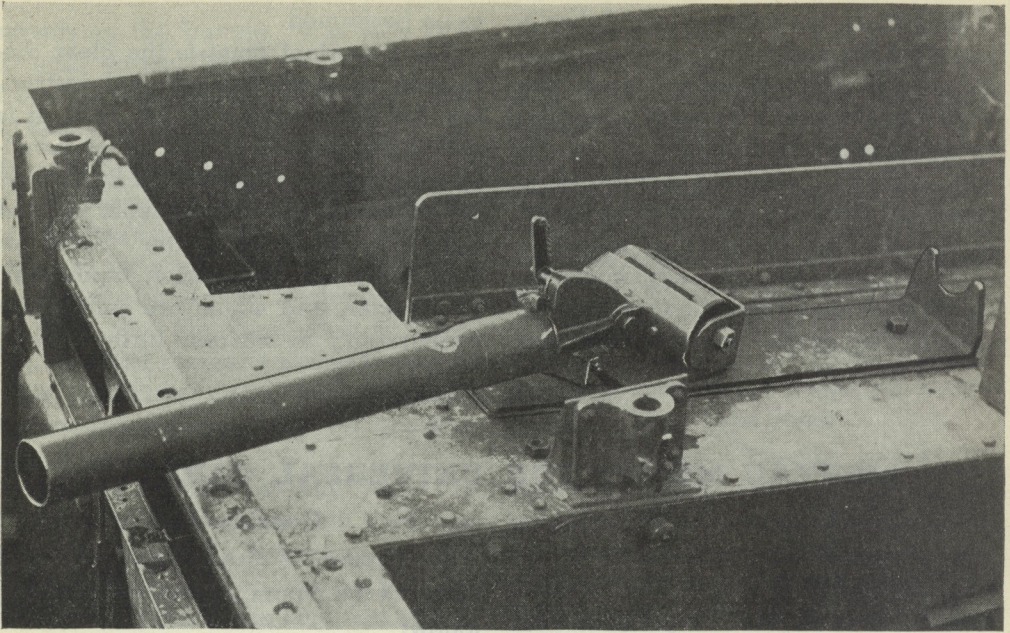
1. One piece of steel plate 23" long, 6" wide and 1/4" thick. At one end there is a 1/4" steel plate, 6" wide and 3" wide, welded in an upright position with a 2 1/2" semicircle cut out of the top for use as a barrel rest. At the rear is a collar welded in the centre of the plate as a swivel bracket. This collar is 6" from the rear end of the plate. The collar is a piece of nickel steel



At the barrel end is another hole 5/8" to take a bolt 1 1/2" long. These bolts are used to fasten the plate to the carrier.

(Continued on Page 17)

Mortar in firing position attached to mount.



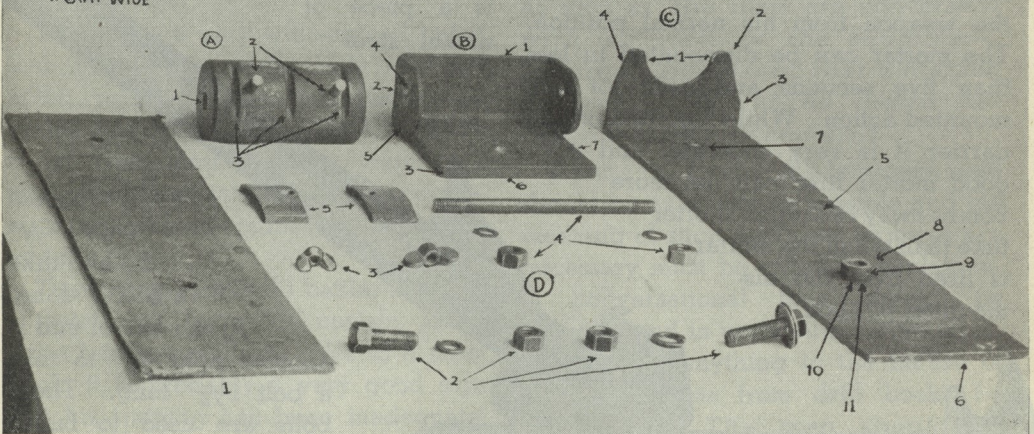
Mortar in position with mount attached on carrier.

- Ⓐ COLD ROLLED STEEL 3in. DRUM $\frac{3}{8}$ HOLE
 2. $\frac{3}{8}$ HOLE & STUDS INSERTED
 3. GROVES TO BE CUT IN FOR MORTAR BASE PLATE
 ONE HALF INCH DEEP, 2 INCHES LONG, $\frac{5}{16}$ WIDE

- Ⓑ BRACKET STEEL PLATE
 1. $\frac{1}{4}$ in. STEEL PLATE
 2. 2 $\frac{1}{2}$ in. HIGH
 3. $\frac{1}{2}$ in. STEEL PLATE
 4. $\frac{1}{2}$ in. HOLE
 5. $\frac{1}{4}$ in. STEEL PLATE
 6. 6 in. LONG
 7. 6 in. WIDE

- Ⓒ 2 $\frac{1}{2}$ in. MUZZLE END
 2. $\frac{1}{4}$ in. PLATE STEEL
 3. 6 in. WIDE
 4. 3 in. HIGH
 5. BASE PLATE 25 in. LONG
 6. 6 in. WIDE
 7. $\frac{5}{8}$ HOLE
 8. $\frac{3}{8}$ HOLE
 9. 1 in. WIDE & HIGH
 10. WELD COLLAR TO PLATE
 11. 6 in. FROM END OF PLATE

- Ⓓ 1. WEBBING BUFFER
 2. BOLTS & NUTS FOR SECURING
 MOUNT TO CARRIER
 3. WING NUTS
 4. 8 in. x $\frac{1}{2}$ in. LONG SHAFT FOR
 ROLLER & NUTS
 5. LEATHER BUFFER WASHER



Here is the mount stripped.

2. The swivel bracket base consists of a plate 6" square and 1/2" thick. A plate 1/4" thick and 2 1/2" high is welded level with the back of the bracket. The ends are rounded to the shape of the roller and 1/2" holes are drilled in the side plates.

3. The roller consists of a piece of cold rolled shafting 3" in diameter, with a 3/8" hole drilled through the centre for a shaft. This shaft is threaded at both ends. The roller is notched so as to allow the mortar base to sit firmly, and two holes are drilled and tapped to allow for studs to anchor the base plate firmly on the roller. Wing nuts are used for tightening down.

4. Some heavy sole leather should be

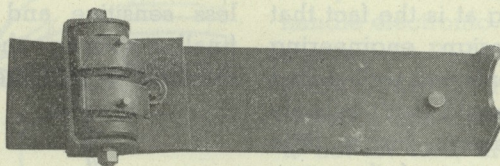
placed between the roller and the mortar base plate, and a piece of belting should be placed under the long plate to take up the shock when firing.

To dismantle the mortar, the wing nuts are unscrewed and the mortar taken off completely.

Safer Firing

This mount makes for all-round safer firing. Due to the shape of the base plate the mortar is apt to slip on hard surfaces at low angle firing. This condition is alleviated with the new mount because it can be used at lower angles than is the case when dismantled.

The mount was designed by Maj. A. Condy, B.E.M., OC of the Carrier/Flame Battle Course at this school, and was constructed with the assistance of Armourer Sgt. G. T. Smith.



Mortar mount.

UNIT MAINTENANCE

This little article is intended as a plea for those items of service equipment that never get much publicity until they break down—the telecommunications equipments.

Considering the communication equipments, as the pace of the modern Army has increased, the demand for continual improvement and expansion of communication facilities has increased accordingly. Development of wireless and line equipment has been necessarily rapid. The bright boys of the design crowd, together with the moguls of industry, have come through with the necessary goods, but the reliability thereof is still, and always will be, dependent in some measure on the common sense and conscience of the user.

And then there's Radar, the "mysterious" doings that enabled all three Services to accomplish the seemingly impossible. Mysterious, yes, in popular

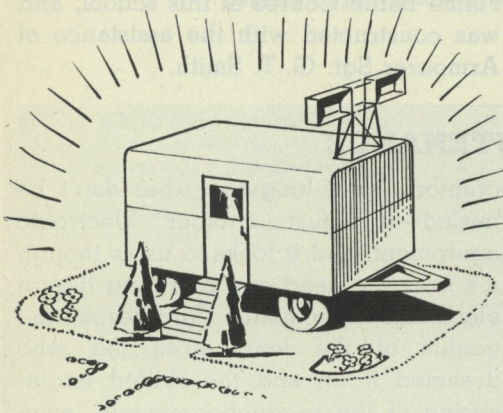
opinion, for a long time, but don't be misled—it's just another electronic equipment, and it looks to us as though it's near the head end of a long line of electronic equipments. And despite the genius of the long-haired lad who dreamed it up and the skilled engineering of the production people, even the latest early warning and gun laying



radar with the auto-follow, air conditioning and the adjustable plush-covered chairs still needs the careful attention of the user if it's going to do its job.

Needs Loving Care

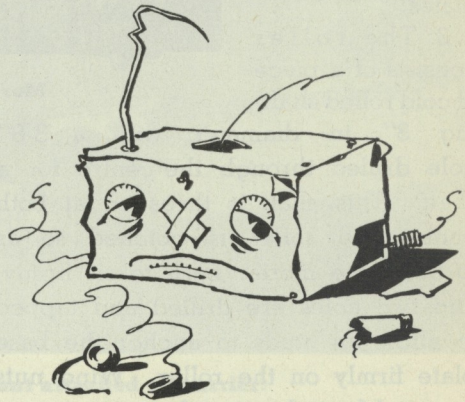
What we're getting at is the fact that all the excellent design, engineering to Service requirements and well-staffed repair shops in the world can't entirely obviate the requirement for a little loving care on the part of the user. Not that the loving care isn't lavished by many. We've seen Tels equipments that are a joy to behold. The Unit is lucky; some of the boys know and love their electronic equipment, and their love is reflected in the state of the equipment. It fairly shines, and that's usually an indication that the works are well tended to.



"—a joy to behold"

But it sometimes happens that the unit doesn't have the necessary affection for the Tels equipment. Maybe the officers are a wee bit at fault. Have they made it their business to get to know their equipment? Or have they said, as many have, and some still do—"Don't talk to me about electronic equipment. I don't know anything about it." Sure—it's on their charge; certainly, they expect it to deliver the goods; yes, it's mighty fine, modern equipment that cost a lot in development and production, and will perform in a way that not so long ago would

have been considered miraculous, but it's electronic equipment, and they're afraid of it. Hence, no interest, and so on down the line. And what happens? The expensive job gets dirtier, rustier, less sensitive and less reliable until finally nothing short of a complete overhaul is indicated.

