

NUMBER 62



MAY 1946

# CATM



CSM J. R. Osborn, Winnipeg Grenadiers

Canada's first V.C. in the Second Great War

OTTAWA  
EDMOND CLOUTIER  
Printer to the King's Most Excellent Majesty  
1946



# Canadian Army Training Memorandum

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NUMBER 62

MAY 1946



Published by the Directorate of Military Training under authority of the  
Chief of the General Staff

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## EDITORIAL

# In Defence of "Spit and Polish"



"I have heard it said that battles are not won on the parade ground. This is most untrue. 'Spit and polish' is both a means and an end. It is the means of acquiring true discipline, morale and esprit de corps and it is the outward manifestation by which their presence is readily recognized and felt. It is not 'eye wash', no mere frivolity, for it lives with the soldier in bivouac, marches with him in the field and bolsters his determination on the day of battle."

This statement was made by a U.S. Infantry officer in an article appealing for adequate recognition for the Infantry Corps. And it is timely. A Canadian officer has only to look about him to notice an ever-increasing untidiness in army dress. It can be explained, of course, by the fact that men in uniform now feel that because the battle is over, there is no longer any need to be quite so smart in their appearance, that they can relax. It can be explained—but it cannot be excused!

Those interested in the term "spit and polish" will find that it originated with the British soldier's traditional use of a little bit of "spit" and a lot of "polish" to bring boots and buttons to brilliance. Don't run away with the idea that this was primarily parade ground technique. "Spit and polish" also went with the British soldier into battle. The great captains of history realized that cleanliness, neatness and smartness went hand in hand with discipline in the making of a good soldier.

There has been considerable criticism by the public of the appearance of servicemen, particularly on the streets. This criticism dates from the end of the war. It was not vocal for a few months, citizens, in the main, taking the view that members of the Armed Forces deserved a hard-won opportunity to relax. Then things got worse. Many men began to look very untidy indeed! One of the most noticeable breaches of dress regulations was the appearance of men strolling along without head-dress; others included tunic collars open and no ties; pocket flaps open and pens and pencils showing; tunics and blouses unbuttoned all the way to the bottom; gaily-coloured socks worn with battle-dress; dirty brass and webb—the list is almost endless and covers dress from beret to boots.

It's an unpleasant picture—and a picture for which officers are in large part responsible. How many times have YOU walked along the street, noticed flagrant

breaches of dress regulations and yet done nothing about it? You can't defend yourself by arguing that it's a job for the M.P.'s; it's primarily your responsibility—a responsibility you accepted when you received your commission.

Our army is only as good as its men. Trite but true. We can hardly say that the man is only as good as his dress, but we can say that a man is only as good as his discipline. Discipline is bound up with dress; discipline is a combination of alertness, cleanliness and a smart uniform.

The "show window" of the Canadian army is its dress. And it's the "show window" that the public sees. To them a slovenly soldier means a slovenly army.

To illustrate further: On VJ Day, CATM went about designing a cover for its next issue. It was to be dedicated to the private soldier who had played such a large part in winning the war. The artist sketched a soldier flushed with victory—and a two-day growth of beard. The editor submitted the sketch, for approval, to an officer who had commanded troops in battle.

"Fine", said the officer. "But why the beard?"

"Well, we thought . . . he's just come out of battle, sir."

"Battle, nothing! Whenever humanly possible, I saw to it that my men shaved—every morning—battle or no battle. That was in Italy, and I discovered that they felt better for it. A clean soldier makes a better fighter. You never saw a Canadian soldier with a stubble like that, even in action, if he had a commander worth his salt. Take his beard off!"

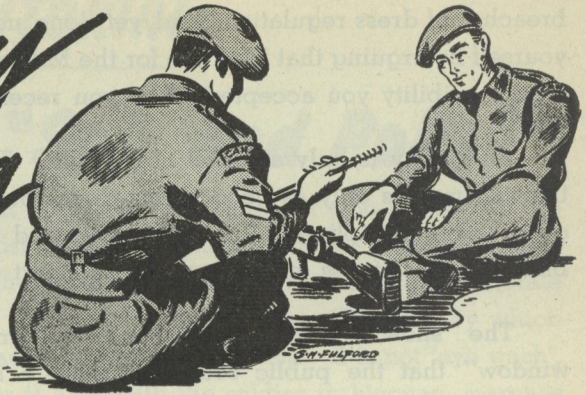
All ranks should be consciously proud of the King's uniform. It is the outward sign that they belong to the best and bravest profession. Fighting garb is a part of esprit de corps.

Canada is now engaged in the vital task of building a vigorous, streamlined army. One of the best methods of encouraging the right type of recruit is to impress upon him the smartness of the King's uniform and that means that every person now in uniform must be the acme of smartness in dress and bearing. Every officer should know his dress regulations and be able to instruct his men in them.

**Remember:** "Spit and polish" still plays its part in discipline and esprit de corps. "Spit and polish" by itself never won a war, but it is one of the biggest single factors in making soldiers who will.



# Military Training



## SECURITY IS NO FAUCET

The recently instituted espionage investigations and the charges which have been laid under the Official Secrets Act as a sequel appear to have had a salutary effect upon the Security consciousness of personnel of the Canadian Army. As a result, a wholesome tendency fully to respect Security safeguards is now evident on the part of many who, formerly, were inclined all too lightly to regard Security restrictions.

This sudden rending of the cloak of complacency is all to the good—if somewhat belated. The abrupt confounding of the all too general it-can't-happen-here attitude—with its attendant condescending attitude to Security—may well provide the brightest ray of sunshine emanating from the entire "spy probe" proceedings. If, in order to appreciate the necessity for Security precautions, Service personnel and civilians alike required both example and publicity loudly proclaiming this necessity, then the "spy probe" has aided Security materially indeed.

The need for Security is not, however, a need which has suddenly arisen as a result of these proceedings. It's the same need that Security Officers have been stressing—too often to unheeding ears—since early in the war. And, in all probability, only the fact that these Security Officers are fundamentally decent fellows possessed of forbearance to a more than usual degree, prevents

their raucous "I told you so" at this time.

Just as Security has been required in the past, so is it required now—and so, too, will it be required continuously in the future. Its need is not something that can be turned on or off like a faucet as the result of espionage investigations. Security is necessary not only in time of war but in time of peace—at all times—if Canada is to be in a position to defend herself in time of need—if she is, indeed, to occupy an adult place among the nations.

## PREPARATION OF PROGRAMS

Final battle efficiency is dependent upon planned and logical training. Progressive instruction to this end requires carefully prepared Training Programs.

There are four stages of preparation: Object, Considerations, Syllabus and Program.

These may be broken down as follows:

1. **Object** (of the instruction):
  - (a) Recruit training.
  - (b) To train instructors.
  - (c) To refresh instructors.
  - (d) To refresh trained soldiers.

*This material on Training Programs was supplied for use in CATM by the Directorate of Infantry, NDHQ. It outlines a method of preparing a program that will give the best results, with the keynote: "Plan Your Work — Work Your Plan."— Editor.*

- (e) Preparation for firing a Range Course.
  - (f) Preparation for a course at a School of Instruction.
2. **Considerations** (affecting the program):
- (a) To whom the instruction is to be given and for how long.
  - (b) To be a continuous course or interrupted by other training.
  - (c) Hours and places of work (availability).
  - (b) Number of students.
  - (e) Number of instructors available.
  - (f) Will it clash with the training of others?
  - (g) Total periods for the course.
  - (h) Equipment and stores available.
  - (i) Time of year.
  - (j) Present standard of students.
3. **Syllabus** (plan, bearing in mind the **Object**):
- (a) Select subjects and allot numbers of periods to each, including range work, demonstration, exams, spares.
  - (d) Draw up a block syllabus, allotting periods to weeks, etc. In other words, plan your course.
  - (c) Check the periods taken with the total number available.
  - (d) A serial letter for subjects minimizes time and space on the program.

- (e) Draw up a detailed syllabus for each subject, stating object, periods allotted, lesson, reference and remarks, i.e., suggestions for carrying out periods.
- (f) Issue a copy of the syllabus to all concerned.

#### 4. **Program:**

- (a) Take periods from the Syllabus and enter them on the Program.
- (b) Ensure a logical sequence in training.
- (c) Avoid monotony by varying subjects and type of instruction.
- (d) Alternate "easy" and "strenuous" periods.
- (e) Start the day with a vigorous subject if possible.
- (f) If held during the winter months, arrange lectures, etc., for the evening.
- (g) Issue a copy to instructors well in advance of the instruction.
- (h) Weekly programs may be subject to alteration, therefore publish a firm Daily Program in Unit Orders.

#### **Points to Note:**

1. Always plan an alternative program in case of bad weather.
2. Ensure that equipment and stores are available and in working order.
3. Allow time between periods for movement, for the mid-morning break and for meals.
4. Detail and rehearse fatigue men when necessary.
5. Give the earliest possible warning to the Weapon Training Sergeant.
6. Post copies of the program on Notice Boards.

**Remember: Plan Your Work—  
Work Your Plan!**

# SALUTING DEMONSTRATION

The object of this demonstration is to fix clearly in the minds of all ranks when and how to salute, and prior to the demonstration the soldier must be taught saluting completely.

The demonstration is controlled by an officer who should precede his period with a brief talk on saluting and then describe the object and details of this demonstration and competition. The form shown on page 7 is then issued and the demonstration run off.

The marked papers should be produced on the next training night and there should then be a general discussion on the points brought out.

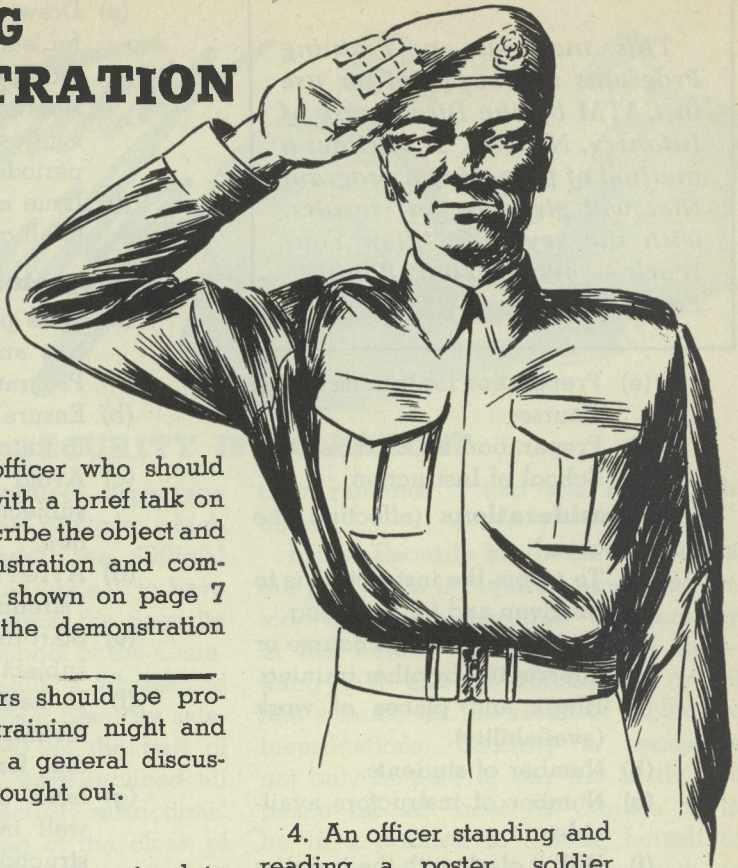
## Demonstration:

1. A soldier giving a correct salute when passing an officer right shoulder to right shoulder.

2. A soldier with his right arm in a sling passing an officer, saluting with his left hand.

3. A soldier passing an officer carrying a parcel in his right hand, saluting with his left hand.

*The demonstration and competition described here is a part of the training program for the Scots Fusiliers of Canada, Kitchener, Ont. With increasing emphasis being placed on discipline, which includes, of course, the paying of compliments, other units should find this idea very useful—Editor.*



4. An officer standing and reading a poster, soldier commences to salute and finishes by wiping his nose instead.

5. A sentry standing at his post and the National Anthem is played and he comes to the slope.

6. Two or three soldiers, not under command, passing an officer and only one salutes.

7. A soldier pushing a baby carriage and his wife clinging to his arm passes an officer and gives an "eyes right."

8. A soldier eating an apple passes an officer, he throws the apple into the air, salutes, catches the apple and carries on.

9. A soldier carrying an armful of clothing sees an officer coming, he puts the clothing down, turns to his flank, salutes, picks up the clothing and carries on.

10. A soldier carrying his gloves in his right hand passes an officer and



salutes by waving gloves towards his cap.

11. Two soldiers carrying rifles at the trail suddenly encounter an officer, they attempt to slope arms and salute but by that time the officer is several yards past them.

12. This scene is supposed to be a public open-air concert and the National Anthem is played. In turn, each of the following is shown:

(a) A group of officers saluting.

(b) A CSM bawling out a man for not saluting whilst the anthem is still playing.

- (c) Two corporals saluting.
- (d) A group of privates remove their hats.
- (e) A group of soldiers in civvies come to attention, but keep their hats on.

**Answers to Saluting Demonstration**

- 1. Correct
- 2. Correct
- 3. Incorrect
- 4. Incorrect
- 5. Correct
- 6. Incorrect
- 7. Correct
- 8. Incorrect
- 9. Incorrect
- 10. Incorrect
- 11. Incorrect
- 12. (a) Correct
- (b) Incorrect
- (c) Correct
- (d) Incorrect
- (e) Incorrect

**SALUTING COMPETITION**

COY.....

NAME.....

**DEMONSTRATION**

	Correct	Incorrect	Remarks
1. Soldier saluting when passing an officer.....	.....	.....	.....
2. Soldier saluting, right arm in sling.....	.....	.....	.....
3. Soldier saluting, carrying a parcel in his right hand.....	.....	.....	.....
4. A soldier passing to the rear of an officer (officer reading a poster).....	.....	.....	.....
5. A sentry standing in his beat and the National Anthem is played.....	.....	.....	.....
6. A group of soldiers passing an officer (not under command)	.....	.....	.....
7. A soldier pushing a baby carriage passing an officer.....	.....	.....	.....
8. A soldier eating an apple passing an officer.....	.....	.....	.....
9. A soldier carrying an armful of clothing encounters an officer	.....	.....	.....
10. A soldier with gloves in his right hand passing an officer....	.....	.....	.....
11. Two soldiers with rifles at trail encounter an officer.....	.....	.....	.....
12. National Anthem is played at an open-air concert, troops not under comd:			
(a) Officers.....	.....	.....	.....
(b) Company Sergeant-Major.....	.....	.....	.....
(c) Corporals.....	.....	.....	.....
(d) Privates.....	.....	.....	.....
(e) Soldiers in civvies.....	.....	.....	.....

The best soldier has in him, I think, a seasoning of devilry. Some years ago a friend of mine in a discussion on training defined the ideal infantryman as "athlete, marksman, stalker." I retorted that a better ideal would be "cat-burglar, gunman, poacher." My point was that the athlete, marksman, or stalker—whatever his skill—risks nothing; the cat-burglar, gunman, and poacher risk life, liberty, and limb, as the soldier has to do in war.—*Field Marshal Viscount Wavel.*

# FREQUENCY MODULATION

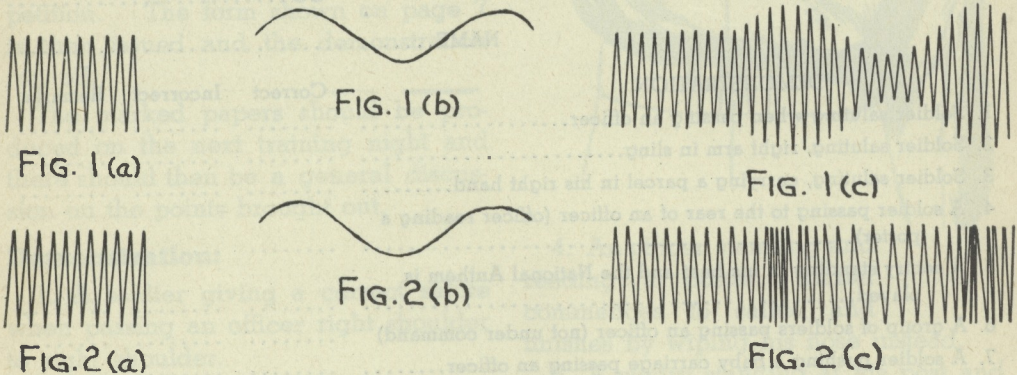
What is frequency modulation, anyway? How does the communication receiver for FM differ from that for amplitude modulation, or AM. What are its advantages?

