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CANADIAN ARMY JOURNAL

The aim of the Canadian Army Journal, which is published by the Directorate of Military Training under authority of the Chief of the General Staff, is to provide officers of the Active and Reserve Forces with information designed to keep them abreast of current military trends, and to stimulate interest in military affairs. The views expressed by authors are not necessarily those of the Department of National Defence.

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THE COVER

A Signals cable wagon in action during the First World War. (See article on the fiftieth anniversary of the Royal Canadian Corps of Signals, page 112).

National Defence Photograph

Field Marshal Sir John Harding, GCB, CBE, DSO, MC, ADC, Chief of the Imperial General Staff (left), is greeted by the Canadian Army's Chief of the General Staff, Lieut.-General G. G. Simonds, CB, CBE, DSO, CD, on his arrival in Ottawa.

THE CIGS PRAISES CANADIAN BRIGADE

The military efficiency of the 27th Canadian Infantry Brigade in Germany received high praise from Britain's Chief of the Imperial General Staff, Field Marshal Sir John Harding, GCB, CBE, DSO, MC, ADC, during his recent visit to Canada.

The 27th had "made themselves a very effective operational brigade, and their military efficiency is of a very high order," he said. He declared, further, that in the event of war he would like to have the Canadian brigade in any forces he might command.

During his 13-day visit to Canada, the Second World War corps commander and former commander of the British Army of the Rhine visited Army Headquarters in Ottawa and

TRUCE IN KOREA

Reprinted by Courtesy of "World Affairs" (Canada)

Monday, July 27, was a big day for the world in general and for the men of the U.N. and communist forces fighting in Korea in particular, for on that day delegates of both sides met at Panmunjom to sign the armistice ending the more than three-year-old Korean war. Under the truce, hostilities ceased at 10 p.m. (9 a.m. E.D.T.) July 27. The major provisions of the Korean armistice are as follows:

1. All hostilities on land, sea and in the air cease within 12 hours;

2. All troops withdraw with their equipment within 72 hours from the demarcation line drawn along the battleline. The Communist and UN armies both must pull back two kilometres (about 1¼ miles) from the line to form the buffer zone which will separate Allied troops from the North Korean and Communist Chinese forces;

3. Allies withdraw within five days from islands held off the North Korean coasts;

4. No blockade of Korea is allowed;

5. A freeze immediately takes effect on reinforcement of troops or equipment in both North and South Korea. Each side may rotate up to 35,000 men a month on a man-for-man basis, but neither may raise the level of men or arms it had in Korea at the time of the armistice;

6. A military armistice commission takes control of supervising the truce and settling any violations. The commission is composed of five UN and five Communist officers, at least three from each side, of general or admiral rank;

7. Ten joint Allied-Communist observer teams are organized for the commission to police the buffer zone and the Han River estuary;

8. Five ports of entry are designated in North Korea and five in South Korea through which men and arms may enter and leave;

9. A neutral nations supervisory commission of four nations is created with officers from Sweden, Switzerland, Poland and Czechoslovakia. This commission has 20 inspection teams. One team will be stationed

British Army Chief

(Continued from preceding page)

training establishments between Montreal and Victoria, B.C. While at Army Headquarters he had discussions with Lieut.-General G. G. Simonds, CB, CBE, DSO, CD, Chief of the General Staff, Canadian Army.

in each port of entry and 10 mobile teams held in reserve;

10. All prisoners captured in the Korean War who desire to return home will be exchanged within 60 days after the armistice is signed;

11. A repatriation commission of five nations is formed to handle those prisoners who refuse repatriation;

12. The neutral commission will take control of these prisoners from the UN command within 60 days after the armistice is signed;

13. For 90 days, the Communists will be allowed to visit the camps in South Korea and interview all the prisoners to stress their "full freedom to return home to lead a peaceful life"; and

14. The fate of those prisoners still refusing repatriation after 90 days will be handed to a political conference. This conference may discuss disposition of the prisoners for 30 days. If any prisoners are still in camps after this deadline, they will be reclassified as civilians and be allowed to go to a neutral country.

Background

Korean Chronology: As we read of the difficult problems of building a lasting peace in Korea, it is well to keep in mind the situation there that preceded the long war. The little peninsular country in Asia has long been a centre of trouble.

Japan annexed Korea in 1910 and ruled it until the end of World War II, when Japanese forces surrendered. Russia, who fought with us in World War II, occupied the northern part of Korea in September 1945. The Allies moved into the southern part, with the 38th parallel as the dividing line between the two areas.

Following is the story of troubles as they developed:

September 1947. The U.S. takes the Korean problem to the UN after long, futile efforts to reach an agreement with Russia on Korean unity.

November 1947. The UN, over Russian protests, sets up a commission to establish a Korean government.

May 1948. Having failed to obtain co-operation in northern Korea, the UN supervises elections in South Korea. A republic is set up there. Russia, on her own responsibility, sets up a communist regime in North Korea.

June 1950. North Korean communist troops invade South Korea in a surprise attack. UN Security Council asks member nations to help defend South Korea.

July 1950. U.S. armed forces land in Korea and are joined later by troops of other countries in a UN Army.

September 1950. UN Army, with U.S. troops playing the major role, launch a surprise attack from the sea and drive the Reds out of South Korea. UN troops then cross into North Korea to fight the Reds.

October 1950. Red Chinese troops enter the war to help the North Koreans. UN forces fall back.

May 1951. UN forces re-establish themselves along the 38th parallel frontier with North Korea. Danger from Reds appears at an end.

July 1951. Red Chinese and North Koreans agree to truce talks but little progress is made toward stopping the fighting for nearly two years.

April 1953. Reds and UN agree on exchange of sick and wounded prisoners of war, a major step toward a truce. Exchange carried out.

June 1953. Reds and UN agree on exchange of prisoners other than sick and wounded. A commission of neutral countries is set up to take over prisoners who say they don't want to return to Red China or South Korea. Hopes for truce rise, but South Korean President Syngman Rhee frees 25,000 of Red prisoners rather than turn them over to the neutral commission. This violates UN agreement with Reds. War enters 4th year.

July 1953. U.S. President Eisenhower's special representative, Walter Robertson, gets agreement with President Rhee, which may keep him from opposing a UN armistice. Reds. . . launch big new offensive. Late in July. . . Reds announce they are ready to go ahead with preparations for a cease-fire.

July 27, the armistice is signed.

The sixteen nations which fought in Korea on the U.N. side have issued a joint declaration. It announces that if South Korea is attacked a second time by the Communists, the sixteen partners will once again join forces to resist the aggression.

Sanguineum Bonum

India, naturally, has been for many years a fruitful hunting ground for soldier stories, and it was an officer of very exalted rank who provided the following specimen:

To his lot it fell to peruse the scholarly report of a member of the Indian Civil Service, holding, for special reasons, temporary rank. It was a report written in the best style of the Civil Secretariat, and was somewhat profusely sprinkled with Latin quotations. However, one comment only was indited upon its margin: "I know some Latin, too. Nil sanguineum bonum."—*Canadian Defence Quarterly* (*October 1923*).

THE RCAF STAFF COLLEGE

By
LIEUT.-COLONEL A. H. LOWE, ED, GSO 1, RCAF STAFF COLLEGE,
ARMOUR HEIGHTS, TORONTO

Introduction

If you have completed some three or four months of the Canadian Army Staff College course, you have probably had the following experiences:

- The exercises, into which you poured your very soul, have been returned all fouled up with red ink.
- You have been told that your thinking processes are most confused.
- You have been informed that your ability to express yourself in public (of which even you were not proud) has been rated as barely moronic.

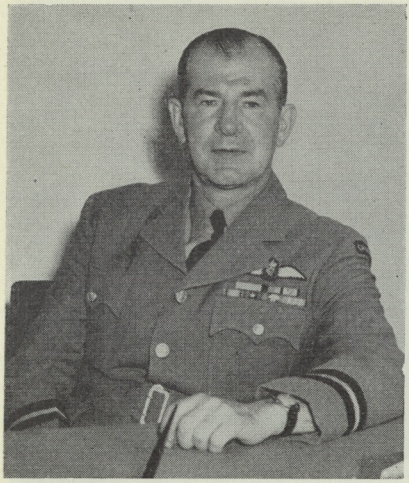
All of this has had either one of two effects—to make you desperately despondent or violently antagonistic. These effects allow you two courses of action—to cut your throat quietly in the bar or to jump off a high cliff with a member of the Directing Staff under each arm!

Suddenly through the darkness of your desperation a light glimmers. You are informed that the Canadian Army Staff College will leave Kingston, Ont., for a Joint Study Period at the Canadian Joint Air Training Centre, Rivers, Manitoba. Furthermore, the briefing tells you that this Joint Study is with the students of RCAF Staff College. At this stage of the course you would be willing to study jointly with two-headed Hottentots just for the opportunity of getting away from those melancholy halls of learning. Then you wonder, "Where is the RCAF Staff College anyway? What are these chaps like? Are they a bunch of 'fly boys' just out of High School? Since when has the RCAF had a Staff College?"

You will doubtless get some answers to these queries before you leave Fort Frontenac, but, in any case, you will have a trip by train to Rivers, Manitoba, with your opposite numbers in the Air Force, and you can get all the information you need then. If you do get a comprehensive coverage of the subject it will probably be something like this.

History

The RCAF Staff College was founded on the 1st of August, 1943, at its present site on the spacious grounds of the Glenalton Estate in Armour Heights, Toronto. The first course began on the 4th of October of the same year, following the aims and methods of the RAF Staff College



RCAF Photograph

Air Commodore J. L. Hurley, CBE, CD, Commandant of the RCAF Staff College.

which many of the now senior officers of the RCAF had attended.

Courses one to seven were called War Courses and were of three months' duration; however, with the end of the war the 8th Course, beginning in July, 1945, was lengthened to six months. The 12th Course was of nine months' duration and finally the 13th Course, which began in September, 1948, assumed the full peacetime length of ten months.

The ten months' course, beginning in September and ending in June to coincide with the university academic year, has been established as peacetime policy. Owing to the expansion of the RCAF, the 16th and 17th Courses were but eight months in length; however, with the 18th Course, the College returns to the ten months' programme, and the student body increases substantially. The 18th Course commenced on the 9th of September, 1953.

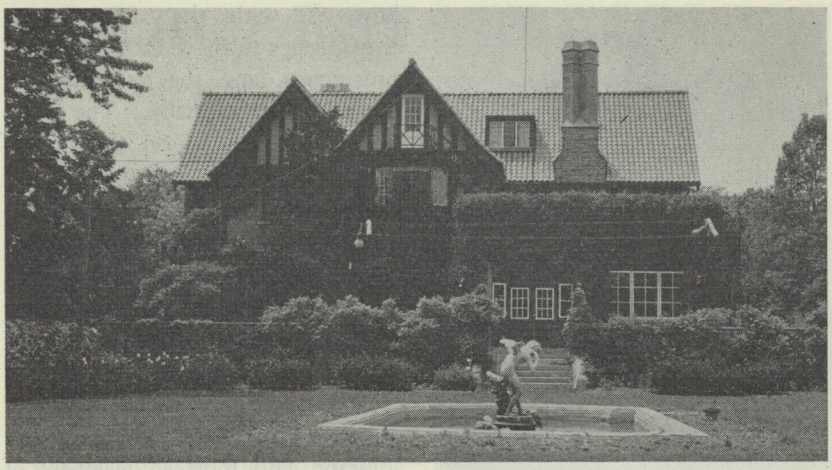
Organization

The organizational structure of the college comprises the Commandant, a small administrative housekeeping staff, and an instructional wing.

The instructional wing is composed of a Director of Studies (formerly designated as Chief Instructor), an adjutant, and fourteen members of the Directing Staff. One member of this Directing Staff is from the Canadian Army, one from the RAF, and one is a civilian professor of English.

RCAF Photograph

Group Captain M. Lipton, AFC, CD, Director of Studies.



RCAF Photograph

The Main Building (from the gardens).

The present Commandant is Air Commodore J. L. Hurley, CBE, CD, and the Director of Studies is Group Captain M. Lipton, AFC, CD.

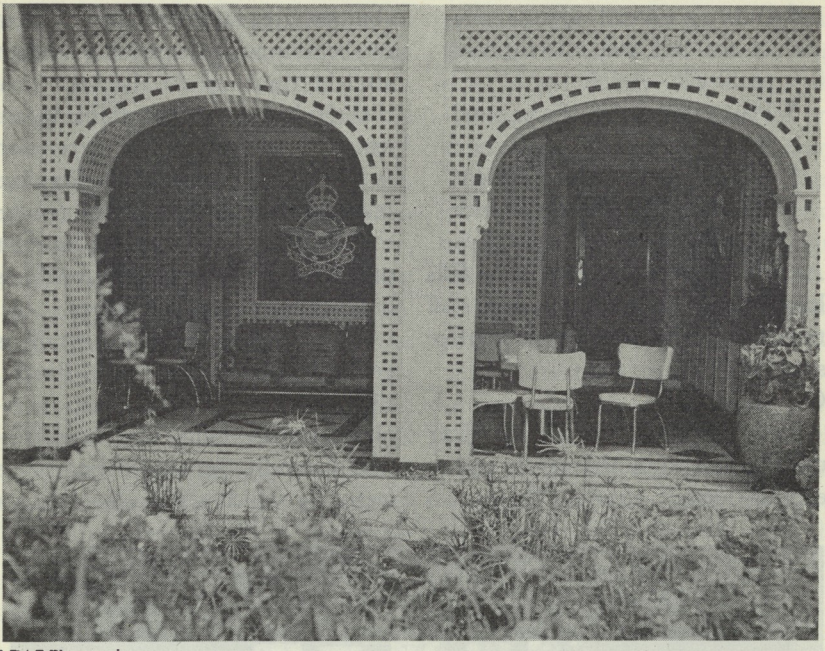
The size of the student body has varied over the years. In 1948 its numbers were increased from 30 to 42, which was to be made up of 34 officers from the RCAF and two from each of the RCN, the Canadian Army, the RAF, and the USAF. Sixty are attending Course 18.

Unlike the Canadian Army Staff College, which is directly responsible to Army Headquarters, the RCAF Staff College is controlled functionally and administratively by Training Command Headquarters, Trenton.

The RCAF recognizes that, given a sound organization, the Service depends for its efficiency on the individual officers of its staffs. A career planning policy ensures that these officers gain a wide and balanced background of Service experience. Their education as staff officers begins at the RCAF Staff College.

The RCAF Staff College offers the senior Staff course given by the RCAF, and officers who have passed the Staff College Qualifying Examination attend this course somewhere between their tenth and fifteenth year of service. Certain officers may also be chosen to attend courses of approximately the same level given at Staff Colleges of the other Services.

After attending the RCAF Staff College, and after further experience in senior rank, selected officers may attend the Joint Staff Colleges. Following this stage of training,



RCAF Photograph

The conservatory.

senior officers may attend courses of the highest level; those of the National Defence College (Canada) or the Imperial Defence College (United Kingdom). By means of this succession of staff courses, an officer may continually improve his staff technique and broaden his comprehension of war.

The Aim

The aim of the RCAF Staff College is to prepare officers for staff duties and to introduce them to the fundamentals of air warfare.

Description of the Course

To fulfil its aim, the College offers a ten months' course of instruction designed to assist the student to:

- Think logically and to express his ideas clearly, concisely, correctly and convincingly.
- Have a thorough knowledge of Service writing.
- Know his own Service.
- Understand the employment of air forces, whether alone or in conjunction with other Services.
- Keep abreast of scientific and technical developments that may affect the employment of air forces.

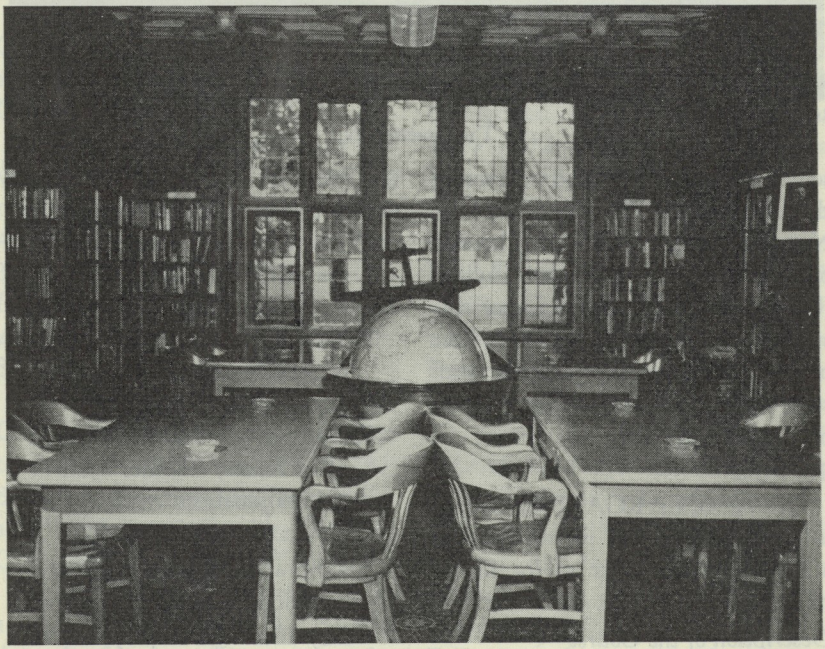
- Gain a broad perspective of national and international problems.
- Plan, both Air Force and Joint.
- Study and solve current operations and other Service problems.

As will be seen, the instruction falls logically into two main fields, staff training studies and air warfare studies.

Curriculum

First and foremost, a staff officer must be able to think logically and to express himself clearly. These two abilities are interdependent. There can be no accurate expression without straight thinking. At the same time the results of straight thinking are lost if the power of clear expression is lacking. Because there is this close relationship, it is possible to improve the ability to think clearly by constant practice in the more tangible functions of written and oral expression.

Instruction in Service writing is given throughout the course. Firstly, this writing provides practice required for improving written expression. Secondly, Service writing is the means by which a staff officer does a



RCAF Photograph

The library.

great deal of his day-to-day work. Thirdly, a large organization, such as the RCAF, will function more efficiently if its correspondence is written and handled in a standard manner. By training all staff officers in Service writing this standardization can be effected.

Naturally a staff officer should know his own Service. But in his staff appointments he tends to become absorbed in his own particular problems. It is important, therefore, that the staff course should present him with as broad and as complete a picture as is possible so that he may see this individual job in reasonable perspective. To this end every aspect of the RCAF is reviewed.

With the improved ability to think and to express himself, with a sure command of Service writing and a thorough knowledge of his own Service, the staff officer is well prepared to carry out his daily assignments. But he can direct these tools to far greater advantage if he has increased his understanding of the purpose of his every day work. The air warfare studies, then, are designed to broaden his viewpoint.

The emphasis of the air warfare studies is on the employment of air forces. Lectures, reading and discussions lead the student to a study of the general principles. He is encouraged to develop his own concepts by an analysis of the past and a synthesis for the future. It is soon learned that air forces cannot wage war independently. They must be transported, supplied, supported and protected by both navy and army. Those aspects of employment, then, of the naval and military arms which affect air forces are brought into focus.

Wars are fought with the technical means available. Air forces, in particular, are quick to reflect advances in technology. It is imperative, therefore, that staff officers follow closely current scientific and technical developments. For this reason the latest information is presented, and the importance to air warfare of new developments is emphasized.

There are a number of associated studies which add to the background knowledge required to understand air warfare. Global geography, geopolitics, economics, social sciences and government are all factors which have an important bearing on air warfare. While the length of the course does not allow a thorough study of such subjects, nevertheless it is important that the student be at least introduced to them. It is hoped that some of these fields will capture the student's interest to the point where he will continue his studies after he leaves the Staff College.

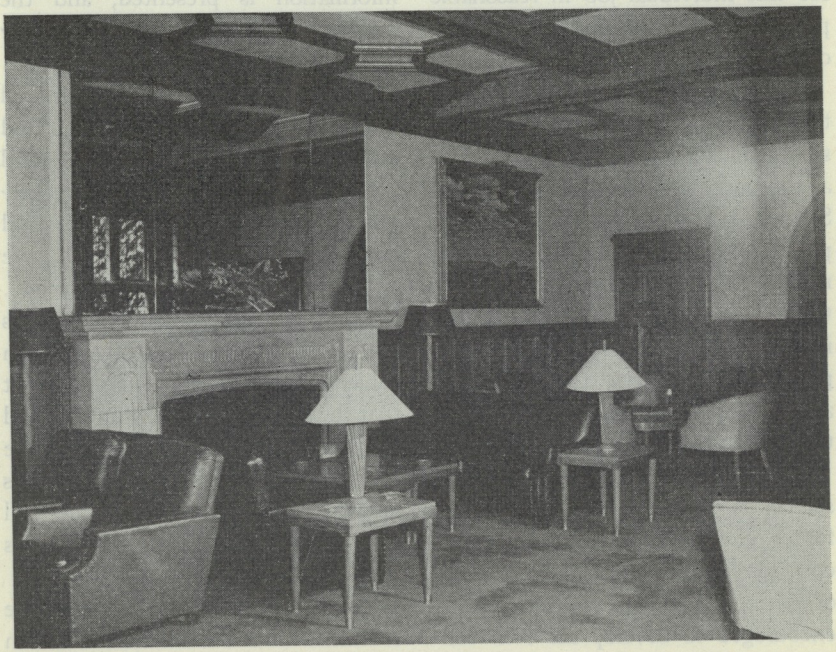
At the end of the course, the student will realize that he has been presented with no College-sponsored

doctrine of air warfare. In fact, he may have been surprised to find that members of the staff are encouraged to express personal, divergent views. A moment's thought will perhaps convince the student that this is a highly satisfactory condition. There is no accepted concept of air warfare. It would, indeed, be dangerous to attempt to convert staff officers to a set doctrine. It is much wiser to condition them for the rapid changes that may take place in the future by encouraging them to think for themselves and to exercise their own judgement. Hence, rather than trying to steer the student into a restricted way of thinking, he is urged to contribute the products of his own reasoning and research.

Visits

To give the student an opportunity to broaden his scope and extend his experience a number of visits are made to both Service and industrial establishments.

For some years now, the RCAF Staff College has spent two weeks of each course with the Air University Command of the USAF. Attached to one of the Staff schools, the class is given a broad picture of the or-



RCAF Photograph

A corner of the lounge.

ganization, function, equipment, and concepts of the USAF.

A similar two-week period has been spent with the Canadian Army Staff College in joint studies of common interest. This visit has another object of making friendships which should help future working relationships with a sister Service.

The naval series has been given at HMCS "Dockyard", Halifax, and at HMCS "Shearwater", Dartmouth, N.S. The visit included trips on board HMCS "Magnificent" and other ships of the Royal Canadian Navy. This visit, like the Joint Study with the Canadian Army Staff College, has a secondary object of making friends in a sister Service.

Visits are made to the three main aircraft plants in eastern Canada: A. V. Roe, Malton, Ontario; De-Havilland, Downsview, Ontario, and Canadair, near Montreal, Quebec.

In addition, the Staff College has the opportunity to see some heavy industry in operation when they visit the Steel Company of Canada at Hamilton and the General Motors plant at Oshawa.

Buildings and Grounds

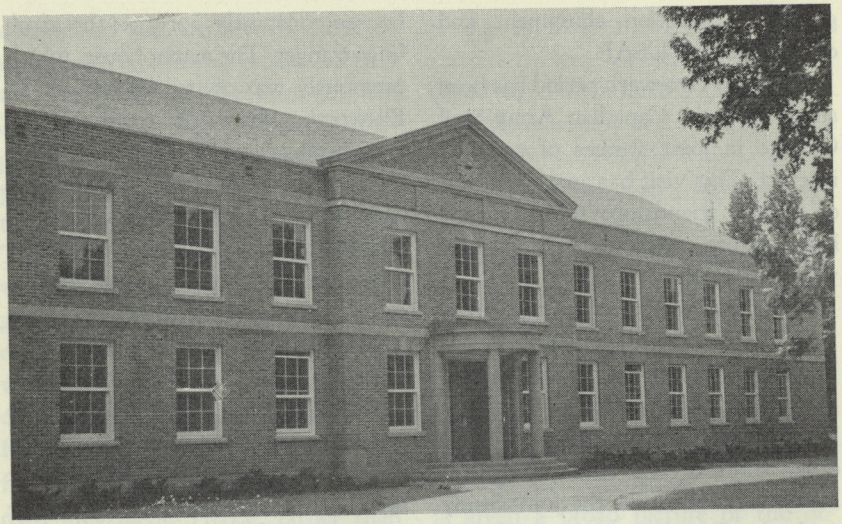
An account of the RCAF Staff College would not be complete without a description of the buildings and grounds. The property covers 33 acres, 27 of which are beautifully landscaped. Ornamented pools, trellised walks, summer houses and green houses constantly surprise the strolling stranger. The manor house, which previously was owned by Mr. A. L. Ellsworth, then Chairman of the British-American Oil Co., is now one of the best appointed Messes in Canada. There are comfortable living quarters on the first floor, while the ground floor includes a large lounge, a conservatory, a games room, a mahogany panelled dining room and the College library. Although the administrative and instructional facilities had previously been housed in a converted coach house, they have now been moved to a fine, new building at the eastern edge of the College grounds. This building is Curtis Hall, and the laying of its foundation stone by Air Marshal Curtis, the then Chief of the Air Staff, on the 2nd of May, 1952, marked a milestone in the history of the College.