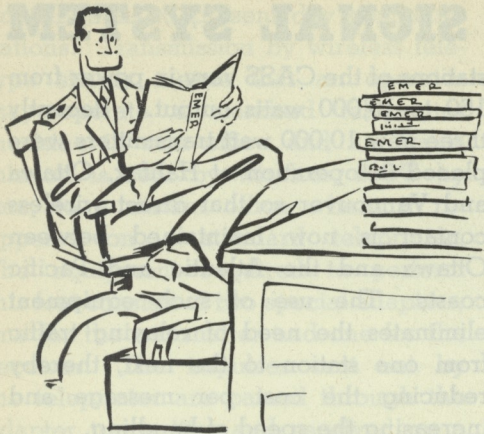


"—nothing less than a complete overhaul"

It's really a shame. Care of Tels equipment is so important, and so simple, and yet sometimes so neglected. It seems to us that when the Unit Officers know something about the equipment, understand its capabilities and its limitations, and are completely familiar with its day-to-day demands on the user for maintenance, they are in a much better position to ensure that Unit Maintenance is carried out. Result, electronic equipment in which all ranks may well take pride and which, when required, will do the job for which it was designed.

Many an equipment, particularly in the larger sizes, has been tagged as a "Jonah," a jinxed set, when all it needed, poor thing, was the attention from its user which is its birthright.

It's not really such a big order. True, we can't all hold a Ph.D. in Electronics, but fortunately that isn't necessary. The equipment is engineered to reduce Unit Maintenance to a minimum and



“—browse in the EMERs”

telemechs are specially trained and equipped to handle the repair jobs. All the Unit Officer has to do is read the EMERs or CALEMELs pertaining to the equipments he has on charge. Those in “Category XY3” are the ones; they detail “First Echelon Work.” “XY2”, the “Technical Description,” is also a good publication for an officer to browse in. A nodding acquaintance with “XY2” and a working knowledge of “XY3” will enable an officer to apply searching spot-checks on his Unit Maintenance. And it’s hardly necessary to point out that a display of enthusiasm and a bit of knowledge on the part of the officer will have its effect on the Other Ranks who carry out the Task System.

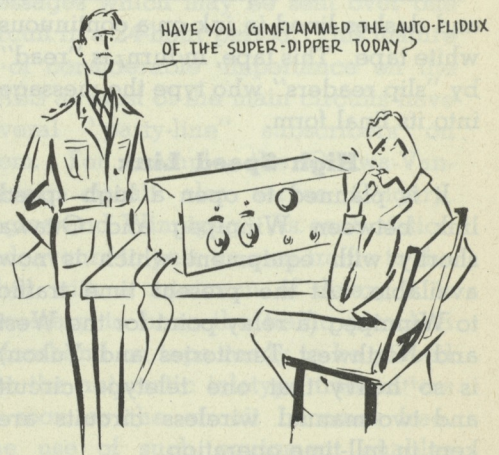
If we may be permitted a quick peek into our crystal ball, which to date we’ve used mainly in attempts to predict the condition of electronic equipments after a unit has finished neglecting 1st Echelon work for any given period, we’ll give you our special preview of the shape of things to come. We see more and more electronic equipment. Not only do we see startling developments in communications equipments, standardization, tropicalization, simplification (to the user) and improved performance, but when we look at electronic detection and prediction,

guided missiles, etc., we quickly pull the black velvet cover over our time machine. We don’t want to appear too fantastic. Maybe we’re prejudiced, but it certainly looks to us as though the Army of the future is going to have to handle electronic equipment more than somewhat. Perhaps now’s the time for every officer to reject the idea that a working knowledge of Tels equipment is not for him, and to develop a keen interest in the use and care of the new gadgets as they come along.

What to do

So to summarize our plea for a little more affection on the part of Units for their Tels equipments, we suggest that as a start, you officers:

1. See that EMERs and CALEMELs are available.
2. Ensure that your maintenance people use them.
3. Study them yourselves; you’ll probably find them interesting.
4. Understand broadly how the things work, and why.
5. Know the 1st Echelon Task System as you know your drills.
6. Take an interest; demand spick and span appearance and peak performance. Be prepared for more and more electronic equipment.



“—apply searching spot-checks”

CANADIAN ARMY SIGNAL SYSTEM

Here is another in the interesting series of articles prepared exclusively for CATM by the Directorate of Signals, NDHQ.

—Editor.

Wireless Equipment: Today the Canadian Army Signal System maintains and operates a considerable quantity of modern, high-powered wireless equipment. The overseas radio circuit consists of two extremely reliable high-speed automatic transmission wireless links, capable of transmitting messages at a rate of 300 words per minute. These links were installed in order that large amounts of traffic could be transmitted rapidly to England during favourable transmission conditions.

Practically 100% of all army and air-force traffic to overseas has been sent on these two high-speed circuits. Messages are punched in code on a special tape which is fed mechanically through a "keying head" which keys a high power transmitter. As the dots and dashes thus sent are received too rapidly to be picked up by ear, the receiving station feeds this signal into a "tape recorder." This machine "translates" the signals into visible dots and dashes lined in ink on a continuous white tape. This tape, in turn, is "read" by "slip readers" who type the message into its final form.

High Speed Link

It is planned to open a high speed link between Winnipeg and Ottawa shortly with equipment which is now available. At the present time traffic to Winnipeg (a relay point for the West and Northwest Territories and Yukon) is so heavy that one teletype circuit and two manual wireless circuits are kept in full-time operation.

Wireless transmitters on the radio

stations of the CASS vary in power from 150 to 10,000 watts output. Recently three new 10,000 watt transmitters were placed in operation at Halifax, Ottawa and Vancouver so that direct wireless contact is now maintained between Ottawa and the Atlantic and Pacific coasts. The use of such equipment eliminates the need of relaying traffic from one station to the next, thereby reducing the cost per message and increasing the speed of handling.

One of the most satisfactory low-powered service transmitters is the RCA AT-3, known overseas as the "Maple Leaf Set" or the C-33. These transmitters were ordered originally for overseas use by the army and, for air-control purposes, by the RCAF both in Canada and Overseas. A moderate number are now being used on the CASS.

FM (frequency modulation) equipment has been installed at certain points on the System to provide "telephone quality" communication channels over short distances where it was not feasible to erect pole lines. In addition, FM multi-channel equipment is being used to provide keying links between Army Signal Offices and their associated transmitters, often located 5 to 15 miles from the Army Signal Office itself. An operator is, therefore, able to key a transmitter at a remote point without the use of a connecting landline.

Several transmitters may be keyed simultaneously by this means. Expanded use of this method will reduce costs incurred in the renting of leased control lines between the ASO and the remote transmitter site.

At the present time tests are being conducted between Halifax and Ottawa on Canadian manufactured wireless teletype equipment. Wireless teletype is one of the most important and valuable

contributions to present day communications. Transmission by wireless teletype simply means that an operator may operate a standard teleprinter machine in one office and his transmission is sent by wireless, **NOT** by line, to a distant office where it reappears on a standard teleprinter. The equipment required to perform this feat consists of two special adapters, one for the transmitter and one for the receiver. The impulses sent out by the teleprinter are passed through the adapter transmitter and received on a standard receiver, unscrambled in the receiver adapter and the resulting impulses fed into a teleprinter. This teleprinter proceeds to print the message as typed by the operator in the distant office. The message is immediately available for delivery to the addressee as received.

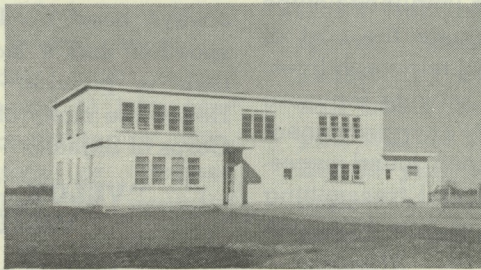
No Landline Needed

The benefits of this method of communication are many. It eliminates the necessity of landline, it is inexpensive because adapters may be attached to existing transmitters and receivers at a relatively low cost; it offers considerably faster service than can be secured over a hand speed wireless circuit because teleprinters operate at approximately three times manual speed; and it overcomes the need for trained Morse operators.

It is proposed that within the next few years the CASS will use this method of communication almost entirely because of its efficiency, economy and proven value.

Where several circuits are required over comparatively short distances the principles used in radar are applied to

provide the facilities required. This method of radio transmission on very high frequencies permits several messages to be sent at one time over a single radio channel with quality equal to or better than that obtained over present day telephones. This mode of transmission is subject to the limitation of distance imposed by the use of these very high frequencies. This can be overcome by placing relay stations at high points between main stations on the route. Field Marshal Montgomery, in the closing stages of the war, came to rely on sets of this type for his communication to such an extent that he was prepared to site his headquarters to suit the requirements of this set.



The Leitrim remote receiving building. Signals are picked up here and sent to the Army Signal Office at Ottawa.

Teletype Equipment: Nearly every station on the CASS possesses one or more teleprinters, while many of the busier

stations have special automatic teletype equipment. By means of this automatic equipment messages may be sent at the rate of 60 words per minute, considerably increasing the number of messages which may be sent over one circuit in a 24-hour period. This feature is of considerable importance on the CASS as most of the main circuits have several "party-line" subscribers on them. For example, the Ottawa-Vancouver circuit also serves Calgary, Regina and Winnipeg. As each station endeavours to pass its own traffic to the other with a minimum of delay, it is necessary to have the traffic punched beforehand on tape ready to be placed into the automatic teletype transmitters as soon as the circuit becomes free. The use of such equipment enables several stations to have the facilities.

of a direct line to Ottawa and to its fellow "party-line" subscribers, while the cost of leasing the line can be spread over the operating charges of a group of stations.

Rapid Service

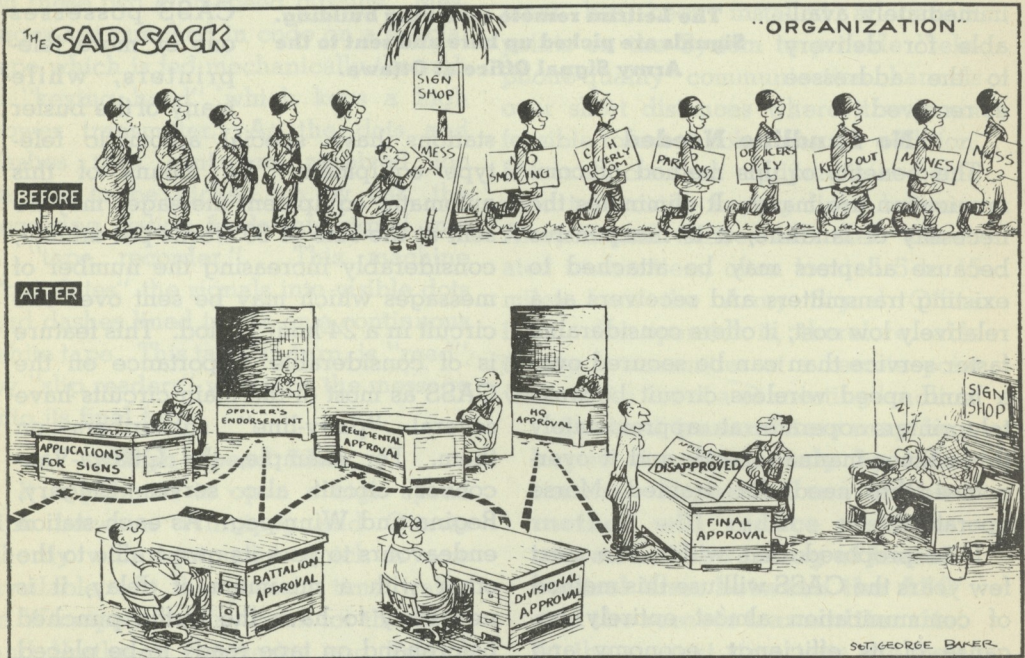
Although the use of landline teletype circuits have proven of inestimable value, it is probable that, when traffic eventually decreases, the CASS will revert to wireless as its principal means of communication. By using teleprinters in combination with existing wireless equipment, it will be possible to give the rapid, efficient service usually associated with landline teletype systems and yet eliminate the cost of renting transcontinental telegraph lines.