These questions, and many others, are a source of worry today to everybody, from the civvy who hopes that an FM set will eliminate soap operas, to the poor platoon officer who is faced with the problem of putting an FM set back into operation.

It's really all very simple. First, let's review amplitude modulation. In the common garden variety of communication equipment, the intelligence is con-

charged from the loudspeaker as speech, music, etc.

Now let's tackle frequency modulation. The frequency modulation version of the musical note illustrated before is shown in Fig. 2(c). This wave in turn is composed of two components, the fixed station frequency, Fig. 2(a), and the modulating musical note, Fig. 2(b). It will be seen that the *amplitude* of the wave is constant but the *frequency* changes in accordance with the intelligence. Thus, in a nutshell, the principal difference of FM from AM is that in FM the carrier frequency varies—in AM the carrier amplitude varies.



veyed from transmitter to receiver in an amplitude modulated wave, the shape of which is shown in Fig. 1(c). This wave results from impressing on the fixed station frequency at the transmitter (called the "carrier frequency" and shown in Fig. 1(a)) the audible frequency shown in Fig. 1(b) which might represent, say, a musical note.

The important thing to note is that the modulation (speech, music, etc.) does not change the frequency of the carrier which is the same in Fig. 1(a) as in Fig. 1(c). Only the *amplitude* of the carrier changes in accordance with the modulating frequency.

At the receiving station these variations in carrier amplitude are picked off the carrier, suitably amplified, and dis-

## Overcomes Static

So what? you say. Well, it happens that noise and static, and in fact most forms of man-made interference are chiefly amplitude variations and therefore don't stand a chance in an FM system. Anyone who has cursed a 19 set when operating in a noisy locality will vouch for the excellence of any system which overcomes these obstacles.

In addition, interchannel interference is negligible in an FM system because the receiving set has the property of excluding completely all but the strongest signal at any one frequency. For instance, if you were riding in a wireless lorry from one FM station to another operating on the same frequency and a considerable distance away, you would

*CATM presents another article in the interesting series prepared specially for this publication by The Directorate of Mechanical Engineering NDHQ, —Editor.*

not find that at some point the signals would interfere but instead, that one would vanish suddenly, and the other appear. The Germans at one stage of the war made good use of the fact that an FM set is sensitive only to the strongest signal at a given frequency by pouring on to the air kilowatts of power which effectively jammed the FM frequencies being used by the Allies at that time.

For good reproduction of all signals, a radio receiver should amplify audible frequencies up to 1600 cycles a second. Actually, you're lucky if you get much more than 5000 cycles a second from your AM broadcast receiver because the Department of Transport allows only 5000 cycles a second each side of carrier frequency on the broadcast band—broadcasting audible frequencies over 5000 cycles results in serious interference between stations.

**No such problem is encountered with an FM equipment because the operating frequencies and channel widths for FM are chosen to permit amplification of all audible frequencies without preference. This provides for much greater fidelity in the reproduction of music.**

Since Army service demands that only speech be transmitted, and no music, the fidelity of the FM system is not as important from that point of view as its noise-eliminating properties. The channel widths for Army equipments can therefore be considerably reduced below those for high

fidelity broadcast transmission and a greater number of stations accommodated within a given band of frequencies.

Army use of FM is by no means restricted to the transmission of speech. Full advantage has been taken of the discrimination against interference possible with FM by utilizing this method of transmission in radio teletype links—the whole system being commonly referred to as a "carrier frequency-shift keying" system. A teletype is ordinarily operated from pulses of varying length which are keyed "ON" and "OFF" in the same manner as characters transmitted in Morse code. Such transmission is subject to the weaknesses inherent in AM (i.e. bursts of static tend to make the teletypewriter select incorrect characters). In the frequency-shift keying method, however, the "ON" "OFF" pulses are replaced by changes of frequency for dots and dashes, the carrier amplitude remaining constant. This is in effect an FM system and has proved to be extremely satisfactory.

#### **Don't "Bounce"**

The chief disadvantage of any FM system, as we know it now, is the fact that transmission beyond the horizon is not satisfactory since the operating frequencies are such that the waves do not "bounce" off the Kennelly-Heaviside layer but instead slip through. However, by increasing the height of the transmitting tower, the horizon distance can be extended and thereby the range of the transmitter. One of the first successful FM broadcast transmitters was situated atop the Empire State Building.

What about the actual equipments? Receivers for FM do not differ radically from those for AM, the only real difference being in the detector stage, or stage in which the speech, etc., is passed on for amplification and the carrier frequency is discarded. In the FM set this detector is replaced by

two devices—the “limiter” and the “discriminator.” The limiter is the “brains” behind interference-elimination since it removes all amplitude variations from the incoming signals. The discriminator converts the modulation on the FM carrier back to amplitude variations. The rest of the set is much the same.

**FM transmitters are smaller and drain less current than AM transmitters of the same power output. This fact is of military value in that it makes possible the development of pack-sets that are smaller and lighter than those now in use.**

Frequency modulation is really not new. The basic principles have long been known but not practiced until recently. Even prior to 1914, frequency modulation was seriously considered as a suitable means for transmitting intelligence. At that time mistuned circuits were employed to convert the frequency modulated wave to an amplitude modulated wave which was then “processed” in the same manner as is utilized in modern receiving sets. Rapid strides were being made however in the development of techniques for the transmission of AM signals, so much so, in fact, that FM was more or less put on the shelf for a number of years.

In 1922, J. R. Carson indicated in a mathematical paper that if FM was to be successful much greater channel widths were required than for AM—an idea that was contrary to popular belief at that time.

Meanwhile radio communication was becoming increasingly important. More stations on the air meant more interference and the cry arose for a system which would discriminate against unwelcome bursts of static and other forms of interference.

### **The Father of FM**

In 1925, E. H. Armstrong, (who might well be called the father of FM), began

experiments with an FM system, keeping in mind J. R. Carson’s theory that wider channel widths were required. Armstrong at first experimented with an FM system, using small frequency deviations and found there was no noticeable noise improvement. By increasing the frequency deviation (i.e. maximum change in frequency of the wave for a given audible sound) he found that the noise-eliminating properties were much increased.

This observation led immediately to a renewal of interest in the development of FM for general use, and eventually to the advanced techniques of today.

**One of the most recent refinements of the FM system is known as “pulse-time modulation,” a system which incorporates both FM and radar techniques. The transmitter here emits short spurts of radio-frequency energy, the individual pulses lasting for time intervals as short as one-millionth of a second. The intelligence is conveyed by changing in accordance with the modulation the time-position of the energy spurts—that is, the frequency of the spurts. (Hence the comparison to FM). Since the pulses are of such short time duration, it is possible to operate several channels at once on the same frequency. This is accomplished by using a “scanning” device to select the corresponding pulses of one channel.**

The operating frequency of this equipment is so high (5000 megacycles) that transmission at present is limited by earth curvature to line of sight. Present trends indicate that in the future the range may be extended by means of a system of relay stations stretching from coast to coast.

# WHAT IT TAKES TO BE AN OFFICER

In 1944 and early 1945 questionnaires were returned from 73 men in the armed services. These had been college men who, as superior and healthy students, were selected to take part in the Grant Study. This study is an extensive investigation of normal young men over a period of years.

The 73 men were asked to give their opinions of the qualities that make for a good officer. The answers were, in many respects, of distinctive character.

Fifty-five of the men were officers, and 18 were enlisted men. Forty-four were in the Army, 29 in the Navy. Eighteen men were engaged in actual combat; 55 were in non-combatant work of different sorts. Their ages ranged from 21 years to 28 years. All 73 had excellent records in the armed services, and many had received decorations. Only seven of the men were judged to be somewhat dissatisfied with their positions or locations in the war.

*This article tells the result of a survey made in the U.S. Army to determine the qualities that make for a good officer. Seventy-three former college men in the armed forces were questioned; of the 73, eighteen were enlisted men and the remainder officers. Canadian officers should find the results of this survey interesting, the opinions being listed in an article by Dr. C. W. Heath and L. W. Gregory in the U.S. Infantry Journal.—Editor.*



The following paragraphs give the qualities for good officers in order of the frequency in which they were mentioned, using so far as possible the language of the men themselves:

### **Human Understanding**

The largest number (37 men) mentioned *human understanding*: respect for and understanding of the enlisted man as a man. Consideration of others. Able to think of the welfare of his men "first, last, and always." "Humanness." Ability to secure the confidence and love of his subordinates. Tolerance. Understanding of the enlisted man's point of view. Patient management of men. Sympathetic and friendly (not strained). Close to his men, interested in them. Democracy.

Twenty-eight men mentioned *intelligence*: ability to assimilate, learn quickly, plan ahead. Understanding in general. Imaginative in a practical sense. Wise. Superior intelligence.

Good judgment. Power of reason. Perception. General intelligence. Resourcefulness. Brains. Ability to think clearly, logically, quickly.

Twenty-seven men mentioned *knowledge*: technical knowledge and training. Adequacy of knowledge and training for his job. One who "knows his job thoroughly." Properly trained. Experienced. Knowledge of specialties of his job. Technical efficiency.

Twenty-seven men mentioned *leadership*: general personality of the leader, or having the qualities that are ordinarily assumed to go with leadership; in general one whom men will follow; one who inspires confidence; (included here was one man's criterion: "Ability to make men do what they formerly did not want to do"). Another mentioned that leadership without other qualities can do harm.

### **Responsibility**

Twenty-six men mentioned *responsibility*: (Willingness, desire, and ability to take responsibility.) Sense of responsibility to job and men.

Twenty-one men mentioned *unselfishness*: putting men or job first. Courage to admit errors. Willing to give up all his time. Self-understanding, self-discipline, self-control, honesty. Lack of haughtiness, bullishness, overbearingness, meddling. Sincerity. Manner of one unaware that he holds commission, unselfconscious of rank. Not beset by outside worries.

Twenty men mentioned *ability*: general ability to handle men. Capacity for his assignment, ability for it. Ability to cope with problems. Ability to use his capacities to good advantage. Skill. Military efficiency. Ability to apply attention to his job.

Thirteen men mentioned *decisiveness*: ability to take prompt action, make positive and quick decisions, give

orders without hesitation or fear, size up the situation "immediately."

### **Work Hard**

Eleven men mentioned *work*: willingness to work hard, being "on the ball," thorough; to work hard at his profession; to discharge his duties well, both agreeable and disagreeable ones; ability to get things done, to work toward an end, to drive himself, persevere.

Ten men mentioned *consistency*: steadiness, sureness. Ability to stick by a chosen policy. Controlled emotionally. Trustworthy. Steadfast. Even disposition. Calmness. Power of concentration. Always master of situation.

Ten men mentioned *education*: both formal and informal. Background (often linked with education, e.g., "he is educated because he had social advantages"). Experience in civilian life which has prepared him for job.

Nine men mentioned *sense of humor*: cheerfulness, "gentle humor," good humor.

The following qualities each were mentioned by eight or less men:

*Forcefulness*: energy, drive, firmness, ability to discipline men, aggressiveness (but not domineering), real desire to fight.

*Common sense*.

*Confidence*: lack of self-consciousness, not self-centred, not shy, not fearful of higher authority.

*Gentlemanliness*: gentlemanly manner, personal charm, having qualities of a gentleman, courteous.

*Initiative*.

*Courage*: fearlessness, acceptance of personal risk.

*Character*: "positive personality," strength of personality, "good personality."

*Endurance*: physically fit. High physical standards.

*Adaptability*: ability to get along with enlisted men and officers.

*Patriotism*: loyalty, "devotion to his country and his God."

*Experience as enlisted man*: experience as enlisted man, or broad background for understanding him.

*Dignity*: commanding respect, honor. *Articulateness*: ability to express himself clearly and briefly.

*Simplicity*.

*Patience*.

*Organizing ability*: ability to plan his own work and that of subordinates.

*Neatness*.

*Diplomacy*: knack for proper encouragement, tact.

*Earnestness*: enthusiasm. "Enthusiasm tempered with determination."

*Extrovert*.

*Ambition*: to have ambition.

"*Conviction* and faith in fundamentals of morals."

*Desire to excel*: desire to do his job better than anyone else.

*Interest* in jobs other than his own. Set a cheerful example for his men.

The qualities for a good officer which were considered by the men to be the most important were as follows (in the order of frequency):

- Human understanding
- Leadership
- Responsibility
- Intelligence
- Unselfishness
- Ability
- Knowledge
- Education
- Work
- Confidence
- Gentlemanliness
- Courage
- Organizing ability

**"Human understanding" is therefore the quality which these seventy - three young men thought to be the most valuable for a good officer to**

**possess. This is a quality not seen on official instruction sheets for selection of officer candidates.**

These human qualities were mentioned a little more frequently by enlisted men than by officers, and by those who came from families of low income groups than by those whose families were in the higher income brackets. Those men of the 73 who had been previously judged in college to have particular interest in human values and in helping others gave this trait most often. It was given about as frequently by Army as by Navy men, by combat as by noncombat men.

### **Tabulated Results**

There were some slight differences in the traits most commonly designated by enlisted men and those by officers. These are illustrated by the following table: (Number of men who designated each trait is in parenthesis.)

#### **18 Enlisted Men**

- Human understanding (12)
- Knowledge (9)
- Intelligence (7)
- Unselfishness (6)
- Responsibility (5)
- Work (4)
- Consistency (4)
- Ability (4)

#### **55 Officers**

- Human understanding (25)
- Leadership (24)
- Responsibility (21)
- Intelligence (21)
- Knowledge (18)
- Ability (16)
- Unselfishness (15)
- Decisiveness (12)

Another opinion which was requested of the same group was to describe the qualities which distinguished the "good" officer from the "good" enlisted man. The following is a list of the principal qualities starting with the characteristics which were most commonly given,

ending with those less often mentioned. (For example, 29 men thought that "education" was the chief distinguishing feature between the officer and the enlisted man, whereas only two men thought it was a matter of "pull.")

*Education.*

*Sense of duty*, or responsibility, willingness to accept responsibility.

*Intelligence*, or ability to assimilate.

*Little difference* ("About the same"; "Damn few characteristics which differentiate"; "In practice almost no difference, in theory . . ." (he lists some qualities); "No distinguishing charac-

teristics except those automatically present with increased authority"; "The same for good officer as for good enlisted man").

*Social advantages*, upbringing, cultural training, background.

*Luck*, matter of accident, opportunity, circumstances, "breaks."

*Leadership qualities.*

*Don't know*, not qualified to answer.

*Better manners*, gentility, refinement, poise.

*Training.*

"Pull," friendships with influential people.

(Continued on page 21)

## MOVABLE RIFLE RACK

Movable rifle racks mounted on casters have been constructed for the use of the Ontario Agricultural College Contingent of the Canadian Officers Training Corps, Guelph, Ont., by Lt.-Col. E. W. Kendal, officer commanding, who also drew up the plans for this type of rack.

The accompanying photo and working drawing show the method of construction. The OAC Contingent reports that these racks are very adaptable. They are narrow and take up comparatively little space in crowded QM Stores, and can be easily handled by one person.