Accommodation

With the exception of the Commandant's residence, which is on the College grounds, there is no accommodation for married personnel at the RCAF Staff College. Single quarters for sixteen officers is provided in the Mess building.

Students

A comparison of the students of the Army and RCAF Staff Colleges should always be interesting. Questions regarding age, rank, experience and outlook are bound to arise, and there would probably be as many



RCAF Photograph

Curtis Hall.

different answers to such queries as there were people asked. However, some generalizations may be made. For the most part the students are of Wing Commander and Squadron Leader rank; generally, they are between 32 and 40 years of age. Many of them went from school into aircrew and now they have to learn the machinery of supply and organization which supports fighting squadrons. Thus far they appear very similar to the Army counterpart. Their attitude towards the Service and like in general is not too different from the Army Officer, but there are minor differences. The Air Force appears to be a more technical Service than the Army, and, therefore, the air force officer is a more technically inclined individual. There is no regimental system, so his idea of *esprit de corps* more nearly resembles that of the naval officer, where the ship is the thing: today it is one ship, tomorrow another. Conditions of service and combat are entirely different from the army, which cause the air force to have diverse views on discipline. This is something which they have not been able to inherit ready made, but which they have to determine for themselves, to fit their own air force operations.

Altogether then, it would seem that, except for the minor differences caused by the conditions of Service, the student at the RCAF Staff College is the same type of person who attends the Canadian Army Staff College.

Conclusion

Prior to attending a Staff College, officers of the three Services have usually had little or no contact with other Services. The RCAF are well aware that all future military operations will be joint operations, and that the greatest emphasis must be placed on mutual co-operation. To this end every effort is made by the RCAF Staff College to acquaint their students not only with the organization and functions of the other Services, but also with as many of the officers of the other Services as possible.

Because warfare in the third dimension is a comparatively new development, the air force of today has not been able to inherit a ready-made set of principles, concepts and traditions. These are still being forged on the anvil of experience. The RCAF Staff College now has the plant and staff to temper the metal precisely; the material is of the best in the world; with the aid, and by the good grace of the Master Forger, the finished product will be of inestimable value in the future of the Service, and a credit to Canada.

Security

I believe that in my public dispatches I have alluded to every point to which I should wish to draw your attention, excepting one, which I will mention to you—that is, the secrecy of all your proceedings.

There is nothing more certain than that, of one hundred affairs, ninety-nine might be posted up at the market-cross, without injury to the public interests; but the misfortune is that, where the public business is the subject of general conversation, and is not kept secret, as a matter of course, upon every occasion, it is very difficult to keep it secret upon that occasion on which it is necessary. There is an awkwardness in a secret which enables discerning men (of which description there are always plenty in an army) invariably to find out; and it may be depended upon that, whenever the public business ought to be kept secret, it always suffers when it is exposed to public view.

For this reason secrecy is always best, and those who have been long trusted with the conduct of public affairs are in the habit of never making public business of any description, that it is not necessary that the public should know. The consequence is, that secrecy becomes natural to them, and as much a habit as it is to others to talk of public matters; and they have it in their power to keep things secret or not, as they may think proper.—*Wellington.*

DISCUSSION AND THE SERVICEMAN

An article prepared by the Bureau of Current Affairs, National Defence Headquarters

Sir Winston Churchill has stated that civilization means a society based on the opinion of civilians. He went on to say that "civilization means that violence, the rule of warriors and despotic chiefs, the conditions of camps and warfare, of riot and tyranny, give place to parliaments where laws are made, and independent courts of justice in which over long periods those laws are maintained."

Now just because a civilian enlists in the armed forces of his country it does not mean that he is set apart from his fellow men or that he has renounced that "society based on the opinion of civilians". It does not mean that he is not subject to the laws made by Parliament or to the courts in which the laws are maintained. In short, he remains a citizen with all the rights and obligations that go with the status of a citizen.

True that by the mere fact of his enlistment, because of his oath of allegiance and the conditions under which he has agreed to serve in the armed forces, he has accepted certain limitations on his freedom which collectively go into the general category of discipline—necessary for the good order and efficiency of the service to which he belongs.

Do these limitations inhibit him from expressing his ideas? Only to the extent that he may not say or do anything that is contrary to his oath of allegiance and the National Defence Act. He may not, for instance, advocate the use of force to effect a change in the form of government that Canada now has. He may not take an active part in political activities though this restriction is not confined to service men since it applies equally to all other employees of the government. Again, he may not advocate a strike, wherein, too, he does not differ from the civilian public servant.

But these limitations do not prevent the service man from voting or from expressing his opinions on a political issue in conversation with other service men. Indeed, his obligations as a citizen require that he vote and make an intelligent attempt to appreciate the issues of the day affecting the welfare of his country.

In order that he might vote intelligently he must have an appre-

ciation of the meaning of the issues placed before him at the time of the election. This appreciation is not something acquired overnight—something he begins to acquire when the election tocsin is first sounded and puts away after casting his ballot until another election is called.

It might be argued that he can obtain sufficient knowledge of what is going on in his own country and in the world at large simply by reading. Indeed facilities are provided in messes and canteens to enable him to read. Besides, most service men read the daily newspapers. This argument, however, is, in the first place, too sweeping a generalization and, in the second place, it is doubtful that the average man knows how to read a newspaper with discrimination. This is where discussion comes in.

What is this thing called discussion?

It is definitely not an end in itself. It is a means whereby individual opinions are clarified, whereby points of view are elucidated for the benefit of others in the group, whereby an approach to common understanding is obtained. It is not the discussion itself that is so desirable as the fruits of discussion. These fruits, obtained in an organized, orderly manner, represent a synthesis of the views of the group arranged and summarized by a discussion leader.

The discussion centres around an issue rather than a topic and thereby needs a disciplined approach. It aims to secure the expression of opinions without rancour and without altercation. It seeks to do this by balancing opposing opinions about the issue that is under discussion. It has form but it is not formal: it demands art but it is not arty.

If it is organized and orderly, how is it organized?

The very expression "informal discussion" most often applied to it suggests that there is very little organization. But informality is not synonymous with disorganization. A cocktail party is usually informal but it requires a certain modicum of organization if it is to receive the accolade of society's approval—it should not, at least, be a drunken brawl.

This is where the discussion leader comes in.

If the discussion leader is too formal he gets no discussion: if he is too informal he is not a leader. He has to develop that sixth sense that tells him how far he can go and how far he can let others go. He must be able to smell a red herring and prevent the discussion from wandering away from the issue. This is the quintessence of good leadership and the leader is the lych-pin of such organization as there is.

The discussion leader chooses the issue to be discussed. This he must do wisely. Topics which have a personal connotation for some members of his group he will avoid. He will not, for example, debate the relative merits of one religion with those of another. He will avoid racial issues which might be embarrassing to one or more members of his group. But he will not shirk an issue merely because it is controversial. He is not a censor. He is not a propagandist. He is not there to impose his own or any official point of view. He is there to conduct and encourage discussion.

In handling the group he will encourage those with conflicting points of view to state their respective cases. He will discourage those who tend to be too verbose and who try to monopolize the proceedings: he will encourage those of a more retiring disposition. Through the contact he has with the minds of his men he will learn more about their mental processes—which of them play hunches; which hesitate too long before making up their minds; which can be relied on in an emergency; which of them are endowed with mature and sound judgment.

He will keep in mind too that he is being assessed by the members of the group. Men are quick to detect flaws in the leader's expressed opinions: they are quick to notice a tendency towards bias, to muddle-headedness, to emotional reactions and to general incompetence in handling a group. They may not be able to define the difference between dictatorial methods and strategy in handling a situation but they assess their leaders just the same. By wise handling of the discussion group the junior officer can add several cubits to his stature. He can make or unmake the morale of his men: he can make or unmake his own reputation as a leader of men.

What of the members of the group, the NCOs, men and women? What do they get out of these discussions?

In the first place the whole idea of orderly discussion is probably new to most of them. In general, they are aware that discussions take place in Parliament and in the meetings of local government bodies and that these, for the most part, are orderly. The connection between organized discussion and democratic processes is brought home to them—all the more so when they realize that the discussion group is not a propaganda agency. They are encouraged in their belief that democracy has something to commend it. The further they progress the more they are confirmed in that belief.

They learn to respect the ideas of others even if they do not accept them. The give-and-take of discussion

is a broadening and educational process that strengthens their faculties of reasoning and gives them a tolerant outlook that enables them to live in greater amity with their fellow men. This is invaluable in barrackroom life.

If sufficient interest is aroused by the leader they can be persuaded to read something more than the sports page—healthy enough in itself but an unbalanced diet—and possibly to cut down on the comic books—a noxious drug that is habit forming and stultifying.

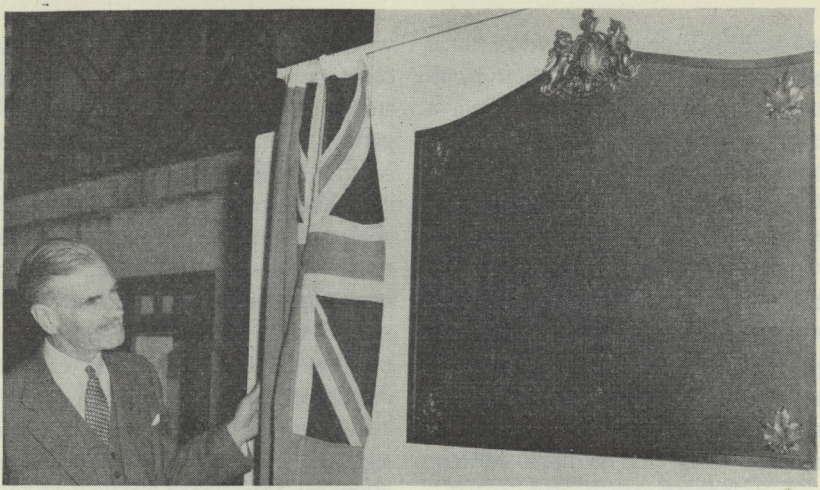
In a democracy this is important since the service man in a democracy is not a mere automaton or robot that, machine like, is given orders which he is not expected to understand but merely to carry out. As long as our forces are on a peace-time basis with a possibility of expansion in an emergency, we expect to train our NCOs as future officers and our men as potential NCOs.

Again, we are sending men abroad as part of the United Nations forces in the Far East and as part of the NATO forces in Europe. There, whether we like it or not, they are constantly being compared with the troops of other countries. This comparison is made, not merely on their bearing on parade or their conduct on manœuvres, but on their social behaviour in the cities and towns they visit when on leave. Canada wants its men to have a good reputation abroad. Social poise and discretion in casual conversation can be developed by the discussion.

In conclusion we should not lose sight of the fact that the oversea's representatives of Canada can be potent emissaries of good will—something the world needs and that Canada cannot do without. They are ex-officio ambassadors that can make a real contribution to the understanding of our country by those who live on the other side of the Atlantic and Pacific Oceans. We should see to it that they are properly equipped for their mission. The Current Affairs program is a definite means towards ensuring that they get the right kind of equipment—the kind that free peoples everywhere know and understand.

Mistakes

Mistakes occur in the thought of all living people. In the Provincial Museum in Toronto there is a wizened caveman who hasn't made a mistake for several thousand years, ever since he curled up in his grass mat and went to sleep. The only people who are never mistaken are dead.—*The Royal Bank of Canada Monthly Letter.*



National Defence Photograph

Sir Archibald Nye unveils the plaque at Fort Henry.

CEREMONY AT FORT HENRY COMMEMORATES REGIMENTS

A Report issued by the Directorate of Public Relations (Army), Army Headquarters, Ottawa

An historic ceremony commemorating the services of British and Canadian Armed Forces at Fort Henry, one of Canada's oldest military fortifications, was held at Kingston, Ontario, on September 8.

A bronze plaque bearing the names of 41 British and Canadian regiments which garrisoned the fort between 1812 and 1940, was unveiled by Lieut.-General Sir Archibald Nye, GCSI, GCMG, United Kingdom High Commissioner to Canada. It was erected by the Government of Ontario which administers the fort as a tourist attraction.

The plaque also bears the inscription: "They also serve who stand and wait". The motto is an apt one since, through the turn of events, Fort Henry never became the scene of wartime operations even though it held prisoners of war during two world wars.

Sir Archibald once served as a subaltern officer with the Leincester Regiment (Royal Canadians) which was formed in this country in 1858 and later was stationed in the Kingston area.

During the ceremony he inspected a formation of representatives and

National Defence Photographs

Above: Sir Archibald inspects the Princess of Wales Own Regiment, who formed part of the Guard of Honour. *Below:* The Fort Henry Guard of Honour dressed in their original 1812 British Army uniforms are inspected by the United Kingdom High Commissioner.

THE STAFF COLLEGE ~ QUETTA, PAKISTAN

By
MAJOR C. H. LITHGOW, THE ROYAL CANADIAN REGIMENT*

Military history owes at least two debts to decisions taken by General Sir Horace Smith-Dorrien. One decision was made when, as Commander of Second British Corps in the Retreat from Mons in 1914, he ordered his tired divisions to turn and fight and the famous Battle of Le Cateau resulted. The other decision preceded the first by seven years when Smith-Dorrien was GOC Quetta Division in Baluchistan. Having been ordered to select a suitable site in the Quetta area for a Staff College for the Indian Army, he was eventually faced with two likely localities. His final choice proved to be a fortuitous one, since the rejected site lay in the path of the disastrous earthquake of 1935 and had the Staff College been there all in it would probably have perished with a consequent loss to the British and Indian Armies.

When Lord Kitchener became Commander-in-Chief India he quickly recognized the need for trained staff officers in the Indian Army, and to this end he ordered the founding of

*The author wrote this article while attending the Command and Staff College, Quetta, Pakistan, in 1952. He is now GSO2, HQ Western Command, Edmonton.—Editor.

Ceremony at Fort Henry

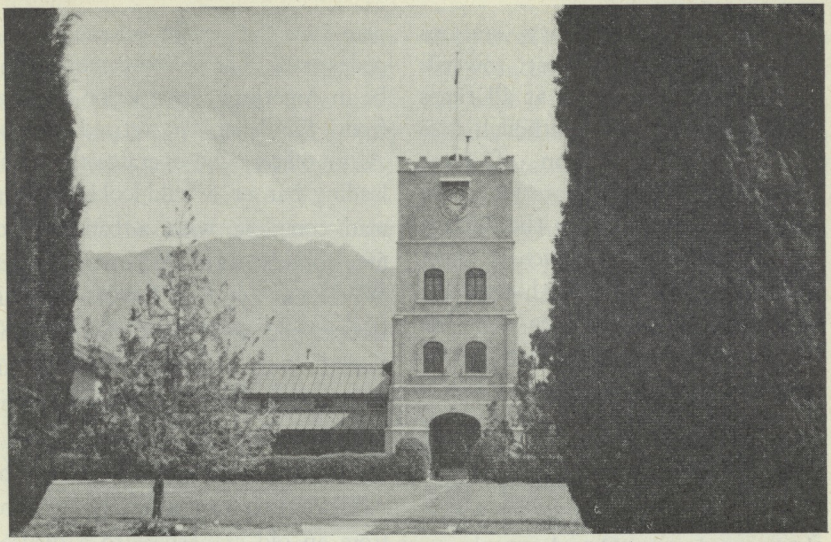
(Continued from page 20)

representative detachments from most of the British and Canadian units or Canadian affiliated units concerned.

Concluding the ceremony, the Fort Henry Guards, attired in the scarlet tunic livery of the 19th Century, presented a display of footdrill peculiar to that period. The old artillery pieces lining the walls of the fort were fired and a mock attack was made on the stronghold.

Many of the British units were directly represented at the ceremony since a large number of their officers are presently resident in Canada.

In all, a total of nine Canadian regiments garrisoned the fort between 1837 and 1940. The other 27 Canadian unit representatives who were present for the unveiling represented their British affiliated regiments.

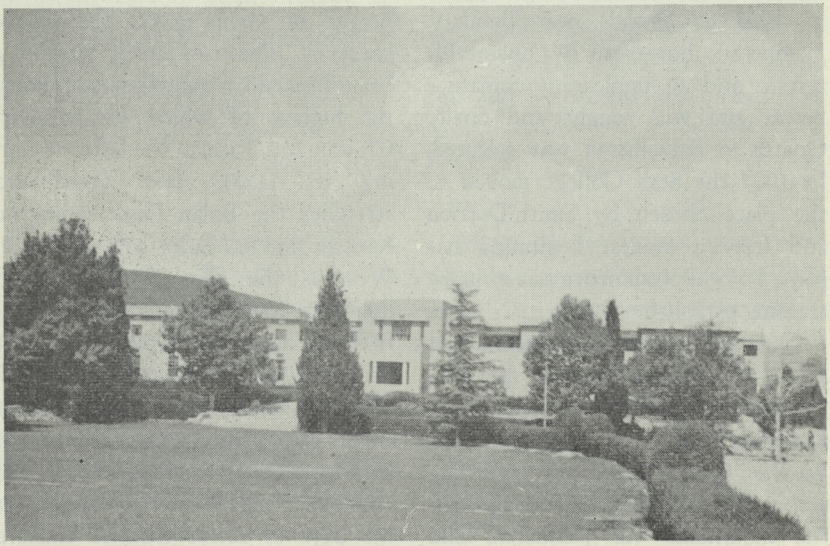


Main building and Clock Tower of the Staff College.

a Staff College with the least possible delay. As a result a college opened in 1905 at Deolali near Bombay. Hampered, however, by unsuitable terrain and an unpleasant climate a better site was sought and finally Quetta in Baluchistan was selected. In 1907 the Staff College moved to the place chosen by Smith-Dorrien and from a modest beginning has gained world prominence as a military training establishment.

Quetta is a semi-hill station about 530 miles North-West of Karachi, the capital of Pakistan. One leaves Karachi by rail at noon each day via the "Quetta Mail" and travelling across the Sind Desert and through the mountains via Jacobabad and Sibi reaches Quetta about 26 hours later. The trip from Karachi is a steady climb since Quetta lies at a height of about 6,000 feet above sea-level. The city itself sits in a basin formed by encircling mountains, the highest of which are Murdar, Chiltan and Takatu, the latter towering to 11,000 feet. Southward stretches the Bolan Pass leading to Karachi and 60 miles to the North-West is the Khojack Pass which leads to Kandahar in Afghanistan. In wintertime the north wind must rise to 7,000 feet to cross this pass, bringing bitter cold to the Quetta area. Nick-named the "Khojack", it bears little resemblance to the "Chinook" of Western Canada. In the days of active frontier warfare Quetta was the southernmost in a

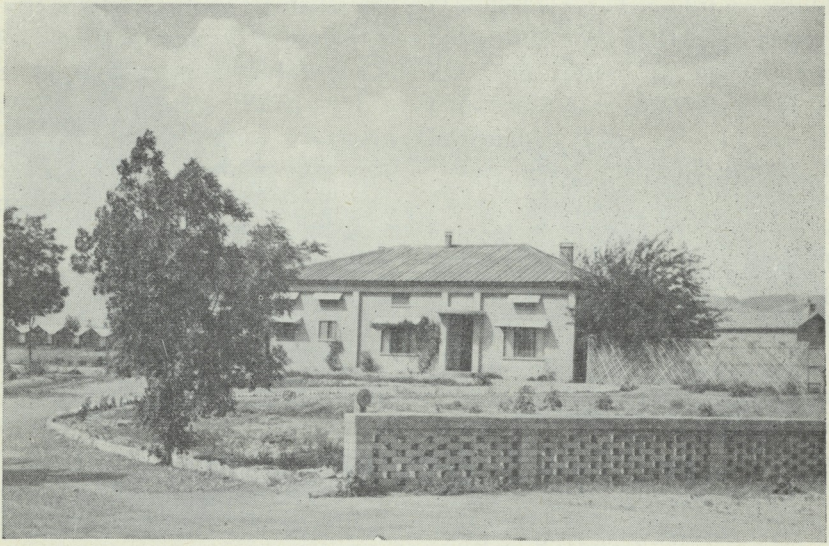
line of British Military stations which faced North-West towards Afghanistan and it was at all times a large military base. Although it is still a military station of some importance, with comparative peace on the frontier, it lacks the "active service" atmosphere which it must have had at one time. With a population of about 40,000 the city has largely been rebuilt since the earthquake when, it was estimated 30,000 people died. To-day it appears at times to overflow with people and there is an almost perpetual "Saturday night" air about the place. In Jinnah Road, the "main drag" in Canadian parlance, both Cadillacs and camels compete with hundreds of bicycles for a place in the traffic stream. As a pedestrian, one's companions may be an American construction engineer from Kandahar, a retired British Army officer who operates the city's leading bar or a wild-looking tribesman complete with a bandolier of fifty rounds and a rifle bearing Queen Victoria's cypher. In the Kobari Bazaar one will meet traders who would "take the shirt" from his North American counterpart and make him think he was being done a favour. If you have the time and the patience you can unearth anything from an old crankshaft to a disused soda syphon, spend an hour bargaining for it and go home feeling



The Officers' Mess.

sure you were "taken". Driving can be hazardous for it appears that the local inhabitants drive cars and bicycles much as they fight in a war, with a wild carefree abandon that knows no fear.

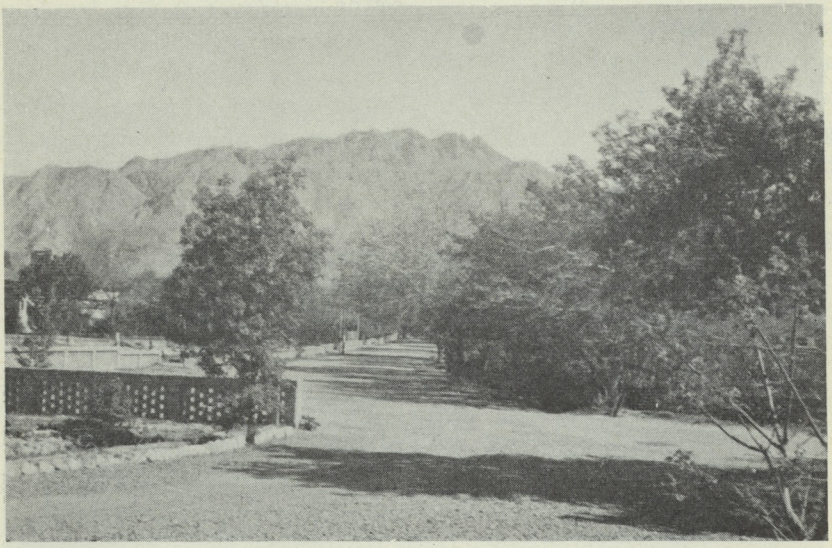
One of the chief features of the area is the general lack of water, and a serious one this year [1952]. Most of the water is secured in large reservoirs situated high in the mountains from which it is fed down into the city and military cantonment. This shortage is a serious obstacle to cultivation of any kind and gardening is a constant battle with the brilliant sun which shines continually during the day. Water for irrigation is channelled down the hills in a most ingenious and comprehensive system of concrete or earthen ditches and is led eventually to whichever part of the area is entitled to water at the time. Although the British have to all intents and purposes gone, they have left a decided mark in the gardens which exist, but one hour's water every two weeks is not enough to maintain much of a standard. The farmer in the country is forced to use more primitive means to obtain his water and this results in the digging of a "karez". The arid, desert-like countryside is dotted with these karezes and some of them stretch for some miles following the general contour of the ground to their eventual destination.



A married officer's bungalow.

There is an aura of military history about Quetta, little of which appears

in conventional studies of the subject. Kandahar and the Khojack Pass figure in the Afghan Wars during the period of Lord Roberts' command and one soon discovers that Fort Sandeman, Peshawar and the Khyber Pass are very real places. The romance of the Frontier and the great traditions of the pre-partition Indian Army are preserved in Pakistan to-day in the names of such famous regiments as Probyn's Horse, the Guides, the Frontier Force Rifles, the Royal Kohat Mountain Battery and many others. A glance at the names of previous instructors at the Staff College reads like a page from a military "Who's Who". One sees the name of Lt.-Col. Le Q. Martel, Royal Engineers, who was in time to become an outspoken champion of the tank and a most distinguished General Officer. Colonel B. L. Montgomery, Colonel C. J. A. Auchinleck, Colonel Sir Oliver Leese and Colonel P. C. S. Hobart are other names which will be familiar to Canadians. Perhaps even more inspiring are the large boards which bear the names of previous students. Here in earlier days were Blamey, Auchinleck, Ismay, Slim, Crocker and Gale, to mention but a few. The roster of Canadian officers goes back nearly thirty years. One of the first Canadian students was Captain J. K. Lawson, RCR, who was to be killed at Hong Kong in the Second World War as the commander of Canadian troops there.