Sites: In order to provide for more efficient operation of any permanent radio system, it has been found necessary to separate the actual transmitting and receiving sites, not only from one

another, but from the central operating point (headquarters) as well. This separation together with the use of remote sites reduces interference and provides space for the erection of efficient aerial systems. It is intended to obtain remote receiving and transmitting sites for the more important CASS radio station as soon as possible.

Conclusion: The Canadian Army Signal System has served not only the Army but many other government departments. Its usefulness is dependent on several factors but principally on how well it provides communication facilities for its customers. Its aim has always been to do this by giving a speedier and a more accurate service than is possible by other agencies. Hence the motto of the Royal Canadian Corps of Signals:

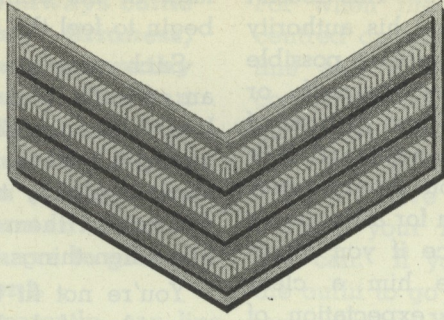
**"VELOX, VERSUTUS,
VIGILANS."**



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

THE NON-COMMISSIONED OFFICER

Three and a half years of war ought to be enough time for every officer in the army to learn to back up his N.C.Os. — help them become better leaders by giving them full respon-



sibility and preserve their self-confidence and authority in the dozen ways this must be done. But many have still to learn how to develop first-rate non-commissioned leaders in training and combat. Yet every platoon or company commander must expect any N.C.O. in his outfit to take over life-and-death responsibility in combat when the platoon or company commander is killed or wounded in action.

More than Stripes

Putting stripes on a man's sleeve doesn't by itself make him a leader with assurance. The promoted private may have given signs before you made him of having the stuff a N.C.O. needs. But you, as the leader from whom he has received his authority, are still the man he must look to for his backing and for specific instances of the way to lead men. And some company or platoon commanders never seem to learn that their own faults of leadership are usually reflected in those of their assistants, though many N.C.Os. do rise above ineffectual or uncertain leadership.

When a N.C.O. first sews on his stripes, the chances are that he's going to need extra help for a while until he gets hold of his job. Unless the new N.C.O. has had a considerable amount of experience in a real exercise of authority as an acting N.C.O., he is likely to feel somewhat uncertain. This will often show in the

fact that he acts too tough—or too easy—or too tough one time and too easy the next. He will be an unusual man if he pitches in apparently with complete confidence and without making

some awkward mistakes.

A lot will depend on how you have handled your other N.C.Os. If you have always stood behind them and preserved their dignity and authority, every new N.C.O. will know from the start that you will do the same for him. But if you haven't, you can expect a new corporal or sergeant to be mighty unsure of himself.

Fortunately, every new N.C.O. has several officers and older N.C.Os. in his outfit to pattern his actions after. If you happen to be a poor or mediocre leader, he doesn't have to pattern himself after you, but it is likely that he will if you're his commander.

A new N.C.O. needs some words of encouragement and advice from you—and he shouldn't have to seek them. As his leader it's your proper job to keep an extra close eye on him for a while after he is made—and more for

*While this article was written by a member of the United States Army and is thus an American opinion, the lessons it teaches apply equally well to the Canadian Army. It was extracted from the British War Office Infantry Bulletin.—
Editor.*

the purpose of finding things to explain and praise than to blame. This doesn't mean for you to weaken his authority by standing over him whenever possible and giving his orders yourself, or explaining at length to him in front of his men just what you want and how you want it done. You should never have recommended him for a Noncom's rating in the first place if you didn't think you could give him a clear order with reasonable expectation of his carrying it out O.K., without continual supervision on your part.

Let Men Know

The way to help him most by praise is to give him that praise within the hearing of his men. No matter how much he may flounder on his new job, as long as he wears stripes try to find something to encourage him about. Nothing helps an uncertain leader more than a clearly spoken expression of appreciation. Many seemingly poor choices have finally grown to be able N.C.Os. through gathering confidence from sympathetic understanding and encouragement.

Encouragement must not, of course, be overdone, or the N.C.O. will never learn to stand on his own feet. But you can't expect him to know he is doing all right unless you say so, and it will help him all the more if you say so out loud, so his own men can hear it.

But advice, containing criticism if it is needed, should invariably be given in private—never in front of other enlisted men or officers. Criticism and blame of a non-commissioned officer before others is never justified unless his mistake is so serious in its effect on other men that you are going to "bust" the N.C.O. on the spot.

It only takes one mild criticism of a N.C.O. by you in front of his own men to ruin their respect for him, to

make them feel that you do not have faith in his ability or character, and begin to feel the same way themselves.

Such complete lack of leadership on an officer's part can easily result in loss of life in combat. If you show that you don't have faith in a N.C.O.—show it plainly to his men—how can you expect them to have any faith in him when things get tough.

You're not fit to wear bars if that's your idea of dealing with one of your N.C.Os.

It has practically as bad an effect to jump on a N.C.O. in the presence of others who do not happen to be his own men. It is bound to embarrass him seriously and start his inward stock on a downward rush from which it isn't at all likely to recover.

Applies In Battle

Not even in a battle emergency can open criticism of a N.C.O. in front of others be justified. Even there, in the interest of your own outfit and your own leadership of that outfit, you should never in any circumstances bawl out a Noncom—unless you are going to take all his authority away from him then and there and put someone in his place. There, more than anywhere, you need to help your leaders through the tough situations.

Even in battle, when you have to correct a N.C.O., get close enough to his ear for what you say to be private. Don't even let yourself look as if you were jumping on him when others can see you.

How you say in private what you have to say to a N.C.O. when you correct him is a matter of your leadership in general. You have to be fair even if you think you have to be hard and many a first-rate leader—many of the very best—have never in all their careers found it necessary to form the habit of being tough in manner towards their subordinates.

You will be a far better leader if you can always come close to showing firmness, understanding, and sympathy in the right mixture. You can show the utmost firmness without getting tough. And if you can do that, you salvage the maximum or human morale even when you have to give a severe punishment.

Not all leaders, apparently, can live up to this most effective manner of leading men. If you are weak enough to have to get tough, you've got to be, at the same time, fair and just.

If you aim for such conduct toward your N.C.Os., if you try continually to strengthen their standing in the unit, you will have a first-rate, fighting outfit.

But you may even be a superb leader of men yourself, with an outfit that thinks you could hardly be beat, and still not handle your N.C.Os. to

the best advantage of the whole unit. For when the leadership is strongly centred on one man, no matter how fine and able and self-possessed in combat—if that man goes, his outfit is all too likely to go to pieces.

Build Them Up

So you have to build up your junior leaders, your N.C.Os., in every way you can. If you drop out, you want the outfit to go ahead as well as if you were there. You must never get to believing it can't. You want it to fight on ahead, kept up by your tradition—and (mainly) by your good work in helping your N.C.Os. find themselves from the first day they put on their stripes and become effective combat leaders.

If you think you have some faults in the way you handle your N.C.Os. you can change yourself. It takes thought, awareness and practice. But you can do it if you're worth the bars you wear.

If you can't, you'd better turn them in!

SAFETY LIMITS DURING AIR STRIKES

(British War Office Infantry Bulletin)

The following question and answer concerning safety limits for troops during air strikes in Burma is reproduced from India Infantry Liaison Letter No. 21, dated September, 1945:

Question: How close can troops get during an air strike? Does this vary with the type of bomb used and if so what are the various safety limits?

Answer: The distance to which troops can get depends on the type of bomber in use as well as on the weight of bombs. When dive bombers are being used, the safety areas are less than with ordinary bombers.

Details are as follows:

1. **Liberators**—Carry 500 lb. or 1,000 lb. bombs; total load, 8,000 lbs. Safety distance, 1,000 yds.

2. **Mitchells**—Can carry out a low-

level attack (50 ft.-100 ft.) usually by two or three aircraft carrying a total bomb load of 4,000-6,000 lbs. of various types. Safety distance, 1,000 yds., but likely to be reduced as pilots gain more experience.

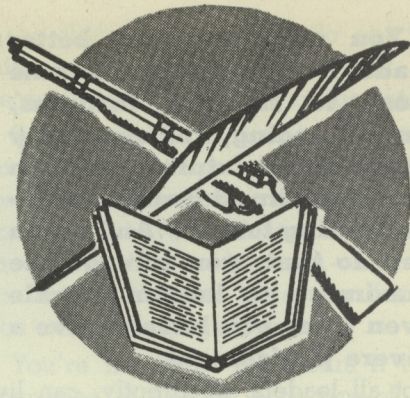
3. **Thunderbolts (Dive Bombers)**—Carry two 500-lb. bombs. Safety distance, 700 yds. This can be reduced to 500 yds. with experienced pilots.

4. **Hurricanes (Dive Bombers)**—Carry two 250-lb. bombs. Safety distance, 300 yds.

If a target is a big one, twelve aircraft can carry out pattern bombing from a high level (approximately 4,000-6,000 ft.). Safety distance, 1,000 yds.

On many occasions some of the above distances have been considerably reduced.

CANADIAN ARMY EDUCATION



TRAINING AT A38

When A38 Prisoner-of-War Guard Training Centre, North Bay, Ont., was taken over by the Veterans Guard of Canada in February 1945 it was considered advisable to increase Educational Training, which formerly had been given by VGC company officers. As a result, organization of several projects of practical value to VGC personnel returning to civilian life was started.