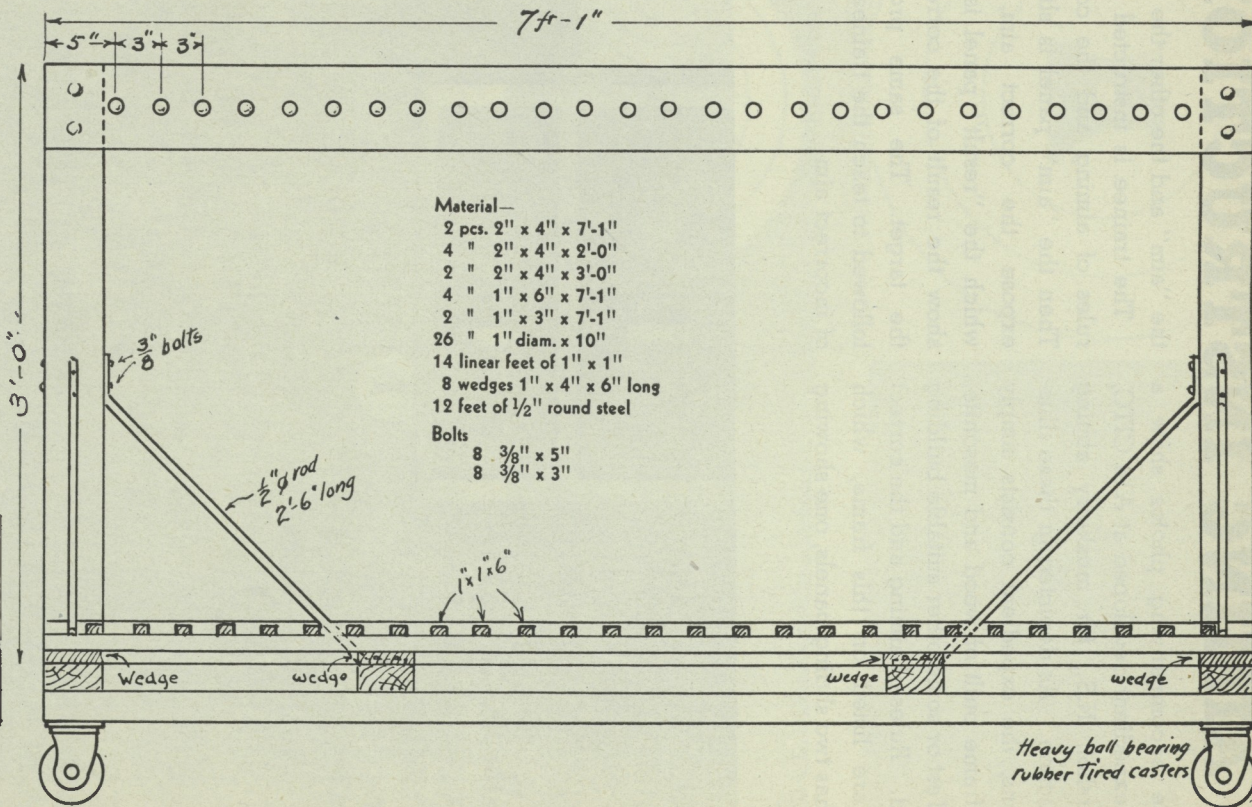
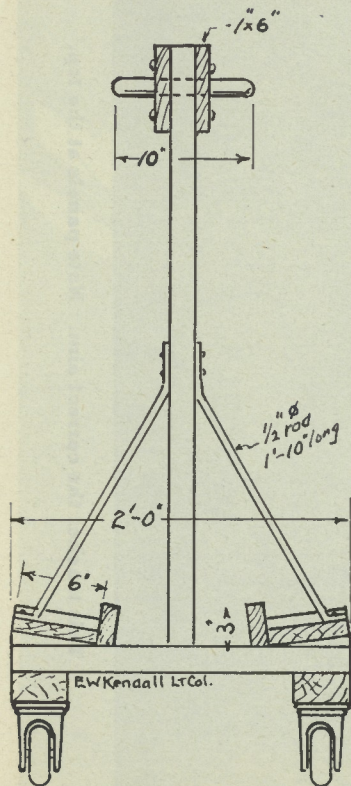




# MOVABLE RIFLE RACK

Capacity - 50 Rifles.

15

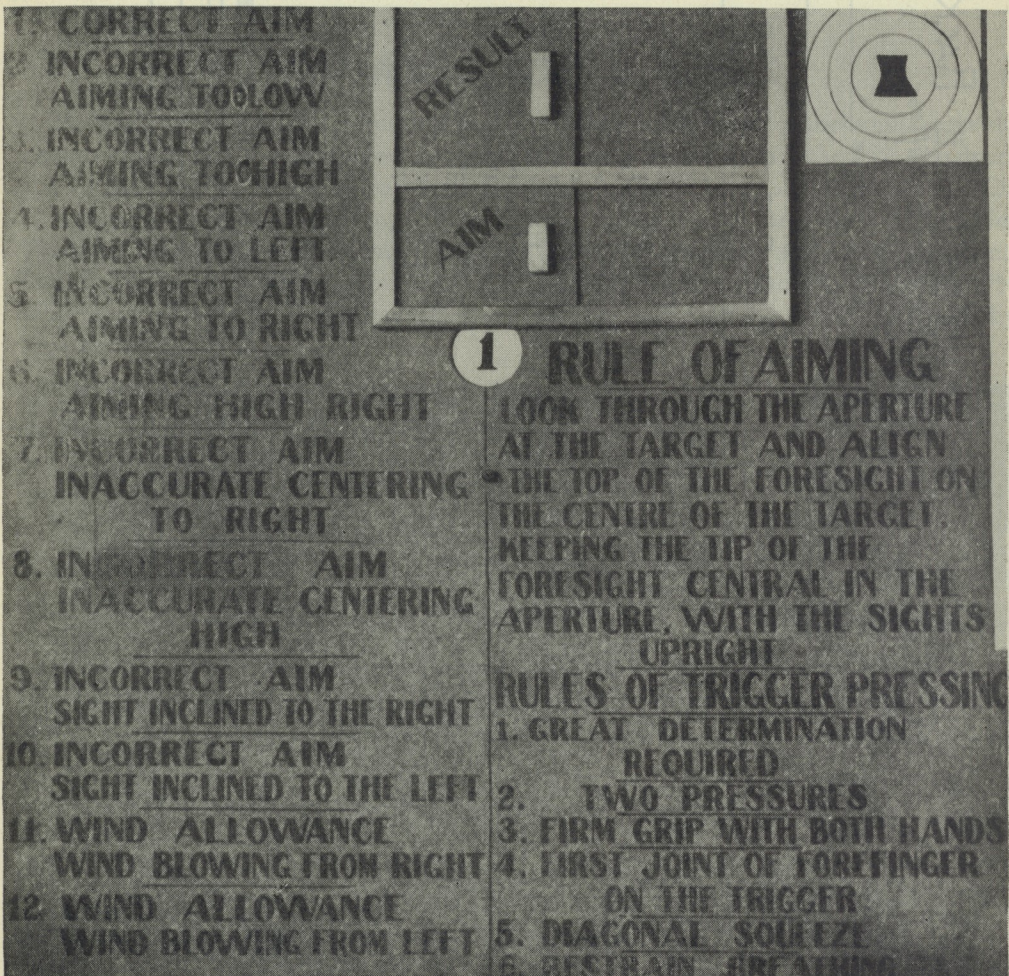


# AIMING INSTRUCTION

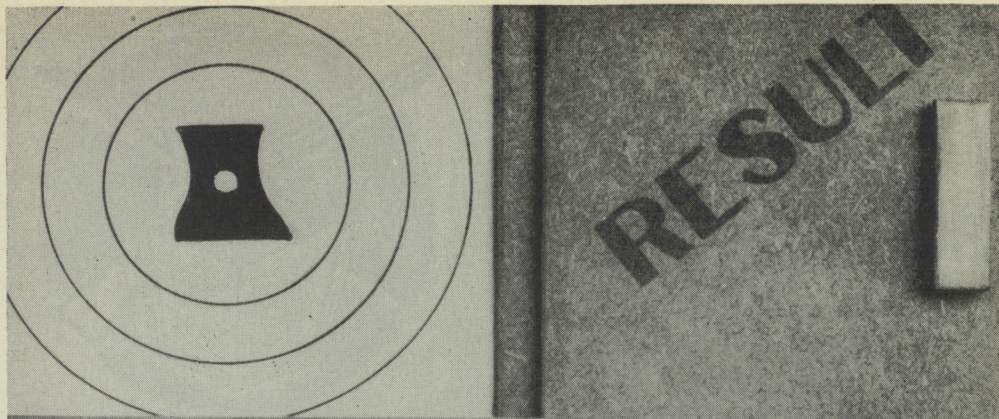
The accompanying photos show a new expedient developed at A14 CITC, Aldershot, N.S., for musketry aiming instruction. As depicted in these illustrations, the expedient consists simply of a frame built of wood and masonite, Ten-Test or some other suitable building board. Rules of aiming and the correct aim are listed on this frame, which also has two sliding panels, one showing

the "aim" and the other the "result".

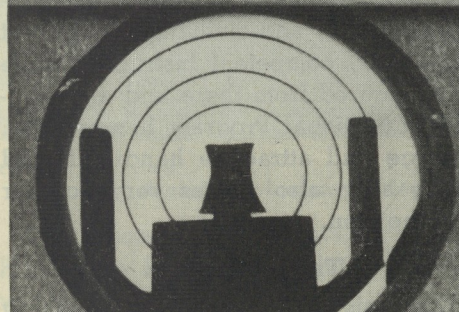
The trainee is instructed first in the rules of aiming and the correct aim. Then the "aim" panel is slid along to expose the correct aim, following which the "result" panel is moved to show the result of the correct aim on the target. The same procedure is followed to teach the trainee the result of incorrect aim.



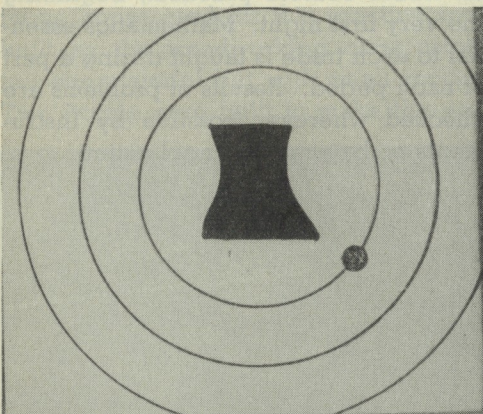
This teaches the correct aim. Note panels at the top.



RESULT



AIM



RESULT

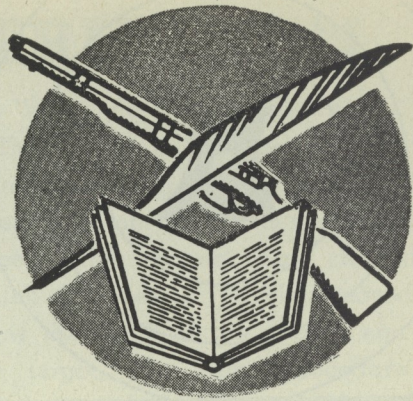


AIM



# CANADIAN ARMY EDUCATION

## CLASSES AT LONGUE POINTE



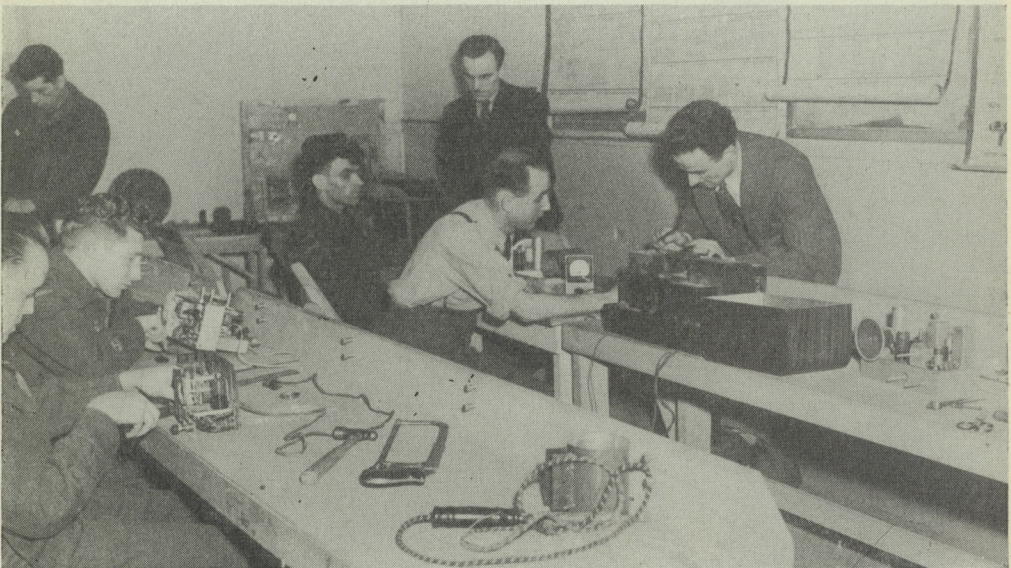
The Education Training Program at Longue Pointe Ordnance Depot, Que., was begun in the fall of 1943. It has steadily progressed to a point where over 40% of the Unit personnel are engaged in some branch of educational upgrading. A large building has been set aside for this purpose, and the Officer Commanding has co-operated in every way possible in making available the necessary supplies and equipment.

As all personnel at LPOD are on HWE and have no day time educational training syllabus, all courses are conducted at night and on a voluntary basis.

Due to the large number of technicians, military and civilian, employed at this Depot, competent instructors have been secured from there and a diversified Educational Program has evolved. A large and attractive handicraft and hobby shop also proves very popular with the men.

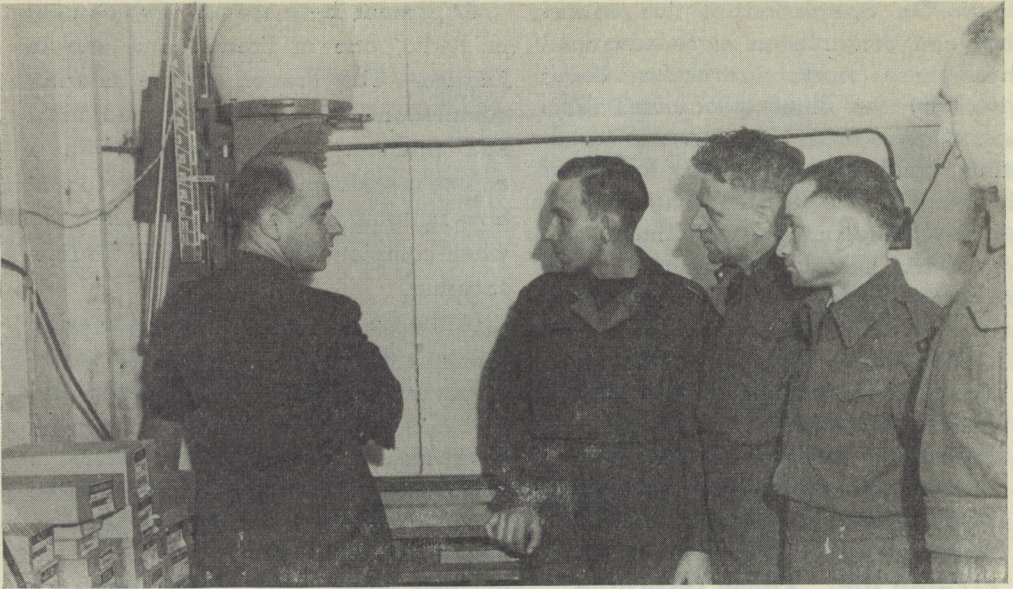
### Trade Courses

Emphasis has been placed on making all trades courses practical, beginning the very first night. Mathematics essential to each trade is taught during a part of each period. Results of problems are checked wherever possible by instruments or by practical application.