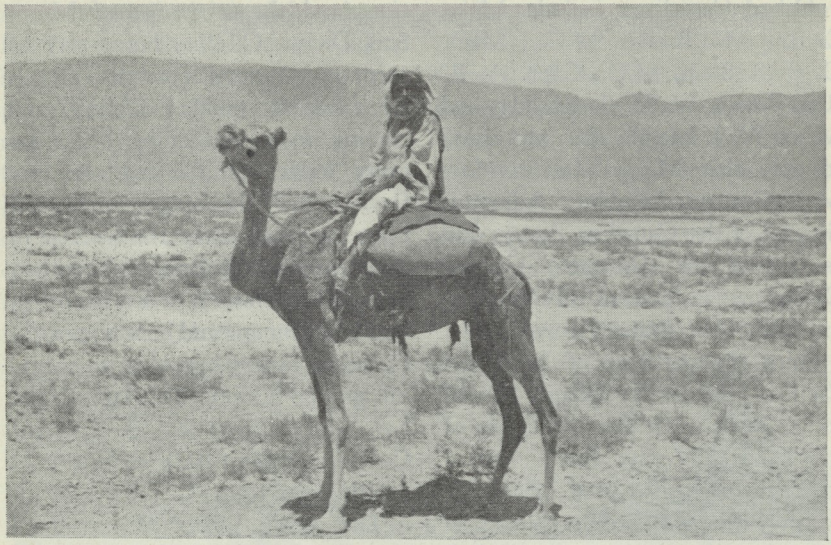
Mount Murdar and Braithwaite Road. A view from the front of an officer's house.

Other Canadians include Major E. L. M. Burns, M.C., Major C. R. S. Stein, M.C., Capt. A. R. Roy, Major W. H. S. Macklin and Major W. J. Megill. It is interesting to note that Major Macklin (now Major-General Macklin, Adjutant-General of the Canadian Army) had as one of his classmates, General Cariappa, the present Commander-in-Chief of the Indian Army.

Since the partition of India and Pakistan the Staff College has of course come under the jurisdiction of the Pakistan Army. Faced with a shortage of trained staff officers, it has pursued Lord Kitchener's original purpose with great vigour and each year turns out about fifty Grade 2 staff officers. The present Commandant and about half the instructors are British, but as Pakistan gradually fills her many officer commitments it is to be expected that all the instructors will be officers of the Pakistan Army. Most of the students are officers of Pakistan and the 1952 course included three British officers, one Canadian, one Australian, one American, an Iranian and a French officer. The course follows the pattern of all Commonwealth countries, with perhaps some extra emphasis upon mountain warfare and the use of animal transport. Otherwise, however, students here, like those in Canada, struggle with Movement Tables, Appreciations, Op Instructions and the intricacies of Minor Staff Duties. Off-duty hours may be spent in a variety of ways. There is an excellent military library and reading room containing books on every aspect of the military profession. For the sports enthusiast there is squash under the tutelage of the present world champion's brother, polo at least once a week, shooting, tennis, swimming and hockey, not the Canadian variety but what we would call ground hockey. This latter game has been essayed by the present Canadian student with no benefit to his syndicate team.

The single officer at the Staff College lives either in or near the Officers' Mess, a photo of which is shown. Married officers are housed in six or seven roomed bungalows of reinforced concrete, a picture of which also appears.

Although soldiers of the Pakistan Army served with great distinction in Africa, Italy, Malaya and Iraq as members of the famous Fourth, Fifth, Eighth and Tenth Indian Divisions, the strongest link is with the "Forgotten Army" of Burma, the Fourteenth. One hears no talk here of Caen, Falaise, Ortona or the Scheldt, but rather of Imphal, Kohima, the Chindwin and the Sittang. This feeling is perhaps best expressed in a poem which hangs on the Officers' Mess wall:



A typical nomad or perhaps a farmer.

They have gone past, men of the shield and sword,
Last of our fame and half the world away
From all familiar things. So let them rest
Now that the battle's done. The jungle way,
From Naga Hill and over Chindwin's banks,
Will hear no more their green limbed stealthy tread,
Or watch with fevered eyes where tanks have gone,
And little boats, and where a man lies dead.
Across their air-lines blow the purple clouds,
Water and grass and nameless twilight things
Press after them and cover close their tracks.
And where their voices whispered, silence clings.
An army passes but its loves remain
Freedom—and a way home through jungle rain.

Pakistan, a country barely five years old, seems destined to play a big part in the affairs of the Far East. Of great assistance in this will undoubtedly be the armed services which already have a century of fine tradition behind them.

SOME OBSERVATIONS ON THE ARMOURED PERSONNEL CARRIER

By
COLONEL ROGER ROWLEY, DSO, ED, DIRECTOR OF MILITARY TRAINING,
ARMY HEADQUARTERS, OTTAWA

Background

While glancing through some back issues of the Canadian Army Journal recently, I re-read with interest the article by Major R. E. Newton entitled "The Armoured Personnel Carrier" which appeared in the July 1952 issue.

In order to keep the record straight, it seems desirable to comment briefly upon certain statements in Major Newton's article. Before doing so, however, I should like to fill in a bit of the background information surrounding the concept of the Armoured Personnel Carrier (APC). At the same time it might be well to consider briefly some of the problems which arise when a decision is taken to use these vehicles in the tactical battle.

Major Newton, in the introduction to his article, referred to the original APC as being a hollowed-out tank. This, in fact, is not the case. The APC grew out of a demand for a new type of vehicle required for a special task in a particular operation conducted by 1st Canadian Army during the early summer of 1944. The operation referred to was Operation "Totalize", which is well known to all Canadian officers. It is generally accepted that "Totalize" was something of a classic battle, for it was in this operation that the Trojan Horse principle was first used successfully in contemporaneous military history.

All officers who took part in Operation "Totalize", or who have studied this battle since the war, will recall the situation which existed at that time. Briefly, Field Marshal Montgomery, the Commander-in-Chief of the Allied Land Forces, was developing his plan for the destruction of the German forces in Normandy. The Field Marshal's intention was to break out from the Caen bridgehead in a southerly drive directed upon Falaise and Chambois and in this way to effect a link up with the U.S.

forces who had driven south from St. Lô and then swung westward. This large pincer movement, it was hoped, would encircle and destroy the remnants of the German 7th Army.

The initial move in the Caen area involved a break-out from the beachhead. In effect, the cracking of the main German defences before the city itself and the destruction of the German layback lines between Caen and Falaise. The Commander, 2nd Canadian Corps, was given the task of planning and executing the break-out from Caen as the first phase of this operation.

Major-General (now Lieut.-General) G. G. Simonds, Commander of the 2nd Canadian Corps, appreciated that because of the pattern of the German defences and the restrictions imposed by terrain and other factors, it would be necessary for him to effect an initial penetration of the enemy defences to a depth of several miles; further, that the forces selected must be of such a composition as to ensure the presence of considerable numbers of infantry upon the final objectives. Consideration of the time factor clearly indicated that infantry moving on foot at their normal rate would rob the plan of two of its essential elements—surprise and speed.

General Simonds' final plan, therefore, provided for the "deep penetration" infantry "driving" on to their objectives with the accompanying tanks of the 2nd Canadian Armoured Brigade. As this "drive" was to be a long one and as it passed over and between enemy held localities, it was obvious that the infantry must be protected against enemy small arms fire and shell fragments. It was also clear that the vehicles in which the infantry were to "drive" must have cross-country performance equal to that of their accompanying armour.

At the time in question there was no standard type of Army vehicle designed for this task. There were, however, some self-propelled (SP) 25-pounder equipments already within the beachhead. These vehicles were known as "Priests", capacious vehicles of good mobility, being fully tracked. The modification of these vehicles required little more than the removal of the artillery piece. In addition, all the "Priests" were lightly armoured and easy to get in and out of; the fact that these unfrocked "Priests" adequately performed the task assigned to them is a matter of historical record.

Tactical Handling of APC

APCs are normally used in three main roles:

1. The "deep penetration", where APCs are used in conjunction with armour, and *en masse*, i.e. where up to an infantry brigade or battalion is transported. Such penetrations

have been effective up to seven miles or more.

2. Limited penetration, where APCs are used to lift company groups of infantry, and armour, with the object of transporting them through the initial enemy defences and placing the infantry on or close to the main enemy locality.

3. The transporting of infantry across obstacles other than water; an example of this type of employment is the infantry portion of a breaching or gapping team, when special equipments are used.

One of the most difficult problems confronting the commander who plans to use APCs is whether to "drive" his APCs onto the objective or whether to debus close to his objective. Before this decision can be made the following factors require study:

1. Terrain, particularly the size, shape and local geography of the objective.

2. Obstacles both natural and artificial, including minefields.

3. The state of training of his own troops.

4. The amount of intelligence available on enemy dispositions and strength.

5. How much time is available in which to plan, brief and rehearse the operation.

Regardless of the commander's decision, it is true to say that the position of an infantry commander contemplating the use of APCs is not very different from that of a commander who is planning an airborne assault. In both cases the attacking infantry will find themselves suddenly projected onto or in close proximity to the enemy localities where they must immediately commence the battle. The problems of orientation, reorganization and the recognition of preselected sub unit objectives are considerable. In some cases it may be preferable to drive close to the enemy locality, debus in dead ground or behind cover, even if the cover is only a defilade created by the APCs themselves. This alternative, to drive directly on to the objective, may often be preferable if troops are not extremely well trained. In any event, both methods were successfully employed by the Canadian infantry in Western Europe during the Second World War.

In his article, Major Newton makes a statement that present development trends in the field of Armoured Personnel Carriers have resulted in a change of the configuration of the vehicle. This change in appearance makes the modern APC distinctive and easily recognizable. With all this I agree, and it would seem to be a retrograde step in design, particularly when one remembers that the APC developed during the Second World War had the advantage of affording as much

protection as a tank, while, at the same time, presenting no distinctive silhouette to draw a disproportionate amount of enemy fire. For this reason if for no other we should resist discarding the basic principles of design configuration, unless, of course, it can be shown that carriers of an unconventional type can be developed which will be so vastly superior in performance as to outweigh the benefits which accrue from the original configuration.

Turning for a moment to unconventional vehicles, I think we must agree that Major Newton has developed his idea of the tank-drawn infantry sled in a most interesting and convincing fashion. Unfortunately, the idea is not a new one and was in fact conceived and developed in the Italian theatre at the battle of Anzio. It will be recalled that Brigadier General O'Daniel, then commander of the 3rd U.S. Infantry Division, was assigned the task of breaking through the enemy perimeter. When assigned this task, General O'Daniel, in order to achieve his object, proposed to use a new method to get the assault infantry forward through the minefields and enemy fire. He wanted to minimize infantry losses and to have the infantry instantly available on the objective to take advantage of the ground gained and the resistance which would be partially overcome by the accompanying armour. General O'Daniel's fertile mind produced a plan which in turn initiated a request for a large number of individual sleds and component items for the movement of his division over the bullet-swept area between a start line and final objective. The report of this attack indicates that it was moderately successful.

The infantry tank sled assemblies were issued to each of the three infantry regiments of the 3rd Division. All the regiments either used this equipment or attempted to use it. Unfortunately, in most cases the tanks pulling the sleds were either knocked out by anti-tank fire or destroyed by mines, rendering the sleds useless. In one instance, however, the employment of sleds was successful. This was in an area where the assault was directed against fortified houses. These were not defended with anti-tank guns, and mines were only present in an area close to the houses themselves. Despite the limited success of the operation, it was recommended at that time that further study and development should be undertaken in order to determine the feasibility of adopting the sled principle within the U.S. Army.

Shortly after the war, HQ Army Field Forces were directed by the Department of the Army to initiate a research and development project

on the tank-drawn infantry sled. Certain test model sleds were built and exhaustively tested at the Armoured Centre, Fort Knox, Kentucky. Although much useful information was obtained, it was finally decided to discontinue development within this field. This decision was taken because it was agreed that the infantry sled very definitely falls within the category of a special purpose item which has an extremely limited application, and, as such, continued development of this item would be of questionable value. Despite the foregoing it is gratifying to know that infantry sleds could be made available on short notice should a special requirement arise.

Information on the American studies has been made available to me by the kind co-operation of the U.S. Department of the Army. I take this opportunity of expressing my thanks to them.

New 20-Man Life Raft

Goodyear Tire and Rubber Company now is producing a 20-man life raft for the Air Force to be carried in air transports. Automatically inflated by carbon dioxide, the raft can be inflated and ready for use within approximately 30 seconds, a company announcement reported.

Circular in design, it is identical on top and bottom and can be boarded regardless of which side turns up in the water. Twelve feet six inches in diameter, it weighs 108 pounds and measures 36 by 18 by 18 inches in its carrying case.

One of the unusual features of the raft is a portable nylon canopy which easily can be attached to the outer edge of the raft. The canopy has two port holes and is fitted with an elastic lining at the bottom which fits snugly to the side of the raft. Reversible, the canopy is camouflaged greenish-blue on one side and colored a brilliant neon red on the other for signalling purposes. Provision is made for attaching a radar reflector to the canopy's mast. — *Army-Navy-Air Force Journal* (U.S.).

An Apology to Major Veitch

The name of Captain (now Major) D. Veitch, author of the article "Reorganization of Engineers for Combat" published in the July 1953 issue of the *Journal*, was inadvertently misspelled. Major Veitch is GSO 2 (Staff Duties) in the Office of the Chief Engineer, Army Headquarters, Ottawa.—*Editor.*

NATO AFTER FOUR YEARS

Reprinted from "External Affairs", the monthly bulletin of the Department of External Affairs, Ottawa

NATO has frequently been described as an organization with a double purpose — a short-term military purpose and a long-term "community" purpose. While this description makes an important point about NATO (it differs from the pre-war type of military alliance), the tendency to employ it haphazardly to correct the initial emphasis on military plans can be misleading. One is constantly on the lookout for a transformation that may not, in fact, take place in the way imagined. Since NATO observed its fourth anniversary on April 4, this might be an appropriate time to take a closer look at its "double purpose".

Two Objectives

No one will deny that NATO was born of collective insecurity. When universal collective security could not be achieved through the United Nations, it became necessary to organize collective security on a selective basis. This selection naturally embraced the North Atlantic area as of first strategic importance in the defence of the free world. The primary purpose of the Treaty is to deter aggression, first by the acceptance of definite commitments in case of attack and second by the agreement of the parties to "maintain and develop their individual and collective capacity to resist armed attack".

There was, however, a secondary purpose in the signing of the Treaty. This purpose, championed by Canada and inscribed as Article 2 of the Treaty, was that the member nations should not only agree to associate for security reasons but should resolve as well to promote "conditions of stability and well-being" and to "encourage economic collaboration". This resolution was inspired, it may be suggested, by an awareness of continuing disturbance and crisis in the twentieth century. Military co-operation alone appeared to be inadequate in the face of the peculiar menace presented by international Communism. In a sense, NATO was formed to rebut both the military threat posed by Soviet expansion and the ideological threat posed by Communist propaganda.

Four years of experiment and progress have led to the conclusion that these two objectives of NATO

are indivisible. It has been found that the primary objective of adequate defence involves, as an integral part, the secondary objective, non-military co-operation. In other words, adequate defence against aggression depends upon adequate economic co-operation. It is not, therefore, strictly accurate to think of military and non-military phases of NATO. The need for military preparedness should be thought of rather as a long-term need, and the non-military or "community" objective as fusing with it.

Article 2 is not a phantom on the horizon; it is part of a developing process. Two excerpts from Council declarations illustrate the development of NATO thinking along these lines. The first was made after the Lisbon meeting in February, 1952; the second after last December's Ministerial meeting:

1. Members of the Council look forward to the time when the main energies of their association can be less centered on defence and more fully devoted to co-operation in other fields for the well-being of their peoples and for the advancement of human progress.

2. By combining their resources and their knowledge, by sharing the material burden of defence, by the constant practice of mutual consultation and mutual association, member states have already increased their common strength, understanding and unity.

Both statements were made with Article 2 in mind. The second, without invalidating the first, suggests that co-operation for defence and "co-operation in other fields" are not mutually exclusive.

Recent Activities

A brief description of some recent NATO activities may help to explain the development of this mutual association. NATO's main task so far has been the establishment of collective forces in the NATO area under integrated commands. To create these forces and maintain them has required the mobilization of immense resources by the member countries for the purpose of defence. To organize such national efforts and to co-ordinate them has required the development of a special technique of collective planning, which, since the Lisbon meeting of the Council (in February 1952) has been called the Annual Review. The Annual Review for 1952 began last July [1952] with the sending out of a questionnaire designed to obtain from member governments a picture of the progress of their defence build-up and of their future defence plans. An interim report was submitted to Ministers when they attended the Council in Paris last December, and a final report was made to the Min-

isterial meeting of the Council in April.

This first Review is very much of an experiment. It is probably the first time that any group of nations has voluntarily agreed to submit the defence plans of each member for scrutiny by the others assisted by an international staff of experts. The process has revealed the great complexity and practical difficulty entailed in the Lisbon conception of creating "balanced collective forces", forces that, in quantity and quality, must meet modern military requirements. One problem to which it is difficult to find a satisfactory answer is the equitable distribution of the defence burden among countries of unequal size and resources. Clearly, some countries in NATO can do more than others. But it is more difficult to say exactly what each is best equipped to do and what limits each must set. It has been the purpose of this first Annual Review to compile the data which, if agreed interpretations can be reached, will provide some preliminary answers to such questions.

Other problems, however, introduce themselves. What kind of data are needed? How are they to be acquired? Are they in all respects susceptible to legitimate comparison between one country and another? It is such practical problems that have concerned the Council and the Secretariat in carrying out the Annual Review in recent months. Consideration of them has led to stress on the effectiveness of forces rather than on their numbers. For the job has been first to estimate as nearly as possible what is available and second to consider ways of improving and strengthening these existing forces, and, after this, to consider what further steps can be taken, in the form of "force goals" for the future, toward the objective of adequate defensive strength. The setting of force goals thus becomes both a beginning and an end. It is a beginning because it provides a firm military objective for future planning. It is an end because the proper decision can only be made after the circumstances surrounding each nation's effort have been thoroughly assessed.

Different Approach

This approach is different in emphasis from the one adopted at Lisbon. If it is true that the Lisbon force goals for 1952 were substantially reached, it is perhaps also true that they had been loosely defined. It has been found that a precise idea of what is meant by a division prepared and equipped to fight must be agreed before any counting of heads becomes significant. What does the idea of "fifty divisions" mean in fighting power? The answer may vary from one defence ministry to another.

It is, therefore, General Ridgway's job, and Admiral McCormick's too, not only to suggest how many troops are needed but to recommend what standards of training and equipment they should meet. The latter task has become preliminary to the former, in the sense that, in the present stage of Western defence, a sufficient deterrent to aggression must emphasize quality rather than quantity. At Lisbon the urgent task was to provide forces, however loosely defined. The fact that such initial provision has been made now enables a re-assessment to be made of national capacities and policies.

Annual Review

The 1952 Annual Review . . . therefore follows in logical sequence the programme begun at Lisbon, and is neither a tailing-off nor a slowing-down. The procedures and methods of consultation evolved during its course will form the basis for that closer unity and community of purpose that NATO is building. The Annual Review process is becoming a focus of NATO activities.

Though the result must be a balanced appraisal of military forces and a plan for reaching military goals, the process itself involves far-reaching political, economic and strategic considerations. Some of these have been mentioned. It might be noted as well that the strategic considerations governing NATO planning are themselves subject to modification. They may be modified by political re-assessment of the international situation. The development of new weapons may invalidate previous calculations. The whole fabric of strategic and military planning must be kept continually under review; this, too, forms part of the Annual Review. The process as a whole consists of a balancing and assessment of many considerations, some verifiable, others unpredictable and open to disagreement.

Infrastructure

Many NATO activities can be related to the focal point of the Annual Review. One aspect widely publicized, particularly during and since the last Ministerial meeting, has been "infrastructure". These fixed military installations, consisting mostly of airfields and communications used in common by the NATO forces, represent but a very small proportion of the total NATO defence effort. Yet they have received publicity because the provision of them involves complicated negotiations for common financing, which in turn affect national, political and economic policies. How much can each country provide? What degree of priority should be attached to infrastructure financing in relation to other parts of the defence effort? Such questions cannot be answered except

by reference to the same considerations that relate to the Annual Review. It is the same problem of reconciling national capacities with the necessities of collective defence.

Other Activities

Other NATO activities also bear some relations to the Annual Review. Exchanges of views on political matters of common concern such as, for example, the EDC Treaty and Indochina, will be taken into account when political and economic factors are reconciled with military estimates of adequate defensive strength. A Council working group has been considering the implications for defence of such problems as unemployment, the need for skilled labour and national emigration and immigration policies.

There is the problem of civil defence; how can it be co-ordinated and what priority should be given to it? Finally, as expressed in Article 2, there is the desire of NATO nations to "further the development of peaceful and friendly international relations by strengthening their free institutions" and "by bringing about a better understanding of the principles upon which these institutions are founded". It is true that measures to this end involve more than a defensive joining of hands. Yet, for the present at least, the effort to provide sufficient military strength to deter aggression, with all its ramifications, involves as well the deeper understanding envisaged by Article 2. By voluntarily undertaking the common efforts and sacrifices involved in collective defence, the sovereign states that are members of NATO are, in fact, laying the groundwork for the fuller development of the North Atlantic community.

The Theory of War

The theory of war was not more familiar to the camp of Caesar and Trojan than to those of Justinian and Maurice. The iron of Tuscany or Pontus still received the keenest temper from the skill of the Byzantine workman. In the construction and use of ships, engines and fortifications the barbarians admired the superior ingenuity of a people whom they so often vanquished in the field. The science of tactics, the orders, the evolutions, the stratagems of antiquity, were transcribed and studied in the books of the Greeks and Romans. But the solitude or degeneracy of the provinces could no longer supply a race of men to handle those weapons, to guard those walls, to navigate those ships, and to reduce the theory of war to bold and successful practice.—*Gibbons, "Decline and Fall of the Roman Empire."*

F/M MONTGOMERY VISITS CANADA

National Defence Photograph

Field Marshal the Viscount Montgomery of Alamein, KG, GCB, DSO, Deputy Supreme Commander of SHAPE, met with Canadian Chiefs of Staff during a stop-over in Ottawa during August while enroute to Toronto where he officially opened the Canadian National Exhibition. Above, left to right: Air Marshal C. R. Slemon, CB, CBE, Chief of Air Staff; Lieut.-General C. Foulkes, CB, CBE, DSO, CD, Chairman, Chiefs of Staff; Field Marshal Montgomery; Lieut.-General G. G. Simonds, CB, CBE, DSO, CD, Chief of the General Staff; Vice Admiral E. R. Mainguy, OBE, CD, Chief of the Naval Staff; Dr. O. M. Solandt, OBE, Chairman, Defence Research Board.

The Black Watch (R.H.R.) of Canada

For the sake of the record, the *Editor* would like to draw the attention of readers to a mistake inadvertently made in a caption for a picture published on Page 27 of the July 1953 (Coronation) issue of the *Canadian Army Journal*. The photograph shows the Pipes and Drums of The Black Watch (Royal Highland Regiment) of Canada parading at the Parliament Buildings in Ottawa on Coronation Day. The caption stated in error that this unit was the Argyll and Sutherland Highlanders of Canada.

FROM COLONEL TO SUBALTERN

By
Colonel A. G. Chubb, DSO, CD, Director, Royal Canadian Armoured Corps, Army Headquarters, Ottawa

The following are three more letters in a series written specially for the Journal *by Colonel Chubb. Through the medium of these "father-to-son" letters, the writer gives the young officer some fatherly advice on how to get along in the service.*—Editor.

* * *

IV

Dear John:

Your mother and I are barely on speaking terms at the moment. You remember that damned brass bed. Well, when she was having it moved upstairs, it gouged a hole in the wall and when she finally got it upstairs she found it was too big for the spare room. On the way down it knocked two rungs out of the railing and when I started to laugh, she nearly had a stroke. No sense of humour, but then few women have.

You sound pretty pleased about getting a troop and I must say I am surprised that you were given a command so early. Your troop sergeant, Sergeant Graham, sounds like a precious jewel but I don't blame you for being a little overcome at his medals and general air of confidence. For heaven's sake don't try to bluff him as he has probably trained several young gentlemen in his time and can be a tremendous prop to you. If you don't know the answer and this will be the case for some time, don't be afraid to ask his advice. As time goes on you will find that you will be turning to him less and less for actual guidance. As long as you get him on your side you will find it much easier with your troop.

As for the men of the troop you may well find that you have had a certain amount of "dead wood" eased into it by the other troop leaders. This is nothing to be alarmed about and can, in fact, be a blessing because anything you are able to do will stand out clearly as an improvement. I would give my right arm to be in the position that you are in now, starting out on a life of working in close contact with your own men. It is a tremendous responsibility and challenge that has been placed in your hands. These chaps are yours to have and hold probably for a period of years and everything they do, say and think is of the utmost concern to you in

your position of troop leader. At the moment I feel sure that they only appear as a series of rather vague faces. However, over a period of time you will find that you will get to know each one intimately and will find that you have all kinds, fat ones, thin ones, quick, slow, stupid, smart —all kinds will pass through your hands. Your task is to take all of these completely dissimilar types and turn out a troop, the best troop in the best squadron in the best regiment in the Army. It is really a big job but can be done through understanding, sympathy, knowledge and continual and unceasing interest and work. When finally the troop is yours in fact, you will realize the truth of what I am telling you now, that the challenge of being a good troop leader is a tremendous thing.

Whatever you do, don't lose sight of the fact that your troop is made up of individuals. They are not symbols nor automatons but human beings with all the strengths and weaknesses of human beings. You will have to continually observe them, think about them, assess them as individuals, in order to fit them into your team. Avoid using smart aleck phrases such as "bodies" or "bods" when speaking of your troops. I may have the phrase in vogue a little mixed up but you will know what I mean.