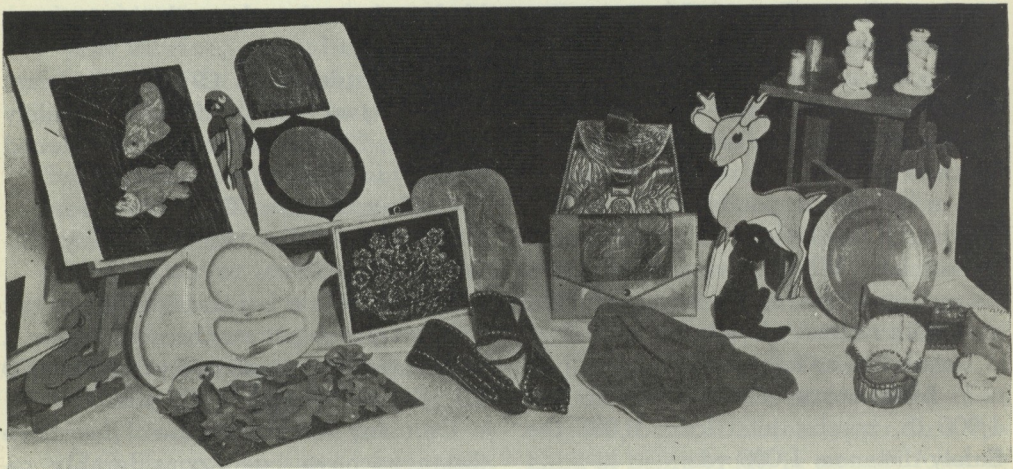
The plan was launched the following month with the co-operation of the DOC of MD 2, the Director of Education, NDHQ, and Maj. G. E. Macklin, Education Officer for MD 2.

Emphasis was placed on the practical application and training in subjects such as Small Farm Holdings, including the breeding, care and management of hogs and poultry; construction of simple hog pens and poultry houses; practical work in carpentry, leatherwork, cera-

mics, plastics, etc., along with definite information on Rehabilitation.

Three registered sows and poultry were obtained, as well as equipment, including power machine tools and hand tools which were transferred from S8 Canadian Army Trades School. Additional machinery was purchased for the wood-working shop.

Instructors were selected from VGC personnel, and the first course, Sept. 25 to Oct. 3, 1945, was given to 10 selected Educational NCOs from Internment Camps in Canada. Practical work was carried out in the care and feeding of hogs, killing and dressing of fowl for market purposes, repairing of furniture and work in wood, leather, plastics, painting and sign writing.



Displayed here is a variety of handcraft work done at A38.



Lawn chairs and other articles of woodwork made at A38.

Lectures were given by Maj. J. F. MacMillan of the Directorate of Education, NDHQ; Maj. K. M. Hatch, District Education Officer; Lt. Col. F. I. Carpenter and W. C. Nixon, local representatives of the Department of Veterans' Affairs; Mr. Hutchinson, of the Canadian Legion Educational Services; F. C. McRae, provincial agricultural representative; and Mr. Manahan, local hog breeder.

Enthusiasm of the candidates gave the directing staff incentive to enlarge on the training.

The second three-week course commenced Nov. 26, 1945, with 27 candidates (six officers and 21 other ranks) from Internment Companies. The list of subjects taught follows:

History of Army Education (Hints For Instructors), Film Utilization, How

To Express Yourself, Camp Libraries, Small Holdings and Agricultural Projects, Gardening (Preparation of Soil, Growing, Harvesting and Storage), Bee-Keeping, Orchard and Small Fruits, Hogs (Housing, Practical Management,

Information in this article was compiled by Lt. Col. R. S. Harrison, M.C., E.D., commandant of A38 Prisoner-of-War Guard Training Centre, North Bay, Ont., and supplied to CATM through the co-operation of Lt. Col. O. B. Rexford, of the Directorate of Military Training (Education). It reveals the progress made at A38 in fitting army personnel for civilian work.—Editor.

Types, Feeding and Breeding), Poultry (Housing, Practical Management, Dressing and Marketing).

Latest Information on Rehabilitation, Facts About Rackets, Canadian Pension Act, Use of Information Rooms (Discussion Groups), Carpentry and Woodworking, Painting and Sign Writing, Course of Home Repairs (repairing of furniture and plumbing and electrical fixtures and equipment), Leatherwork, Plastics, Ceramics.

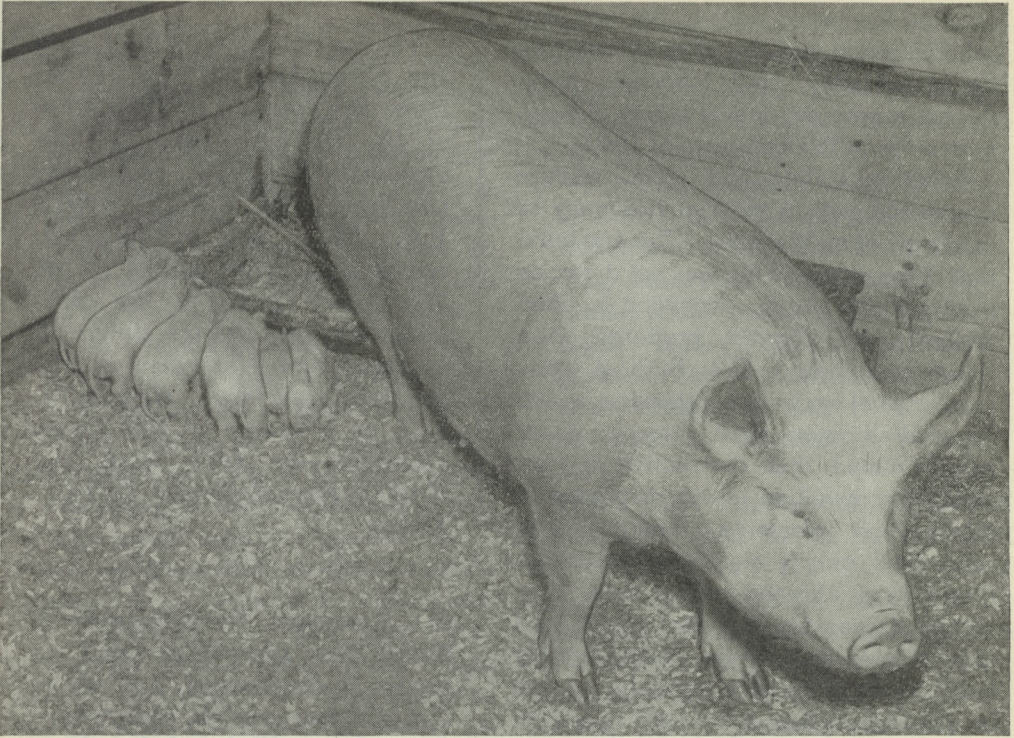
It is interesting to note that during the progress of the course three registered sows produced litters. This event

proved useful in giving practical demonstrations in the care of young pigs.

The third three-week course commenced Jan. 14, 1946, with an enrolment of 36 candidates; the purpose being to train more personnel of Internment Camps and VGC Companies. In addition to subjects already mentioned, the third course included CLES and other correspondence courses, Technique of Instruction, Adult Education, Functions of Army Education, Shell Work, Drawing and Designing and Small Building Construction. The course consisted of 132 periods.



Instruction is being given here to a class in leathercraft.



A registered sow with a litter farrowed at A38. This litter gave students an opportunity for practical work in hog raising.

HISTORICAL NOTE ON ARMY EDUCATION

In a model set of standing orders, published in 1767 by an officer of the Queen's Royal Regiment, there occurs the following order: "A Sergeant or Corporal, whose Sobriety, Honesty, and Good Conduct can be depended upon . . . is to be employed in the capacity of a Schoolmaster."

About the same time, the 18th Hussars had a regimental "school of instruction," and from 1800 onwards, the Rifle Brigade took steps to make all their N.C.O.'s literate, a practice which materially helped the brilliant collective training of Sir John Moore's brigade at Shorncliffe.

Not all regiments were so enlightened. William Cobbett, when a recruit, had to teach himself grammar by the light of a wood fire in an otherwise unlighted barrack room. But one may reasonably infer that the adult school was not an

uncommon institution in the 18th century Army. The need was great—Cobbett tells of an adjutant who was so ashamed of his spelling and handwriting that he locked away every scrap of writing before he left the orderly room.

Schools Ordered

In 1811, the Adjutant General issued a memorandum directing each regiment to establish a school for the care of its children (for in those days women and children trudged after the baggage wagons, and joined the troops in camp or bivouac). Some regiments had already done so; there certainly was a school of this nature at the base headquarters of the Peninsular Army, which may have prompted Wellington in 1813 to order all regiments in the field to open schools "as opportunities might permit." From this time, adult education

became the lesser duty of the sergeant schoolmaster, and the care of children his major duty, until Macaulay introduced a new service of Army Schoolmistresses in the Estimates of 1840.

Adult education and social welfare proceeded with a marked hesitancy in the Army after Waterloo. The amelioration of the soldier's life was not divorced from politics, and in succession Jacobin, Radical and Chartist proffered their injudicious help. The Biblical commentaries of excited secretaries, which gave Wellington such unease, might have created that destructive temper which Cromwellian troops displayed in their worst moments, though as it turned out, only a minute fraction of the forces was affected. The most conspicuous example was that of the two Grenadiers who were imperceptibly led from "a discussion regarding forms of government" in a low inn to a projected mutiny at the Tower.

The Duke's Ideas

One can understand the feelings of the grand old Duke of York, as he reprimanded a chaplain who had proposed to establish a barrack library—"H.R.H. will on no account sanction so **unnecessary** and so objectionable an institution." H.R.H., however, did approve the general issue of 28 selected and sage volumes, each one stamped "Approved, C. Cantuar—E. Ebor—J. London."

In 1839 reading rooms were established in all barracks (in the East India Company's stations they already existed), and 300 volumes were despatched to each by the Stationery Office. A copy of the catalogue exists in the Record Office; it displays such taste and understanding that one would probably not err in attributing the selection to Macaulay, then Secretary at War.

The order of 1811 had enjoined Army chaplains "diligently to scrutinise the conduct of

This article is reprinted with the permission of the author from the Journal of Education of the British Army. It will appear in two parts, this being the first. Col. A. C. T. White, V.C., M.C., the author, was senior Education Officer of the 21st Army Group in the campaign through France, Belgium, Holland and Germany in the Second Great War. He won his V.C. as a major of the Green Howards in 1916 with the British Expeditionary Force.—Editor.

the Sergeant Schoolmaster." Since the chaplains had no power to command, and since the visiting parish clergymen who often officiated for them had no official status, there was an almost complete lack of guidance until the Rev. R. C. Cleig (best known as the author of "The Subaltern") was appointed Inspector General of Army Schools in 1846.

In the year before his appointment, it happened one day that Cleig, then Chaplain General, encountered the Paymaster General, Baring, as they were boarding a river steamer at Vauxhall. Some turn of conversation inspired them to pay an unannounced visit to the Duke of York's School on the Chelsea bank, where Sergeant Schoolmasters were in charge of classes in this boarding school for the sons of meritorious soldiers.