*Canadian Army Photo*

**A radio class at work at LPOD**



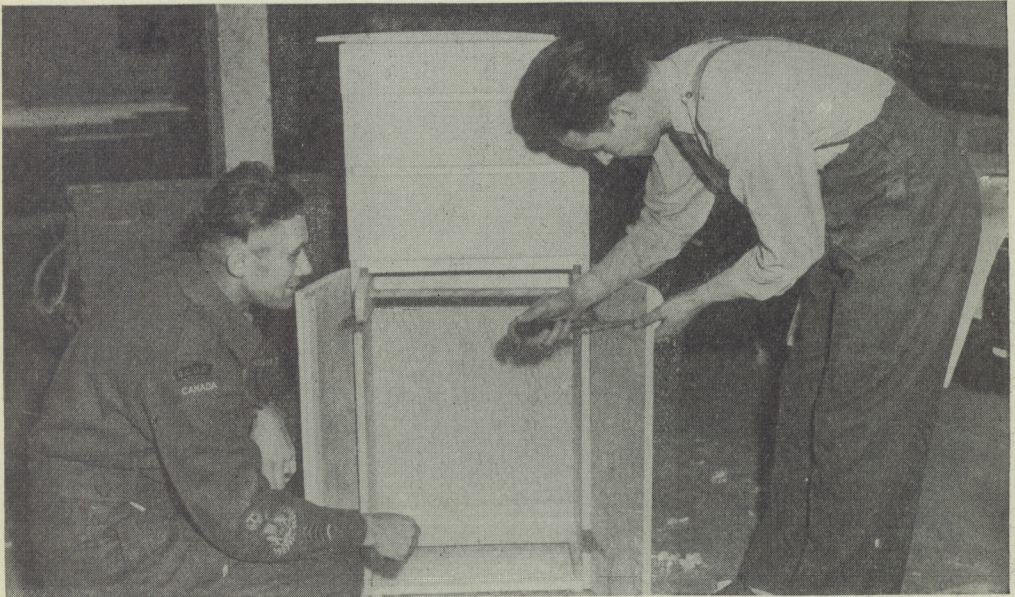
Canadian Army Photo

**A civilian instructor lectures at the LPOD photography class**

The theoretical and practical part of Elementary Electricity, including house-wiring in Lumex and BX cable, is taught at the Education Building. The model frame house used for this practice was built by the woodworking class using full size material but with small rooms. Two stories were built to make the use

of three and four-way switching more realistic. The blueprints are made at the school using the proper symbols and all practical work is done with strict adherence to the Canadian Electrical Code.

As soon as the men enrol for this course they are given apprenticeship



Canadian Army Photo

**LPOD working class student learns some fine points from the Sergeant-Major.**

time. On completion of this course they can continue on more advanced three-phase work, instruction being given by the chief electrician. This course gives them experience in installation, conduit bending, etc. Providing the man remains at LPOD long enough, he may then continue with the course of Electric Motor Maintenance given by one of the former senior instructors at Hamilton Trade School.

**The value of these courses has been proven by the fact that most of these men have gained as much or more knowledge and practical experience than they would have gained working as apprentices in civilian life. Those returning to civil life who have followed these courses for nearly two years are able to complete their apprenticeship in approximately two years. Some are now doing this. Those remaining in the army have greatly enhanced their changes of promotion and of passing trades tests.**

At present there are only two courses in Radio, one in French and one in English. The French course nearing completion has covered the theoretical and practical work together with a course in mathematics, with each student now building a five-tube set to be used when completed for practice in troubleshooting.

In the English radio course the syllabus was drawn up by Capt. Robinson, the instructor, and S. M. Pearson and the class is composed of men who have had considerable experience in radio work in the army. The aim here is not to fit them for civilian employment but to make them more competent in their army work. Men who are interested enough to attend night classes are the men who will eventually go ahead in the army.

The Motor Mechanics course has followed very closely the CLES text-booklets in Automotive Engineering. The class opens with a question and answer period, then the answers are checked with demonstrations on cut-aways. This means that nearly all of



*Canadian Army Photo* **Students are learning to be electricians at LPOD.**

each class period is spent on practical work.

Results to date have been exceptionally good. Here again the instructor has had a number of years of experience at Hamilton Trade School. Many former students of this class now discharged, have good jobs or are taking further training under C.V.T.

### **Upholstering**

In Upholstering, second hand articles of furniture were purchased or donated for the class. The students follow a progressive syllabus, beginning on square frames, webbing and springing; and finally the complete upholstering of a chesterfield suite. Though many of the students plan to make this line

their work, many others appreciate its value in dollars saved by doing their own household repairs.

The Typing course was first conducted for the benefit of CWAC personnel, and there was enrolment of over one hundred. Standard tests were used, and many students successfully met the standard of civilian schools.

Two classes for male personnel are now in operation.

Other classes in Woodworking, Photography, French and English Conversation are held twice weekly. With the exception of the latter two classes, no academic classes are held at LPOD because of its proximity to Montreal civilian schools.

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## **FOOT SOLDIER STILL SUPREME**

The Chief of the United States Army Ground Forces, in a report published recently by the U.S. War Department, said that machines failed to lessen the importance of the man who fought hand-to-hand in the Second Great War, and suggested the same would be true in the event of another conflict.

Gen. Jacob L. Devers said that "this most technological of all man's struggles put just as much emphasis on the ground soldier as did those wars waged with the short sword and the musket."

The Ground Forces absorbed 81 per cent of the American Army's battle losses, he noted. They captured nearly all the prisoners and won an overwhelming majority of the medals for heroism.

"The infantry, which comprised only 20.5 percent of the total strength overseas, suffered 70 per cent of the total casualties.

"The ground army captured and disarmed 8,150,447 enemy troops.

"Ground soldiers made more than 40 major landings on hostile shores. . . "

Two devices of organization played major parts in the AGF record, Gen.

Devers noted. One was a cadre system in forming new units, by which a battalion was organized and trained and then furnished key men for still more battalions. The other was a system of furnishing a constant stream of individual replacements to fill vacancies left by casualties.

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### **WHAT IT TAKES**

*(Continued from page 14)*

Apparently the greater part of the men thought that most good soldiers could become good officers, particularly if they had educational or social advantages and were given suitable opportunities or "breaks" to become officers.

One man's remark is worth quoting: "The average American enlisted man shows great promise as an example of our educational progress. His mind is quick. His English is poor, and his tastes rather low, but he does his job well. The officer must do his job also, but holds responsibility. He is poorer physically, more trained mentally and more mature."

## CWAC HANDICRAFTS

Handicrafts have become a popular and profitable form of relaxation for girls in the Canadian Women's Army Corps. Practically every unit, whether in the city or in an isolated camp, boasts a "Hobby Room". Crafts attracting the most interest are leather-work, glove-making, needle-work, clay-modeling, weaving and felt-work. Many girls have developed quite a skill in woodwork and have turned out ornamental and useful bowls, dishes and lamp stands.

Hobby Rooms are comfortable, well lighted and well equipped. In the evening they become a hive of industry with each girl working at the particular craft in which she is most interested. The order of dress is sports clothing and the atmosphere is quite informal.

The following is a typical scene from any one of the Units across the

country on "Craft Night". The writer entering a Hobby Room early one evening found about 25 girls engaged in activities which give scope to their creative and constructive faculties. Fingers were flying, tongues were wagging, the conversation being sometimes humorous but oftentimes quite serious. Here was a place where one could "let off steam" and at the same time turn one's energy to a new and fascinating diversion.

Two large floor looms stood against one wall. At one was seated a girl weaving place mats for a luncheon set which was later to adorn the table in her dining-room. At the other, the weaver was working on a scarf of fine soft wool, a gift for some lucky fellow. Three others were weaving attractive, brightly coloured belts on inkle looms. Some of the very industrious girls have woven enough material for civilian suits.



Canadian Army Photo

**Members of the CWAC are busy with their weaving.**



In a corner of the room was another group hooking rugs and tiny pictures, getting a deep satisfaction from transforming a piece of sacking into an article of lasting value by the use of coloured wool or cloth. Others were making gloves of fine soft leather. The workmanship on these gloves was of high grade. They were well cut and neatly sewn and would be a welcome addition to anyone's wardrobe.

### **Leather-Work**

The centre of the room contained three long tables around each of which were seated half a dozen girls engaged in leather-work. Comfortable slippers were being made from sheep-shearling. Wallets were being glued and thonged and leather which would later be used

to make an attractive bag was being tooled with interesting and simple designs.

Still others were modelling figures and costume jewellery from quick-drying clay. After modelling, the articles are painted and glazed, later to become an accessory to the designer's costume when she walks out in civilian clothes.

Service girls have gained something by their participation in handicrafts; something which they will carry with them on their return to Civvy Street. Craftwork not only provides relaxation but develops imagination, perception and manual facility which will be invaluable to our girls and may perhaps provide a profitable and agreeable means of supplementing their income.



*Canadian Army Photo*

**She demonstrates her skill in leather work.**

# EXERCISE MUSKOX IN PICTURES

(Canadian Army Photos)



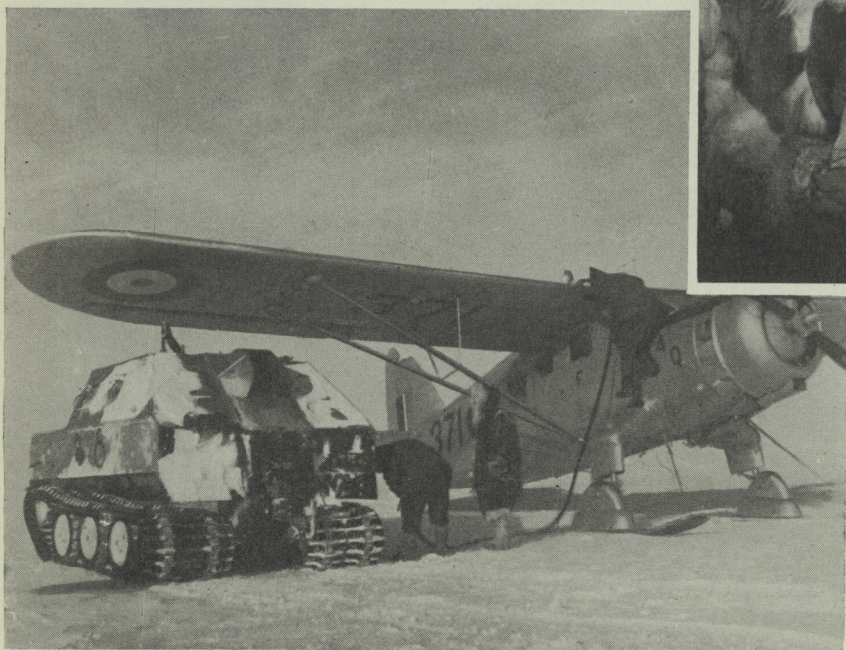
Here is a snowmobile taking on gas from a fuel drum on a sled. This photo was taken when the expedition was on its first day out from Baker Lake on the second lap of the 3,100-mile expedition. W. P. House (left), civilian equipment expert representing the U.S. Army Quartermaster Corps and an observer with the Exercise, is operating the pump.



Working in an "open air" garage. Exercise Muskox men are seen repairing one of the powerful snowmobiles used on the expedition. The work is being done on the ice of Cambridge Bay, NWT, far above the Arctic Circle. In the background is the "St. Roche", RCMP ship of Northwest Passage fame, wintering in the Bay.



This human interest picture shows an Eskimo family posing with a Muskox driver at Cambridge Bay, NWT. The woman with the baby perched on her shoulders has her face tattooed—a custom now almost extinct among the natives.



The crew of a snowmobile is shown pumping fuel from a plane to their vehicle, the aircraft having more gasoline than it requires. This picture was taken as the expedition crossed the Arctic Circle, with the wind at about 25 miles an hour and thick ground drift reducing visibility of the Norseman which has landed on the frozen terrain.



Aircraft were used to drop supplies for Exercise Muskox. Here a parachute which has just landed a drum of fuel on the ice of Schultz Lake is being deflated by a meteorologist with the moving force. A driver is seen pumping fuel from the drum to the vehicle.

# Recreational Training

## SERVICES PROMOTE SPORTS

With the will-to-win instinct learned in sports activities so subconsciously converted into battle leadership during the war, few people ever considered that such activities were actually organized by the Auxiliary Services and its associated organizations, the Y.M.C.A., Canadian Legion, Knights of Columbus, Salvation Army and the Y.W.C.A.

While all admirably performed their specific roles in caring for the general welfare and comfort of the men and women in the Army, special credit must be given to the Y.M.C.A. supervisors who carried the secretarial role in the various sports committees and assisted



in conducting the larger sports meets in England and on the Continent, especially after VE day and until the general repatriation move was well on its way.

In Canada the Directorate of Auxiliary Services organized and administered the sports program with the assistance of its Command and District Sports Officers.

### Now In DMT

With the rehabilitation of army personnel rapidly progressing, necessity has involved the changing over of sports control and administration from the Directorate of Auxiliary Services to the Directorate of Military Training, with effect from April 1, 1946. This change does not affect the activities of the Auxiliary Services Organizations at present active.

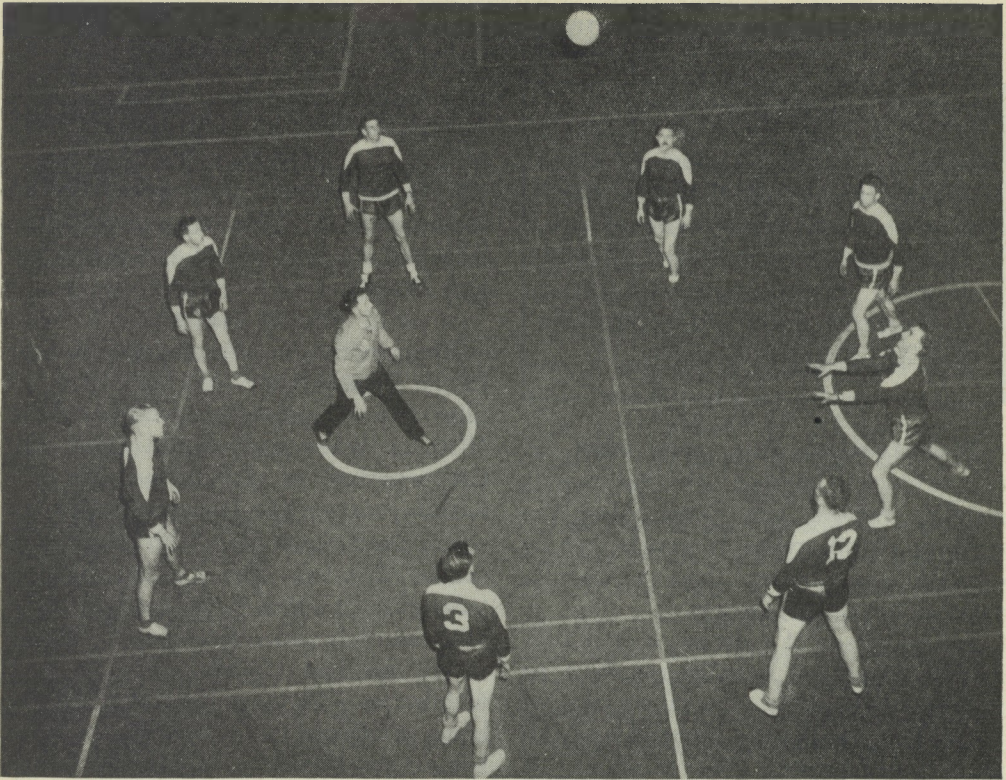
Sports in the army is no longer just an after-duty consideration. The significance of a sports program demands its adoption in training a soldier. Its morale-building characteristics so plainly exhibited throughout the war, and its ever-increasing popularity with the public make it very desirable, and it should prove a strong incentive in the promotion of recruiting for the Active and Reserve Forces.