Your mother just trailed by, saying that she has a headache and is going to bed, so I had better go up and try to make my peace with her. I still think it was damned funny about the bed, but it will be better if I drop the subject.

As ever,
Dad.

* * *

V

Dear John:

Your mother invited Mary to tea this afternoon and they spent most of the time tittering over some old snapshots of you. Now I don't want to interfere in your private affairs but it had an ominous look about it and you had better think the situation over pretty clearly. Believe me a 2/Lieut's pay doesn't stretch to a wife, so watch your step.

I know you have completed the calling expected of you in the garrison. In my day it was a lot more involved, as we had to call on the wives of all those senior to us and it took ages to get it completed. I think the present system of the subaltern calling on the GOC and his CO and maybe one or two of the other senior officers, a very sound system. It makes it a lot easier for the wife to put a face to the names she probably hears very seldom. I know it is a little unnerving to call on the GOC, but I always found it easy enough once the plunge was taken. Oddly enough, you will find that a fair rule of thumb is "the more senior they are the more pleasant to

meet". I think that they sort of mellow with age and service.

Which reminds me, you and the other subalterns have accepted quite a little hospitality in the homes of the married officers. It seems to me that it is about time that you sort of paid off some of the debt. I know it is easy to let it slip, thinking that no one will notice and anyway you are single and they are married, etc., etc. Nothing could be simpler really. Why don't you round up two or three lads like yourself and put on a tea or small cocktail party for the wives who have entertained you. I am certain that you can obtain permission to use one or two rooms in the mess and it is a pleasant, easy and not too expensive way in which to pay off a few old scores. Think it over, my boy, and I think you will agree that it will be a pleasant sort of gesture to make.

I think that you are wise in starting to do a little private study for your Lieutenant to Captain exams. This business of cramming like mad for two weeks before the examinations is very foolish. You may be able to bluff your way past the exams but the knowledge you cram never stays with you. Little and often is the ticket and makes for good habits, too. After all, it is your life's work and the more you know about the business, the better you will be at it. With which Parthian shot I will leave you. As ever,

Dad.

VI

Dear John:

Your mother and I are a little disappointed in you. No wonder the Adjutant had you all up on the mat, but I can only hope that it was a general blast and did not apply to you personally. It is quite inexcusable that officers should be late in arriving at a regimental dance and so miss going through the receiving line. Such rudeness is incredible and you must realize that every officer at such a do is a host and has a very definite responsibility in seeing that every guest has a pleasant time. For heaven's sake make certain that you ask your CO's wife for a dance during the evening and you will also find it sound to ask a reasonable number of the other wives for the same privilege. Again it is a matter of courtesy on your part as a junior officer and at the same time is frees the older officers and allows them to have a go at the subalterns' girls. As I grow older I find this is a good thing, albeit a bit sad.

I think you were wise in not going into the local pub when you saw that there were several of your lads already there. It isn't a question of being snobbish at all, but it is common sense. I remember several of my young gentlemen who were in a pub with three or four of the other ranks and a civilian got rather drunk and started making slighting remarks in a loud voice, running down the Service.

PRINCIPLES OF TRAINING

Supervision over replacement training by Army Ground Forces [in World War II] was guided by five basic principles, established early and adhered to throughout World War II. In general, these principles are applicable to the Army's training today:

1. The individual must learn to work and fight as a member of a team. Throughout all aspects and levels of training this concept of teamwork is constantly emphasized.

2. The troop commander himself is responsible for training, rather than the specialist who might actually conduct it. This reflects the basic military principle of personal leadership.

3. General military proficiency is stressed. Create the soldier first, the technician later.

4. Rigid performance tests are given to insure uniformity, adjustment to exacting standards and the earliest efficient completion of the training mission.

5. Realism characterizes all training whenever possible. Live ammunition and rugged training areas are concrete expressions of this fundamental requirement.—*Army Information Digest* (U.S.).

From Colonel to Subaltern

(*Continued from preceding page*)

This went on for some time and finally one of the lads, a Corporal, had had enough and walked over and very quietly and firmly clocked this character. The fat was really in the fire then and the officers were in the embarrassing position of being mixed up in a Service brawl in public. The Corporal was busted and the officers got a fairly rough trip when we discussed it next morning in my office. Lord knows the troops don't get much privacy as it is, so avoid their places of amusement as much as possible. Incidentally, I sympathized with the Corporal and saw that he got his stripes back in short order. Naturally the above does not apply during a smoker or regimental party, which is usually very good fun. Then it is essential that you mix freely, but I have no worries about you on that score.

This letter may seem like a bit of a blast—which it is. However, here is a small donation to the cost of your mess kit, which may ease the sting.

As ever,

Dad.

Canadians Win Empire Shoot

THE BISLEY MEETING ~ 1953

By
CAPTAIN J. H. GOLDING, ARMY PUBLIC RELATIONS OFFICER,
CANADIAN ARMY LIAISON ESTABLISHMENT, LONDON, ENG.

The *London Times* refers to it as "The Imperial meeting at Bisley". The National Rifle Association identifies the competition as "The 84th Annual Meeting". Most of the Commonwealth members call it "Bisley" — and to any marksman or markswoman who has had the honor to represent Canada there, it is the quintessence of rifle shooting anywhere.

Bisley, 1953, brought the elements of a soundly-balanced Canadian team to the unpredictable ranges where wind and shadow and rain edge furrows in the faces of new competitors and cause the veterans to sniff the breeze, watch the flags and use their calculating pads.

On the Sunday fraught with what the British describe as "frightful" weather, the Canadian Team won the Empire Shoot. It was a day when people who inhabit the control towers of airfields take the day off. The weather was like that. One may imagine how it was on the 1000-yard range when the average vet was allowing about 10 feet from the centre of the bull in order to let the wind bring his shot into the circle — not to mention the light and shade, the wet flags which compromised wind judgment and the summery chill that is peculiar to England.

Yet it was a grand day for the 1953 Bisley team for they out-shot New Zealand and Australia and the trophy was donated by Australia who wanted to keep it. It was also the first time the New Zealanders had competed for some years and they had a strong team. But Canadian skill and doggedness, in the wet and wind and cold, pulled the team up topside and people like Lt.-Col. Stephen Johnson of the King's Own Calgary Regiment, Calgary, and Major Dick Hampton of the Royal Canadian School of Infantry, Camp Borden, hit the higher rungs of the scoring ladder. It was a day when experience paid off. And the first time for Canada to win the trophy too!

The accomplishments of the 1953 Bisley team have already been recorded. However, it was a dramatic moment when Lt.-Col. Johnson was ready for his last shot in the dying

stages of The Queen's Shoot on the final afternoon. He needed a bull to win, an inner to tie, and he scored his first magpie of the day. Yet the colonel had proven what he has always believed, written about and lectured about — that consistency and adherence to fundamentals will pay off.

He was a good loser and he ranked well in many prize lists. Several members of the 1953 team swear by his book, "Shoot To Live". It is their bible.

Lt.-Col. Johnson was runner-up for The Queen's Prize — a creditable accomplishment.

There are many tabulations one could make concerning the 1953 Bisley team, but the prime purpose of this brief article is to record some of the impressions of some members of the team as to the value of having shot at Bisley. At this point, it should be mentioned that in the opinion of the '53 team the quiet, deliberate judgment and coaching of Lt.-Col. Desmond Burke, Lansing, Ont., one-time King's Prize Winner (1924) and master of wind judgment and mirage appreciation, was the cementing factor which held the team together and produced the fine results that are now on record with The National Rifle Association of the United Kingdom — Bisley, 1953.

When the Canadian team arrived at Bisley, their average age was close enough to 42.5 years. The oldest member was 60 and the two youngest were 23. Major A. B. Coulter was commandant, an experienced military man, and Major C. A. Vickery, a well known school principal and range officer for Long Branch, Ont., for nearly 30 years, was adjutant. The older members of the team realized what was at stake and it didn't take them long to form a shooting committee which was to decide what whom was to do at what time. This principle was accepted by all, harmoniously, and this little group, headed by Lt.-Col. Burke was the activating factor for all operations.

This "shooting committee", mostly composed of Bisley veterans, sized-up each contest; they made an appreciation of the newcomers, their temperaments, their ability, their general know-how. They tried to do the best they could with the material at their disposal. And they did well, but it went deeply into the realms of psychology, public relations, marksmanship, and so on. The main objective was a good show for Canada and it is doubtful if any other team of the 1,200 contestants in camp at the time spent as much time trying to estimate what was best for the group as a whole.

A rigid schedule of loosening-up was first on the list. Rifles were checked. Wood could tighten in the English damp. Barrels could become

unseated. Ammunition had to be selected with care. With fine weather, the "youngsters" were o.k. but with bad conditions, it took the veterans to explain or construe or evaluate the conditions for the newcomer, and that is always a tricky business with a person who is regarded as a good shot and who, in best circumstances, is not likely to take to hard advice kindly. This may be an objective appreciation but it is the writer's opinion of what he saw and heard.

In other words, it takes a man with inclinations toward the "corps diplomatique" to be helpful to the newcomers and for which effort they receive little, if any, thanks. Life is like that.

Immediately before recording opinions of the team, it might be interesting to note that all competitors at Bisley this year, as in other years, wore peculiar hats, water-proof clothing and acted as if nothing at all really important were taking place. It is all part of the atmosphere. In fact, they are terribly interested and go home to talk over each point of success or failure with extreme finality.

Major Vickery, the adjutant, said: "Shooting here is under extremely difficult circumstances. It rains and then it is clear. Wind currents and uneven ground make conditions awkward at long ranges. There is a special tension due to the keen competition and the knowledge that the top riflemen in the Commonwealth are your competitors. These marksmen are used to a 36" bull at 900 and 1,000 yards, but here they have a 30" bull and the targets are coloured differently. It may be a small point but it makes a difference."

Officer-cadet E. L. Warner, Lennoxville, P.Q., a member of the Bisley team for the first time, said: "There was more wind than I'd ever had to cope with before. The smaller bull made a big difference to me, but the advice I had from Col. Burke, Col. Johnson and Major Hampton let me in on an advanced world I hadn't known. If ever I make the Bisley team again, I think I'll be able to do a better job because of the experience and the help from the older shots."

Warner was not at his best in the beginning. He soon found his Bisley legs, however, and began putting his shots into the black circle. He is regarded as a particularly steady holder. He was well up in almost a dozen of the major competitions, won some and proved his right to be on the 1953 Bisley team, just as he proved his right to represent Canada at the Olympic rifle shooting (small bore) competitions at Helsinki, Finland, in 1952. Warner bought a rifle in Denmark after the meet and hopes that he may be able to join a group of Canadians who may go to Venezuela

in 1954 for the World Rifle Championships.

Capt. W. J. Newell, RCAPC, Winnipeg, an official member of the team, was first interested in rifle shooting by his soldier father. It was his first try at the famous ranges in the Bisley competition and he had his rather seasoned opinions, too: "The team spirit impressed me most," he said. "Everyone worked under direction and worked well. The weather shook me to the boots but we all shot in the same conditions." Capt. Newell said he found chats with Col. Burke and other veteran members of the team helped him.

Sgt. G. D. Emperingham, RCOC, Montreal, was having his second try at Bisley, though having qualified on three occasions. Casual and cool, he knows his rifles and takes his losses as well as his wins with a wry smile.

He believes that: 1. Bisley teaches wind judgment as nothing else has taught him in Canada, and he knows the west, too. 2. Bisley teaches "holding", especially in relation to the smaller bulls. 3. After his first experience in England on the Bisley team, he found the ranges at Connaught almost easy and scored well. 4. Listening to the old-timers at night has added a profound amount to his shooting knowledge, especially Lt.-Col. Burke's advice on wind judgment. Sgt. Emperingham holds Lt.-Col. Steve Johnson of Calgary as tops in methods of musketry coaching and particularly recommends Johnson's "Shoot To Live" to any newcomers keen on rifle shooting. He is a disciple of the Johnson methods.

Major R. W. Hampton, an instructor at the Royal Canadian School of Infantry, Camp Borden, Ont., who has qualified six times for Bisley, got out of a sick bed, lay in the wet and knocked nine bulls out of ten on the 900-yard range in heavy wind and rain one Sunday to contribute a major part to the team's victory in The Empire Shoot for the first time. He believes in a constant, high standard over a long period rather than a mercurial record of performance. He thinks proficiency in any notable degree depends most definitely on serious and regular practice; knowledge of all phases of competitive shooting, including the work of the armourer, ammunition, wind and mirage judgment, and physical and emotional condition.

It seems to be a tall order but Major Hampton is quietly adamant in his views. He regards Bisley as good, first from a Commonwealth standpoint, and, secondly, for the spirit of competition it engenders and the demands it makes on the skill a man must possess to prove his mettle in such company.

Competitive shooting teaches self-control, and impresses on a man that he is *part* of a team, not an individual.

WARFARE AND THE FUTURE

By
MAJOR-GENERAL J. F. C. FULLER*

There have been only two great revolutions which have radically changed the organization of armies. The first followed the adoption of the horse as a military animal, and the second the introduction of the internal combustion engine as a military machine.

Before the advent of the horse, city and village militias were organized in phalangial order—that is, into an inarticulated line of men six or more ranks deep, and as fighting consisted in push of pikes, victory depended upon choice of ground and endurance. Because the strength of a phalanx lay in its men maintaining a wall-like front, actions were purely frontal; manœuvring was virtually impossible and so was pursuit. Even more important, because supply depended upon porterage, it was exceedingly difficult to maintain an army for any length of time in the field; therefore rapid wars of conquest, as known in later ages, were impracticable, and in consequence wars were little more than raids restricted to clashes between neighbouring city states.

The introduction of the horse, in about 2000 B.C., not only completely revolutionized this primitive warfare

Major-General Fuller, retired, eminent British military analyst, is the author of many books and articles on the world military picture. This article is condensed from Brassey's Annual, *1952, and is reprinted with the kind permission of William Clowes & Sons, Ltd., and the Editor.*—Editor.

The Bisley Meeting

(*Continued from preceding page*)

"No textbook can teach a man wind velocities," he says. "It takes time, and when the going gets rough, watch the veterans edge up to the top of the scoring list, not because they are more clever but because they are more experienced."

Major Hampton feels, from a standpoint of general assessment of rifle shooting, that the unknown factors are the problems of getting weapons to shoot properly. Weather can affect weapons. Gunsmithing is important. Bad ammunition can spoil the best man on the butts, not to mention wind, mirage, light, shadow, rain, wet flags and bad physical condition.

but also the character of war itself. First, it radically changed the supply system of armies, for the horse can carry or haul far more than a man, and what is even more important, unlike man, it can normally live off the country. The first great change was, therefore, the extension of the range of action of armies. Secondly, by using the chariot as a means of human conveyance it enabled troops to be brought in a state of freshness on to the battlefield and massed at tactically advantageous points. Thirdly, when the horse was used to mount the soldier upon—which took place long after chariots were introduced—an arm was created which could operate either independently of or in co-operation with infantry and which eventually evolved into two main types, heavy cavalry for shock action and light for reconnaissance and pursuit.

Though these developments covered many centuries, they finally led to a radical change in organization. The old infantry army of pre-horse days, geared to human muscular power both for fighting and supply, was replaced by an army geared to the muscular power of the horse. Not only was range of action increased, but the introduction of cavalry led to the birth of tactics—ability to reconnoitre, charge, manœuvre, reinforce, and pursue. Arising out of this emerged a new factor, power to surprise, and therefore attack of an enemy morally as well as physically. In all this the point to note is that the adoption of the horse led to the development of a totally different army—a horse-powered in place of a man-powered organization.

With the introduction of the internal combustion engine, which could supplement or replace horse-power by mechanical power of a vastly higher ratio, the same evolution was to be expected. And had this been grasped at the opening of the present century, when the motor car was in its infancy and the aeroplane was born, a hypothetical chart could have been drawn showing—very imperfectly though it would have been—the probable influences of the internal combustion engine on military organization. From it could have been learnt what changes were likely to be needed in order to enhance the power of armies, what could be done, and—as important—what could not be done as things actually were, and lastly what steps should be taken in order to render them possible.

Though no such chart was made, and the changes which so vast an increase of motive power would effect were left to circumstances to dictate, changes nevertheless closely followed those which had arisen after the horse was adopted. The first was the rapid replacement of the draught-horse by the lorry, not only in order to supply

troops in the field, but also to meet the ever-increasing demands for artillery ammunition. In fact, the great artillery battles of World War I would have been impossible without mechanical transport. The second was the use of the lorry for troop movements, which became increasingly frequent during the above war, and normal in the next. The third was the introduction of the tank, armoured mechanical cavalry, of which two main types were designed, a heavy tank for assault and a light for reconnaissance and pursuit. And the fourth, an enormous increase in opportunity and ability to effect surprise.

Here we have the main ingredients of what may be called a "motorized army"—that is, an army organized round the internal combustion engine. In greater part, such an organization was visualized within two months of tanks first taking the field. In the memorandum entitled. "A Tank Army," Major (now Lieut.-General Sir Giffard) Martel opened his study by stating: "Unless this war ends in a disarmament and a temporary universal peace, there can be little doubt that the present unarmoured and unprotected soldier will cease to exist and a tank army will take his place. A present-day army could never fight an army consisting of, say, 2,000 tanks."

Two years later, when the war ended, such an army was almost in being. Not only was the Allied plan of operation for 1919 based on tanks supplied by cross-country tractors, but the following tracked vehicles were either in existence or were being built: self-propelled guns, supply tanks, salvage tanks, armoured infantry carriers, mine exploding tanks, bridging tanks, engineering and signal tanks: in fact, the main ingredients of a fully motorized army. So convinced was I myself that the internal combustion engine would revolutionize military organization that, in 1922, I wrote: "In the next great war we may expect tactical organization to proceed . . . at enormous speed, if muscle be replaced by petrol . . . weapons will become more and more powerful, protection more and more mobile, mobility more and more speedy, and morale, safeguarded by these three, more and more firm. What does this mean? It means that no army will organize for a twenty-round contest, but instead . . . in such a manner that it can deliver . . . a knock-out blow as soon as possible after the first round opens. An army inferior to its opponent in numbers but superior in mobility will stand every chance of knocking out its adversary before he can even step into the arena."

Years later, in 1936, when again considering this subject, I wrote " . . . even under existing circumstances, it

is possible for mechanized arms to overrun a country such as France, Germany, or Poland in a fortnight."

Although in the last war this prediction was dramatically fulfilled, during it a fully motorized army was never created, armies remaining largely in their chariot stage. Even so elementary a question as whether there should be one or two types of tanks was still being debated when the war ended. This was due to confused thinking, arising out of the inability of the soldiers to realize that an army should be organized around the prime motive power of its day.

Let me here recapitulate in slightly different form. A man is not a weapon, he is a one-tenth horse-power creature who can carry weapons or a load, and as long as he is the sole means of carrying weapons or loads, he is the prime mover. Similarly with the horse, it is not a weapon, it is an animal approximately ten times as powerful as man. It can carry a man and his weapons and haul a weapon or a cart. As long as a more powerful motive force does not exist, the horse remains the prime mover. Lastly, as regards the tank, it is not a weapon—nor incidentally is an aeroplane. It is an armoured, self-propelled cross-country vehicle many times more powerful and less vulnerable than the horse. As long as it maintains its supremacy it cannot be other than the prime mover.

Had the soldier before the last war looked upon an army as a complex machine instead of as a bagful of war tools, he would not only have built tanks but also bullet-proof cross-country supply vehicles. He would not have decided to haul his guns with tractors, but would have mounted them on bullet-proof machines, and he would have moved his infantry in bullet-proof carriers instead of in lorries. In short, he would have built his army around the petrol engine, armour, and the caterpillar track, as armies of old were built around the horse, body armour, and the wheel. True, in the last war many of these changes did materialize, but only through force of circumstances and not in accord with an organized pattern—a blueprint of a fully motorized army.

Now it is not my intention in this study to elaborate such a point, for the simple reason that I do not possess the requisite technical and administrative knowledge to do so. Instead, it is to examine certain tank problems which, in my opinion, have an important bearing on future warfare, and which may possibly assist the would-be army designer in devising a fully motorized army.

The problems I have in mind stem logically from those which arose after the horse first became a military animal, and though I will omit increased radius of action, which is now

so apparent that to examine it would be platitudinous, I will consider the remaining four: surprise, supply, co-ordination, and independent action. After which I will examine . . . special problems—night operations, and the influence of atomic weapons on armoured mobility.

Surprise.—How to effect surprise is the basic problem in tank warfare, and one which in peace time is apt to be overlooked, and therefore in war time to become doubly conspicuous.

After the battle of the Somme in 1916, when tanks first took the field, we were told that it was a mistake to have used them because there were not sufficient to warrant success and their surprise effect was consequently lost. After the battle of Cambrai the following year, in which tanks played a decisive part, we were told that a similar surprise could never again be repeated. Of course surprise was not lost and of course it could be repeated, and could not fail to be as long as tank armour rendered rifle and machine-gun fire ineffective. That anti-tank weapons modify tank surprise is obvious, but they cannot annihilate it, because the main power of the tank does not rest in its armour and weapons but in the paralysing effect its *mobility* has on the enemy's mind.

In Poland in 1939 the effect of the German armoured assault was immediate, for within forty-eight hours of the initial attack the Polish G.H.Q. was paralysed, whereupon the body of the Polish army fell to pieces. This sudden collapse was not only due to the unmechanized state of the Polish army but, as may be seen in the next great assault on the Netherlands and France, to correct tank tactics, for in May, 1940, the French had greater numbers of tanks than the Germans, as well as tanks of a superior quality.

In this second German invasion a British staff officer, at the time serving in France, on 19th May wrote: "The Panzers still drive about at their own sweet will . . . with no main body behind them. No infantry within sixty miles, just motor cyclists and tanks . . . News that the Panzers are in Amiens. This is like some ridiculous nightmare. . . . . The Germans have taken every risk—criminally foolish risks—they have got away with it . . . they have done everything that should not be done by orthodox, book-trained, stereotyped soldiers, and they have made no mistake. The French General Staff have been paralysed by this unorthodox war of movement. The fluid conditions prevailing are not dealt with in the text-books, and the 1914 brains of the French generals responsible for formulating the plans of the Allied armies are incapable of functioning in this astonishing layout."

Not only were the French G.H.Q. surprised, but also the German, for on several occasions during the assault *à outrance* General Guderian was ordered to halt his tanks so that the infantry might catch up!

In this case it may be said that the French tactical collapse was due to faulty tank organization. Though this defect certainly contributed to German success, in the battle of Tunis in 1943, when the British and Americans were at clinch with the Germans and Italians, identical results are to be seen. At the time of the final Axis collapse a British war correspondent wrote: "Our tanks roared past German airfields, workshops, petrol and ammunition dumps, and gun positions. They did not stop to take prisoners—things had gone far beyond that. If a comet had rushed down the road it could hardly have made a greater impression . . . the German generals gave up giving orders since they were completely out of touch . . . in a contagion of doubt and fear the German Army turned tail . . . and became a rabble."

Again, it was the same in 1944 during the invasion of Normandy, when tanks were called upon to operate in a difficult terrain and were faced by numerous and powerful anti-tank weapons. In August, when General Patton broke through at Avranches and set out on his headlong advance, this is what we read: " 'Halt for nothing' was the guiding principle of the armoured columns. . . . Forward patrols [of armour] shot up everything, batteries, headquarters, strongpoints. . . . Disorganization robbed them [the Germans] of both a plan and the means to carry it out."

Surprise was as potent in 1944 as in 1939 or in 1917; therefore we may conclude that it will remain so, though the means of effecting it will have to be modified, not only according with the terrain but also with reference to the anti-tank weapons tanks will be called upon to face.

What does all this point to? That whatever tank organization is elaborated in the future, it will be defective unless it permits of violent surprise, and the violence of surprise will in the future, as in the past, be in direct ratio to the mobility tanks are able to develop and maintain.

Supply.—The above logically introduces the problem of logistics, that branch of the art of war which embraces transport and supply and which constitutes the basis of strategy and tactics. Because, as Napoleon truly said, "an army marches on its stomach", it follows that unless the speed of its supply services is greater than or equal to that of its fighting arms, the latter cannot make the most of their mobility.

Two examples taken from the last war suffice to illustrate this: namely,

the initial German Russian campaign and the 1941 Allied campaign in France.

In the first the Germans were faced by a very different problem from the one they had to solve in France. The depth of Russia was immensely greater, and whereas in France road and rail communications were plentiful and good, in Russia they were few and indifferent. Added to this on account of climate—rain, frost, and thaw—the season of mobile operations in Russia was restricted to between the months of June and October.

To win the campaign was possible were Moscow occupied before the autumn rains set in, because Moscow is the hub of the entire Russian rail system, and once gained, the supply of the Russian armies would be so crippled that a knock-out blow might have been struck in 1942. The logistical problem was, therefore, how to cross a distance of some 800 operational miles in three months.

As in France, the campaign was opened with an armoured assault, which was so rapid that in twenty-four days some 500 miles were traversed and Smolensk reached. Could this speed of advance have been maintained, there is little doubt that Moscow would have been occupied early in September. Why was it not maintained? Setting aside Hitler's faulty strategy, the answer is, because of the breakdown of the German supply system. The armoured divisions were not fed by cross-country supply columns, but depended on lorry transport which was tied to the roads, and in rainy weather was restricted to the main roads—few in number—because the secondary roads were at once converted into rivers of mud. Further, the motorized infantry divisions, also lorry borne, could not keep pace with the armoured divisions, which neither could nor were intended to hold ground.