They saw a system that was both grotesque and cruel. It would serve no purpose to recall the details, and it is sufficient to say that with the help of Sidney Herbert (Secretary at War) and of the Committee of the Privy Council which was the predecessor of the

Board of Education, they drafted the Royal Warrant of 1846, which began, "Whereas we have deemed it expedient to introduce into our Army a class of man better calculated to perform the duties of schoolmaster . . ." The gist of the change was that a teachers' training college and practising school of the current type were established at the Duke of York's School.

"Greatest Boon"

What the new system accomplished is illustrated by the evidence of a commanding officer to a Parliamentary Commission of 1850:—"It (the system of education) is very popular, and next to the good conduct warrant, is, I think, the greatest boon the Army has received since I entered it. Experience has convinced me that crime has diminished as men have rational occupation and comfort in their quarters. We have had few defaulters during the past month, and in six days, none, which is unusual in a place like Edinburgh, and is, I think, to be attributed to the school and the occupation attendant on it."

Up to this time the Sergeant Schoolmaster had been borne on the strength of his regiment—Foot Guards, Highlanders, or Artillery—and had worn its uniform. From now until 1914 his usual uniform consisted of dark blue frock coat and trousers, gold cord shoulder knots, sash, sword, and a cap with "a Crown worked in gold thread." Warrant rank was introduced in 1854, and commissioned rank a little later. In 1856 the East India Company founded its own Corps of Army

Schoolmasters, and established a Normal School at Poona; but after the Sepoy Mutiny and the fusion of the two armies, the Company's Corps became merged in the Queen's Corps.

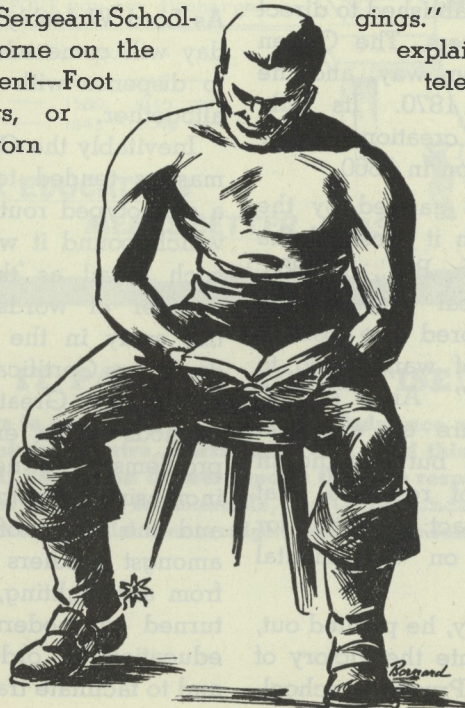
By 1859, schools were found in every permanent station of Army and the embodied militia—in Montreal, the Ionian Islands, New Zealand, St. Lucia, Hong Kong, Hyderabad and Melbourne. Attendance was compulsory for the first year of service, thereafter voluntary.

There was none of that rigid uniformity with which fiction has endowed the British Army. The annual report speak of unit libraries, managed by committees on which the rank and file were represented, of lantern lectures, community singing, Christy minstrels, dances, and gymnastic classes. In Aldershot in 1858 there was a garrison list of 27 available Army lecturers. Two brigade majors with "magic lantern" lectured respectively on "Wellington"

and "The Australian Gold Diggings."

An artillery officer explained the new electric telegraph, and a corporal of the Devons was found constructing one from his memory of the lecture. Schoolmaster Grant lectured on "Curiosities of Air and Water, with Chemical Experiments."

But at the other end of the scale was the wretched schoolmaster in Capetown, to whom no sailing ship delivered stores in 1857 and 1858. During those two years, in a dark hut paved with cobble-



stones he taught fifty men with the aid of a dozen (borrowed) slates, and a pocket map of the world. Statistical evidence of progress is revealed by two surveys made in 1856 and 1859. In the former year, of 10,000 men who were interrogated, 20 per cent could not read, and 47 per cent could not write the most simple statement. Three years later it was calculated that 61 per cent of the Army proceeded past the primary stages of learning.

Queen Objects

After the Crimean War, which brought down a storm of criticism on the training of officers, there was an abortive attempt to fuse the education of officers and men under a single directorate; but the Queen, as her correspondence shows, personally intervened to prevent it, her objection being to any division of authority between the Commander-in-Chief and a committee. Col. Lefroy, R.A. (later Sir John Lefroy, F.R.S., Governor of Tasmania), who succeeded Cleig in 1857, did, however, become subordinate to "The Council of Military Education," a body established to direct the education of officers. The Queen ultimately had her own way, and the Council expired in 1870. Its only memorable act was the creation of Army Certificates of Education in 1860.

Its outlook may be gauged by the trepidation with which it received the report of Col. McCrea, R.A., in 1868. This officer, the local Inspector of Schools in Malta, deplored "the absence of life and reality, of warmth, so to speak, in the system." Army schoolmasters, he said, "are an excellent correct class of men, but wanting in that happy fertility of resource, that variety of tone and tact, essential for a right impression on our mental faculties."

In the Prussian Army, he pointed out, it was usual to attribute the victory of Koniggrats to the Prussian school-

master; and he prophesied that if ever the British Army fought the Prussians, the issue would be decided by their respective standards of intelligence and education. Warming to his subject, he demanded the reduction of guards and the transfer to education of the time saved, the appointment of unit education officers, and the decoration of classrooms in an æsthetic and inviting manner. The answer of the Council was brief but embarrassed.

Towards the end of the century several events marked the increased importance attached to literacy. The promotion of N.C.O.'s became more and more dependent on certificates, and in 1892 the Drill Book postulated that private soldiers "should be taught to think and, subject to accepted principles, to act for themselves." Before the South African War the Army contained more than 4,000 men with 1st, and 45,000 with 2nd Class Certificates of Education. All this activity, however, was formal and was based on a misguided estimate of the value of the curriculum in elementary schools. As Lord Wolseley put it in 1898, "The day will come when we shall be able to dispense with Army Schoolmasters altogether."

Inevitably the Corps of Army Schoolmasters tended to inbreeding and to a stereotyped routine. The regulations which bound it were arid, and full of such detail as the suitable minimum number of words and sentences for the essay in the examination for the 2nd Class Certificate.

The First Great War brought these methods to an end. Faced with old problems in a new setting, with the increasing monotony of the war years and the sense of futility engendered amongst soldiers in stations remote from any fighting, the army ultimately turned to modern methods of adult education in order to fortify morale and to facilitate training.



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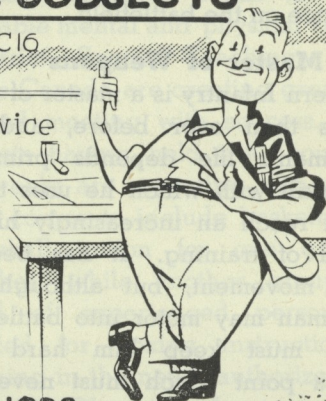
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BETTER EDUCATION

MEANS BETTER JOBS



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IT PAYS TO ADVERTISE!

Believing that it pays to advertise, A21 Canadian Ordnance and Electrical and Mechanical Engineering Training Centre, Barriefield, Ont., had this poster prepared for use at the Centre. The Unit Education Officer reports that the response to such advertising was immediate. Within 24 hours, for example, the Correspondence Course applications doubled in number. Other establishments might well try the same idea.

THE INFANTRY

(Field Marshal
Sir Bernard Montgomery in the
British War Office Infantry
Bulletin.)

On 3 October, 1945, Field Marshal Montgomery lectured on the subject of the 21st (British) Army Group in the Campaign in North-West Europe, 1944-45, at the Royal United Services Institution, London.

Some extracts from his lecture, in which he refers to the Infantry in this campaign, are reproduced below:

"In spite of predictions to the contrary, the Infantry has lost none of its importance on the battlefield.

Master of Weapons

"Modern Infantry is a master of more weapons than ever before, and the Infantryman's life depends primarily on the skill with which he uses them; he must reach an increasingly higher standard of training. It has been a war of movement, but although the Infantryman may motor into battle, his training must keep him hard and tough—a point which must never be overlooked in these days of troop-carrying transport.

"The introduction of the armoured personnel carrier is an important innovation in the employment of Infantry. It enables Infantry to be transported across bullet-swept zones in order to arrive fresh at the vital part of the battlefield. The development of this technique has already gone far, and done much to enlarge the scope of Infantry tactics. For example, in the first major attack by the Canadian Army astride the Falaise road on 7 August, Infantry carried in "Kan-



garoos" were moved by night a distance of five miles to their off-loading point; the last three miles of this advance were actually within the enemy gun areas. They then fanned out to overrun the belt of country they were attacking.

Artificial Moonlight

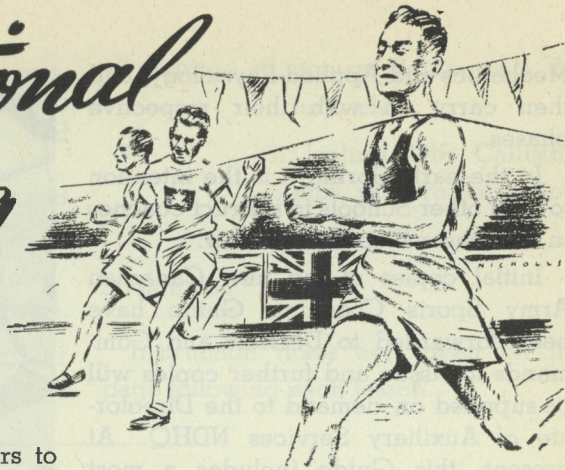
"The tendency to do more and more by night has been greatly facilitated by the provision of 'artificial moonlight.' Artificial moonlight, provided by searchlight batteries, has now become a standard part of our military organization and has greatly assisted the activities of the Infantryman. It has also proved its value in more rearward areas, to the bridge builders and administrative echelons.

"It has again been the Infantry who suffered the heaviest casualties. I cannot praise too highly the stamina and persistence which the Infantry displayed in the campaign. Divisions were called upon to remain continuously in action for many months on end—to this they responded admirably, even during the very bitter winter we experienced.

High Morale

"And if I were asked what is the greatest single factor which contributed to his success, I would say

Recreational Training



POSTURE AND PLAY PLAN

When soliciting the aid of others to co-operate in any scheme where a task is involved, the most common appeal is to express a desire for **TEAM** work.

Team work is a concerted effort entered into by individuals for a mutual cause. Being worthy of cultivation, it is logically learned in playing team games. Teaching of team work was one of the reasons for promoting the "Posture and Play" Plan of Physical and Recreational Training, another being the desire to create a greater interest in Canada's major sports which eminently reflect the character of our peoples and fashions their emotions.

The January issue of CATM explained the coaching methods to be employed in teaching our major sports during training hours with the benefits to be derived by army personnel.

With but seven minutes Warming-Up Callisthenics at the commencement

of all sports lessons, the men enter into this phase very vigorously with interest, the necessity for this phase being proven to them later when participating in the game. The privilege of being properly taught to play a popular game by an Army Sports Coach is appreciated and the lessons have a lasting value. Enthusiasm displayed leads to a most profitable mental and physical reaction.