Coaching the individual soldier in "Posture and Play" methods of instruction as illustrated in the volleyball pictures will prove a mutual benefit to physical development and team work.



Canadian Army Photo

**This photo shows advanced coaching in spiking and blocking for volleyball.**



*Canadian Army Photo*

**Volleyball players are being drilled here in elementary ball passing.**

Many people are playing and enjoying volleyball today because of its "relative" simplicity, but they are not playing well. Their coaching has been inadequate and they have not been indoctrinated with the full possibilities of the game.

The game skills are readily acquired by players when they are properly coached. To play indoors, nets must be at a standard height and stretched tightly, balls properly inflated and kept clean, courts clearly marked and convenient score boards must be used to keep all players posted on the point standing of both teams. Teams must be limited to the official six players on a side but substitutes may be used to accommodate more. Accurate ball handling and team work must be stressed.

Volleyball's chief value is that it is primarily a participant's sport. The three major factors are motivation, adequate instruction and opportunity

to participate.

**Motivation:** The attitude of the coach plays an important part. If the instructor can explain the game, knows the fundamentals and provides opportunities for play under favourable conditions where fun and learning occur, then a good start has been made.

Equipment and playing space should be provided and special periods should be set aside for individual and team coaching.

The motion picture film, "Play Volleyball", constitutes excellent instruction and is available at District Film Libraries.

**Adequate Coaching:** Best results are obtained when the players know what they are trying to do and want to do it. These functional fundamentals must be mastered: the serve, receive and pass, setup "spike" or attack block, net recovery, team work, knowledge of rules.

# MILITARY CUSTOMS AND SURVIVALS

*Written by Maj. T. J. Edwards, M.B.E., Fellow of the Royal Historical Society, this is the third instalment of an article on the traditions of the service. It was extracted from the British Army Quarterly for CATM—Editor.*

**Moustaches:** This may seem an odd subject to have any association with military matters, but, nevertheless, the growing or otherwise of moustaches by officers and soldiers had a definite relation to military fitness.

For purposes of personal hygiene all European armies usually removed as much hair as possible from their persons—heads were closely cropped and the face clean-shaven, thus rendering it impossible for disease-carrying vermin to get a footing. In the 18th Century, however, we are told that the Austrians permitted their already blood-thirsty hussars to wear moustaches to give them a terrifying appearance. Apropos of this, Baron de Marbot, the well-known French military writer, records that the French General Macard used to say, "Look here! I'm going to dress like a beast," and forthwith stripped off as much clothing as possible and went into action showing a shaggy head, face and body.

Marbot also tells us that when he was hussar in the 1790's the order was for all French hussars to wear moustaches for smartness and to give them a manly appearance. Those who could not grow moustaches had them painted on with blacking, which proved very unpleasant in hot weather, when the scorching sun in drying the blacking drew the skin up in a painful manner.

In *The Times* of the 21st of September, 1837, will be found the account

of a young man who complained to a magistrate that he had been treated roughly by his workmates because he grew a moustache. Asked why he did so, he replied: "The reason vy I vears it is 'cos it's fashionable and makes me look like a man of some courage."

## **Order Issued**

The practice of wearing moustaches in the British Army was fairly general after the Waterloo campaign, but in 1830 an order was issued prohibiting the wearing of moustaches in the cavalry, except the Household Cavalry and Hussar regiments. With the coming of the Crimean War another change took place, which was notified in a Memorandum from the Horse Guards dated the 21st of July, 1854, part of which ran—"A large part of the army being employed in Turkey, where it has been found beneficial to keep the upper lip unshaven and allow the moustache to grow, the General Commanding in Chief is pleased to authorize that practice in the Army generally" subject to certain regulations; "the wearing of the moustache is to be optional with all ranks." After the Crimean War moustaches were no longer optional, but were ordered to be worn.

## **During the Great War the wearing of moustaches was optional, as it is at present.**

The above brief notes give but an inadequate sketch of what might be thought a simple subject, but they show that the custom of wearing or not wearing a moustache in the Army has some unsuspected historical associations.

**The Cameron Highlanders:** This Regiment observes an old custom of not playing music on Sundays when going to and returning from Church. Its origin seems to be connected with Inverness when the regimental depot was there, in deference to the views of the local civil authorities. Queen

Victoria, when the matter was brought to her notice, expressed a wish that the custom should be observed.

**"Oates Sunday":** The epic story of Captain Oates deliberately walking out to his death during Captain Scott's Antarctic expedition of 1912 is too well known to need recounting here. Captain Laurence Edward Grace Oates was born on the 17th of March, 1880, and was commissioned to the Inniskilling Dragoons on the 30th of May, 1900, being promoted to his captaincy on the 19th of November, 1906.

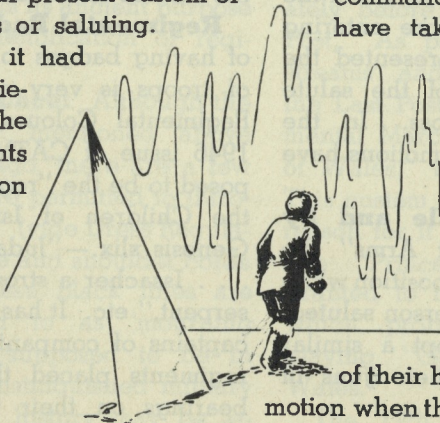
It was on the 17th of March, 1912, his thirty-second birthday, that Oates performed this great act of sacrifice, which his leader recorded as "the act of a brave man and an English gentleman." To commemorate this deed of heroism the 5th Royal Inniskilling Dragoon Guards\* have instituted an annual "Oates Sunday," which takes the form of a memorial service held on a Sunday near the anniversary of his death.

The ceremony was held in 1939 at Colchester on the 14th of March and a number of survivors of the expedition were present, the most notable being Admiral Sir Edward R. G. R. Evans, K.C.B., D.S.O., LL.D. ("Evans of the Broke"), who gave a stirring address. At the time of the expedition Admiral Evans was a young naval lieutenant and was second-in-command to Scott.

**Saluting:** Various origins have been attributed to our present custom of paying compliments or saluting.

One theory is that it had its origin in the medieval custom when the victors at tournaments shaded their eyes on

*\*Formed by the amalgamation of the 5th Dragoon Guards and the Inniskillings in 1922; granted "Royal" in 1935.*



approaching the Queen of Beauty for their prizes, otherwise they would have been blinded by her dazzling loveliness. Another is that it is the King's Commission that is saluted and not the officer who holds it, but as naval warrant officers and midshipmen are saluted, this falls, because they are not commissioned.

Still, another and perhaps the correct reason is that the salute arises from a demonstration of mutual trust and respect by the nobility in the days of chivalry. In token of these sentiments knights, etc., on meeting, would place themselves in an attitude of defencelessness by uncovering their heads or raising their vizors. But headdresses, whether iron casque, shako, bearskin, etc., have not always been easy to remove quickly and so the preliminary movement of raising the hand has been accepted for the completion of the whole movement.

The uncovering of the head was a universal form of salutation and obeisance in this country up to about the end of the 18th Century in both military and civil life. In civil life today it still obtains, and in the Foot Guards men remove their headdress when in fatigue dress instead of raising the hand in salute.

### Discontinued

During the 18th Century, however, commanding officers appear to have taken the matter into their

own hands and gradually discontinued the practice of removing the headdress because "As nothing disfigures the hats or dirties the lace worn more than taking off the hats, the men for

the future are only to raise the back of their hands to them with a brisk motion when they pass an officer" (Stand-

ing Order of The Royal Scots in 1762). Cleanliness, therefore, seems to be at the bottom of our modern practice.

It will be noted that the back of the hand was to be raised; presumably the palm would be dirty from handling the musket, particularly when on active service. Such a practice does not appear to have found universal approval, for in 1777 the Duke of Cumberland ordered that "N.C.Os. and soldiers are to pull off their hats to all officers of whatever corps they belong to, whenever they pass them." However, by the beginning of the 19th Century the pulling off of hats appears to have been discontinued.

It will be remembered that for some years saluting was carried out by the hand farthest from the officer saluted. This involved saluting with the left hand when passing an officer on the right-hand side. To Indian troops saluting with the left hand was an insult. This method was abolished in 1918.

**Gun Salutes:** The idea of defencelessness is seen in the former practice of firing gun salutes with live shot. When the gun was fired it was evidence that the gun was empty and therefore could do no damage to the person, etc., saluted. In those days it took a considerable time to reload a gun with shot.

**Salute with Swords:** Until recently the salute with the sword was reminiscent of Crusader days, when the knight kissed the hilt before entering the conflict. The hilt represented the Cross and the motions of the salute roughly described a cross. In the present salute some of the motions have been omitted.

**Salute with the Rifle and by Tanks:** In the "Present Arms" the rifle is again placed in a position when it can do no harm to the person saluted. Tanks when saluting adopt a similar attitude when they dip their guns in salute.

**Saluting with Colours:** The lowering or "vailing" of Colours as part of a salute is very ancient, and Sir John Smith mentions the practice in his "Instructions, Observations and Orders Mylitaire" written in 1591. Ward (1639) states: "If a king or great prince passeth by, the Ensigne is to vaile his Colours close to the ground with his knee bending, in token of allegiance and submission." This practice was officially recognized in the Regulations of 1799, wherein it is stated that: "All armies salute crowned heads in the most respectful manner, colours and standards dropping and officers saluting." This idea can be traced through the official Regulations on the subject to the present day (Vide K.R. 917).

**Wearing of Headdresses in Churches:** Normally the headdress is removed on entering a church or other sacred building, but there are a few occasions when it is not removed. It was probably observed at the Coronation Service in Westminster Abbey that the Gentlemen-at-Arms on duty (not those in the congregation) wore their helmets all through the ceremony. It is because they are on duty that they wear their headdresses, irrespective of the place where their duty is performed.

A more common instance occurs in the service of the Laying-up old regimental Colours, where the Colour party wears its headdresses throughout the service in the Church.

**Regimental Badges:** The practice of having badges to distinguish bodies of troops is very ancient (see under Regimental Colours, page 40, March 1946 issue of CATM). What are supposed to be the "regimental badges" of the Children of Israel are given in Genesis xlix.—"Judah is a lion's whelp . . . Issacher a strong ass. . . . Dan a serpent," etc. It has also been seen that captains of companies and colonels of regiments placed their own armorial bearings on their Colours until pro-

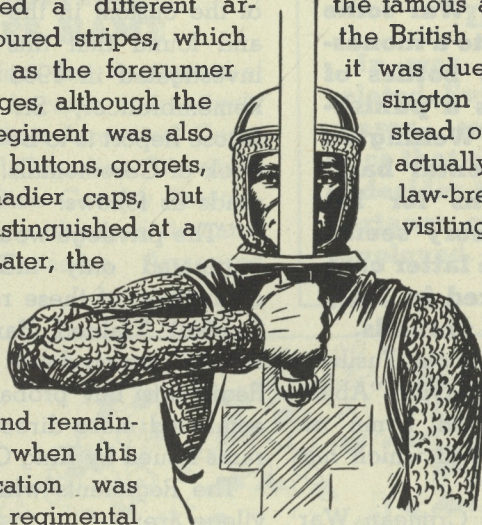
hibited in 1751. In this year a Royal Warrant authorized some regiments to wear badges on their grenadier caps and drums, but the colour of the facings assisted regimental identification to some extent. This, however, appears to have been inadequate for its purpose, because in 1768 another Royal Warrant laid down that: "The men's coats to be looped with worsted lace, but no border. The ground of the lace to be white, with coloured stripes."

### Forerunner of Badges

In the "General View" table which accompanied the Warrant each regiment is prescribed a different arrangement of coloured stripes, which may be regarded as the forerunner of regimental badges, although the number of the regiment was also borne on officers' buttons, gorgets, drums and grenadier caps, but could only be distinguished at a short distance. Later, the wearing of the number of the regiment became universal on headdresses and remained so until 1881, when this form of identification was abolished and regimental badges, much as we know them today, were introduced.

Now that full dress is not worn generally, our custom of wearing regimental badges fulfils its ancient purpose of assisting the identification of regiments.

**Black Line in Lace:** Although the "Coloured Stripe" mentioned above disappeared long ago, there are a few regiments which are permitted to introduce a "black line" (vide Dress Regulations) into their lace and shoulder cords in full dress. These black lines are sometimes referred to as "mourning stripes" and are supposed to be in memory of some distinguished military leader. Whatever history may be at-



tached to them, only two regiments, so far as can be traced, are permitted to wear them for that reason: The East Yorkshire Regiment for General Wolfe, who was killed at the taking of Quebec in 1759; and The Royal Norfolk Regiment for General Sir John Moore, who was killed at Corunna in January 1809, and was buried by the old 9th Foot. In the 1768 Warrant several regiments had black stripes in their lace.

**Visiting Rounds:** The practice of visiting sentries when on guard had its origin in the first half of the 18th Century. The late Sir John Fortescue, the famous author of "A History of the British Army," has stated that it was due to a burglary at Kensington Palace. The sentries, instead of arresting the burglars, actually assisted them in their law-breaking. After this episode visiting rounds were established in order to ensure the sentries did their duty.

**Bugle Calls:** Our modern bugle calls were composed by Joseph Haydn. George III would not let him return to Germany until he had composed them.

**Hymns Played at Night:** No less than four of our regiments play hymns at night as a long-standing custom. The 10th Royal Hussars play, immediately before the sounding of the Last Post, "As pants the hart for cooling streams" and "Thy will be done." After the Last Post the band plays the Regimental March, "God Bless the Prince of Wales," and the National Anthem. This custom originated in 1866, but the reason for it has not been traced. The title "Prince of Wales' Own" was granted to the 10th Hussars in 1783, which probably accounts for their playing "God Bless the Prince of Wales."

The 12th Royal Lancers play the



Sicilian Vespers, the former Russian National Anthem, an Evening Hymn, "God Bless the Prince of Wales," and the National Anthem. There are two theories regarding the origin of this custom. In 1794 a part of the regiment was stationed in Italy, where its good conduct attracted the attention of Pope Pius VI. His Holiness marked his appreciation by presenting a number of gold medals to the officers and is said to have presented the hymns at the same time with a request that they be played as often as possible.

**Another theory is that during the Peninsular War some of the 12th broke into a monastery and stole 109 bottles of wine, and that, as a punishment, the Duke of Wellington ordered the regimental band to play the hymns for 109 years. Neither theory seems satisfactory. In the latter case the 109 years expired in 1917, yet the custom still prevails.**

In 1878 The Royal Scots Fusiliers introduced the custom of playing "Abide with me" and a selected hymn on Sunday night, the origin of which has not been established.

About the time of the Crimean War (1854-1856) the 1st Battalion The Welch Regiment originated the practice of playing "Sun of my Soul," a Spanish chant and a Vesper hymn on Sunday nights, and here again the reason for so doing has not come to light.

**A City of London Privilege:** A much-debated custom is that exercised by certain Regiments of marching through the City of London with bayonets fixed, Colours flying and bands (and drums) playing. Under its "ancient privilege" the City of London claims to have power to forbid troops to march through its jurisdiction in the above-mentioned manner. There is no evidence that the privilege existed before the Restoration of Charles II,

but, during his reign, Warrants for recruiting contained the proviso—"But in case you beat your drums within the City of London or the Liberties thereof, you are first to produce this our order for the same to our Mayor of the said City."

The Regiments which enjoy the privilege base their claim on the fact that they are the lineal descendants of the City trained bands or were authorized by Charles II to beat their drums, etc., when recruiting in the City. A few years ago the writer was given facilities for making a research into the origin of the custom in the Guildhall library, and found that this matter was fully investigated in 1906 by the then City Remembrancer, Sir Adrian Pollock, whose Report is to be found in the "City Book of Ceremonials." His conclusion reads as follows:

"The privilege would appear to have originated only indirectly from the connection of these regiments with the Ancient Trained Bands of the City, which were no doubt the nucleus of the Regiments but probably the privilege emanated more directly from the Warrants issued by King Charles".