After 10th October, General Guderian writes: "The next few weeks were dominated by mud. Wheeled vehicles could only advance with the help of tracked vehicles," and "these latter, having to perform tasks for which they were not intended, rapidly wore out." Also he informs us that "corduroy roads had to be laboriously laid for miles on end in order to ensure that the troops received even the limited supplies available. The strength of the advancing units was dependent less on the number of men than on the amount of petrol on hand to keep them going." Lastly, when winter came, "in order to start the engines of the tanks, fires had to be lit beneath them. Fuel was freezing on occasions and the oil became viscous."

The second example is very different, because distance was less, roads good, and climate normal West-

ern. Europe summer weather.

Logistics and Strategy

On 31st July, 1944, General Patton's Third Army broke through the German left flank at Avranches, after which the speed of its advance was such that a supply crisis began to develop. When on 17th August, the Third Army neared the Seine, General Eisenhower informs us that "truck transportation became utterly inadequate to cope with the situation," and, in consequence, aircraft had to be withdrawn from the newly created First Allied Airborne Army as well as from the Strategic Bombing Force in order to supply Patton with 1,000 tons of petrol daily, a figure which soon had to be doubled. "This type of last-minute planning," comments General Martel, "is not the way to organize these vitally important administrative arrangements in fast mobile warfare."

Why did the crisis take hold? The answer is, because air power had been so fully exploited strategically and tactically that, when supremacy in the air was assured, it was found that its administrative possibilities had been overlooked. In fact, it had not been grasped that, because the aeroplane can dispense with roads and because it is the most mobile vehicle in existence, it is the ideal supply transporter when cost does not enter the question. Had fewer bombers been built, and in their stead had General Eisenhower had at his call, say, 2,000 flying four-ton tankers, there need have been no pause west of the Rhine; in which case the high probability is that Berlin would have been entered by the Allied powers long before Christmas.

The following, therefore, are the two most important lessons to be learnt and applied before another war engulfs us: (1) Because armoured forces move on tracks, their supply vehicles must do the same. And (2) because in highly mobile operations road, rail, and cross-country supply may not prove sufficient, organized aerial supply columns must be at hand to feed the chase at a moment's notice.

Granted power to surprise and means to supply armoured forces, I will next turn to the question of tank co-operation and independent action, which are best considered conjointly.

Co-operation and Independent Action.—During the last war, and mainly on the insistence of Field-Marshal Montgomery, it was decided that a dual-purpose tank was all that was needed—that is, a tank which equally well can co-operate with infantry and work independently.

This conception, due to confused thinking, was quite unknown to the original tank designers, who worked on the principle that a heavy, slow-moving tank would be required to co-operate with infantry and a lighter

and faster one to co-operate with cavalry. What, at the time, was not appreciated was that, though heavy tanks and infantry could co-operate, as they successfully did at the battles of Cambrai and Amiens, on account of the vulnerability of the horse, light tanks could not effectively do so with cavalry. What they could do, however, was to replace cavalry altogether.

Between the two wars this replacement was made—our cavalry regiments were converted into tank regiments and equipped with medium tanks. But during this change-over, mainly because of its cost, the heavy assault tank faded out of the picture until 1938, when it was resurrected in the form of the Infantry Tank and organized in Army Tank Brigades. At about the same time the faster tanks became known as Cruisers and were formed into armoured divisions. The main differences between these two types were that, whereas the Infantry Tank had a maximum speed of 15 m.p.h. and was protected by armour varying from 78 mm. to 65 mm. in thickness, the speed of the Cruiser was 28 m.p.h. with armour varying between 40 mm. and 20 mm. Both were armed with a 2-pdr. gun.

Meanwhile, late in the field, in order to guarantee the greatest output of tanks, the Germans concentrated on two main models, the Pz. Kw. III and Pz. Kw. IV (a close support tank). Both were medium machines with a speed of about 20 m.p.h. the armour of the one varying from 50 mm. to 30 mm. and of the others from 30 mm. to 20 mm. The first was armed with a 50 mm. gun and the second with a 75 mm. With these machines, supported by a large number of six and nine ton light tanks, the Germans overran Poland and France in 1939 and 1940.

It was in the second of these campaigns that the British Infantry tanks, under General Martel, proved their worth. Of their action on 21st May, 1940, he writes: "This attack was just the type of action for which the infantry tank was intended. There was no case of a long move round a flank for which cruiser tanks are needed. . . . His tanks [German] were knocked out quite easily," whereas some of our tanks "were hit fifteen times without having any effect on the tank or the crew. When a tank can advance and ignore the fire of the enemy anti-tank guns, a great moral effect is produced. Such a tank dominates the battlefield."

The obvious lesson of this action, that in close-fighting armour and gun power and not speed are the decisive factors, was but partially appreciated by the Germans. Though they reinforced their armour, they continued to use Mark III's and IV's until in Russia, in November, 1941, they came up against the Russian T.34 cruiser tanks. These machines were

more heavily armoured and gunned, and against them the German 37-mm. anti-tank gun proved ineffective. "The result," writes General Guderian, "was a panic."

From then on the battle of the types steadily passed from its independent cavalry to its co-operative infantry phase. We produced the Churchill Infantry Tank with armour varying from 90 mm. to 75 mm., and the Germans the Panther and Tiger, the one with from 100 mm. to 45 mm. of armour, and the other with 102 mm. to 62 mm. Of the value of these infantry tanks two examples suffice: the break-through at the battle of El Alamein in 1942, and the fighting in Normandy in 1944.

In the first, which was a battle of assault against a prepared position, the cruiser tanks used—namely, the American Grant and Sherman—were not sufficiently armoured, and in consequence suffered heavy casualties. "There is no doubt," writes General Martel, "that if a brigade of Churchill tanks had been available, they could have overcome . . . [the] 50-mm. anti-tank guns quite easily." Actually, only four Churchill tanks were used in this battle. "All . . . were struck many times by 50-mm. anti-tank guns, and there was only one penetration."

Battle of Types

Of the fighting in Normandy, Martel says: "The German Panther tank showed its superiority against our Cromwell tank [cruiser] . . . by having heavier armour in front and a more powerful gun. The ground in Normandy was so enclosed that head-on fighting between tanks was a common occurrence and an advantage to the Panther tank . . . Our Shermans and Cromwells were no match for them and our Churchills were only a little better. What we wanted in this type of warfare was the new design of really heavy infantry tank which we had always asked for, but this was not available. Future operations, however, showed that the Panthers were equally unable to hold up our armoured divisions [cruisers] when it became a war of movement in open spaces."

The conclusions to be drawn from these two examples, and others could be added, are that, whereas in position warfare armour and gun dominate, in mobile warfare it is speed which does so. This truism, which should never have been lost sight of, has now been accepted, for our present policy is to build three main types of tank, a cruiser, an infantry tank, and a light tank. Therefore, in idea, we are approximately back to where we were in 1916–18, and can design for the future on the proved logic of the past.

Night Operations.—Today the only tactical field which remains largely unexploited is night fighting. Once

armies went into winter quarters and cut down their operational year by six months. Still armies go into night quarters and cut down their operational day by twelve hours. When are soldiers going to tumble to it that an army which can fight round the clock has a hundred per cent. advantage over one which can fight only half-way round it?

Night into Day

This problem was tackled before the last war and led to the invention of the C.D.L., a tank fitted with a powerful projector of special design emitting a fan-shaped, flickering beam of light which illuminated a wide field and dazzled the eye. The projector was protected in such a way that it could not be put out of action by anything less than a direct hit with a shell which could penetrate five inches of armour.

The purpose of this weapon was to solve the problem of night fighting on a large and organized scale, enabling an attack to be carried out more methodically and rapidly than during daylight, and far more economically and securely; for whereas the field over which the attacker advanced was brilliantly illuminated, all the defender was able to see was a wide expanse of dazzling light which obscured everything behind it, and which was so brilliant that it rendered aimed fire by eye impossible.

That the C.D.L. was considered of value is proved by the fact that two brigades of C.D.Ls., one of three battalions and the other of two, were raised in England, as well as two Armoured Groups, each of three battalions, in America. Nevertheless, though prior to D Day (6th June, 1944), the 1st (C.D.L.) Tank Brigade and the 10th (C.D.L.) Armoured Group were fully mobilized and ready to proceed overseas, so little interest was taken in the new weapon that it was not until 11th August that the first of these formations was landed in France, the second following eleven days later. Even then, instead of being used in the operations following on the break-through of the U.S. Third Army, operations in which the Germans could seldom move except under cover at night, the six battalions were never moved forward from their disembarkation camps and were gradually disbanded, as were the rest.

Though the C.D.Ls. have long vanished on the scrap heaps, the idea of turning night into day still offers endless tactical possibilities, the most obvious being the ability to break through an enemy's front under cover of darkness and put blitzkrieg into pyjamas. If in the last war the French generals were paralysed by the German tanks in broad daylight, what would have been their state of mind had it been possible for the latter to operate even more freely during the night than during the day,

and thereby establish a round-the-clock *blitzkrieg*? . . . Thus we return to the basic tank problem—surprise.

Atomic Warfare.—Lastly, as regards atomic weapons, what influence will they have on the tank? One thing is certain, their introduction will enhance the value of mobility, because rapid dispersions and concentrations, such as can be effected with cross-country vehicles, will become doubly necessary. Further, as the 1951 tests in Nevada have shown, armoured vehicles are more immune to blast, heat, and radiation than unarmoured. Therefore, of all forces armoured ones are the least vulnerable on the atomic battlefield.

The deductions to be drawn from this are that, in future warfare, armies should not only be armoured but, in order that they may be able to disperse and concentrate with extreme rapidity, they must be capable of developing a far higher mobility than in the past. On this question Major Lamar McFadden Prosser writes:* "Forces must concentrate only at the critical moment of action and disperse rapidly thereafter. At this critical moment, and only then, should the force offer a profitable target for atomic weapons. The swiftness of the concentration must introduce the element of SURPRISE and so reduce the danger of atomic annihilation."

Further, he adds: "All now seems to hinge on mobility. The speed of manœuvre now demanded may require that all ground forces be mounted. The assembling of regiments of foot soldiers is much too time-consuming and would certainly reduce the possibility of surprise and increase the time of vulnerability. To mount the infantry in trucks (so-called motorized divisions) is to remain road-bound, and this would be fatal. The answer seems to be tracked vehicles. Whether or not these vehicles should also be armoured, introduces problems too numerous to be settled without experimentation. But that all troops will be mounted in tracked vehicles appears to be inevitable."

Thus we reach the summit of the second great revolution in the organization of armies.

Conclusions.—Finally, what does all this point to? That, though tactical essentials remain constant, unceasing readjustments of means have to be made in order to meet the changing conditions of war. The soldier has still to hit, to guard, and to move; he has still to endure, to be supplied, and to surprise. New weapons do not change these things, but how to effect them always changes.

Fear of the atomic bomb may abolish war by making it appear too

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WAIT FOR THE WAGON

Reprinted from the Royal Army Service Corps Magazine

The origin of the Corps March, "Wait for the Wagon", is very obscure, but the adoption of this tune is interesting.

In 1875 there was a review in Aldershot in honour of the Sultan of Zanzibar, and each regiment on parade had its own march past played as it passed the saluting base. The Commander-in-Chief, the Duke of Cambridge, ordered that the Army Service Corps should march past (prior to this they had not been in the habit of marching past at reviews). He asked what tune they used. On being told they had none, he said, "Tell them to play 'Wait for the Wagon,' " and since then it has been used as the Corps march past. The tune was appropriate and long enough for small mounted units to march past to, but as the Corps expanded and larger units on foot marched past, the repetition of the verse and chorus, which are very similar, became monotonous.

In 1945, the Director of Supplies and Transport, Major-General H. R. Kerr, asked for a new march, and the executive work was carried out by Colonel C. J. Williams, then Assistant Commandant, RASC School, Aldershot, and the Bandmaster, Mr. J. F. Dean. As a result of their labours the march was born. In the new march, a South African folk tune, the "Trek Song", was added to the original "Wait for the Wagon". It was first played at Kensington Barracks by the Corps Band on VJ Day, 15 August 1945, to a large audience of senior officers of the Corps. After final approval by the Colonel-in-Chief, H.R.H. The Duke of Gloucester, it was notified in Army Order No. 36 of 1946.

Warfare and the Future

(Continued from preceding page)

unprofitable to wage; but as long as wars continue, though this annihilating weapon will change methods, it can no more change the essentials of tactics than did the discovery of gunpowder. The soldier will go on hitting, guarding and moving. Without endurance he will be unnerved; without munitions and food he cannot fight, and surprise will remain for him his staunchest friend and most deadly foe.

Though the roots of future warfare are hidden in the past, the plant of war must be cultivated creatively. No stereotyped copying is likely to succeed. Victory is to be sought in the imagination.

"...in Aid of a Civil Power", 1877

By
Captain R. H. Roy, Public Archives of Canada,
Ottawa

A few years ago there appeared in the *Canadian Army Journal* an article dealing with the assistance given by the armed services to the civil authorities during the Manitoba Flood of 1950. This example of willing co-operation and joint effort by the services received the well-deserved plaudits of the country. Our history records a number of similar instances when the army was called upon to render aid to a civil power. Not all of these, however, was in the spirit of the Manitoba Flood and indeed, many were viewed as a distasteful but necessary task by the military authorities. One such incident, attended by unexpected peril, occurred in British Columbia three quarters of a century ago. It serves as a model of an unpleasant task carried out with restraint and efficiency by the militia.

In February 1877, trouble broke out at the Wellington Colliery, a small coal-mining village situated some nine miles from Nanaimo on Vancouver Island. The dispute between the miners and mine-owners over wages and "short-weighing" increased in bitterness and a strike resulted. The owners brought in men from the United States to work the mines but these men were "persuaded" by the local inhabitants to leave the district. The owners then ordered the Sheriff to evict such of the strikers who were still residing in company-owned houses. Once again the owners were frustrated, for by open threats and intimidation the Sheriff and his men were prevented from carrying out their legal duty.

Despite our present conception of the ethics of the case, here was an instance where the law was openly defied and it was evident, under the then prevailing conditions, that sterner measures must be adopted. On 28 April 1877, therefore, the local Stipendary Magistrate and three Justices of the Peace sent the following letter to Lt.-Col. C. F. Houghton, Deputy Adjutant-General of British Columbia:

"Whereas it has been brought to our notice that the miners on strike at the Wellington Colliery, Departure Bay, have resisted the Sheriff and his officers in the execution of their duty, and in our opinion a riot or disturbance of the peace is likely to occur when the Sheriff again attempts to perform his duty, and it is anticipated that such riot or

disturbance will be beyond the power of the Civil Authorities to suppress or to prevent or deal with.

"We therefore request you to call out such portion of the Active Militia as you consider necessary for the purpose of aiding the Civil power and of preventing or suppressing any such anticipated riot or disturbance of the peace."

Upon the receipt of this communication, Lt.-Col. Houghton immediately visited the Attorney-General of the province who agreed, on behalf of the provincial government, to pay all the expenses of the proposed expedition. It was further agreed that since there were about 100 men on strike, and since these had the sympathy of the majority of miners from other coal mines in the vicinity, it was desirable to call out all the available militia men, "such course being most likely to bring the matter to a speedy and peaceful termination."

A notice was placed in the Victoria "Daily Colonist" calling upon the militia of the provincial capital to parade at the Drill Shed on Sunday morning, 29 April, at 10 a.m. A similar notice called upon the militia at New Westminster to parade at 7:30 p.m. on the same day. On Sunday at the appointed time all was in readiness. In Victoria No. 1 and No. 2 Companies, Victoria Rifles, paraded in full strength with the exception of three men who had been given special leave. No. 1 Company consisted of one Lieutenant and 29 other ranks, while No. 2 Company had one Captain, one Lieutenant and 26 other ranks. Within half an hour this militia force embarked on the paddle-steamer "Maude" and at 11 a.m., the ship was under steam for New Westminster to pick up the remainder of Colonel Houghton's command.

After a rough eight-hour voyage to the mainland the "Maude" reached New Westminster. Here the commanding officer inspected No. 1 Company, New Westminster Rifles and the Seymour Artillery Battery. The latter unit boasted the possession of two 24-pounder brass cannon under ordinary circumstances but on this occasion, as with the remainder of the militia, they were armed with breach-loading Snider rifles and bayonets. Except for two riflemen who were absent from the city there was a full turnout: the Seymour Battery totalled one Lieutenant and 20 other ranks while the rifle company had one Captain, one Lieutenant, one Ensign and 26 other ranks. An assistant Surgeon who had volunteered his services completed the complement.

Colonel Houghton had now collected together what was in effect the entire body of trained Canadian

Provincial Archives, Victoria, B.C.

Lieut.-Colonel Charles F. Houghton.

militiamen on the Pacific Coast*—a total of eight officers and 101 NCOs and men. All of the four units involved had been formed only three years previously, and although some of the officers and men had had military training with the British Army or provincial militia, an estimated eighty-five per cent of the men had never donned a uniform nor shouldered a rifle before they volunteered to serve in the militia three years ago.

The problem of getting such a comparatively large body of troops aboard such a small steamer as the "Maude" was not easy, but Colonel Houghton solved it in a manner which will remind many readers of the troopships of the Second World War. To quote his own Report:

"The orders (for embarkation) were admirably carried out by the Officers and Non-Commissioned Officers of the various Companies and little or no confusion took place in the stowing of the men although every available space in the Steamer had to be utilized even to the tables in the Saloon, which were densely packed with men both on top and underneath, and the floors of both the Saloon and the Main Decks completely covered. In fact the muster was somewhat larger than I expected and there was an insufficient supply of blankets and mattresses on board, notwithstanding the fact that I had borrowed forty pairs of the former . . . "

By midnight everyone was aboard, and at 3:30 a.m. the "Maude" sailed for Departure Bay, arriving there late Monday morning.

Before landing at the colliery wharf the men had been issued with twenty rounds of ammunition and some cooked provisions. They had also been addressed by Lt.-Col. Houghton as to the nature of the duty confronting them. It was an unpleasant task, he said, and warned them it required the greatest steadiness on the part of all ranks. He further cautioned that on no account were they to lose their temper or take any notice of the insults which might be offered to them. Moderation, firmness and common sense were the keynotes of his speech, a formula which was perfectly suited to the task which lay ahead.

The troops had no sooner started on their way to the mine when they encountered the first of the strikers. A newspaper correspondent accompanying the troops describes the situation as follows:

"As we passed some men standing by the roadside they greeted the uniforms with ironical cheers, and a

*A Company of Volunteer Rifles existed in Nanaimo, but government neglect, the absence of a Drill Shed and the lack of a trained drill instructor had thinned its ranks to one officer and about 12 other ranks in 1877. None of these men were properly trained.

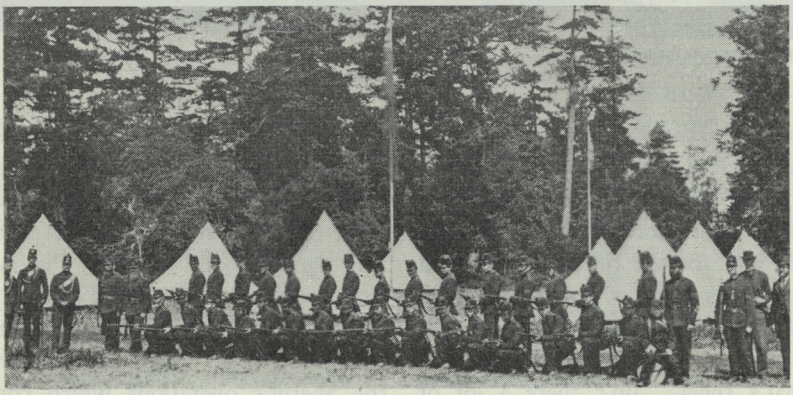
Provincial Archives, Victoria, B.C.
Wellington, B.C., on Vancouver Island (*circa* 1877).

few remarks were heard to the effect that 'a dose or two of buckshot would clear 'em all, out;' 'they had come to eat turkey 'till they bust';" etc. Some of the riflemen were told afterwards that when the miners first spied the 'sodgers' they exclaimed to one another 'My God, what's them'; 'ain't there a lot of them too'; and the yellow cuffs, collars and facings of the Seymour Artillery caused that Corps to be taken for Royal Marines."

Arriving at the centre of the mining community the militia took up central positions from which they could observe the movements of the Sheriff and police in whatever direction their duty should call them. By this time a body of seventy or eighty miners had gathered close to the soldiers and endeavoured to annoy the men by some harmless jeering and offensive remarks. The militia, however, remained steady at their posts and ignored the taunts. Finding they could not provoke the men into a rejoinder of any kind the miners dispersed, some going to observe the Sheriff's operations which consisted in the enforcement of some twenty writs of ejectment.

While the Sheriff was busy at this task, several policemen had arrested three strike leaders for whose arrest warrants had been issued a few days previously. This accomplished, those arrested were put under a military escort and led away. Thus freed of their charges, the police went to the aid of the Sheriff and his men. The latter were not having an easy time

of it for, although not actually assaulted, they were much impeded in their work by the miners "who took favourable opportunities of throwing sacks and other harmless things over their heads when they were occupied in carrying furniture and chattels from the houses." However disagreeable this and similar incidents were to the special constables, the troops made no move to interfere. They were there solely to prevent the occurrence of a riot or disturbance of the peace, neither of which showed any signs of erupting.



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The Victoria Volunteer Rifles.

At 4 p.m., having completed about one-third of his business, the Sheriff ceased his work. Lt.-Col. Houghton thereupon prepared to withdraw his militia for the night. However, Mr. Spalding, the Stipendiary Magistrate under whose orders the militia commander had placed himself when he arrived at the colliery, informed Colonel Houghton that he feared the strikers might damage the mine and its machinery if it was left unguarded during the night. To prevent this No. 2 Company, Victoria Rifles, stood guard on the premises until morning.

On the following day rumours were circulated that a strong body of men were coming over from Nanaimo to reinforce the Wellington miners. At the same time the special constables expressed a desire to have the soldiers stationed closer to them to prevent a repetition of the previous day's insults. In Wellington itself, however, the local populace were quieter and Colonel Houghton thought it advisable to change the disposition of his men. Despite the rumour of additional men coming from Nanaimo, he decided to keep no

more than one company in Wellington itself. The other two rifle companies were stationed at Departure Bay, while the Artillery Company posted sentries on the wharf and gangplank of the "Maude" to guard against the escape of the strike leaders as well as to prevent any of the militia from straying into the nearby town of Nanaimo.

In Wellington itself the commander of the rifle company on duty, in consequence of the complaints of the Sheriff's men, advanced one section of his company as a piquet to within some thirty yards of the Sheriff's scene of operations. The remainder of the company was disposed from time to time in such positions as to have his operations well in view and within easy supporting distance.

This combination of prudence and flexibility was an effective system, permitting the civil officers "to perform their functions without any further interruption of interference on the part of the miners." The rumour of additional miners coming from Nanaimo proved to be unfounded and the Sheriff's work continued unabated throughout the day. By 4 p.m. he reported to the Stipendiary Magistrate that his work was accomplished, and that officer in turn informed Lt.-Col. Houghton that he had no further need of the services of the militia. Colonel Houghton immediately gave orders for the withdrawal of all the soldiers from the mining town to the steamer "Maude". This was speedily accomplished, and late that same night the "Maude" set her course for New Westminster.

Early on the following morning the New Westminster units were put

Provincial Archives, Victoria, B.C.

The paddle-steamer "Maude".

ashore and dismissed by Colonel Houghton. A few hours later the "Maude" set sail for Victoria. Head winds and tides impeded her progress, and further delay of almost two hours occurred when the steamer got stuck on the sand-banks at the mouth of the Fraser River. By the time the "Maude" was nearing Victoria night had fallen—"a night as dark as it is well possible to imagine."

Under these circumstances, and while about fifteen miles from the harbour mouth, the "Maude" and her passengers had a close brush with disaster. Colonel Houghton gives a vivid description of the incident:

"The Captain (of the steamer) feeling confident in his knowledge of the locality, pushed on slowly for some time when suddenly a violent shock intimated but too clearly that we had struck on a rock, and the violent bumping and surging of the steamer seemed to threaten imminent danger of her speedy dissolution.

"For a moment panic prevailed and some of the men rushed to the only two small boats the steamer carried and began to try to get them lowered. The boats were not capable of containing more than ten men each, and there were some ninety men on board including all hands, and although we were not more than fifty yards from an Island I anticipated more danger from men being lost through the boats swamping in the surf, than by remaining in the steamer where we were.

"I therefore ordered the men to desist immediately from their attempts to lower the boats and detailed officers and sentries to stand guard over them and prevent any person from interfering with them. I then instructed all the men who had not already done so, to put on life-preservers, and await patiently the orders from the Captain of the ship, which were duly transmitted to them through me. They immediately obeyed, and the panic was over in a moment, and the men cool and collected and thoroughly amenable to discipline in less than three minutes after the steamer had struck on the rock."