District Sports Coaching Schools across Canada are creating great interest and meeting with success. Some Districts having held trial courses of two weeks are repeating with a three-week course to include basketball and volleyball tuition for one group of Coaches, while another group composed of experienced personnel is selected for boxing instruction and coaching in the newly-authorized International (Olympic) Amateur Boxing Rules adapted for use in the Interim and Reserve Armies. Both coaching groups attend general lectures, including Conditioning and Hygiene, Body

INFANTRY

(Continued from previous page)

morale. I call morale the greatest single factor in war. A high morale is based on discipline, self-respect and confidence of the soldier in his commanders, in his weapons, and in himself. Without high morale, no success can be achieved—however good may be the strategic or tactical plan, or anything else. High morale is a pearl of very great price. And the surest way to obtain it is by success in battle."

Here's more information on the army's "Posture and Play" Plan prepared specially for CATM by the Directorate of Auxiliary Services, NDHQ. Additional articles will appear in future issues.—Editor.

Mechanics and Applied Physiology, and then carry on with their respective phases.

In the early Spring it is the intention to hold other Schools to instruct coaches in the seasonal sports to follow.

Initial copies of the new Canadian Army Sports Coaching Guide have been forwarded to Districts and Commands for issue and further copies will be supplied on demand to the Directorate of Auxiliary Services NDHQ. At present, this Guide includes a most comprehensive plan well illustrated for basketball coaching, also advanced information on the Coaching of Volleyball and the new International (Olympic) Amateur Boxing Rules which require the referee to officiate **in the ring** and permits applause by the spectators during the progress of the bouts.

This Guide is being translated into French.

With each District and Command being in possession of rubber-soled canvas shoes for issue during the Interim Period, all should be in readiness for interesting training in the "Posture and Play" program.

An example basketball lesson taken from the Guide is outlined below. This complete lesson is for Trained Soldiers with former experience in basketball. The lesson for beginners is divided into two parts, allowing practically double the time on the fundamentals of the game and the teaching of the rules.

POSTURE AND PLAY

TIME BASKETBALL PERIOD OF
LESSON No. 1 50 MINUTES

1. Staff: 1 Coach, 1 Assistant Coach. Class: 20-24 Players. Equipment: Two balls for each back-board. Players' numbers required.



- | | |
|------------|--|
| 2 minutes: | 2. Call the Roll. (Note instructions page 14.) |
| 3 " | 3. Talk: Coaches remarks on "Posture and Play" Plan. |
| 7 " | 4. Warming-Up: Conditioning Callisthenics. (Note page 15.) CAUTION: This phase is very important and must never be cut short. |
| 2 " | 5. Issue Equipment: Players' numbers and balls. |
| 3 " | 6. Talk: Stress importance of basketball at every practice. (FUNDAMENTALS) |
| 12 " | 7. Ball Handling: <ul style="list-style-type: none"> (a) Brief talk and demonstrations. (b) Two hand chest (or push) pass. (c) Bounce pass. (d) One hand push pass |
| | 8. Shooting: <ul style="list-style-type: none"> (a) Set (or chest) shot. (b) Lay up Shot. |

- | | | | |
|-----------|---------------------------|------------|------------------------------------|
| 7 minutes | 9. Dribbling: | 2 minutes | 12. Return Equipment: Re- |
| | (a) Pass dribble and pass | | form class. |
| | (chest, bounce and | 3 " | 13. Cooling Off: Callisthe- |
| | push). | | tics, posture correction. |
| | (b) Dribble with set and | | 14. Break off. |
| | lay-up shots. | | |
| 4 " | 10. Explanation of Rules: | 50 minutes | |
| | Read Rules 1, 3 and 4. | | |
| 5 " | 11. Team Competition: 21 | | Instruction notes are given on the |
| | point shooting. (Page 75) | | page following each lesson. |

SKILL-AT-ARMS CONTESTS

Several successful Skill-At-Arms Contests have been sponsored in the Canadian Army, the most outstanding being the GOC's contest at Camp Borden and the GOC-in-C's contest for Pacific Command, both being held late last year.

These were introduced by Maj. Gen. F. F. Worthington, C.B., M.C., M.M., while commandant at Camp Borden, and they were open to all Corps. Maj. Gen. Worthington continued these contests when he was named GOC-in-C, Pacific Command.

The competitions were designed to promote proficiency in both rifle and Bren. At Pacific Command the last

contest at Blair Ranges, North Vancouver, included warming, sighting-in, application and snap-shooting practices for the rifle, and "crash action," application and rapid fire for the Bren, the Bren team consisting of two ORs. A battle practice was also held for teams consisting of one Fire Control Officer, one Bren and seven riflemen. Rifle practices were also staged for CWAC teams, while the program also featured a clay pigeon shoot and "21 or bust."

Borden Contests

The Borden contests held at the Mons and Amiens Ranges included individual rifle, individual LMG Bren, rifle fire and movement and team contests, the



Canadian Army Photo

Here is a group picture of all CWAC teams firing in the Skill-At-Arms Competition in Pacific Command. The group includes the 31, 28 and 29 Administration Units, CWAC, representing Prince Rupert Defences, A6 CETC, Chilliwack, B.C., and GSB, Vancouver, respectively.



Canadian Army Photo

Maj. Gen. Worthington, C.B., M.C., M.M., GOC-in-C, Pacific Command, presents a representative of the team from A6 CETC, Chilliwack, B.C., with the GOC-in-C's "Presentation Shield." This was the first prize for the First Section Rifle Competition open to RCA, CIC, Training Centres and Schools.

teams consisting of one NCO Fire Control Officer, one Bren and nine riflemen. There was also an invitation match for all officers.

Units taking part reported that benefits from these contests are far-reaching,

since they promote shooting proficiency in all types of marksmanship. In addition to the advantages which accrue to training, the competitions also create a valuable sporting spirit.

ARMOUR AND INFANTRY

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

"In street fighting the closest possible liaison was necessary between tank and infantry commanders. Tanks gave moral support to the infantry by their presence alone, but it was impossible for them to give material support in the confused and constantly changing situation brought about by street fighting unless there was the closest liaison between the two arms.

"Since the usual procedure was for the infantry to enter the houses from the rear or to 'mouse hole' their way into them, the infantry commander had to be able to indicate his progress to the tank commander, and it was necessary to arrange mutual signals. Any material—

except white — waved from the windows or roofs served the purpose. The tank commander would then direct his fire on to the targets ahead."

RESERVE FORCE EXAMINATIONS

Written examinations for promotion of officers in the Reserve Force, as authorized by the Directorate of Military Training, NDHQ, will be held on the following dates:

30 March, 1946—Papers "Common to All Arms."

31 March, 1946—Papers "Special to Arms."

BRITISH TANKS IN BURMA

This is an interesting account of British tank operations in the Imperial campaign in Burma as told by a brigade commander, who attributes the British success in the operations largely to the unorthodox tactics employed. The report, written before the cessation of hostilities, was condensed for CATM from the War Office Infantry Bulletin.—Editor.

Terrain Obstacles Overcome: The most outstanding development in Burma has been the operation of tanks over extremely difficult terrain. Tree-covered hills, on which it was considered impossible to employ armour, have now become normal ground for tanks.

Fire Support by Tanks: The role of tanks is limited to fire support where the terrain makes it impossible for them to participate in the actual assault. In the Imphal areas, where the Infantry attacked over broken ground, through trees and shrubs, and up hills, it was impossible to estimate accurately the time it would take to reach the objective. On a timed program there was a grave risk of a considerable pause between the end of artillery concentration and arrival of the Infantry on the forward edge of the objective. This pause would allow the enemy to re-occupy his positions and effect minor repairs to bunkers and vision slits. A timed artillery program was therefore impracticable, and artillery support had to be "at call."



The British officer recommended that a tank forward observer accompany the assaulting infantry. Experience in Burma also led him to recommend the following method:

The Infantry will call for artillery concentration when ready for it, and will call it off when they have approached it as near as possible. There will, however, still be a gap between the time of concentration ends and the arrival of the Infantry at the objective. This gap can be bridged by 75mm fire from the tanks, called for by the tank forward observer, so that to all intents and purposes the concentration continues.

The main problem confronting the British Infantry was the reverse-slope position, to which the Japanese withdrew during bombardment. From here they either launched an immediate counter-attack, or made the British position on the objective untenable by mortar and grenade fire. It was normally impossible to cover all these slopes with fire from British gun positions, so tanks dealt with them.

Destroy Bunkers

An additional use for tanks in the fire-support role was to destroy bunkers and fire positions disclosed either by previous air strikes or during the actual

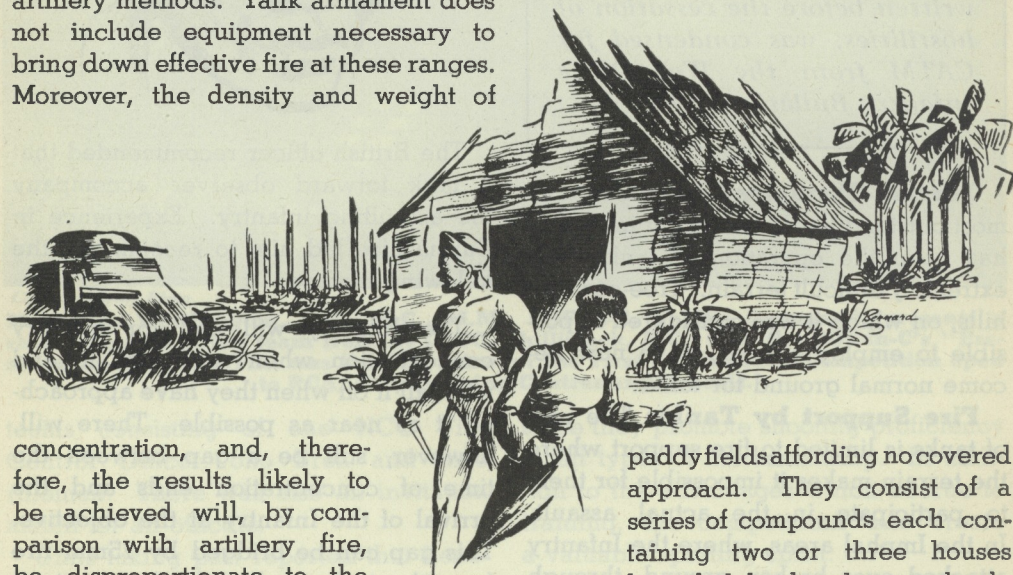
artillery concentration. These uses of tank-fire support were more economical and beneficial than superimposing tank fire on the artillery concentration.

Higher British headquarters made the following comment:

"It is considered that the employment of tanks in these roles which are primarily artillery tasks is abnormal, and should only be resorted to when it is impossible to use recognized artillery methods. Tank armament does not include equipment necessary to bring down effective fire at these ranges. Moreover, the density and weight of

Village Fighting: The original, and somewhat natural, assumption that if the Japs left the hills and came into the plain, they would be quickly and easily disposed of by the tanks, was soon proved to be incorrect.