The Regiments which enjoy the privilege are:

Grenadier Guards—Colonel Russell's Regiment, now 1st Bn. Grenadier Guards, was raised in the City of London in 1660.

The Buffs—the original company, from which this Regiment enjoys its connection, was raised in London in 1572.

The Royal Fusiliers—the nucleus of this Regiment, raised in 1685, was two old Independent Companies stationed in the Tower of London. The 6th Bn. of the Regiment was formerly the Royal London Militia, which was recruited in the City.

The Royal Marines—some of their original companies were formed of men from the London Trained Bands.

The Honourable Artillery Company—was raised in London and its training ground was that of the City Trained Bands.

5th Bn. The Royal Northumberland Fusiliers—this Battalion's claim rests upon the fact that during the Gordon Riots in 1780 it was quartered in the City of London and, therefore, in the performance of its duty it would march with fixed bayonets, etc.

(To be continued)

### ASSOCIATION CHANGES NAME

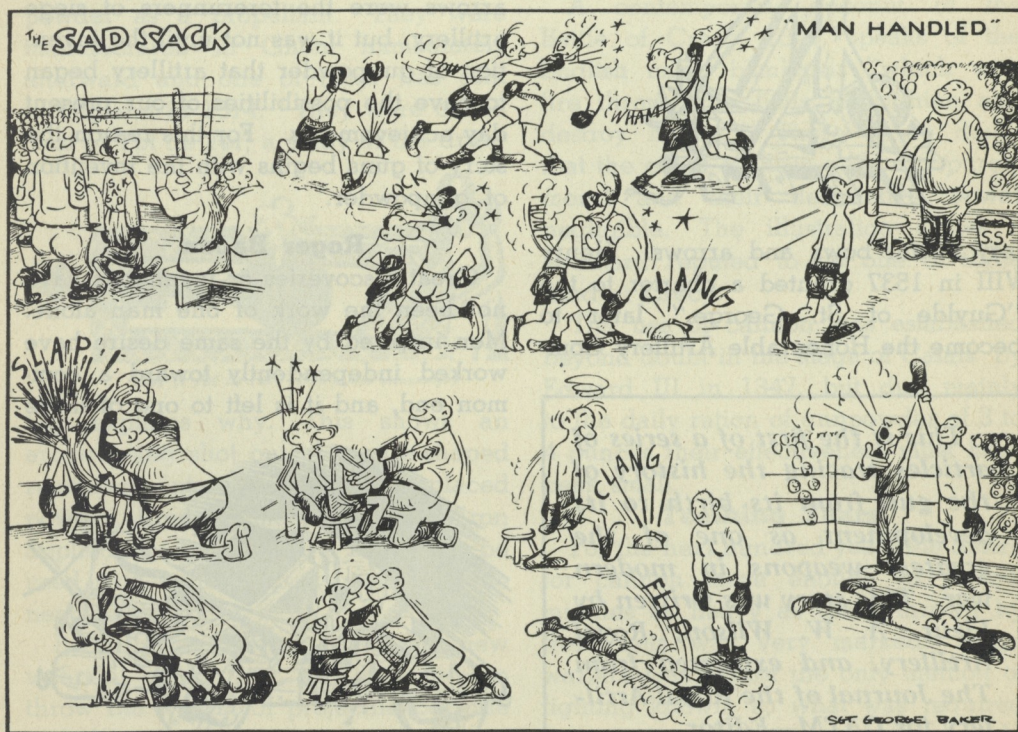
In view of the fact that Regiments of Cavalry (Horsed) became successively units in the Canadian Armoured Corps and then the Royal Canadian Armoured Corps, the Canadian Cavalry Association has accordingly changed its name to the Royal Canadian Armoured Association.

### QUALIFYING EXAMINATIONS FOR RESERVE FORCE

The next Reserve Force examinations will be held Saturday and Sunday, August 24 and 25, 1946, according to an announcement by the Director of Military Training.

### CO-RELATION IN WAR

In war, everything is co-related. Every move has some reason, seeks some object; once that object is determined it decides the nature and importance of the means to be employed.—Fosch.



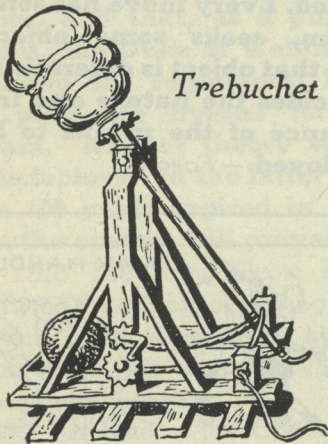
Reproduced by courtesy U.S. Army Week'y "Yank"

# THE STORY OF THE GUN

Part I: 1242 to 1650

## Before Gunpowder

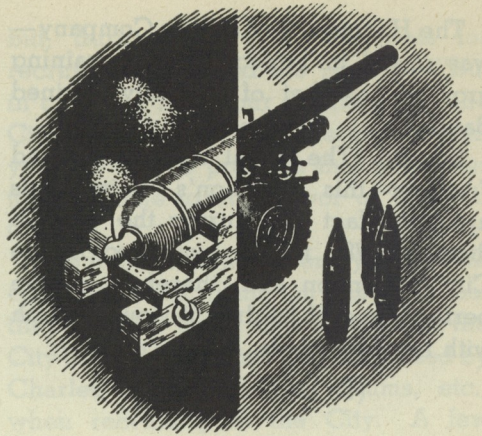
Gunpowder and Artillery are terms regarded today as inseparable, but this has not always been so. It seems that up to the middle of the 16th century any weapon discharging a projectile of any kind and by any means was a piece of artillery. In France and England (13th Century) the wordartil-



Trebuchet

lery meant bows and arrows. Henry VIII in 1537 granted a charter to the "Guyld of St. George," later to become the Honourable Artillery Com-

*This is the first of a series of articles tracing the history of the gun from its birth to its development as one of the greatest weapons in modern war. This story was written by Lieut. A. W. Wilson, Royal Artillery, and extracted from The Journal of the Royal Artillery for CATM—Editor.*

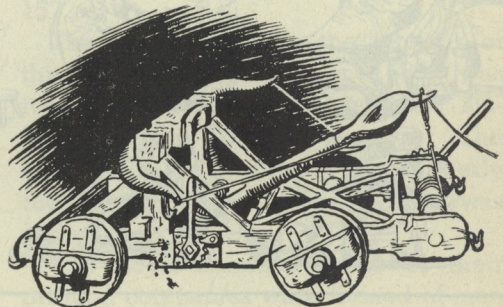


pany, a fraternity "to be overseers of the science of artillery, that is to witt, long bowes, cross bowes and hand-gonnes for the better encrease of the defence of our realme," and a chronicler in 1571 says "Artilerie nowadays is taken for two things, gunnes and bowes."

The machines used by the Normans and Romans (shown here) for throwing huge stones and discharging large arrows were the forerunners of siege artillery, but it was not until the invention of gunpowder that artillery began to have the possibilities of our present day achievements. For this reason the story of guns begins with the invention of gunpowder.

## Roger Bacon

Great discoveries or inventions have not been the work of one man alone. Men inspired by the same desire have worked independently toward a common end, and it is left to one of these



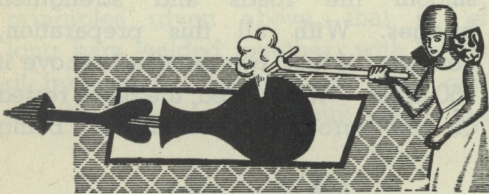
Catapult

men, who by luck or superior knowledge, or both, has produced the finished article. So it was with gunpowder. Claims for its invention have come from all over the world, but the honor seems to go to the English friar and alchemist, Roger Bacon (1214-1294). At any rate his recipe is the earliest known to us.

The date of the invention is somewhat obscure, since Bacon did not make his discovery public but instead concealed his findings in cryptic writings only recently solved. One of these works suggests that the discovery was made in the year 1242 or even earlier. Bacon apparently used his gunpowder to make crackers for children. Though he may have envisaged its use in guns, he did not live to see it put into practice.

**Birth of the Gun**

Within 20 years the secret was out, but it was not until 1313 that a German monk, Berthold Schwarz, who lived in Flanders, made the first gun with gunpowder as a propellant. They were manufactured in Ghent immediately afterward and one of them was sent to England in 1314. They were called Vasi or Pot de Fer; a study of the draw-



*Vasi or Pot de Fer (from a 1326 manuscript)*

ing explains why. This shows an arrow being shot out of a vase-shaped receptacle into which has been placed powder, fired by means of a hot iron applied to a touch-hole, a method to be used with minor improvements for the next 500 years or more.

It is quite obvious that the new weapon could not be expected to throw the weight of projectile possible with the trebuchet and similar machines, and consequently the gun did not



immediately supplant these more primitive methods which continued in use for some 100 years or so. Cannon are believed to have been used by Edward III in his campaigns against the Scots in 1327, but apart from the information that they were "Crakys of War" we know nothing about them. Certainly they must have been very ineffective.

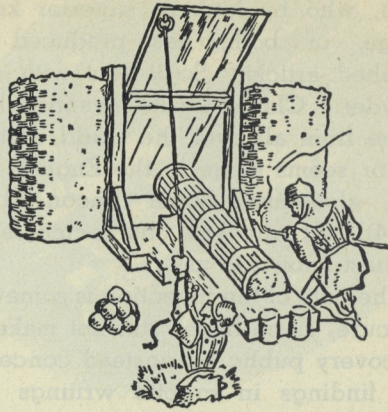
A contemporary account of the Battle of Crecy, 1346, speaks of the English using bombards "which with fire throw little balls to frighten and destroy horses." There is no doubt that the effect of these guns was purely moral and their destructive power negligible. The illustration shows a bombard reputed to be one of three used at Crecy.

The use of cannon was established beyond doubt in the siege of Calais by Edward III in 1347, but due mainly to the daily ration of gunpowder of 3 to 4 ounces their effectiveness must have been small.

**Teething Years**

For the next hundred years the desire for cannon large enough to project missiles as heavy as those thrown by trebuchets was very marked. Siege warfare was almost the only method of fighting known, so what was required was a piece large enough to provide the means of knocking down the walls

of a town. These early cannon were made of wrought iron and had an effective range of a few hundred yards. One such, made by Henry VI in 1440, was composed of 14 long bars in a circle like staves in a barrel (hence the word "barrel" applied to the piece) imperfectly welded together and strengthened by hoops of iron shrunk on to the staves, typical of the general method of manufacture. Its piece, the bore of which measured 4.25 inches, was 7' 6" in length, and weighed 8 cwts. Owing to the increase in the size of cannon, the method of firing the charge by applying a hot iron (which was obviously inconvenient) was superseded by a plan of priming the vent with loose powder, fired by means of a match.



*Siege operations, 15th century*

Act of Parliament in 1456 speaks of "Carts of War" for conveying light artillery.

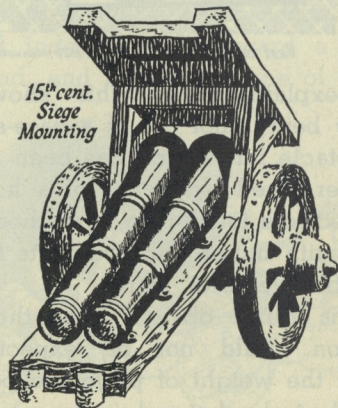
### Heavy Guns

The most famous of heavy siege guns of this period is the bronze cannon of 12 palms (25 inches) caliber made by Mahomet II for the siege of Constantinople in 1453. It weighed nearly 19 tons and was 17 feet long. It required a frame or carriage of 30 wagons to move it and was drawn by a team of 60 oxen; in addition, 200 men had to march beside it to support the weight, while 250 workmen went ahead to smooth the roads and strengthen bridges. With all this preparation, however, it took two months to move it 150 miles. When fired, the piece rested on the ground, the breech being



*Siege Mounting,  
14<sup>th</sup> cent.  
The gunner holds a  
shield for protection  
against arrows*

The illustration shows how siege warfare was conducted. Notice the fixed mounting of the gun and the gunners' shield for protection against arrows. Sometimes the guns were fired in pairs and had shields of wood, fixed or movable. (It is interesting to consider that when in the latter part of the 19th century shields were again used for field artillery a loud outcry came from the Press against something that was not in the true tradition of the artillery. Even so, most of these cannon had no special carriages, for a Scots

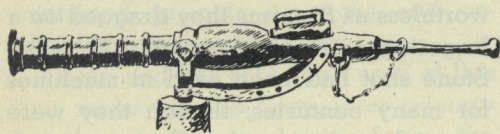


*15<sup>th</sup> cent.  
Siege  
Mounting*

*Siege operations, 15th century*

embedded. Handspikes were placed in the sockets to facilitate the laying of the piece. Its stone pellet weighed over 600 lbs., with a range of one mile—and the fastest rate of fire achieved was seven times in one day. Though ridiculously cumbersome it showed an ambitious spirit in the desire for really heavy artillery.

**Another famous piece of large caliber is Mons Meg, now in Edinburgh Castle, and believed to have been forged at Mons in 1461-83. It has a 20" bore and fired a 330-lb. stone shot. According to an old record, Mons Meg, or**

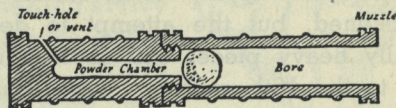
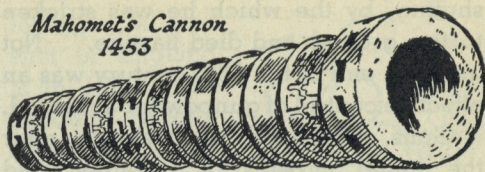


*Breech Loading Petriecoe 1461*

**"Munce," if discharged with 105 lbs. of powder well rammed in the chamber and set at an angle of 45°, could project an iron ball 1,408 yards or a stone one 2,876 yards.**

This gun was constructed on the principles given above, that is, of long bars welded together, with hoops of iron shrunk on to them. This can clearly be seen at the point where the

*Mahomet's Cannon  
1453*



outer hoops have broken away. (See illustration page 38.)

At the same time many experiments were made in producing breech loaders—one of which is shown here. The charge was small enough for this to be practical, but when charges and pieces became larger due to increased requirements, the breech was no longer strong enough to withstand the increased strain. This problem was not solved until the middle of the 19th century.

### **Not Reliable**

Most of these guns were treacherous and unreliable. On record are many instances of unfortunate accidents. Perhaps the most notable is the rather charming account of the death in 1460 of James II of Scotland during the siege of Roxburgh Castle: "While this prince, more curious nor became the Majestie of any Kinge, did stand near-hand where the Artyllaire was discharged. His thigh-bone was dung in two by a piece of a miss-framed gunne that brake in the



*based on an old print*

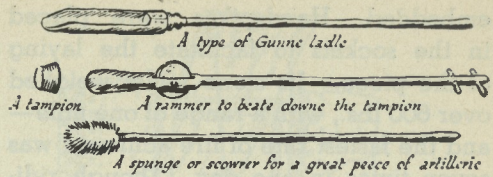
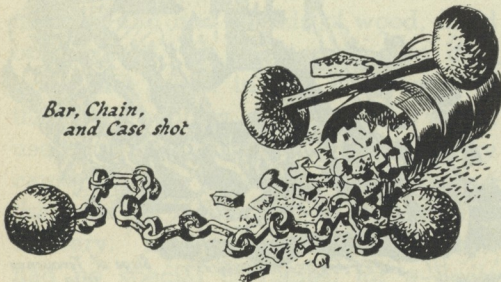
*Siege of Terouenne  
1513*

shuting, by the which he was stricken to the ground and died hastilie." Not until the end of the 15th century was an effective control of gunpowder achieved.