A quick check revealed that although she was taking no water, the "Maude" was fast on the rocks, resting in two places nearly amidships just fore and aft of the paddles. Every possible effort was made to ease the steamer off the rocks but to no avail. A falling tide made further efforts fruitless, so the men were told to get what sleep they could until help should come.

At daybreak an Indian with a canoe was hailed. The Police Superintendent and one of the militia

men were landed at the nearest point of Vancouver Island, about two miles distant, and despatched to Victoria for help. The soldiers, meanwhile, were taken off the steamer and landed on a small island nearby, there to await the arrival of their rescuers.

Help was not long in coming. At about 10 a.m., five hours after the Indian in his canoe had been hailed, a steamer from Victoria, the "Cariboo Fly", arrived to pick up the men. Using the small-boats of both steamers the soldiers were taken off their small island and embarked. Within an hour of this operation the "Cariboo Fly" landed the men in Victoria. Here they were marched to the centre of the town and dismissed, giving three rousing cheers for Lt.-Col. Houghton as they did so.

Few will disagree that the "expedition" described above constituted a model of a disagreeable task well executed by a body of untried militia. Were there any benefits to the miners or militia from this action? There were, in both a negative and positive sense. Lt.-Col. Houghton sums this up in the concluding paragraphs of his Report:

"There can be no doubt of the fact that were it not for the presence of the Militia at Wellington, the miners would have continued to set the law at defiance, and I am strongly of the opinion that had I sent up a small force they would have met with resistance and the affair unhappily would have ended in blood-shed.

"I think the movement will have a good moral effect upon the country, and I am satisfied that it has already given a stimulus to the Militia of this Province, which will have a beneficial effect upon the organization in the future."

Lt.-Col. Houghton was probably correct in his first opinion, and events proved him right in the second. Oddly enough, in the next few years military records show that there were more volunteers from Wellington enlisting in the Nanaimo Rifle Company than there were from Nanaimo itself.

Sources of Information

The main source of information for this article is found in the *Report of the Deputy Adjutant-General, Military District No. 11, With Reference to the Calling Out of the Militia . . . , 4 May 1877* in the military records of the Public Archives. Newspaper accounts in the Victoria "Daily British Colonist" during February-May 1877, and material in the files of the Office of the Adjutant-General of Militia, 1874-1879, provide supplementary information.

Courtesy the Public Archives of Canada.

The York and Simcoe Battalion passing through the Touchwood Hills, May 1885.

Flashback: No. 4

THE YORK AND SIMCOE BATTALIONS IN THE TOUCHWOOD HILLS

NARRATIVE SUPPLIED BY THE HISTORICAL SECTION,
ARMY HEADQUARTERS, OTTAWA

The photograph on the opposite page shows the York and Simcoe Battalion passing through the Touchwood Hills, early in May 1885, during the North-West campaign. They are marching from the base at Fort Qu'Appelle to the advanced base at Humboldt, fifty-five miles southeast of Batoche, Riel's headquarters, where the longest and heaviest engagement of the rising took place.

The York and Simcoe Battalion was a composite Militia infantry unit raised *ad hoc* for this campaign. It consisted of four companies of the 12th Battalion of Infantry, "York Rangers", whose headquarters were at Aurora, Ontario, and four companies of the 35th Battalion of Infantry, "Simcoe Foresters", with headquarters at Barrie, Ontario. It was commanded by the latter unit's C.O., Lt.-Col. W. E. O'Brien, M.P.

After the temporary setback at Batoche on 9 May, Major-General Frederick Middleton (G.O.C. Canadian Militia), in command of the North-West Field Force, ordered the troops on his lines of communication to move nearer the front. The York and Simcoe Battalion, which had been in garrison at Fort Qu'Appelle, marched 150 miles via the trail which threaded the Touchwood Hills to Humboldt, where advanced stores had been deposited and were under protection of The Governor General's Body Guard for Ontario, now The Governor General's Horse Guards (3rd Armoured Regiment). The Winnipeg Battalion of Infantry (later 95th Battalion, Manitoba Grenadiers, today perpetuated by the 12th Manitoba Dragoons (18th Armoured Car Regiment)) also moved forward from Troy (now Qu'Appelle) to Fort Qu'Appelle.

The men of the battalion are wearing the full-dress uniform of the day—scarlet tunic and spiked helmet. The white-helmeted horsemen are obviously constables of the North West Mounted Police. The mounted officer on the right of the column is probably Lt.-Col. O'Brien; a magnifying glass reveals that he is wearing luxuriant white whiskers. Some of the transport in rear of the column appears to consist of ox-carts.

In September 1929, the two regi-

SOME THOUGHTS ON MORALE

By
COLONEL E. R. RIVERS-MACPHERSON, OBE, FRGS, FRSA,
THE GORDON HIGHLANDERS (RET.)*

INTRODUCTION

The following thesis governed the teaching at the School of Infantry, Barnard Castle, during the last war:

"War is won by MORALE, FIRE and MOVEMENT in combination; they must, therefore, be studied together. Morale, which expresses itself in the aggressive spirit, is the only motive power in the face of the enemy—at least in a forward direction—that the war machine possesses. Without it tactical conceptions are just academic wishful thinking, for they will not be implemented on the battlefield. Without it, your men will not move forward! The maintenance of our morale and the breaking down of that of the enemy, therefore, requires to be our FIRST task. We have always paid lip service to the dictum that the morale is to the material as three to one, yet we give it less than one-third of the attention!"

The above in the main forms the background of present-day teaching, and I suggest that we might add a second trilogy, implementing it as follows:

Morale is born of confidence, and confidence is built up on:

1. Good Leadership.
2. Good *Matériel.*
3. Personal Fitness.

LEADERSHIP

In the limited scope of this article it is not proposed to expand further on FIRE and MOVEMENT, but it is admitted that you cannot have fire without movement, nor movement without fire, and both are dependent on morale.

Morale remains one of those indescribable words, of which it is quite impossible to give a concise definition; our dictionaries are exceedingly discreet on the subject, describing it as merely a word which inspires confidence and discipline. One must admit, however, that, in simple language, morale should engender a frame of mind which makes a

* *The author is a member of the United Services Institute of Ottawa. This article is reprinted from* The Army Quarterly (*Great Britain*).—Editor.

Flashback: No. 4

(*Continued from preceding page*)

ments, then known as The York Rangers and The Simcoe Foresters, were awarded the Campaign Honour "North West Canada, 1885". Both regiments have changed their roles. The former is now The Queen's York Rangers (1st American Regiment) (25th Armoured Regiment), R.C.A.C., and the latter is the 45th Anti-Tank Regiment (Self-Propelled) (Grey and Simcoe Foresters), R.C.A.

man willing to follow his leader even under severe stress or great danger, and also a desire to carry out one's duty even when not under control of a superior officer. Of course such qualities as those, will largely depend on their leaders, admiration for those in immediate control, and, above all, confidence in the higher command.

A good deal has been written on this subject by Professor C. W. Valentine, formerly of the University of Birmingham, and while the general principles governing morale alter but slightly over the ages, the conditions for developing morale have considerably altered in recent years owing to great advances in education, economic conditions, etc. The average man is much more questioning today, and wishes to know the why and wherefore of everything and so on. In other words, there is a more critical attitude which, whilst adding to the difficulties of the administrative officer, is capable of being developed on productive lines with a much greater result.

Naturally the handling of this more critical attitude requires tact and discrimination, but if this is done we shall carry the men 100 per cent. One saw this attitude highly developed in the 8th Army during the last war by General Montgomery, who set an outstanding example of how to develop morale. The latter by his dynamic personality and by his insistence that his big ideas in any battle should be made clear to even the lowest private, engendered a wonderful spirit of co-operation and gave the men absolute confidence in their leader.

Let us now consider a few points which have a great bearing on this question of the development of morale. The *Daily Telegraph* during the last war summed up the question succinctly as follows:

"In the old Army there was a blind obedience, the result of strict discipline, which was often confused with loyalty to one's Officers and to the Army. To-day there is a much more questioning quality in the loyalties of the other ranks. The N.C.Os. and men nowadays are not blindly loyal to their senior Officers just because the latter happen to hold the King's commission. They first wish to satisfy themselves that their Officers are thoroughly capable, and, as intelligent men, they take mental note of every action, look and word of their seniors, and assess them either as simply Officers who have to be saluted, or as good Officers whom they would follow to hell and back."

I suggest we must admit that the above statement is based on sound premises and encourages us to consider the men's aspect from the point of view of performing unnecessary acts which only serve to irritate. We must not forget that irritation always produces mental fatigue, and the latter definitely lowers morale. It is obvious therefore that we must seek out the causes of irritation and eliminate them if possible. There is no doubt the men are often asked to perform a lot of unnecessary jobs

which could be avoided. I will just quote a few such examples:

(*a*) An N.C.O. wasting ten minutes of snap-shooting practice insisting that all ground-sheets should be in a straight line and not even half an inch out. The fact that the sheets were displaced as soon as the men got down to position apparently never occurred to him.

(*b*) In demonstrating the Bren gun the men had to be in single file, the first man by the barrel, the last man being so far away that he could not see a thing.

(*c*) A whole company detailed to attend a concert because of lack of support.

(*d*) For omitting to return a library book (through working to 10 p.m.) given 7 days C.B.

I have quoted just a few from an official report, which certainly would tend to reduce confidence in those responsible for such things. And even when the wrongs are imaginary this may have its disadvantages. "The men who brood over imaginary wrongs soon become discontented." I quote from a Service manual—and how true it is!

Sometimes a situation will occur when the officer responsible is faced with a quick decision, often unorthodox, which will either enhance or lower morale; in situations of this nature, a sense of humour is important. To illustrate this point, I well remember an incident in West Africa. As is well known, the West Africans have a keen sense of humour, and when identity discs were issued on the outbreak of war in 1914, the O.C. of a certain company, who sported a monocle, was speechless when he arrived on parade to find all his men wearing a disc stuck in their left eyes, in exact imitation of their C.O.! The latter quickly recovering his sang-froid, shot his monocle into the air by contracting his eyebrows (a trick he had learnt) and said to his men: "That is more than you can do!" Then everybody laughed and all was well—the men would have followed their Commander "to hell and back." If orthodox disciplinary measures had been taken the morale of that company, if not the battalion, would have suffered severely.

A well-known judge once said that it was important not only that justice should be done, but that justice should *appear* to be done. Many things, of course, must be done in Army training for which a full explanation cannot be given to the men. But there should be an alert watch for things likely to go against the grain and which are likely to appear unnecessary and the reasons for those given.

It will be appreciated that the average intelligence of the Army to-day is undoubtedly higher than that of the First War, and whilst

possessing this intelligence their personal bravery in the field is in no way impaired; the galaxy of awards for personal acts of bravery in the last war bears testimony to this. Wellington truly said that there were no bad regiments, but only bad commanding officers—the latter makes or breaks his men.

Great leaders have always attached importance to morale, for example, the famous General von Moltke, whose plans were so complete when France declared war in 1870, said: "Now I can lie on the sofa and read a novel." That set a tremendous example to his Staff. Again, to come to more recent times, the well-known German General von Rathneau stressed the point that hero-worship should be cultivated, especially by senior officers, to stimulate morale, as if hero-worship could be developed the effects would be far reaching. The General himself, when his troops were held up on the Volga, swam the river in the first German advance, and it was reckoned by this spectacular act morale was boosted by the equivalent of a division attacking. Again, one hour before zero at the Battle of Alamein, i.e. 21.30 hours, General Montgomery saw his senior officers for a few minutes and finished up with these words: "I am going to bed now, gentlemen, and I am being called at 6 a.m." The effect of this dramatic announcement, that the Army Commander was retiring to bed one hour before zero, inspired all his subordinates and boosted morale to a remarkable degree.

We must be careful, however, not to develop our hero-worship on vulgar lines, but in a perfectly decorous manner, as long as we get it over to the men that we are leaders in the truest and highest sense.

Matériel

The care and maintenance of all Army Equipment has always been one of the neglected sides of our military life. The last war emphasized its importance in sustaining the aggressive attitude. The late Field-Marshal Haig stated that the best Commanding Officer in the field always ensured that his equipment was in first-class order. This is almost a platitude now. In the last war the Germans realized the importance of care and maintenance of their equipment, and any mal-treatment of the latter was punished severely and often brutally. Neglect of equipment breeds lack of confidence in the latter, and subsequent lowering of morale.

The change-over to a mechanized Army has stimulated the vital importance of adequate care and maintenance; any neglect of the latter would produce immobility and defeat.

One word might be said of the importance of good packing. A good deal has been written and said on the subject, but it might not be out of

Robot Pilot

A new robot device has been developed for the [U.S.] Air Force that enables a plane to take off, fly to a given destination, and land without a human hand touching the controls.

The device, which operates something like the old-fashioned player piano music roll, is not the same as pilotless flight, since a human pilot is present in the plane.

Called the automatic master sequence selector, the robot device is intended for automatic long-range flights from coast to coast, or across the ocean, to relieve the pilot of his manual duties and make him simply a flight "monitor". It employs a highly intricate electric "brain" which receives instructions from a punched tape.

A special coding device punches the tape according to a flight plan made out in advance. The plan is divided into such sequences as taxiing down the runway, take-off, climbing to altitude, directional heading toward the destination, and landing.

Since the device also controls the plane's air speed, the flight is made in the length of time specified in the plan.—*News release.*

Some Thoughts on Morale

(*Continued from preceding page*)

place to mention, that a crisis was only narrowly averted after the first landings in North Africa in the last war, when units' equipment not only arrived damaged, but often smashed beyond repair, all due to careless packing.

Personal Fitness

There are so many instructions, both official and semi-official, on this important point that it hardly needs stressing. The personal fitness of Field-Marshal Montgomery in the last war illustrated what a valuable asset it was. With fitness we naturally associate personal appearance and military bearing, which, of course, includes saluting. Sir Winston Churchill stressed this point when he commented on the appearance of the 8th Army in their victory march at Tripoli, that after 1,400 miles of desert fighting they looked like Guards on parade. Personal fitness engenders a sense of well-being and is a great morale booster. Thus we have all the "bricks" for the building up of morale, which if truly laid will support us in times of danger like Dunkirk, or lead us to great and honourable victories in defence of our homeland.

BEAGLING AS TRAINING FOR WAR

By
CAPTAIN J. A. GILLANDERS (THE ROYAL CANADIAN REGIMENT),
PHYSICAL TRAINING INSTRUCTOR AT THE P.T. WING, CAMP BORDEN, ONTARIO

The author was prompted to write this article after he took over the management of a pack of beagles at the School of Infantry, Camp Borden, during his spare time. An interested group of Canadian officers purchased the beagles in England, and they are maintained at no expense to the public. However, as Captain Gillanders explains in his article, a pack of hounds can be used for a more serious purpose than sport; he draws on historical records to prove that they can be used as training for war. The views expressed by the author are not necessarily those of Army Headquarters.—Editor.

* * *

Hunting, aptly described as "The sport of kings, and the image of war without its guilt", has been associated with military training for several thousand years, and the long, embittered history of war is interlaced with numerous examples of this particular medium of instruction.

Xenephon, renowned Greek general and scholar, whose teachings undoubtedly influenced both Alexander the Great and the Romans, considered hunting to be an ideal means of training his young soldiers. Queen Boadicea encouraged her warriors to hunt before going into battle, subsequently leading them to victory on the heels of their successes in the hunting field. Edward III took two packs of hounds with him to the battlefields of France, and the great Duke of Wellington maintained a pack of sixteen couple throughout the Peninsular Campaign.

In more recent times, Edward VII sent twelve couple of his own hounds out to Lord Kitchener in South Africa where they were used as a means of exercising chair-borne staff officers in Pretoria. During the First World War hounds were included in the impedimenta of the British Expeditionary Force, and at least three packs, including one of beagles, were hunted in France and Belgium for the benefit of troops in rest areas.

Present-day records show that since the end of the Second World War at least twelve packs have been formed by British units in Europe, whilst, in England each of the three armed services maintains a pack at one or more of its schools of instruction.

Thus history clearly shows that hunting and soldiering have long gone hand-in-hand, with the sport as an adjunct to the profession. Despite this, however, the critic may find it hard to reconcile beagling with train-

ing for war particularly in view of the latter's most modern and mechanized form. Yet the fact remains that many of the principles of war are equally applicable to beagling, and to follow hounds with any degree of success demands the same qualities that are demanded of the present day soldier.

Briefly, the *Aim* of beagling is to hunt and destroy hares by the exclusive use of a pack of hounds under the control and leadership of a huntsman assisted by several whippers-in. Achievement of the aim is dependent upon all the following factors:

Morale: Physical and mental well-being of both hounds and hunt staff.

Offensive Action: The very essence and spirit of hunting.

Surprise: Inherent instinct combined with tactical handling.

Concentration of Force: Again, the combination of instinct and training illustrated whenever hounds are hunted.

Co-operation: The bounden duty of hunt staff and followers alike.

It is this last-named principle which is the immediate concern of the follower, and by its strict observance he will be able to find, in the hunting field, many a valuable lesson to apply during the course of his military career. Although beagling is essentially an onlooker's sport, the follower should never fail to appreciate the fact that he is also an active participant, and may, at any time, be called upon for assistance. His status is somewhat similar to that of the rear-echelon soldier who, even if he never fires a shot or sees an enemy, still plays an important role in the winning of a battle by virtue of keeping the fighting troops supplied.

Perhaps the most important of the follower's "duties" is that of remaining silent: nothing can be more distracting to hounds working out a line than a lot of idle chatter or yells of encouragement. The concentration necessary is almost unbelievable and the slightest noise is sufficient to raise their heads and destroy the huntsman's train of thought. Besides which, noise means loss of surprise and consequently a direct violation of one of the most important principles of war. For those who have participated in a silent night attack this point will be abundantly clear.

If silence is to be maintained how then does the follower convey information to the huntsman? Simply by holding his hat in the air, which has the effect of attracting the huntsman's attention and which will bring him, or one of his whips over to receive the information offered.

Every soldier knows, or should know, his field signals; likewise every follower should take the trouble to learn the signals practised in the hunting field. A cap raised in the air then pointed in the direction taken by a hunted hare will provide

the same information to a huntsman that a rifle held in the air and pointed in the direction of the enemy conveys to a platoon or section commander.

Should information need to be given verbally, however, the manner of its delivery should be the same as that used on the battlefield—clear, concise and accurate. Garbled reports are as useless to a huntsman as they are to a platoon commander, and the results inevitably the same—confusion, delay and possibly even failure in achievement of the aim. The hunting field is one of the best places in which a young soldier, be he private, NCO or officer, can learn to pass on information. Clarity of thought and fluency of expression can be developed with all the accompanying excitement of the chase without, in the event of error, the dire consequences of battle. Practice in the one will bring perfection in the other.

In order to acquire the ability to pass on information the follower must first learn to use his eyes and ears so that he may be able to present a true picture of what he sees. By learning to *describe* ground he will eventually learn to make an appreciation of it. The correct use of ground plays a vital part in any phase of war and there is no better or simpler place in which to learn its use than in the hunting field, following beagles across country. How many soldiers, or even officers for that matter, can describe accurately and in detail, ground they see in front of them. And how many, I wonder, can go on to describe the ground they cannot see, simply by making a logical appreciation of the evidence nature provides.

The critic may decry this last remark, yet the fact remains that a great deal of dead ground can be fairly accurately pictured if that which is visible is correctly appreciated.

To an observant follower, a hunted hare will frequently provide outstanding examples of the use of camouflage which, with little difficulty, could well be adopted for training purposes. For instance, it is not an uncommon occurrence to see hounds, huntsman and followers draw right over a hare sitting in the middle of an open field. Her colouring, blended perfectly into the ground, and her utter immobility, even when but a few inches from sudden death, defies detection, and only the sight of the hare fleeing rapidly in the opposite direction to that taken by hounds will offer any evidence of her ever having been there. Frequently she will run through a hedge into another field, double on her tracks, take several huge hops to one side or another and then squat, blended into the foliage to watch hounds go careering past, out into the field only to lose her line where she back-tracked.

Although camouflage plays an important part in the deceptive instincts of a hare, it is not the only one, and the followers will find many others equally instructive should he take the trouble to seek them. Every possible device is used in attempts to elude the almost certain death awaiting her should the hare fail to exploit her natural instincts to the full.

At first the follower may find it a little difficult to extract any useful pointers from the tortured twistings and turnings of a hunted animal, but a few minutes reflection should reveal the *Aim* of any withdrawal, which is "to break contact with the enemy". Every ruse, device or stratagem employed by the hare is designed to achieve this aim, while every savage instinct roused in the hounds is designed to frustrate it. By watching the tactics of both hunters and hunted the follower can very easily imagine himself watching the tactics of opposing forces in the field. The advantages will be apparent. No sand-table or cloth-model can ever produce the image of war that a pack of hounds in full cry after a desperate hare produces. And no TEWT can even offer as many practical examples of the principles of war as can a day's beagling.

Quite apart from a purely visual aspect, however, beagling offers a number of other objective lessons. It is not a fair-weather sport for the indolent. Rain or shine, in the heat of late summer or the chill of early winter it demands physical fitness, endurance, dash, initiative and personal discipline. If the follower intends to be "in at a kill" he must first make certain of being physically capable of doing so. It is not so much a matter of being able to run fast over long distances as being able to negotiate the ground and its attendant obstacles in a manner that is least fatiguing. No soldier in his right senses would dream of wading through a swamp if he could reach the other side by going round it. The hounds and huntsman might go through but an alert follower, by checking the general direction of the pack and noting, perhaps a tendency to swing right or left, would make a snap decision, set off at a jog trot and arrive at his chosen spot undistressed and fully capable of continuing the run. A few days with hounds will help develop in most followers who are prepared to take the trouble to learn, a useful "eye for country", and a healthy pair of lungs.

The soldier who aspires to be an NCO, or the NCO seeking a commission, can do no better in the furtherance of his aim than to spend his spare time following a pack of beagles at every opportunity available. Watching hounds and fulfilling his own obligations will develop in

him the qualities most sought in a good soldier, and by seeking a military parallel in every aspect of beagling he will be provided with a wealth of practical experience in training for war. Should he wish to make an even deeper study he could well devote some time to hounds in kennels where he would find several worthwhile examples of practical administration in the care, feeding and general maintenance of hounds.

Animal-management is more closely related to man-management than most people realize: the principles are almost identical, and failure to observe them is apparent for all the world to see. Poor hounds present an unspoken criticism of their huntsman just as the poor soldier denotes bad leadership.

The qualities demanded of a huntsman in relation to his calling are those demanded of every officer, and to emphasize this point let me quote the words of Peter Beckford in "Thoughts upon Hunting" and see whether or not they can be applied almost word for word to the qualities of good leadership. "He should be young, strong, active, bold, and enterprising; he should be sensible and good tempered, fond of the diversion, and indefatiguable in the pursuit of it; he ought also to be sober, he should be exact, civil, and cleanly; his voice should be strong and clear; and he should have an eye so quick, as to perceive which of his hounds carried the scent, when all are running, and should have so excellent an ear, as always to distinguish the foremost hounds, when he does not see them. He should be quiet, patient, and without conceit. Such are the excellencies which constitute a good huntsman; he should not, however, be too fond of displaying them, till *necessity calls them forth*. He should let his hounds alone, *whilst they can hunt*, and he should have genius to assist them, *when they cannot*".

Could a better description be asked of the ideal officer?

If all that I have written here be true, the reader, now, will probably be wondering if he will ever be offered the opportunity to discover for himself the benefits proclaimed. If hunting can play so important a part in training for war why is there no pack in Canada, particularly in the Army?

There is. The School of Infantry at Camp Borden, following the example of the British School of Infantry at Warminster, now maintains a pack of six couple. True to the traditional affiliation between the Canadian and British armies, the hounds originate from the kennels of the Royal Military Academy, Sandhurst, and the Aldershot Garrison. History has pointed the way and the first step has been taken; time alone,

RADIO PHYSICS RESEARCH

A Report Prepared by the Defence Research Board, Ottawa, Department of National Defence, Ottawa

One of two research groups which together comprise the Defence Research Telecommunications Establishment, the Radio Physics Laboratory (RPL)* is responsible for radio propagation research problems and in particular, with the investigation of radio communication in the Arctic where the presence of the auroral zone creates unique difficulties.

A unit of the Defence Research Board, RPL developed from the Canadian Radio Wave Propagation Committee (CRWPC) which co-ordinated the wartime research of the Services in its field. The CRWPC, initiated by the Royal Canadian Navy, also embraced the supervision of the ionospheric recording stations operated by the Armed Forces.

Its wartime activities yielded such important results the committee continued after hostilities ended and early in 1947, the Navy provided it with a building on the Prescott Highway. This was used to house the scientific staff and the unit was called the Radio Propagation Laboratory. A few months later, it was renamed the Radio Physics Laboratory on becoming part of DRB, also created the same year.

The new building opened officially last February has been specially designed to meet the needs of research workers in the field of radio physics and will continue to probe Canadian radio telecommunication problems. As well, it will continue to serve as the centre of a comprehensive system of nation-wide ionospheric recording stations operated for DRB by the Department of Transport.

One of RPL's major functions is to attack and provide usable and acceptable solutions or alternatives to the numerous radio telecommuni-

*The laboratory, situated near Ottawa, was opened last February. It is directed by J. C. W. Scott, Deputy Superintendent of the Defence Research Telecommunications Establishment, who is a specialist in the field of electrodynamics. —Editor.