On leaving the hills the Japanese always took up positions in villages. These villages cover considerable areas with dimensions up to 1,200 yards by 1,000 yards and are surrounded by open



concentration, and, therefore, the results likely to be achieved will, by comparison with artillery fire, be disproportionate to the number of rounds fired."

Preparation and Planning: The tank commander reported a tendency to rush attacks, which is somewhat natural with troops who have been fighting the Japanese for two years with inadequate supporting weapons and no tanks. When the Japanese seize a position, unless there is an immediate attack, they rapidly consolidate and are very difficult to dislodge. Rapid attacks may or may not succeed and are always expensive in casualties.

One of the main functions of tanks, the British officer said, is to save Infantry casualties, but they will not do this if an operation is rushed because tanks cannot function efficiently unless they have adequate time for reconnaissance and preparation with the Infantry.

paddyfields affording no covered approach. They consist of a series of compounds each containing two or three houses bounded by bunds or embankments up to 7 feet high, surmounted by thick obstacles. Also there are often nullahs (dry watercourses or gullies) running through the villages.

Jap Defences

Where a nullah existed, the Jap placed his main position behind it. His defences were built into the bunds, and consisted of a multitude of positions, manned by one or two men, with overhead cover, well camouflaged and interconnecting. His anti-tank guns, and in some cases well camouflaged dug-in tanks, covered the junctions of main arteries and lateral lanes. In addition, approaches to the outskirts of the village were covered by anti-tank guns firing across the front. Mines were used to cover this outside approach and were

also laid in the lanes and at obvious nullah crossings.

Given a night's occupation, the Japanese would be so firmly established that the capture of the village would require a carefully staged operation.

With limited bombardment facilities, and when tanks were to be employed to assist Infantry in the capture of villages, this tank commander's experience proved the following procedure the most effective:

1. The axis of attack was decided as a result of patrols and ground reconnaissance.

2. After such softening as was possible the Infantry first established a bridgehead in the village. This was done at night when the enemy could only fire on fixed lines, and with his normal scarcity of artillery was unable to put down heavy defensive fire.

3. Mopping up and mine-lifting within the bridgehead was completed before daylight.

Tanks Move In

4. Prior to dawn, tanks moved into the village to a central area within the bridgehead. They were called forward at daylight to deal with any strongpoints located, but not destroyed, during the night.

5. By day Infantry probed forward to locate enemy guns and Infantry positions, and only when definite targets were found were tanks called forward to deal with them. Tank commanders moved forward on foot, so the Infantry could point out the targets. Engineers under cover of smoke cleared mines from the routes by which the tanks moved up to engage targets.

6. If progressing satisfactorily this procedure continued, but if heavy

casualties occurred it was sometimes necessary to call a halt until dark, when a further portion of the village was boxed. As a result of information gained during the day, it was sometimes necessary to establish a fresh bridgehead to effect a change of axis.

Deployment of Tanks: On numerous occasions the Japanese held a series of hill knobs, usually at the end of a narrow spur. These positions might only be held by a section or two with light machine guns, but were so situated that they could not be reached by artillery fire. They occupied a dominating feature and their destruction was essential. It was impossible to deploy more than two sections of Infantry and a troop of tanks (three Infantry tanks), possibly operating only on a one-tank front.

This has been one of the commonest operations in Burma, and often necessitated a difficult climb; but the presence of one tank has been a deciding factor, resulting in the destruction of the enemy, with few, if any, casualties to British Infantry.

Use of Smoke: The writer recommended that considerable use be made of smoke to cover the movement of tanks in open country and to enable them to close the distance to their objective. This applies particularly where a troop of tanks is working in close co-operation with Infantry.

The Jap was fully sensitive to the climbing ability of British tanks, since his anti-tank mines were found in the most unexpected places in the hills, and anti-tank guns could be expected in increasing numbers on hill features. When this occurred, operations which had been reasonably safe for tanks became expensive, unless smoke was used to cover all likely positions of defiladed guns. Local smoke was necessary to cover mine-clearing operations.

RECREATIONAL SHOOTING



Here are the first four members of the CWAC attached to A12 CITC, Farnham, Que., to qualify for the three badges—First Class, Marksman and Expert—in Recreational Shooting. Left to right, they are Ptes. P. Coish, A. Evans, I. Smith and D. Huard. Pte. Smith has established what may be a record for CWAC shooting. In addition to winning the three badges, she fired the standard advanced classification practices and qualified Expert with the .303 rifle (174 points), Marksman with the Bren, First Class with Sten and Thompson Machine Carbines. Pte. Smith has also fired the 2-inch and 3-inch mortars and has thrown the regulation number and type of hand grenades. Pte. Evans won her final badge with an average score of 95.12 points. Pte. Huard also qualified First Class with the Sten and Thompson.

TRADES TRAINING OVERSEAS

Thirteen courses in trades training are now being taught by the 1st Canadian Rehabilitation Trades School operated by the Canadian Army Overseas. The length of the majority of courses is six weeks, although some are four and others twelve.

The school is organized along civilian lines with a view to providing the students with a good practical working knowledge of the trade in which they are taking instruction.

Grades awarded are designed to permit a ready comparison with civilian trade standards and may be described as follows:

Distinguished: A full practical and theoretical knowledge of the trade which would enable the man to do first-class work in his trade.

Grade "A": A good practical working knowledge of his trade, but requires further training in order to become a first class craftsman.

Grade "B": A practical knowledge of his trade but requires further training and experience.

A list of the courses, together with the length and objective of each follows:

1. Blacksmithing — Six weeks. Methods and use of equipment and materials used in the trade.

2. Blueprint Reading — Six weeks. To teach men to read mechanical drawings correctly; to make simple mechanical drawings and rough sketches.

3. Carpentering — Six weeks. To teach students the basic principles and to give them a practical knowledge of materials and tools used in the trade.

4. Diesel—Six weeks. To train students to become efficient in the construction, operation, maintenance and repair of Diesel engines and Caterpillar tractors.

5. Driver Mechanic — Six weeks. To teach students to drive and maintain various types of wheeled vehicles.

6. Electrician Plant and House Wiring—Six weeks. Basic principles and practical application of AC and DC power as used in plant installations and house wiring.

7. Machine Shop—12 weeks. Use and operation of machine shop equipment.

8. Motor Mechanics—12 weeks. Methods of service, maintenance and repair of all types of wheeled vehicles applicable to trade requirements.

9. Painting—Six weeks. Use of paints for inside and outside decorating, sign painting, hardwood and softwood finishing.

10. Plumbing—Six weeks. To teach students to become proficient in all phases of plumbing.

11. Tinsmithing—Six weeks. To teach students a knowledge of materials and equipments used in the trade.

12. Welding (Arc)— Four weeks. Methods and practices of welding in the trade.

13. Welding (Oxy-acetylene)—Four weeks. Methods and uses of oxy-acetylene welding.

THE STOIC

It was a phony adventurer-soldier who was talking.

"This war," he said, "is nothing compared to the one I fought against the Zulus. One of them threw a spear at me, and for three days I was pinned to the ground."

"Didn't it hurt?" he was asked.

"Only when I laughed."

Army Bookshelf



"Youth And Jobs In Canada." Prepared from reports of the Canadian Youth Commission. 223 pp. \$1.25. Published by Ryerson Press, Toronto.

Employment for the youth of Canada to prevent a recurrence of the appalling conditions of the Thirties is one of the greatest problems facing the country, in the opinion of the Canadian Youth Commission. For this reason, "Youth And Jobs In Canada" presents one of the most comprehensive and complete studies of the situation.

In his introduction, R. E. G. Davies, director of the Commission, estimates there are now close to 1,500,000 young people between the ages of 15 and 24 either employed in civilian life or serving as members of the Armed Forces, and that fully half of these will be released from their present positions during the period of demobilization. Also, account must be taken of the youth, perhaps 150,000, who will be ready to enter employment annually.

With this as a basis, the book deals with the problem from every angle. Divided into five parts, the work covers every phase of employment, its problems and their possible remedies. In addition, youth groups and employment services for youth are discussed.

"Youth And Jobs In Canada" is the first of a series of several books on the

many phases of the life of Canadian youth which the Canadian Youth Commission plans to publish.

This book is strongly recommended to all readers who recognize, as must all citizens who have the interests of Canada at heart, the pressing need for a planned program for Canada's young people.—*M.S.D.*

"A Basic Manual of Military Small Arms". By W. H. B. Smith. 351 pp. \$5. Published by the Military Service Publishing Co., Cameron and Kelker Sts., Harrisburg, Pa.

This book will be of real value to every person who is interested in military weapons. It embraces practically every small arms weapon manufactured by all the important nations. The text is complete with illustrations and is presented so simply that even a person without any knowledge of small arms can follow it with ease. The book is also one for the expert. There is a tremendous wealth of valuable military information for anyone who wants to arm himself with the knowledge of a subject on which our national security rests.—*W.L.J.*

"Automatic Weapons of the World." By Melvin M. Johnson, Jr., captain, USMCR (Inactive), and Charles T. Howen. 625 pp. \$7.50.

Published by William Morrow & Co., New York, 1945.

Both authors are associated with Johnson Automatics Inc., and this is a greatly enlarged version of their "Automatic Arms" published just prior to Pearl Harbor. It is practically an encyclopædia of its subject, well-produced and profusely illustrated. It lists and describes all the military automatic arms, new and old, from pocket pistols to 40mm guns. Sporting rifles and shotguns also find a place.

With an infectious enthusiasm for their subject, the authors trace the continuing evolution of these weapons and examine all the user's problems, particularly that of reconciling reliability with light weight. The development of all fire-arms has marched hand-in-hand in this respect with the process advances made by metallurgy at large. This evolution continues, every few years finding a few more ounces saved on the soldier's weapon and a closer group on his target.

The authors hold strong views on selection of infantry weapons which are well argued and deserve respect. They quote with approval a former Chief of Infantry, U.S. Army: "We ought always, when referring to Infantry, to speak of fire effect, not fire power, because fire effect is ultimately allied with movement, while fire power is a static conception." They would reduce the Infantry weapon types to three (plus revolver or pistol for personal protection.) Their proposals follow:

"1. Certain personnel require a semi-automatic side arm, combining light weight and reasonable power, capable of holster-carrying and one-hand or off-shoulder firing. It must be fool-proof.