Guns developed very slowly after the initial impetus of invention had slackened, but the attempt to design really heavy pieces still showed itself up to the 16th century. One illustration here, based on an old print, shows the use of heavy cannon in the siege of Terouenne, 1513. "The wallis of Turwyne (Terouenne) are sore beaten with gunnes and many houses broken and destroyed. Our gunnes lie within a birbolt shote to the wallis and our miners are also near them," says an extract from a soldier's letter. It is possible that these guns were part of Henry VIII's twelve huge pieces which he called the Twelve Apostles. It is recorded that St. John disgraced himself by getting stuck in the mud and was captured.

### Cast Iron

The next great step forward was marked by the introduction of cast-iron guns. The first is supposed to have been made by Ralph Hog of Bexted, Sussex, in 1542. Casting had been known from the 14th Century, but due to our imperfect knowledge it had not been possible to apply it to the making of cannon. The cast-iron gun was an important advance, for it enabled the makers to produce guns much more speedily. The present 58th (Sussex) Field Regiment R.A. claims direct descent from these old Sussex gunmakers who produced most of the cast-iron

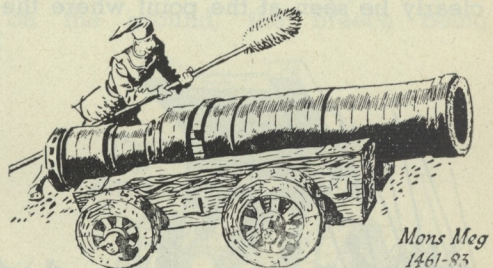


guns which out-shot the brass cannon of the Spaniards in the battle of the Armada.

### Ammunition up to 1500

Mention must be made at this point of the various kinds of ammunition used up to this time. The earliest projectile was the arrow or iron dart, weighing about 7 oz. and bound with leather to fit the bore of the gun. Though experience proved them to be worthless as firearms they dragged on a lingering existence for over 200 years. Stone shot had been used in machines for many centuries; though they were on trial for cannon in France during 1346 it is doubtful whether the following ballad of the battle of Crecy refers to guns."

"Gunners to shew their art  
Into the Town in many a parte  
Schot many a fulle great stone,  
Thankes be to God and Mary mild  
They hurt neyther man, woman or  
childe;  
To the houses though, they did  
harm."



Although stone or iron shot was ideal for battering down the walls of a town, it proved to be less effective when used against troops in the open. What was required was a hail of shot with a spreading effect. This was produced either by mounting a number of small

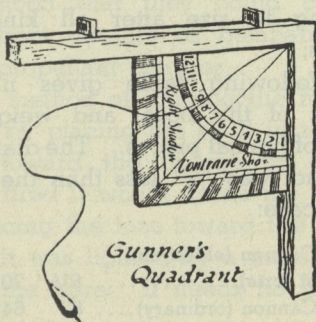
bombards on the carriage and firing them all together (the forerunner of the Gatling gun and machine gun) or by filling a canister with small missiles fired from a single piece, called case shot. In its original form canister or case consisted of old iron, nails, bolts, flints, and gravel loaded loose into the barrel of the gun. This curious assortment, known as "Langridge", must have been very effective at short ranges. Later the case or canister was introduced, and in this form was used as early as the siege of Constantinople in 1453.

Grape shot introduced at about the same time was similar to case except that the missiles (small round shot) were contained in nets or sacks and resembled bunches of grapes.

Chain and bar shot were used at this time mainly by the Navy, their primary function being to bring down the rigging of enemy ships. Twin cannon were sometimes used for chain shot, one ball in each with the chain dangling between them. A single touch-hole fired both barrels simultaneously.

### Use of Sponge

After the firing of any of these missiles it was found that a proportion of powder was left burning in the chamber. It was obviously inadvisable to ladle fresh powder into the bore until this smoldering mass had been swabbed out. The sponge shown here is typical of those that performed this service. It was a familiar sight with the guns up to the end of the 19th century.



Gunner's  
Quadrant

The earliest mention of iron shot in England is in 1350. The accounts of John deSleaford, Clerk of the King's Privy Wardrobe, prove that in 1372-74 men were employed in the Tower in making leaden "pelottes" for guns. No doubt the high cost of producing such



*A firewoorke which may be shotte out of great ordnance.*

metal shot and the fact that a higher charge of gunpowder was necessary in order to throw them over required distances, limited their use considerably. It was not until almost a hundred years had passed that the use of iron shot became general.

### Quadrants and Ballistics

Even though most activity had been directed toward the making of large pieces and the largest amount of noise, it must not be supposed that the science of gunnery had been neglected. A book written by Nicholas Tartaglia (an Italian) in 1537-43 and dedicated to Henry VIII gives some interesting information about the use of guns at that time. In it he suggests means for causing "any great piece of artillerie to make in his discharge an exceeding great noyse and marvellous rore." Again, the noise made by the gun was considered of far greater importance than the effect of the shot.

The gunner's quadrant shown here is an instrument for measuring angles, or as Tartaglia puts it: "This instrument will help us to judge of all the variable positions or elevations that may happen in any peece of artillerie whatsoever. . . The whole square (right angle) shall contain 144 equal parts

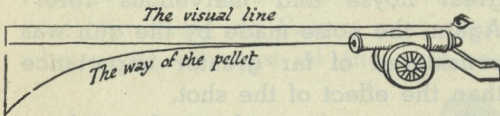


which I call minutes." Twelve of these minutes equalled "one point." It could also be used for measuring angles of sight and plotting the position of targets. It should be mentioned that the English divided the right angle into 90 degrees as they do today.

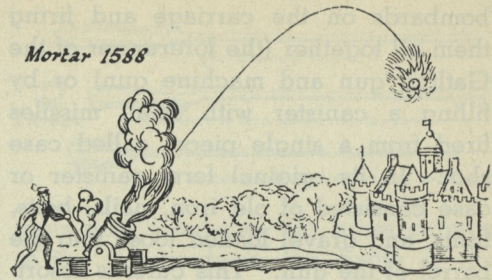
His diagram of ballistics contains most of what we know today, the "visual line" being our present line of sight and the "way of the pellet" (a rather poetic description of trajectory) showed that he was fully conscious of what happened to the projectile in flight. Mention is made too of night-laying and cartridges, and the accompanying drawings show that the use of "fireworkes" (as well as the use of incendiary arrows) had by no means been discontinued.

### First Permanent Force of Artillery

While Tartaglia was concerned chiefly with the science of artillery, Henry VIII bent all his efforts to its organization. He was very artillery-minded and established the first permanent force of gunners in England when he appointed a master gunner and 12 paid gunners at the Tower. The idea was extended and master gunners held permanent positions in all the main towers and castles where, in addition to caring for equipment, they trained their gunners and taught certain civilians who were paid a retaining fee and came up for service when called upon.



The master gunner at the Tower of London was called the Master Gunner of England. When artillery was required for a campaign it was organized as a "Trayne" to which certain pieces of ordnance were allotted together with master gunners, mates, and mat-



trosses, these latter being gunners' assistants. With the "trayne" wherever it went were many wagons following behind and carrying all the comforts of life, even including hired women. The term "Son of a Gun," originally one of abuse, is supposed to have sprung from this practice.

The "trayne of artillerie," unlike the rest of the army, was controlled and administered by a Board of Ordnance, at the head of which was the Master (later General) of Ordnance. He signed all artillery and engineer officer commissions and it was this fact that resulted in the wide distinction between these officers of ordnance and officer of other arms, whose commissions were signed by the King. From this it can be seen that engineers (or pioneers and miners) were on the same footing as the gunners. Today they wear the same combination of colors as the R.A., perhaps the only visible reminder of this bygone fellowship.

### Naming of Guns

Guns of the "trayne" were called "pieces of Ordnance" (hence the word "piece" as applied to the gun today) and were named individually and according to size after all kinds of monsters.

The following table gives names, diameter of the bore, and weight of the shot of typical pieces. The diameter of the shot was  $\frac{1}{4}$ " less than the bore in each case:

Double Cannon (eldest and biggest sorte).....	8 $\frac{1}{4}$ "	70 pr.
Double Cannon (ordinary)....	8"	64 pr.

Demy Cannon (eldest and biggest sorte).....	6½"	38 pr.
Demy Cannon (ordinary).....	6¼"	33 pr.
Culverings (eldest and biggest sorte).....	5½"	20 pr.
Culverings (ordinary).....	5¼"	17 pr.
Demy Culverings (eldest and biggest sorte).....	4¾"	12½ pr.
Demy Culverings (ordinary)	4½"	10 pr.
Saker (eldest and biggest sorte).....	4"	7¼ pr.
Saker (ordinary).....	3¾"	6 pr.
Minyon.....	3¼"	3¾ pr.
Faucon.....	2¾"	2⅛ pr.
Fauconet.....	2¼"	1⅞ pr.

**In addition to these guns, mortars were used extensively by the artillery, the word "mortar" derived from the German "Meerthier," meaning seabeast. They had very short barrels and only very small propellant charges were used in them. In action they were employed to drop large shells over the walls of a besieged city into the town.**

Henry VIII obtained two gunmakers from the Continent, Peter Bawd and Peter Van Collen, to make large mortars and shells for him in 1543. Some of these mortars measured 11 inches and 19 inches in diameter, and the shells were stuffed with "wild fire or firewoorkes and a match (fuze) that the firewoorke might be set on fire for to break in smal peeces, whereof the smallest peece hitting any man would kille or spoile him." Whether they were successful or not is difficult to say, but by 1588 explosive shells were used to good effect, though it must be understood that they could only be fired from mortars or bombardars with small propellant charges.

The method of igniting the fuze was either by placing the shell in the bore (fuze toward the charge so that on being fired it would ignite the fuze) or by placing the fuze toward the muzzle, when it was lighted by a match thrust down the bore. It needs no imagina-

tion to appreciate the high mortality among those gunners who had to perform this latter task.

Heavy bombardars in Germany gave place as early as 1385 to lighter ones mounted on wood and supported on a fork or hook, hence the word "Hakenbusche"—corrupted by the English to Hackbut, Hagbush and finally to Harquebus. A later improvement was the fitting of a stock to the piece, the whole small enough to be carried by hand. Thus the rifle was a development of the gun and not vice versa, as might be supposed.

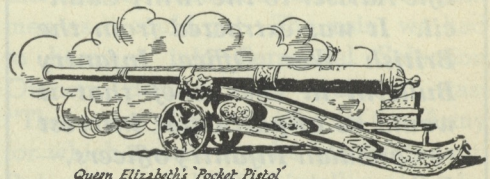
### Table of Ranges

Ranges for the heavier guns had not increased very much since the early days. Nicholas Tartaglia gives a table of ranges (circa 1588) possible with two guns, the Faucon and Saker:

Faucon: poynte blank 320 yds.

Utmost Randon (extreme range) 1,280 yds.

Saker: poynte blank 360 yds. Utmost Randon 1,440 yds.



*Queen Elizabeth's 'Pocket Pistol'*

Compare these with the inscription on Queen Elizabeth's "pocket pistol," a bronze gun for coast defense at Dover Castle:

**"Load me well and keep me clean  
I'll Carry my ball to Calais Green."**

This must have been wishful thinking on the part of the maker. Notice above the method of applying elevation, which had been used with one or two exceptions from very early times: a quoin or wedge placed under the breech and put into position by means of handspikes. The gun was cast at Utrecht in 1544 and presented to Henry VIII.

Its total length was 24 ft. 6 in., with a caliber of 4.75 inches, but for all its size its shot weighed only 12 pounds.

Guns had developed very little since the introduction of cast-iron. Breech loading was not used at all for heavy pieces which, with their smooth bores and round shot, had still to be perfected as really efficient weapons. The following extract from personal accounts of old wars will give some idea of their capabilities.

### **The Sieges**

The Siege of Havre De Grace (New-haven, Normandy), held by English and stormed by French, 1563: "The next

morning after the departure of Mr. Fisser, our knight porter, the bartrey (battery) beganne at our grene bulwark . . . which as yet hath done small hurt to that place, but they have beaten down our steple on which stooode iii (3) fayre Demi-Colveryns to skowre the topp of the hills, but now dispaced, and so are almost all the peeces on the same bullwarke—The (the French) entrenche along the beache to beate downe our castlel. Dick Saunders is killed, so is our water-bayly, whose braynes were streken out going in the stretes, the master of the ordnance is hurt of the face and foote. . . ."

(To be continued)

## **INFANTRY MORALE**

*This article contains views expressed by the Deputy Scientific Adviser to the Army Council. It was extracted from the British War Office Infantry Bulletin in the belief that it would be of particular interest to Canadian Infantry officers.—Editor.*

Weapons, however ingenious and destructive, do not fight wars. Wars are fought by men; and in the end they are won by men who are prepared to go on fighting when their opponents are not. Everyone knows this, and is prepared to pay lip-service to it as a principle. But, unfortunately, most of us act as though precisely the reverse were true. Throughout the war, literally thousands of people have been engaged in the scientific study of weapons—of fragmentations, muzzle velocities and so on. But to the best of my knowledge there have never been half a

dozen people engaged, for even part of their time, on the study of why men are or are not willing to fight or go on fighting.

I regard the moral value of the regimental system and the methods of adapting it so as to overcome the reinforcement difficulty as one of the vital moral issues. But there are a whole mass of other problems connected with the maintenance of morale which are also in need of discussion. The trouble, I think, is that whereas the good regular soldier knows a great deal about morale and man-management he has seldom formulated his knowledge. He works by instinct and illustration rather than by principle. The result is that when the Army is suddenly expanded, and the new armies have to be officered by men without the regular soldier's background, there is nobody to teach them these things.

### **Knows What To Do**

The Army often complains of the poor quality of junior leadership. But, in

fact, it has really itself to blame since the training of junior leaders is often inadequate. The regular soldier, brought up to the job of leadership and man-management, is nonplussed when he finds that most temporary officers have no idea how to lead men. To him it is a thing like walking or talking, that he does without ever thinking about its technique; and when he is called upon to explain how he does it, he simply does not know. The experienced soldier knows what to do, but he does not know why; and his inability to explain leads other people, who have not his experience, to believe that many of the things that he advocates are mere antique prejudices. I myself have constantly found that what the experienced soldier wanted to do about morale was entirely right, even when it seemed pointless to me. But in many cases the reason he gave for wanting to do it, if he could give one at all, was the wrong reason.

**What I feel is required, therefore, is not only the discovery of new knowledge, but the formulation and systematization of the mass of knowledge or morale which already exists amongst soldiers.**

There is no doubt that, purely from the point of view of fitting men to jobs, the regimental system is a nuisance—and I think that most of us concerned with selection started by regarding it mainly as such. But for my own part, the more I have seen of the Army, the more convinced I have become that the regular soldier is right in insisting that the regimental system has a tremendous moral importance. From the purely intellectual, unemotional standpoint it might be so. But war is highly emotional business, and the fact is that many of us who sneer at the Army's belief in simple emotional values are sneering at something we do not understand, but which I think we should

understand fast enough if we ever found ourselves in battle.

I do not suggest that the regimental system as it exists is the only way, or even the best way, to produce the result we want. But I am sure that before scrapping it we must be certain that we have something of equal moral value to put in its place. This is a matter in which the good intuitive soldier may be a better judge of relative values than the purely intellectual scientist.

The facts are that owing to the system by which men had the option of volunteering for the RAF or Navy, who selected the best of them and left us the rest, the Army has received throughout the war a poorer sample of the population.

The result is that there has always been a chronic shortage of intelligent men (the shortage here, though few people ever realized it, has been far greater than that of *physically fit* men). It has always been realized that the Infantry needed as many intelligent men as it could get. The point we had to hammer into Personnel Selection Officers during their training was: "There are plenty of jobs in the Army for which a man can be too intelligent. But you can't be too intelligent to be an Infantryman."