Beagling

(Continued from preceding page)

now, will be able to tell whether the principles of war and qualities of leadership can be learnt on the hunting field and applied on the battlefield as the great military leaders of the past so firmly believed.

cation problems that bear strongly on the effective defence of Canada.

The auroral zone renders ionospheric conditions at high latitudes variable and unstable unlike those elsewhere in the world. Effects in this zone, peculiar to Canada's northlands, originate from charged particles emanating from the sun which deflected by the earth's magnetic field, enter the ionosphere hundreds of miles above the earth.

In addition to producing irregularities in the auroral zone itself, these particles cause magnetic disturbances disrupting to high frequency radio telecommunication, particularly at high latitudes. This results in disturbed skywave telecommunication.

The degree of ionization of the reflecting layers high above the earth determines the highest frequency it is possible to use at any given time for long-distance telecommunications. As well, absorption of radio waves, either within or near the auroral zone, limits radio signal strengths in the north.

Other fields for research are those associated with navigation, detection and control. They involve not only the Armed Services, but also other government and civilian services. It is these and other similar problems which claim the attention of RPL scientists.

Together with its associated experimental field areas housing small research buildings and eight ionospheric transmitting-receiving installations, the laboratory was placed about 15 miles from downtown Ottawa on the western outskirts of the city to achieve relative freedom from objectionable electrical noise and interference. The site includes about 540 acres of flat land suitable for use by the laboratory.

A self-contained unit, RPL is composed of six main research sections and includes as well a scientific library, a kitchen and lunchroom, photographic section and other services.

In addition to its normal laboratory activities RPL is responsible for the technical operation of eight ionospheric stations staffed and operated by the Department of Transport and scattered across Northern Canada.

The technical records obtained from these stations provide raw scientific data which is developed into a major information source on the behaviour of the ionosphere under the influence of polar phenomena. Of pronounced importance to the work of the radio prediction section, this data has been used for years by Washington's Central Radio Propagation Laboratory for forecasts on world-wide radio propagation conditions.

RPL provides as well consulting services in specialized fields of radio telecommunications to the Armed

Forces and to other government agencies. Staff members work frequently with other scientific research groups and universities in Canada and elsewhere on a co-operative or semi-permanent loan basis.

An expanded mesh copper ground screen buried beneath the footings and foundations of RPL's main building makes it a unique structure in Canada. This screen extends for 25 feet beyond the foundation in all directions and grounds the building completely. Rows of glass blocks above most windows facilitate entrance leads from or to anntenæ on the roof and cables and ducts in all floors serve the same purpose. To minimize internal electrical interference, the entire elevator shaft is lined with copper sheathing. Mountings for a variety of masts and antenna systems dot the roof and parapet. Some are carried through to the foundations for extra strength.

Because of its association with the Armed Services and the ionospheric stations, RPL possesses unusual opportunities for long distance research projects. For example, one end of a communication circuit can be installed at Ottawa and the other at one of a dozen locations thousands of miles distant. Similarly, research can be carried out along, across or above the auroral zone by choosing from the variety of available locations.

The contribution of RPL scientists to improvement of Canada's various communications systems has been a notable one. With new permanent quarters and the finest equipment and facilities available, that contribution promises to become one of continuing value.

Tactics

It seems also that he who devises or develops a new system of tactics deserves special advancement on the military roll of fame. All tactics since the earliest days have been based on evaluating an equation in which x = mobility, y = armour, and z = hitting power. Once a satisfactory solution has been found and a formula evolved, it tends to remain static until some thinking soldier (or possibly civilian) recognizes that the values of x, y, z have been changed by the progress of inventions since the last formula was accepted and that a new formula and a new system of tactics are required.—*Field Marshal Earl Wavell.*

Follow Up Victory

It is the duty of the cavalry to follow up the victory and prevent the beaten enemy from rallying.—*Maxim of Napoleon.*

HIGHER COMMAND IN WAR

Some Notes of a Lecture given by Field-Marshal Sir William Slim, GCB, GBE, DSO, MC, when Chief of the Imperial General Staff, as recorded by Wing Commander R. F. Pemberton, MC, TD, MA.*

A Military commander commanding a force of all arms in battle may be aptly compared with the conductor of a symphony orchestra conducting one of his own compositions, but with this difference: the conductor and his orchestra are comfortably and compactly established in an air-conditioned and acoustically designed concert hall whereas the commander and his forces in battle are spread over a vast area in the most uncomfortable circumstances imaginable and they must "do their stuff" to the accompaniment of violent explosions and earthquake shocks under a hail of bombs and bullets, rockets and shells. Yet it is a good simile, for the commander in battle and the conductor in his hall are both artists.

These were among the important points made by the former C.I.G.S. at a lecture he gave in the Senate House of the University of London at 1730 hrs. on 22nd October, 1952, only ten days before he relinquished his War Office appointment to become Governor-General of Australia.

His subject was "Higher Command in War", and he insisted that every great commander is an artist and for that reason must be allowed to paint his picture in his own way. For the same reason, anyone who aspires to high command should not try to model himself on any other commander; but he should develop his own technique out of his own experiences, modified and amplified by his study of the experiences and techniques of others. "It's no good your putting up two badges on your beret and thinking you're like Monty," said the C.I.G.S., "because you're not." When lecturing on command, a commander has to be careful to avoid the suggestion that his own technique is the only right one, or even the best one for it would probably not suit another without considerable modification; and if challenged afterwards by someone who claimed that his way was better, the lecturer's answer should be: "Better for you, perhaps, but not for me."

The Military Mind

Command is a very personal thing, the C.I.G.S. continued. It is an

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extension or projection of the commander's personality. And it originates in the mind. Many scathing things have been said about "the military mind," most of them without justification. But there is, of course, and must be, a military type of mind, just as there are medical minds, business minds and scientific minds. Each one has its own methods. Your scientist for example is a very cautious man; and if you ask him a scientific question, he will probably reply that he must conduct some experiments and compare his results with a fellow scientist on the other side of the world. "Come back in six months' time," he will say, "and I'll give you an answer."

But when a commander has to make a decision in the course of a battle, it's no good his saying, "I must study the war books and consult my friends in other theatres of war." He cannot say, "Come back in a month," or "a week," or even "tomorrow," for he wouldn't be there. He must give a decision there and then, for better or for worse, knowing all the time that his information is incomplete and much of it probably wrong. An immediate decision is imperative. All the commander can hope to do, therefore, is to give the best decision possible in the circumstances and at the time, and never mind what the military historians may say in the future.

Reduced to its essentials, the exercise of command is the same whether you are commanding a section of six men or an Army group of one and a quarter million. The commander's job is to impose his will on others by example, by persuasion and by compulsion. But in all higher commands there are three elements upon which the effectiveness of the command depends. They are: (a) the commander himself; (b) his headquarters; and (c) his contacts with those whom he commands.

The Commander Himself

It goes without saying that a commander in the field must be physically tough, but he must be mentally tough as well. Since command is the extension or projection of the commander's personality, personality is essential and it must be personality of a certain sort. The personality of a good commander is compounded of many things, the chief of which are: (a) will power; (b) judgment: (c) flexibility of mind; (d) imagination; (e) knowledge; and (f) integrity. Each of these calls for brief exposition.

Will Power—As the commander is the main-spring or driving force of his command, he must exert will power of a high order. He must, by the exercise of his will, overcome the opposition (i) of the enemy; (ii) of his own staff and subordinate

commanders; and (iii) of his allies. The opposition of the enemy is, of course, to be expected, and to impose his will on the enemy is the commander's main task. He must also be prepared for opposition—sincere and well meant, but still opposition—from his staff and subordinates among whom will always be found those who say, "This can't be done." But the opposition of allies is sometimes the worst of the three and the most difficult to overcome. Will power is based on courage, on moral courage even more than on physical courage. "A good commander must be as big as his job and not afraid to lose it."

Judgment—A commander is continually having to choose. He must choose his subordinates and he must choose between alternative courses of action. Judgment will enable him to choose wisely and that involves picking out the essential factors and recognizing their relative values. When he was commanding troops in the field, the lecturer adopted the following slogan and insisted on its being observed:

"NO DETAILS!
NO PAPER! NO REGRETS!"

Many commanders, he said, had ruined themselves by regretting their mistakes. He also had another rule for his own observance when he had reached high command. It was: "BED AT TEN AND UP AT SIX" and he heartily cursed anyone who disturbed him between those times. When emphasizing the importance of will power and judgment, however, it is important to realize that strong will power, if not linked with sound judgment, can be a very great danger.

Flexibility of Mind—The commander must always be ready for changes in tactics or weapons. Changes in the tactical situation may be very sudden and very rapid. So the commander must be prepared to change his tactics completely at any time. It was a conspicuous fault of the Japanese commanders that their minds were not flexible. They would persist in their original plans long after changes in the situation had rendered those plans abortive. The lecturer had often taken advantage of this characteristic of the enemy and defeated them by an unexpected, and possibly unorthodox, manoeuvre which threw them off their balance.

Imagination—While imagination is essential to a commander, he must have a "controlled imagination". There will always be a mental conflict between determination and flexibility, and his imagination will help the commander to keep a balance between these two. Without this balance, determination becomes obstinacy and flexibility becomes vacillation.

Knowledge—The commander must know more than his subordinates

and his knowledge must include: (i) knowledge of men, who are the raw material of war; (ii) knowledge of the enemy, and especially of the enemy commander; (iii) knowledge of major tactics; and (iv) knowledge of administration. Most of the problems with which a commander is faced are administrative problems. He knows what he wants to do, but can he do it? Can he maintain and supply his forces in the places where he wants to put them? There may be too much of a risk. He must therefore be a "good judge of administrative risk", and that is perhaps the ultimate test of a good commander.

Integrity—One other quality is needed and this is the real test of leadership, a test applied in adversity. It is integrity or "plain honesty". Men will always follow a leader who is winning, but they will not follow nor obey him in a losing battle unless he is honest and they trust him. "If they trust they will stand." To inspire this loyalty and devotion, "a large and simple honesty" is required. Command is a lonely thing and to exercise it for long is dangerous to the person commanding. He must beware of "yes men" and of adulation. For a moment of crisis will come when all his subordinates pause and say, "What next?" They will look to their commander for a lead and he must give it them. It will not be easy, but that is the commander's great moment. Then is he tested. His whole training as a commander has been, consciously or unconsciously, devoted to preparing him for that moment; and the one thing necessary to enable him to surmount it triumphantly is integrity.

The Commander's Headquarters

The commander's headquarters is important for two things: (a) for its effect on the commander himself, and (b) for its effect on the lower formations. The commander requires information and suggestions, and it is the first duty of his staff to supply them. In addition to accurate information, the staff should offer several plans to meet any given situation so that the commander may have a choice. He will not necessarily choose one of the plans offered to him; he may, in fact, combine two or more, or he may even reject them all and substitute one of his own. But he must be offered alternative suggestions. The second duty of the staff is to convey the commander's will to his subordinate commanders and the troops by clear, quick orders.

Headquarters in the field is always under inspection by lower formations and the troops. It must not only be efficient, it must also look efficient; and allowances must be made for the very natural tendency of the fighting man to criticise those who direct his activities in battle.

Headquarters staff must not live in too much luxury, expecially when the troops are having a rough time; but a moderate contrast in living conditions may be allowed. When the forward troops are on half-rations it is a good thing to put the headquarters staff on half-rations too. And it is surprising how soon full supplies will then be got up to the front lines. Headquarters should be a "friendly place" where visitors from the operational units are welcomed and made to feel at home. But if any staff officer forgets his duties to the troops, he should be sent back to an operational unit for a time and that will put him right.

The headquarters of any commander will be organized to suit that commander. As no two commanders exercise command in the same way, so no two headquarters will be quite the same, though they may look the same. The British Army has now adopted the continental practice of having a Chief of Staff who is the commander's right-hand man and co-ordinates the advice and work of the departmental chiefs (G.A. and Q. in the Army; air and administrative staffs in the R.A.F.). This is a good system, though the lecturer himself said he never had a chief of staff when he was a commander.

The size of headquarters is also important. If should be as small as possible consistent with efficiency. All headquarters are now too big, and they all tend to grow. This is due to: (a) Too much paper work; (b) too many "rackets"; and (c) too much transport. All these need watching and periodic reductions are essential.

Contacts with Lower Formations and the Troops

In all their contacts with lower formations and the troops, the commander and his staff must "cut out the frills and stick to essentials." Many commanders dissipate their strength on non-essentials. It's a question of judgment again. The commander, having chosen his subordinates carefully, must let them work out the details. Subordinate commanders must be given a free hand within the framework of the commander's plan. They appreciate this and work and fight the better for it. And the troops themselves are quick to recognize the commander who confines himself to essentials, and quick also to condemn the fussy general. Above all, the commander must inspire his troops with confidence; confidence in himself and confidence in themselves.

Personality Counts

The British nations have tremendous capacity for leadership and there is any quantity of good material to be developed. The present generation of young officers is as good as its

NEW APPOINTMENTS FOR SENIOR OFFICERS

A REPORT PREPARED BY THE DIRECTORATE OF PUBLIC RELATIONS (ARMY), ARMY HEADQUARTERS, OTTAWA

New appointments for four senior officers involving changes in command for the 27th Canadian Infantry Brigade Group and Western Ontario Area have been announced by Canadian Army Headquarters. These appointments will take effect during the fall of 1953.

Brigadier W. A. B. Anderson, OBE, CD, 38, now Commander of Western Ontario Area, has been named to head the Canadian brigade in Germany. Brigadier J. E. C. Pangman, DSO, ED, 45, vacates his appointment as Commander of the 27th Canadian Infantry Brigade Group to become Army Member, Canadian Joint Staff at London, England. The present Army member of the Joint Staff in London is Brigadier R. W. Moncel, DSO, OBE, 36, who will become Deputy Chief of the General Staff at Ottawa replacing Brigadier T. G. Gibson, CBE, DSO, CD, 45, who goes to command Western Ontario Area.

Higher Command in War

(Continued from preceding page)

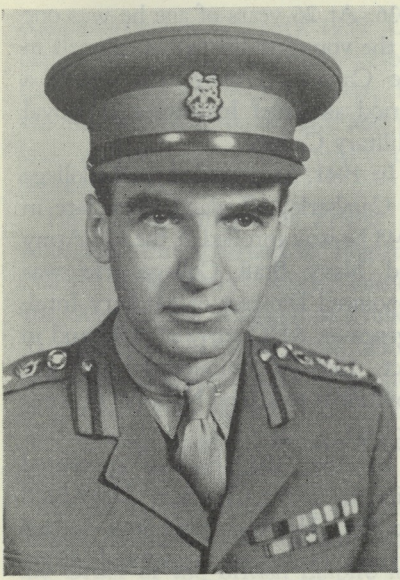
predecessors. All that the young officer needs is a good lead, and then he is first-class. The making of leaders is the development of inherent qualities. Individuality must be developed and brought out, by discipline and by example. In the Services, and in civil life, personality trained by discipline counts.

BRIGADIER J. E. C. PANGMAN, DSO, ED

Born in Toronto, June 12, 1908, Brigadier Pangman graduated from Harbord Collegiate Institute, Toronto. An officer in the Queen's Own Rifles, he was mobilized in June 1940 in the rank of major. In May 1942 he was appointed second-in-command, Queen's Own Rifles. He attended the Staff College, Camberley, in 1943.

Brigadier Pangman commanded the Carleton and York Regiment in Sicily and Italy, and later the Essex Scottish in Northwest Europe.

On his return to Canada he was Colonel, General Staff, at Headquarters Atlantic Command, Halifax, before becoming Director of Staff Duties at Army Headquarters. From July 1946 he served as Director, Military Operations and Plans. In 1947 he went to the United Kingdom to attend the Joint Services Staff College and returned to Ottawa in March 1948. In November 1949 he



Brigadier Pangman

Brigadier Anderson

Brigadier Moncel

Brigadier Gibson

was appointed to the Directing Staff of the National Defence College, Kingston, Ont.

In 1951 he received promotion to the rank of brigadier and the appointment to command 25 Canadian Infantry Brigade Replacement Group at Camp Wainwright, Alberta.

The following year, in December 1952, Brig. Pangman was appointed Commander, 27 Canadian Infantry Brigade Group, the Canadian Army NATO force in Germany.

* * *

Brigadier W. A. B. Anderson, OBE, CD

Brigadier W. A. B. Anderson, OBE, CD, former Director of Military Intelligence and son of one of Canada's most distinguished soldier families, went overseas in December of 1939 with the 3rd Field Regiment, Royal Canadian Artillery. In 1942, after service at Canadian Military Headquarters in London, he returned to Canada for a short tour of duty. In 1943 he returned to England, and during 1944–45 he served with Headquarters First Canadian Army in Northwest Europe.

Brigadier Anderson was born in Montreal in May, 1915. He graduated from Royal Military College, Kingston, in 1936 with top honours and from Queen's University in 1937 with the degree of B.A.

He was commissioned with the Royal Canadian Horse Artillery in 1936. At 26 years of age he was one of the youngest lieutenant-colonels in the Canadian Army. He served a period as Chief Instructor at Royal Military College.

In 1941, he attended Staff College at Camberley, England, then late in 1945 he was enrolled at the US Army and Navy Staff College. He was appointed Director of Military Intelligence at AHQ early in 1946 and in Oct. 1949 he relinquished this appointment to attend National Defence College.

In Aug. 1950 he was appointed Director of the Canadian Army Staff College. He was promoted to his present rank and appointed Commander of Western Ontario Area with HQ at London, Ont., in Dec. 1951.

* * *

Brigadier Robert William Moncel, DSO, OBE

Brigadier R. W. Moncel, a former Director of Military Training at Army Headquarters, acquired an extensive regimental and staff experience in battle with the 4th Canadian Armoured Division.

Robert William Moncel was born in Montreal in 1917 and was educated at Selwyn House School, Bishop's College and McGill University. In civilian life, he was a sales executive for a Montreal firm and his first association with the Army was in 1935 when he joined the Victoria Rifles of Canada, in which he was

commissioned in February 1939. On September 5, 1939, five days before Canada officially declared war, he volunteered for active service and he was accepted as a lieutenant on September 13, 1939.

He was despatched to France in June 1940 but returned to England almost immediately when France was overrun. He returned to France six days after D-Day as a staff officer with H.Q. 2nd Canadian Corps, and, in August, two months later, took over the command of the 4th Canadian Armoured Brigade.

At an investiture at Buckingham Palace, he received on the same day the Order of the British Empire for his services with the 2nd Canadian Corps and the Distinguished Service Order for his personal gallantry and leadership in the Hochwald fighting in Germany. He was also mentioned-in-despatches for his part in the battle of Falaise. The French Government made him a Chevalier of the Legion of Honour and awarded him the Croix de Guerre.

In August 1950 he received his present appointment (Army Member Canadian Joint Staff, London) in the rank of Brigadier.

* * *

BRIGADIER T. G. GIBSON,
CBE, DSO, CD

Brigadier Thomas Graeme Gibson, of Toronto, was born in Toronto, April 6, 1908, and was educated at Upper Canada College and the University of Toronto. He was a business man in Toronto from 1926 to 1930 and was commissioned in the Permanent Force in 1931.

He served as instructor at the Canadian Armoured Fighting Vehicles Training Centre, Camp Borden, Ont., from 1937 to 1940, during which time he was promoted to captain.

He proceeded overseas as Liaison Officer on Headquarters Staff, 2nd Canadian Division, in July 1940, and served as a General Staff Officer on that Headquarters Staff. He studied at the Staff College at Camberley, England, in 1941 and was promoted to lieutenant-colonel to command the Royal Winnipeg Rifles, January 18, 1942.

His promotion to brigadier dates from April 8, 1943. He served in the Italian and Northwest Europe campaigns as an Infantry Brigade Commander.

Prior to going to National Defence College in 1949, he was Vice-Adjutant General at Army Headquarters, Ottawa, and in August 1950 became Deputy Chief of the General Staff.

DMT AND ARMY JOURNAL APPOINTMENTS

A report prepared by the Directorate of Public Relations (Army), Army Headquarters, Ottawa.

Colonel Roger Rowley, DSO, ED, 39, of Ottawa, Director of Military Training for the Canadian Army and Chairman of the Editorial Board of the *Canadian Army Journal* has been selected to attend the 1954 course at the Imperial Defence College in England, it has been announced today at Army Headquarters.

He will be succeeded by Colonel R. A. Keane, DSO, OBE, 39, of Fort William, Ont., former Deputy Co-ordinator, Joint Staff, who received promotion to the rank of colonel when he took over as DMT in October. Colonel Keane will also serve as Chairman of the *Journal's* Editorial Board.

The 1954 course at the Imperial Defence College begins in January.

* * *

Colonel Rowley

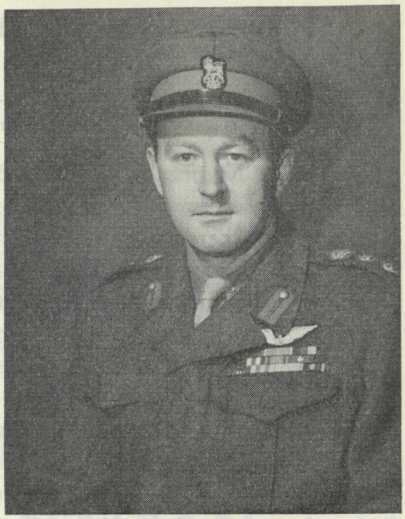
Colonel Rowley was born in Ottawa, June 12, 1914, and was educated at Ashbury College and Dalhousie University. In civilian life, prior to the Second World War, he was in investment banking.

In April 1933 he was commissioned a 2nd Lieutenant in the Cameron Highlanders of Ottawa (MG), and remained with that unit throughout the early years of the war in Canada, Iceland, and the United Kingdom. He was promoted to the rank of captain in August 1941, to major in June 1942, and on 3 Feb. 1943, was appointed acting lieutenant-colonel to command the Canadian Army Battle School. Also in the United Kingdom he commanded the 9th Canadian Infantry Brigade Support Group, then returned to the Camerons as second in command.

In August 1944 he was appointed commanding officer of the Stormont, Dundas and Glengarry Highlanders during the campaign in Normandy, and led that unit throughout the campaign in Northwest Europe. He was awarded the Distinguished Service Order and bar.

Since the war he has served on the Alaska Highway System, at the time the Canadian Army took over the administration and maintenance of the road, and also attended the Staff College at Camberley, England. In December 1947 he was appointed GSO1 on the Canadian Army Staff at Washington, D.C. His appoint-

Colonel Rowley



Colonel Keane

ment as DMO & P at Army Headquarters, Ottawa, was announced 7 Oct 49, effective 1 Jan. 50. He then became Director of Infantry and in Sep. 1951, was appointed Director of Military Training.

* * *

COLONEL KEANE

Born in Fort William, Ont., May 14, 1914, Colonel Keane matriculated at Fort William Collegiate. He served in the NPAM, including the 4th Field Ambulance and The Lake Superior Regiment.

He was overseas in 1941 and then was back in Canada in 1942, serving first on the staff of the 4th Canadian Armoured Division, and then was regimental commander of the 1st Special Service Force in 1942.

After this he was GSO III at Staff Duties, NDHQ, and also served with Military Training, NDHQ.

He then attended No. 7 Canadian War Staff Course following which he was again sent overseas to the 2nd Infantry Division.

Following this he rejoined his regiment, the Lake Superior, and commanded it in Northwest Europe from August 1944 to the end of hostilities.

After the war he served in Pacific Command and since 1946 in Western Command. In 1948 he attended a course in the United Kingdom and in June 1949 became GSO 1 in DMO & P.

In August 1950 he was appointed to command 2nd Battalion, the Royal

THE ROYAL MARINES

Lieut.-Colonel F. C. Hitchcock, O.B.E., M.C., in
The Army Quarterly (Great Britain)*

The Royal Marines in the 1939-45 war truly lived up to their unique traditions for heroism and stoicism down through the ages. Their gallantry in amphibious operations at Crete and at Madagascar, and in the role they fulfilled as Commandos at Sicily and Salerno were but re-echoes of the fighting prowess they displayed at Zeebrugge in 1918.

They have ever been a magnificent body of men noted for their smart turn-out.

They are indeed very serious warriors and in outlook and bearing are a contradiction to that saying which has been twisted so that it might impute credulity to the Corps in: "Tell that to the Marines!"

According to the following extract from "Stevenson's Book of Quotations", the origin of this saying will be found in "Pepys's Diary", in which Charles II stated:

"From the very nature of their calling, no class of our subjects can have so wide a knowledge of seas and lands as the officers and men of our Royal Marine Regiment. Henceforth, whenever we cast doubt upon a tale that lacketh likelihood, we will tell it to the Marines. If they believe it, it is safe to say it is true."

There is recorded, however, an occasion on which a member of the Corps took exception to a remark which embraced the title of his regiment. William IV—the "Sailor King"—was dining on board one of his men-o'-war and towards the end of the dinner a row of empty bottles stood before him showing how well he had wined. Somewhat irritably he beckoned to a waiter saying, "Clear away those Marines." An officer of the Royal Marines, infuriated by this derogatory reference, clapped his hand to his sword-hilt and demanded an instant apology from the Royal Personage, who readily replied, "I have called those empty bottles Marines because they have done their duty nobly in the past and are ready at any time when called upon to do so in the future!"