"2. The basic Infantry rifle must be shoulder-fired, highly accurate, and powerful; not over ten pounds, semi-automatic, *possibly* full automatic as well. It must be positive in function

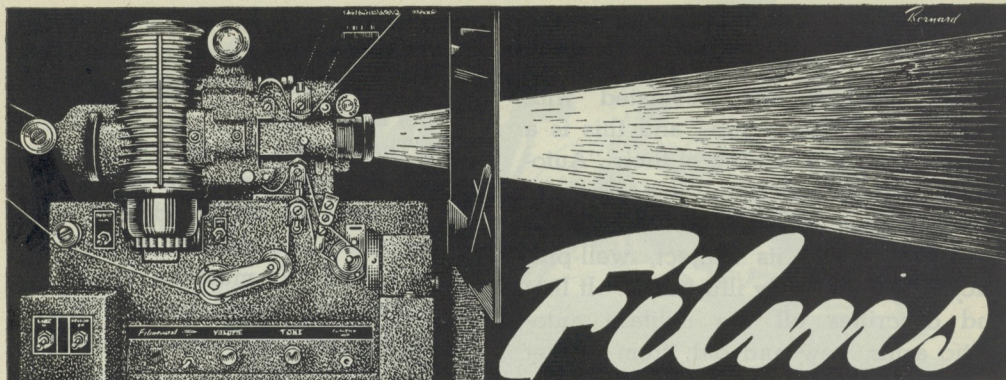
under all conditions. It must fire as many rounds as possible without reloading, preferably ten to twenty. The bayonet is optional.

"3. The basic Infantry supporting weapon may be magazine or possibly belt-fed, capable of shoulder-fire from light support, and adapted to medium-weight tripod. It must be semi- and full automatic. The air-cooled barrel must be quickly detachable. For mobile operations the belts if practicable should be carried in an attached, integral container holding 50 to 100 rounds per box. For tripod firing 200- to 300-round separate belt boxes would be used. This combination arm for shoulder or tripod use would permit unit commanders to adapt their machine gun to any tactical situation.

"Such a weapon would be normally distributed in the squad as an 'automatic rifle,' in the company as a light machine gun, and in the battalion as a machine gun. The basic gun for use in the squad, with shoulder stock and bipod or equivalent, should weigh not over 16 pounds. This weight permits off-the-shoulder firing. Less weight would be better, of course, but substantially more tends to render the weapon impractical for snap-shooting off the shoulder. The platoon or company gun might include a tripod. The battalion gun might have a heavier barrel for longer sustained bursts, and a heavier, more stable tripod mount suitable for overhead fires."

The authors admit there is a problem in getting the weight of the ideal, all-purpose LMG down to a basic 16 pounds, but rightly suggest that conservatives should "ask the man who carries one."

Altogether an engrossing volume for any weapon enthusiast and for military libraries. It might be mentioned in conclusion that the authors hold a low opinion of the bayonet but are fairly polite about it.—C.D.C.



(For your information the following films have recently been distributed.)

General Training

1. TF 7-265 Sand Table Part I—Preparation (25 mins)
 - (a) Demonstrates step by step how sand table terrain is prepared quickly and realistically.
2. TF 7-266 Sand Table Part II—Use (20 mins)
 - (a) Deals with the use of the sand table as an instructional medium.
 - (b) Distributed to Pacific Command, District and Camp HQ Film Libraries, and also to RMC, S-3 Cdn Army School of Instr. and S17 CS of I.

Medical and Hygiene

1. C-901 Prevention of Scrub Typhus (10 mins)
 - (a) A Brit film which explains how Scrub Typhus is contracted and how infection can be prevented.
2. 3-C004 The Story of DDT (33 mins)
 - (a) Tells how DDT was first synthesized by a German in 1870 and describes the development leading up to its use during World War II.
3. C-3006 Six Little Jungle Boys (8 mins)
 - (a) A black and white cartoon dealing with the basic rules of hygiene in tropical areas.
 - (b) The above three films distributed to A-22 CAMCTC; they may also be obtained on loan on request to the Army Central Film Library, NDHQ.
4. SS-280 Back to Normal (15 mins)
 - (a) A Brit film showing the measures provided by the Government to help persons suffering amputations as a result of the war to re-establish themselves in civil life.
5. TF 8-2083 Swinging Into Step (30 mins)
 - (a) A US film, in which a Major of the US Army Medical Corps, who suffered the loss of his right arm in combat action, helps three other amputation cases see that life can be worth while once more.
 - (b) The above two films may be obtained on loan on request to the Army Central Film Library, NDHQ.

CWAC Training

1. TF 8-2101 Figures Don't Lie (20 mins)
 - (a) A US Army film showing how women can obtain, and retain, a trim figure by diligent application to planned exercises for a few minutes each day.
 - (b) Distributed to Command and District HQ Film Libraries.

Rehabilitation

1. SS-461 Veterans in Industry (25 mins)
 - (a) This film centres around a group discussion by Canadian Trade unionists, dealing with the veteran's rehabilitation problems.
2. SS-495 Land For Men (10 mins)
 - (a) A Canadian film which discusses the modern trend of farming and some of the problems which have been encountered and overcome.

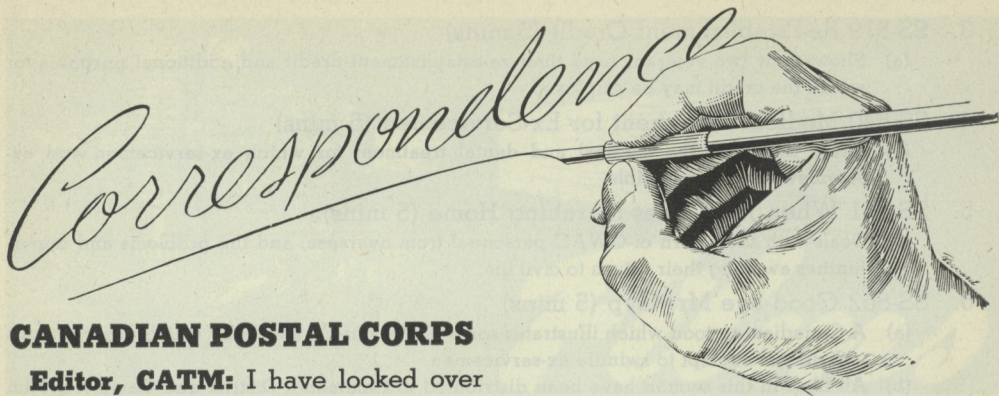
3. SS-519 Re-Establishment Credit (5 mins)
 - (a) Shows how two veterans used their re-establishment credit and additional purposes for which the credit may be employed.
4. SS-540 Medical Treatment for Ex-Servicemen (5 mins)
 - (a) Gives details of the medical and dental treatment for which ex-servicemen and ex-servicewomen are eligible.
5. SS-561 When Jill Comes Marching Home (5 mins)
 - (a) Deals with the return of CWAC personnel from overseas, and the problems and opportunities awaiting their return to civil life.
6. SS-562 Good-bye Mr. Gyp (5 mins)
 - (a) A Canadian cartoon which illustrates some of the various means by which unscrupulous individuals attempt to swindle ex-servicemen.
 - (b) All films in this section have been distributed to Command, District and Camp HQ Film Libraries, and also to all District Depots.

Vocational

1. SS-548 Poultry Raising (10 mins)
 - (a) Shows how to apply methods of poultry raising to make it a profitable undertaking.
2. SS-549 Accounting and Bookkeeping (10 mins)
 - (a) Outlines the qualifications required to be a successful accountant and bookkeeper and discuss the opportunities in this field.
3. SS-550 The Brick and Stone Mason (10 mins)
 - (a) Describes the various aspects of the brick and stone masonry trade and the requirements for apprentices and journeymen.
4. SS-551 Agriculture—General Farming (10 mins)
 - (a) A US production which first depicts the different types of farming carried out in various parts of the country, then concentrates on the aspects of mixed farming.
5. SS-552 Heating and Air Conditioning (10 mins)
 - (a) New methods of ventilation, the planning, designing and installing of air conditioning units, and a study of the theory and physics of air conditioning.
6. SS-553 Painting and Decorating (10 mins)
 - (a) Discusses the opportunities to be found in this type of work and shows how men are trained for it.
7. SS-554 Plumbing (10 mins)
 - (a) The many intricate demands on the plumbing trade are described—the ability to read blueprints, knowledge of the sanitary laws, proficiency in handling many tools and etc.
 - (b) All films in this section have been distributed to Command and District HQ Film Libraries.

Educational (General)

1. SS-480 Clothing (11 mins)
 - (a) Traces the development of textile arts through the hand processes of various nationalities up to the modern methods of mass production.
2. SS-502 Shelter (10 mins)
 - (a) Discusses the effect of climate and availability of materials on the types of shelter used by various peoples, and how these have been adapted to suit the needs of our modern complex civilization.
3. SS-503 Westward Movement (11 mins)
 - (a) Deals with the westward migration of the people of the US, which, beginning from the Atlantic seaboard gradually spread to the Pacific coast.
4. SS-504 Growth of Cities (10 mins)
 - (a) Explains various factors which determine the location and growth of cities.
5. SS-505 Colonial Expansion (11 mins)
 - (a) Discusses the colonial development of America from the point of view of the influence of each of the great powers involved, Spain, France and England.



CANADIAN POSTAL CORPS

Editor, CATM: I have looked over the December 1945 issue of the Canadian Army Training Memorandum dedicated to the Canadian Postal Corps and found it very attractive indeed. We have appreciated the opportunity of co-operating with your Directorate in the preparation of this publication.—*Col. E. J. Underwood, Director of Postal Services.*

CANADIAN FORESTRY CORPS

Editor, CATM: On behalf of the Canadian Forestry Corps, I would like to thank the Directorate of Military Training for the excellent manner in which our articles were presented in the January 1946 issue of CATM, dedicated to the Forestry Corps.

I am sure that officers of other Corps now have a better idea of the work done by Forestry Units, not only during the First Great War, but also during the Second Great War. Illustrations used in CATM in connection with the articles were very appropriate, and they not only enhanced the narrative

but gave a graphic idea of several phases of the Forestry Corps' work.—*Lt. Col. H. H. White, officer administering the Canadian Forestry Corps at Headquarters, Ottawa.*

HOW ABOUT SOME LETTERS?

The Correspondence section of CATM is your section, so why not send a few letters along? Correspondence may deal with military matters generally or training in particular, and don't forget that your ideas may be of interest to other officers. Your name, rank and unit, which should be signed to all letters to CATM, will be used if desired, but if you don't want them published let the Editor know, and initials or a nom de plume will be used instead. And now let's hear from you!

Time is everything. Five minutes makes the difference between victory and defeat.—*Nelson.*

FILMS

6. SS-506 Discovery and Exploration (10 mins)
 - (a) Describes the North American territory involved during the period of discovery and exploration from 1492 to 1700.
7. OF-11 Here is Germany (50 mins)
 - (a) This film traces Germany's historic background with a view to providing an understanding of Germany's motivation to war and the measures being taken to prevent the possibility of future aggression.
 - (b) All films in this section have been distributed to Command and District HQ Film Libraries.

THIS MONTH'S COVER . . .



CATM dedicates its cover this month to the Canadian Women's Army Corps. This Corps has an enviable record of efficient and useful service.



Next Month—THE CANADIAN INTELLIGENCE CORPS

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Printer to the King's Most Excellent Majesty
1946

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"GLORIA, IS MY MASCARA ON STRAIGHT?"

(Reproduced by courtesy of CWAC News Letter)