#### **Had To Make Choice**

But unfortunately, whereas the perfect Infantryman would probably be the most intelligent man in the Army; the Infantry can make *some* use of the more stupid man, where some other jobs can not. Whereas it was useless to send a man below SG-3 plus to be a Signaller, because he simply could not get through the course, the *minimum* standard for Infantry was SG-5. Such a man would not be a good Infantryman. But the choice was between sending him, or reducing the total strength of the Infantry very markedly.

One of the things we were always being told by the very conservative when we started personnel selection was that stupid men tended to be braver than intelligent ones, and that by trying to remove halfwits we were ruining the army. We did, in fact, do some experiments on this question, and for what our results were worth found no significant correlation between courage and intelligence level.

I do not suggest that these results settle the matter. The trouble is that one cannot really draw very reliable conclusions from a comparison between, say, VC's and men convicted of cowardice, because both are exceptional, and neither is very relevant to the main question, which is the performance of the majority. Moreover, morale is very greatly affected by the local circumstances. The same men who will fight well in one unit, where morale is generally high, will desert or fight badly in another where morale generally is low. Cowardice and bravery are not simple things, like people's noses, that go round with them at all times and in all circumstances. Whereas there are some individuals who tend to be generally "braver" than most other people, or generally more "cowardly," the great body of men tend to vary about a mean of behaviour, being slightly above the average in some sorts of circumstances and slightly below it in others. The war has been full of examples which must be known to all of us, of similar "differential cowardice" in war.

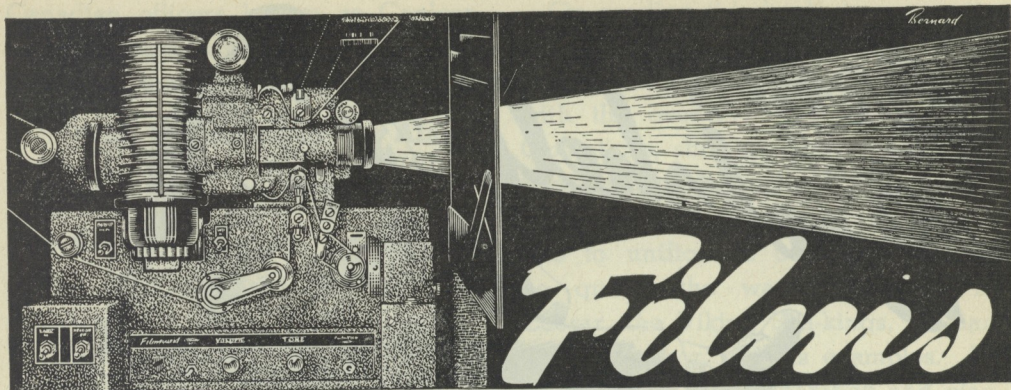
### **"Test" For Bravery**

Whilst I am not prepared to say that there is no correlation between intelligence and courage, therefore, I think it most unlikely that such a correlation could be established clearly enough to make it a criterion in selection. The more promising suggestion is a "test"

for bravery. Here the answer is, that we have never succeeded in evolving such a test. The Germans tried some and dropped them. We used them in the early days . . . and then dropped them too. But both in Other Rank and Officer Selection a subjective estimate of a man's fighting qualities is made by the interview, and is taken into consideration in placing. No man of CT-3 (the lowest estimate of "combatant tendency") is ever sent to Infantry.

**I fear an exact test is crying for the moon, in the present state of knowledge — for the reasons given above. Courage is too variable and circumstantial a thing to yield a single exact measurement.**

On the question of making a cowardly man brave, one must put the counter question, "what is a cowardly man?" The real problem is not to make the rare constitutional coward a brave man, but to ensure that a group of normal men act unusually bravely, and not in an unusually cowardly way—and that is the whole problem of morale. The answer is that it can be done and has been done all through history. What one has to do is what Alexander did to his Macedonians, what Charles XII did to his Swedes, what Napoleon did to the Army of Italy, and what has been done often enough in our own time. *How* it is done is the greatest and most neglected scientific problem of war. The poverty of knowledge about the subject is heartbreaking, and in particular, I think the paucity of work on morale is one of the lost opportunities of the War. At a time when literally hundreds of people have been employed in research on every petty detail of equipment, there has not been a single person employed full time on studying the problem of what makes men fight and go on fighting.



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

### **Vocational**

1. SS-161 The Draftsman (10 mins)
  - (a) Describes the various fields in which draftsmen are required and the skills which are necessary in this profession.
  - (b) Distributed to All District HQ Film Libraries.
2. SS-163 Automotive Service (10 mins)
  - (a) Discusses the varied opportunities to be found in the automotive industry.
  - (b) Distributed to All District HQ Film Libraries.
3. SS-312 The Machine Maker (10 mins)
  - (a) Depicts the operation of a machine tool factory and details the duties of the skilled craftsmen and apprentices employed there.
  - (b) Distributed to All District HQ Film Libraries.

### **Educational**

1. SS-144 Pacific Canada (10 mins)
  - (a) Describes the physical features of British Columbia, its history, cities, and important industries.
  - (b) Distributed to All District HQ Film Libraries.
2. SS-145 Maritime Provinces of Canada (10 mins)
  - (a) Shows the history and growth of Nova Scotia, New Brunswick and Prince Edward Island, and discusses the various trades and professions by which the inhabitants live.
  - (b) Distributed to All District HQ Film Libraries.
3. SS-146 Industrial Provinces of Canada (10 mins)
  - (a) Describes the growth and expansion of Ontario and Quebec, the main geographical features, the sources of water power, and the location of timber and mineral resources.
  - (b) Distributed to All District HQ Film Libraries.
4. SS-147 Prairie Provinces of Canada (10 mins)
  - (a) Traces the development of Manitoba, Saskatchewan, Alberta and the Northwest Territories, discussing their colonization and the main occupations of the people.
  - (b) Distributed to All District HQ Film Libraries.

### **General**

1. SS-331 Now the Peace (20 mins)
  - (a) Compares the peace program of the League of Nations following the War 1914-19 with the plans of the United Nations Organization following War 1939-45.
  - (b) Distributed to All District HQ Film Libraries.
2. SS-332 The Peace Builders (10 mins)
  - (a) Discusses the historic meetings which took place between the Allied Powers during the War 1939-45 and the plans for the future which were outlined at these discussions.
  - (b) Distributed to All District HQ Film Libraries.

# Army Bookshelf



**"Escape From Arnhem."**  
By Capt. Leo Heaps, M.C.  
159 pp. \$3. Published by The  
Macmillan Company of  
Canada, St. Martin's House,  
Toronto.

Here is an interesting account of the activities of a young Canadian officer on loan to the British Army. Written in a simple, easy style, it recounts the outlines of the fateful airborne operation "Arnhem." The attempts to relieve the "Red Devil" heroes of this spectacular gamble to seize the crossings of the Rhine are vividly told but in a most modest manner. One finds it extremely difficult to realize the hardships suffered and the intensity of the fighting during those awful days.

Included in the book are several stories of the work of the Dutch underground movement, with information on how this activity was directed and co-

ordinated by the fighting commanders of the British Forces. The author appears to have enjoyed himself throughout the story, as he seems to have held a roving commission.

His sympathies are with the infantryman "... who knows no rest; the man who must meet the enemy eye to eye and root him out of his slit trench. There are not many real infantrymen who go home again."

Capt. Heaps is a quiet, unassuming lad of 23, is an experienced paratrooper and the holder of the M.C. A Westerner by birth, he spent the early years of his life in Winnipeg. After a period spent in California, his family moved to Ottawa, his present home. He was a student at Queen's University.

He entered the ranks of the Canadian Army, and after being commissioned volunteered to serve with the British Army, joining that small group of

## FILMS

(Continued from Page 45)

3. SS-617 Toronto Symphony I (15 mins)
  - (a) Portrays Sir Ernest MacMillan conducting the Toronto Symphony Orchestra in its first concert to be filmed. A program of contemporary composers is presented.
  - (b) Distributed to All District HQ Film Libraries.
4. CA-24 Sports Go to War (10 mins)
  - (a) A technicolor production showing how the sports of peace-time living assist in training soldiers for battle.
  - (b) Distributed to All District HQ Film Libraries.
5. MN-5124 To the Shores of Iwo Jima (20 mins)
  - (a) This technicolor production shows actual battle scenes of the taking of Iwo Jima by US Forces.
  - (b) Prints of this film may be obtained on loan on request to the Army Central Film Library, NDHQ.

Canadian officers known as Canloan. "Escape From Arnhem" tells his story from then until VE Day.—G.T.H.

**"The Falaise Road" by Alan Wood. 64 pp. \$1. Published by The Macmillan Company of Canada.**

This story is based on day-by-day dispatches to the "Daily Express," British newspaper. The author is an Australian correspondent who was assigned to follow the 1st Canadian Army, and in 64 pages he deals with some of the toughest fighting seen in any war—the fighting along "The Falaise Road."

Unlike so many accounts of fighting which strike a "Hollywood" note and which give the impression that the author was leading the Infantry, this account is written as the author himself actually saw and felt the conditions of battle. There is no flourish or "burnishing of tales" at any point in this history of a battle.

Will "The Falaise Road" be forgotten by those who fought through it and came out alive? "Not bloody likely"—and what's more, those who were never near the scene of the battle will not forget it after reading this book.—F.N.P.

**"Landing Operations—From Grecian Days to 1945". By Dr. Alfred Vagts. 822 pp. \$5. Published by Military Service Publishing Co., Harrisburg, Pa., and Washington, D.C.**

During World War II the people of all Allied Nations, with the probable exception of Russia, became familiar with the term "Combined Operations". In fact, it is more than likely that most people believe "Combined Operations" started in World War II.

On reading this book, however, the author brings a new aspect to World History. He deals in the opening pages with the over-all picture of Landing Operations, showing how, "before war became departmentalized", there were very few fiascos in such operations, due to unification of command, and he quotes the wars conducted by Caesar, the Viking Sea-kings, William the Conqueror, etc., as examples. He also analyses the preparation and planning, logistics, strategy and tactics of Landing Operations. He shows how at the beginning of World War II the trend of thought of the "Higher-Ups" was against Landing Operations, due to the difficulty of efficiently combining the efforts of the Army and Navy.

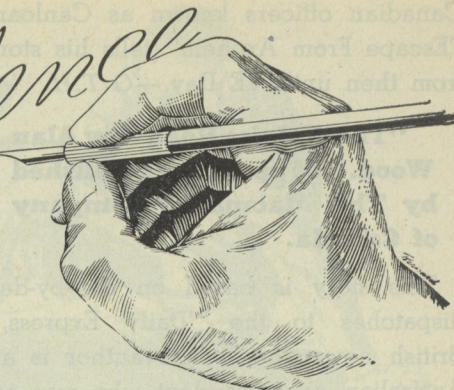
After this detailed analysis of littorial war, the author divides the remainder of the book into three main parts. Part I deals with "Ancient and Medieval Operations" from the Great Days of Greece and Rome down to Medieval England, and the Japanese invasion of Korea. Part II deals with the operations of the 17th and 18th Centuries in Europe and the North American continents, closing with Napoleon's plans for invading England. Part III deals with all major landing operations from the Spanish-American War, through those of World War I (Dardanelles) to World War II (Okinawa).

D-Day Normandy can be considered as the "Grand-Daddy" of Tri-elemental War, the culmination of all Landing Operations since the days of Caesar.

This book provides outstanding material not only for those interested in history, but also for those interested in logistical, strategical and tactical details of Landing Operations from a purely military point of view.—F.N.P.



# Correspondence



**Editor, CATM:** Being very interested in the subject of heraldry, and believing that some of your readers would also like to know something about the subject, I am writing this letter in the hope that you may be able to find space for it in CATM.

Everyone, at some time or other, has run across a reference to heraldry. It may have been in one of Sir Walter Scott's novels or a more recent best-seller, such as Costain's "The Black Rose." But whatever it was, a knowledge of heraldry, even though limited, would have added to the reader's enjoyment of the story. The writer will not attempt to explain the whole science of heraldry, and as far as possible controversial points will not be championed one way or the other.

It has been maintained by many writers on the subject that heraldry originated with the totem pole, and it is quite true that from the dawn of history men used different devices, painted on their chests or carved out of wood and fastened to a pole, for the purpose of identification. Some writers, letting their imagination run riot, traced the origin of heraldry right back to Adam. This naturally led to a certain amount of confusion, and many of their ideas became accepted in the popular mind as true heraldry.

Heraldry, as it is now understood, is concerned mainly with the description of armorial bearings, and the word armorial gives us a clue to its origin. From the time of William the Conqueror onward, armour concealed more and

more of the wearer, until, by the end of the 13th Century, the knight on horseback was almost completely hidden. It was necessary, therefore, to devise a quick means of identification, and the shield was the obvious place to put it. From about the time of Richard I a cloth tunic was worn over the armour, and as it was decorated with the wearer's arms, this gave us the term "coat-of-arms."

There was another need for identification. At a time when few besides the monks could read or write, a man's "seal" was so important that every precaution was taken to safeguard it. Since very few could even sign their names, the seal was used in place of a signature to legalize documents, and the same device carried on the shield was used on this seal.

During the time of spears, shields and swords in warfare, devices tended to be simple and easily identifiable, but with the advent of firearms, making armour more or less obsolete, and the rise of the merchant princes, arms became not necessarily the prerogative of the fighting man, but rather the sign of a gentleman. Great importance was attached to the right to bear arms at this time.

I would like to have the opportunity of continuing this discussion at a later date—if you will give me the space.—  
B.J.R.

## THIS MONTH'S COVER . . .



### **The late CSM J. R. Osborn 1 Battalion, The Winnipeg Grenadiers**

CATM dedicates its cover this month to the late CSM J. R. Osborn, who was posthumously awarded the Empire's highest decoration. He became the fifteenth Canadian to win the Victoria Cross during the war of 1939-45, but he was actually the first, as his magnificent deed at Hong Kong preceded by eight months the heroic Dieppe attack in which Victoria Crosses were won by Lt. Col. C. C. I. Merritt and H/Capt. J. W. Foote. Following is the official citation:

The KING has been graciously pleased to approve the award of the Victoria Cross (posthumously) to:

H-6008 Warrant Officer Class II  
(Company Sergeant-Major) John  
Robert OSBORN, 1 Battalion, The  
Winnipeg Grenadiers.

At Hong Kong on the morning of 19th December, 1941, a Company of the Winnipeg Grenadiers to which Company Sergeant-Major Osborn belonged became divided during an attack on Mount Butler, a hill rising

steeply above sea level. A part of the Company led by Company Sergeant-Major Osborn captured the hill at the point of the bayonet and held it for three hours when, owing to the superior numbers of the enemy and to fire from an unprotected flank, the position became untenable. Company Sergeant-Major Osborn and a small group covered the withdrawal and when their turn came to fall back, Osborn single-handed engaged the enemy while the remainder successfully rejoined the Company. Company Sergeant-Major Osborn had to run the gauntlet of heavy rifle and machine gun fire. With no consideration for his own safety he assisted and directed stragglers to the new Company position, exposing himself to heavy enemy fire to cover their retirement. Wherever danger threatened he was there to encourage his men.

During the afternoon the Company was cut off from the Battalion and completely surrounded by the enemy who were able to approach to within grenade-throwing distance of the slight depression which the Company were holding. Several enemy grenades were thrown which Company Sergeant-Major Osborn picked up and threw back. The enemy threw a grenade which landed in a position where it was impossible to pick it up and return it in time. Shouting a warning to his comrades, this gallant Warrant Officer threw himself on the grenade which exploded, killing him instantly. His self-sacrifice undoubtedly saved the lives of many others.

Company Sergeant-Major Osborn was an inspiring example to all throughout the defence which he assisted so magnificently in maintaining against an overwhelming enemy force for over eight and a half hours, and in his death he displayed the highest quality of heroism and self-sacrifice.



BUT—HARRUMPH—DAMMIT, LIEUTENANT,  
WHAT'S GOING TO BECOME OF POLO?