*This is an extract from an article by Lieut.-Colonel Hitchcock entitled "Service Traditions and Customs—Grave and Gay".—Editor.

Appointments

(Continued from preceding page)

Canadian Regiment, which he led in action in Korea. Early in 1952 he returned from Korea for an appointment in the Joint Staff at Canadian Army Headquarters.

THE ROYAL CANADIAN ARMOURED CORPS

TRAINING OF THE ARMOURED CORPS SOLDIER

By "TANKER"

INTRODUCTION

Scene:—Italy CMF 1100 hours, 5 Jan 44. "You men have done a first class job, but starting tomorrow you will be doing a better one. All your vehicles will be turned in to a compound immediately and from then on you will fight this war as infantry." This was the theme of a talk given by the divisional commander to a unit which had trained and fought as armour since 1940. The following months of the war in Italy saw this armoured unit fighting in the role of the foot soldier—and doing a first-class job in that role.

Scene:—RCAC School, Camp Borden, 1953. "Why is valuable time wasted in teaching me how to fire a rifle? I joined the Armoured Corps to be trained as a tank driver, or gunner, or operator—they are not issued with a rifle." This question has been repeated many times by recruits during their basic training. As one seldom sees a recruiting poster associating the rifle with a tank soldier, is it, then, such a ridiculous or unfair question from any recruit? We think not and if we search this same recruit's mind, similar questions on various other subjects taught in the basic training of an armoured soldier, will be discovered.

Of the subjects taught in Basic Training, it is quite obvious to the armoured recruit that certain ones such as Organization and Administration, Map Using, First Aid and Military Hygiene, including ABCD Training, Military Law, Man Management, Customs of the Service, and Technique of Instruction, are common to all, and must be learned before any soldier can be considered to be trained. The other subjects such as Foot Drill, Small Arms Training, Elementary Platoon and Section Tactics and Physical Training, are generally associated with the foot soldier only, and the reasons for being trained in them are not at all obvious

* "*Tanker*" *is the* nom de plume *chosen by a syndicate of four officers who collaborated in the preparation of this article at the Royal Canadian Armoured Corps School, Camp Borden, Ontario.*—Editor.

to the recruit who visualizes his future only in association with and the handling of a tank.

Armoured tactics, like all other tactics, consist mainly of applying common sense to the problems of war. Before common sense can be applied, however, there must be a framework of basic principles within which to work. Despite the fact that changes in armoured equipment will take place, these basic principles in the employment of armour will still apply.

With these thoughts in mind, it is proposed to discuss a few of the basic training subjects and the basic principles of Armoured Tactics which are being taught in the Royal Canadian Armoured Corps, with a view to bringing out the immense importance that all basic subjects and basic principles play in the thorough training of the individual armoured soldier.

Common Basic Subjects

Drill

"The Aim of drill is to develop in the individual soldier that sense of instinctive obedience which will assist him at all times to carry out his orders. That the foundation of discipline in battle is based on drill has been proved again and again." (CATP 11-2 Drill, All Arms, 1951, Page VII).

It is mistakenly, but nevertheless generally understood by the recruit that the word "drill" means only parade square work, rifle drill, marching, etc., and that the aim of drill is only to teach the recruit how to conduct himself correctly *on parade* both as an individual and as a member of a group. "Is this necessary" he asks, "as I am going to drive a tank, or fire a twenty-pounder?" The answer obviously is "Yes, it is necessary", and early in his training it must be explained to the tank recruit that in addition to achieving a high standard of smartness and military bearing on parade, drill teaches discipline and inculcates in the recruit an idea of the timing of one's actions with others. In no other soldier is the skill of co-ordinating thoughts and movements more important than in a tank soldier. The four crew members—crew commander, driver, gunner and operator—must each learn to co-ordinate their activities so that they act as one man.

"Driver — right — OK, — halt. Shot, — traverse left, — steady — on. 800 — tank, — FIRE!" Sgt. Brighteyes has spotted an enemy tank moving into a fire position and issues this order to get a quick kill. If all members of the crew carry out the drills required of them, they will win this engagement. But, if any one of them makes a false move, forgets any part of his drill, or fails to apply this drill to synchronize with the movements of the others,

this action may be lost. At least if it is not lost, the enemy will be given time, and as a result, the initial advantage to be expected of the well drilled crew will be forfeited. Should the driver not turn smoothly and halt correctly, he will throw the gunner off balance; should the loader not load quickly and with the specified ammunition (an HE round may frighten the enemy but will give him a chance to shoot back) fleeting opportunity will be missed. Should the gunner not co-ordinate movements of eye, hand and foot, he will not hit the enemy. One false move on the part of one individual will probably destroy the efforts of the crew as a whole.

It will be seen, therefore, that a high standard of drill is not learned on the barrack square merely to be used on ceremonial occasions. With the tank soldier it is required in any engagement, from the concentration area to the objective, and precise drill practised constantly tends to make correct application and movement automatic.

Once a recruit understands this point it is much easier for him to understand that basic drill is necessary to enable him to master the more complicated drills which come later with his more advanced training.

Small Arms Training

The effect of small arms has always been an important and often a deciding factor in any action—defensive or offensive. These have always been the weapons most closely related to the individual soldier regardless of corps, unit or trade. Although the tank soldier is normally equipped with a pistol or sub-machine gun for his personal protection, anyone may be required to use the rifle, Bren or rocket launcher for his own protection or for the protection of a harbour area or a headquarters.

Today it is more important than ever before that all maintenance echelons of an armoured formation be capable of fighting as infantry without the assistance of tanks. Paratroop forces will choose Headquarters and Maintenance Areas as primary targets for their activities. This type of enemy action must not only be defeated on the spot but aggressive action will be needed to search out and destroy all enemy in the area. Similar action will be required when an army finds itself fighting in a country where native patriotism has produced effective guerilla efforts. This simply means that the tank soldier must be proficient in the use of all weapons designated as small arms.

Elementary Platoon and Section Tactics

At an early stage, the training of the tank soldier must include

elementary section and platoon tactics. Here he learns the art of observation and camouflage and how to use the ground to his own personal advantage. Later he learns the use of ground by an organized group.

In this phase of his training he also learns the principle of fire and movement which is the basis of all tactics.

While war experience has taught tank soldiers the value of "digging in" for protection against mortar and shell fire; recent atomic tests have also revealed that men in slit trenches approximately one and one half miles from the explosion survived with no ill effects. More so today, therefore, than ever before he must learn how, when and where to dig.

Under the preceding headings of Drill and Small Arms Training, it must be brought home to the tank soldier that his own protection is primarily his own responsibility and that he must become an efficient working member of a co-ordinated team for the good of the team as a whole. In his Elementary Platoon and Section Tactics he begins to realize that before he can hope to appreciate the value of ground or the principle of fire and movement in the handling of a tank or a group of tanks in an armoured action, it is necessary for him to have thoroughly understood and learned such things at the level of the individual foot soldier.

Basic Armoured Tactics

Use of Ground

Ground, to a large extent, dictates tank movement. Proper use of ground in attack or defence can achieve surprise and win battles. This then becomes the starting point in a study of basic tank tactics.

The difficulties in concealing tank movement are obvious, and it is essential that tanks make the best use of any cover that ground affords, as with the section or platoon. Tanks use the ground for concealment while observing and moving, and for protection from fire by placing themselves behind features, thereby exposing only enough of the tank to effectively engage a target. By so doing, the tank adds to its own armour that protection offered by the ground itself, and this protection is of considerable advantage both while the tank is firing from a static position, or while on the move.

By the same token, the enemy is provided with a minimum of opportunity to engage and thereby the possibility of destruction of valuable lives and fighting vehicles before they can be effectively employed in battle is greatly reduced.

As training progresses, the correct use of ground becomes instinctive to the tank soldier as he realizes that regardless of the size and thickness of the armour of a tank, the enemy

possesses a weapon which will penetrate that tank, if the tank presents itself as a target.

Formations

It is essential while tanks are moving and using ground that they maintain contact (preferably visual but this is not always possible) and continue to be mutually supporting. To achieve this, tanks employ certain set formations. Generally these (it is not intended to go into the detailed formations used) are designed to facilitate control within the group, and to provide the maximum tactical advantage allowed by the ground. They also provide the basis of all-round vision and mutual protection which is so essential for armoured movement. Arcs of responsibility are permanently allotted within each formation which afford the group with all-round protection at all times.

Formations lend themselves easily to a bound-to-bound movement, enabling certain tanks in the group to move under fire support from the remainder.

Fire and Movement

Mobility and fire power are two of the main characteristics of armour. With fire power the enemy is destroyed, but it is the mobility of the tank which enables this fire power to be brought to bear on the target. A combination of the two then is essential for success in battle. The mobility of a tank, however, depends upon the crew as well as upon the vehicle itself. It is therefore obvious that even with the best of equipment if the crew is not trained to handle it, and is not thoroughly familiar with its capabilities, this mobility is considerably reduced.

As movement, covered by fire, forms the basis of armoured tactics at all levels, the value of training in elementary section and platoon tactics at an early stage in the tank soldier's career is again emphasized. Throughout this training he learns the application of the principle of fire and movement and that this training is a necessary step towards applying the same principle to armoured tactics.

In the previous sections use of ground and tank formations have been discussed. It will be evident how closely these aspects of tank tactics must tie in with fire and movement. The manner in which tanks move, applying the principle of fire and movement, will depend on the formation being used. The formation to be adopted will be dictated by the ground, and proper use of the ground is essential for good tank movement. The aim of instruction in basic armoured tactics therefore must be to inculcate in the tank soldier a thorough working knowledge of these three basic principles and their dependence upon

each other. It is upon these principles that tank tactics are based.

Conclusion

It is not intended in this article to convey the idea that to be a good tank soldier one must be a completely trained infanteer, but to emphasize that to become an efficient armoured soldier one must first have acquired the basic knowledge taught to all recruits and this for two very definite reasons. The first reason is that any soldier must be able to protect himself, or to assist in protecting himself and his vehicle. The second is that having once learned to handle himself and his personal weapons, and to work as a member of a team, the embryo tank soldier is only then in a position to attempt the next steps in his training—the progressive mastering and efficient handling of the weapons and equipment of his Corps.

The ultimate aim of all training and instruction is "fitness for war". While only basic armoured tactics and a few of the subjects of basic training have been discussed in this article, sufficient evidence has been adduced to illustrate that the firm foundation upon which the complete "fitness for war" is finally achieved by the armoured soldier is:

1. The acquiring by him of a thorough knowledge of the basic subjects taught at the beginning of his service; and

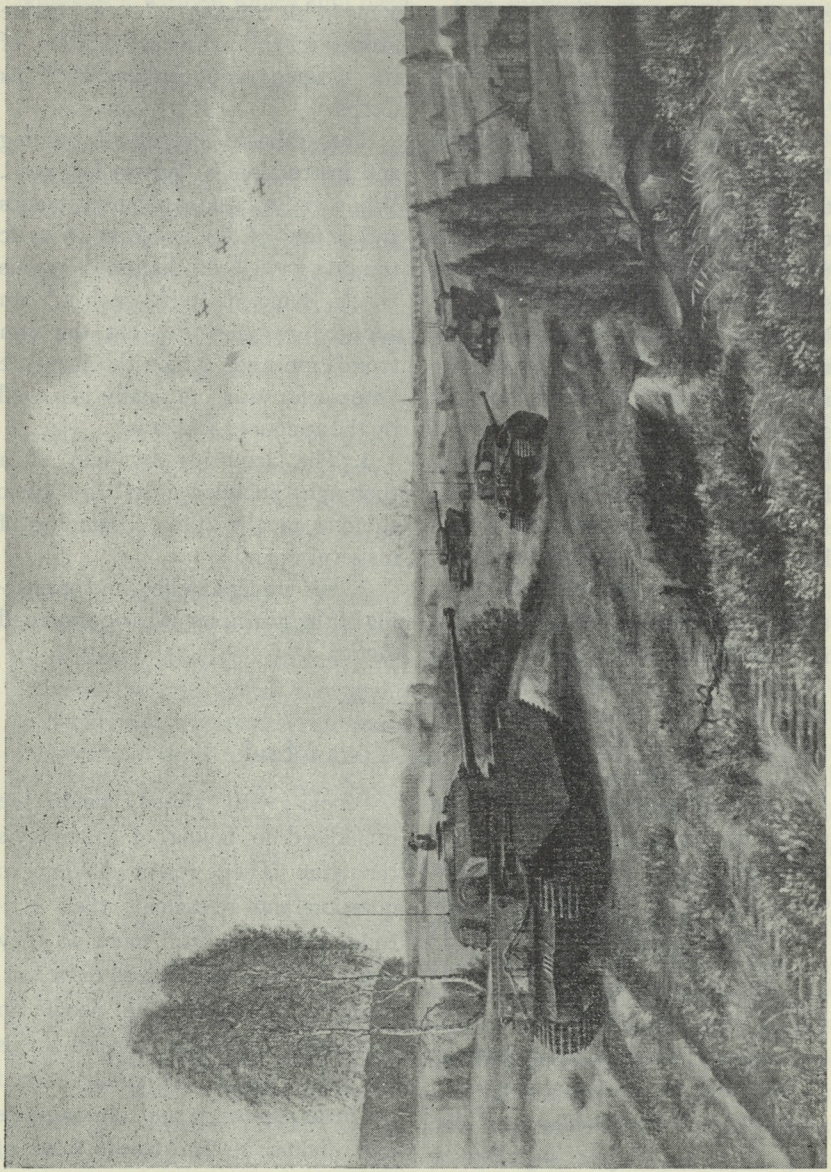
2. His understanding and mastering of the principles of basic armoured tactics.

On Changing Your Mind

It seems somehow criminal to some people to change their minds. There is nothing wrong with telling people one thing today and something else tomorrow: we change, and the world changes. Many things which were true yesterday are not so today.

It is a sign of our vitality to own that we have changed our opinion, indicating that we are wiser than we were. He is, indeed, a wise man who keeps his mind open so that he recognizes important changes.

People with closed minds are prejudiced in favour of yesterday's thoughts. They resent having to question and re-examine their attitudes and ideas; still more do they resent it when others raise questions. Emerson dismissed such people in this way: "A foolish consistency is the hobgoblin of little minds, adored by little statesmen and philosophers and divines."—*The Royal Bank of Canada Monthly Letter.*



VISUAL CAST SLIDES

By
LIEUT. M. L. FOSTER (B. ENG.), ROYAL CANADIAN ARMOURED CORPS SCHOOL,
CAMP BORDEN, ONTARIO

Introduction

Photographic Visual Cast slides* originated from the necessity to portray accurately pieces of equipment which were virtually unobtainable in quantity and too expensive to handle in everyday demonstration.

These slides proved successful and many new uses became apparent with their subsequent employment. The Travelling Training Teams from the Royal Canadian Armoured Corps School, where this training aid was pioneered, applied these slides to good advantage on their tour of the Armoured Reserve Force units in Canada earlier this year. The bulk of the slides dealing with Driving and Maintenance training, for example, were of sectioned models and permanently installed equipment. These models could not be duplicated for distribution to either Active or Reserve Force units, due to the time and expense involved in the sectioning operation. However, with well-chosen slides of specific components the widespread use of these models became possible.

Herein lies one of the many advantages of the Photographic Visual Cast slide, for once the negative has been made any number of slides can be run off at very little cost and in a very short time.

Figure 1 shows one of these slides in position on the Visual Cast machine. The projected image can be enlarged or reduced to four diameters of the actual component with very little loss in definition. The finished slide appears as a transparent black and white positive picture, the safety film base of which is well suited to the Visual Cast machine.

A method of producing these

Additional information on the subject of visual aids in military training is contained in the article "Look, Listen and Learn" published in the May 1952 issue of the Journal.—Editor.

This picture is a reproduction of an oil painting presented to Colonel A. G. Chubb, DSO, CD, Director of Armour at Army Headquarters, Ottawa, by the Officer Commanding and officers of "C" Squadron, Royal Canadian Dragoons, now with the 27th Canadian Infantry Brigade in Germany. The scene depicts Centurion tanks of "C" Squadron on manœuvres somewhere in Germany. The tanks are moving forward to their objective directly supported by RCAF aircraft also stationed in Europe. They can be seen flying off to the right of the picture while the bombs dropped by them are exploding just ahead of our own tanks. The picture was painted by F. Borgtz, a German civilian employed by the squadron as the regimental sign painter.

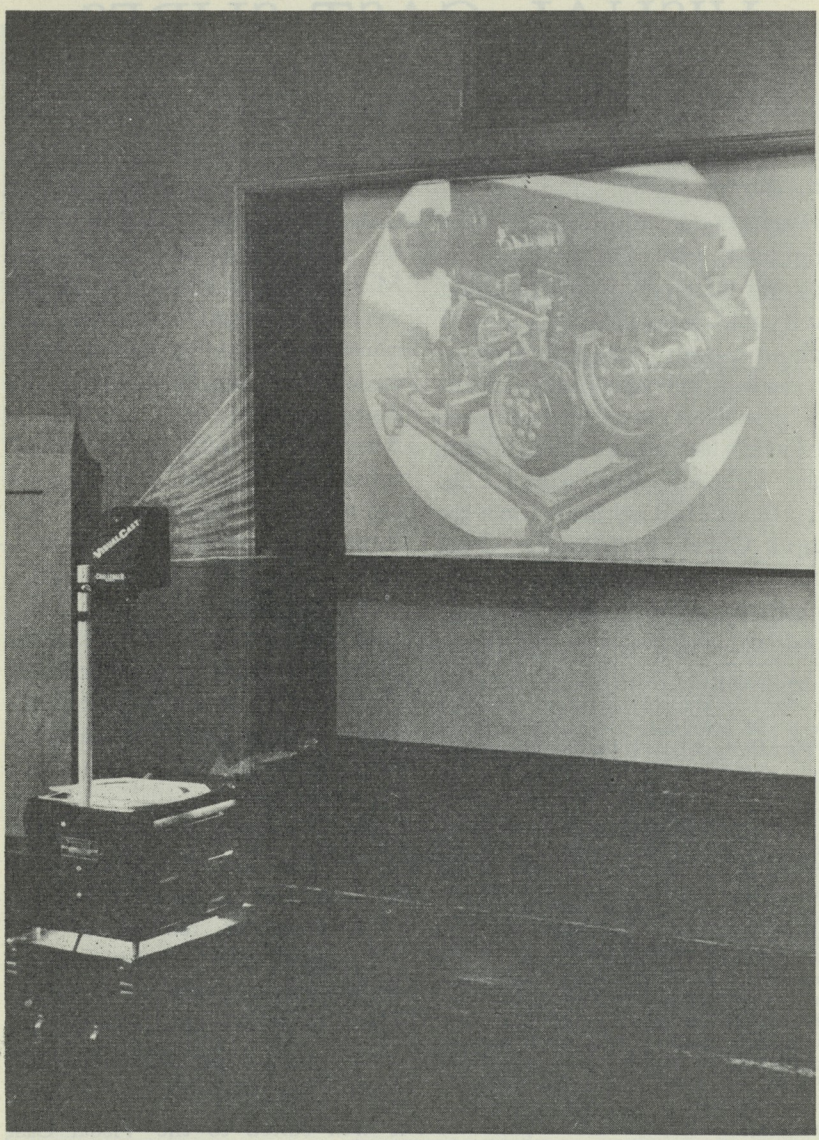


Figure 1

slides, together with the material required, is given below.

Method

(The following was the method used in producing the slide shown in Figure 1).

The Negative

A press camera was used to allow for ground glass focusing and to ensure good composition.

The film employed was Super XX, 2¼ x 3¼. Two reflector floods were used to light the equipment. The exposure reading was taken on a square foot of white cardboard held against the equipment with the exposure meter one foot away. The film was developed in D-76 for 19 minutes at 68 degrees F. to obtain contrast.

The Slide

The negative was placed in the enlarger and projected onto a piece of 8 x 10 white paper, and the lens then stopped down to f-16. A test strip was made on Kodak Contrast Process Ortho at the above aperture and the exposure time was found to be 4 seconds.

A sheet of 8 x 10 Contrast Process Ortho was then substituted for the paper, the black separating paper was used behind the film to prevent a double image, and a 4-second exposure was made.

The film was developed in D-11 for 2½ minutes at 68 degrees F to give maximum contrast. After the fixing and washing operations the film was hung to dry.

A double cardboard frame fastened with staples provided the slide support.

Conclusion

The estimated cost of a slide produced in this manner is about 60¢. However, where a number of slides are to be made from the same negative the cost is lowered somewhat.

Experiments are being made with colour slides along a parallel operation. Some success has been found using Ektacolour Film Type B to make the negative and Ektacolour Print Film to make the transparent slide, the negative and slide being processed with the Ektacolour kit. The results are promising.

Any additional information can be obtained from the RCAC School, Camp Borden, Ontario.

Soldier's Equipment

There are five things from which the soldier should never be separated: his musket, his cartridges, his pack, rations for at least four days, and his pioneer tool. Let his pack be reduced to the smallest size possible if necessary; but he should always have it with him.—*Maxim of Napoleon.*

LIVING DANGEROUSLY

During the course of a lecture at the Royal United Service Institution on 27 February 1952 Mr. Fitzroy Maclean, CBE., M.P., described how he had brought Marshal Tito from Yugoslavia by plane to meet Field Marshal Sir Henry Wilson, the Supreme Allied Commander in the Mediterranean:

"When we got to the mess, which was quite a small room, with space for about six or eight people to sit down round the table, we noticed that Marshal Tito still had with him his bodyguards, his faithful bodyguards who had protected him all through the fighting in the woods. They were two enormous partisans with tommy guns. When we got to the door of the dining room, it was a question of what was to happen about the bodyguards. Sure enough, they pushed their way in, too. We sat down to lunch! One of the bodyguards held Tito's hat, which was a most magnificent creation, and the other kept the Field Marshal covered with the tommy gun—a good start to the lunch! Tito had a very large dog, a wolfhound, which settled down under the table. I knew it to be a dog of uncertain temper and I did not feel very happy about it. There was an Italian mess waiter, who was a little bit nervous—as Italians sometimes are. When he saw that formidable-looking man with the tommy gun he was so frightened that he dropped a large dish of green peas with a bang on to the top of the table. Of course, the dog, who had gone to sleep under the table, woke up and started snapping at everyone's ankles; the man with the tommy gun thought that a bomb had been thrown; his trigger finger twitched—and I think the Field Marshal had a very narrow escape indeed! Fortunately, with his usual good humour, he managed to carry the situation off, and—to do him justice—Tito joined in the laughter just as gaily as did everybody else. That was the first official contact between Marshal Tito and the outside world."—*J. M. Hitsman, Army Headquarters, Ottawa.*

Skill and Discipline

"Victory is gained, not by weight of numbers and untrained courage, but by skill and discipline . . . A thoroughly trained man will be bold and confident in action; one has no hesitation in undertaking work with which one is perfectly familiar. A small trained force is the best guarantee of success; a raw undisciplined host is foredoomed to destruction."—*Vegetius in "Epitome of the Military Art", Fourth Century A.D.*

CORPS OF ROYAL CANADIAN ENGINEERS

THE QUEEN IS COLONEL-IN-CHIEF OF ROYAL CANADIAN ENGINEERS

A message of appreciation of the honour conferred upon them by the Queen in consenting to become Colonel-in-Chief of the Corps of Royal Canadian Engineers was sent to Her Majesty last June.

The text of the message signed by Brigadier J. L. Melville, CBE, MC, ED, Honorary Colonel Commandant of the Corps, and the Queen's reply received from her Private Secretary follow:

Her Majesty the Queen,
Buckingham Palace.

Most Gracious Sovereign:

The officers and men of the Royal Canadian Engineers present their humble duty to Your Majesty and beg leave to express their thanks for the high honour which you have conferred upon the Corps by graciously consenting to become its Colonel-in-Chief. Their thanks has a special significance because the first day of July, Nineteen Hundred and Fifty-three, is the fiftieth anniversary of the formation of the Corps in Canada.

They also have the honour to renew the expression of their loyalty and devotion on the occasion of Your Majesty's Coronation, and to beg to be permitted to wish Your Majesty all health and happiness.

(Signed) *James L. Melville*
Brigadier
Honorary Colonel Commandant,
Corps of Royal Canadian Engineers.

* * *

Buckingham Palace

24th June 1953

Dear Brigadier,

I have laid before The Queen your message, received through the Canadian Joint Staff in London, from the officers and men of the Royal Canadian Engineers on the occasion of Her Majesty's Coronation.

The Queen is very proud to have become Colonel-in-Chief of the Royal Canadian Engineers and commands me to send her sincere thanks and good wishes to all ranks of the Regiment.

Yours sincerely,
(Signed) *N. G. Adeame.*

Brigadier J. L. Melville, CBE, MC, ED.

THE ROYAL CANADIAN CORPS OF SIGNALS

FIFTY YEARS OF CANADIAN MILITARY COMMUNICATIONS

PREPARED BY THE DIRECTORATE OF THE ROYAL CANADIAN CORPS OF SIGNALS, ARMY HEADQUARTERS, OTTAWA

- *Acknowledgement is made to S/Sgt. F. W. Pratt, formerly Editor of the* Royal Canadian Signals Quarterly, *for the writing of this history of the Corps. He also obtained the photographs reproduced here.*—Editor.

* * *

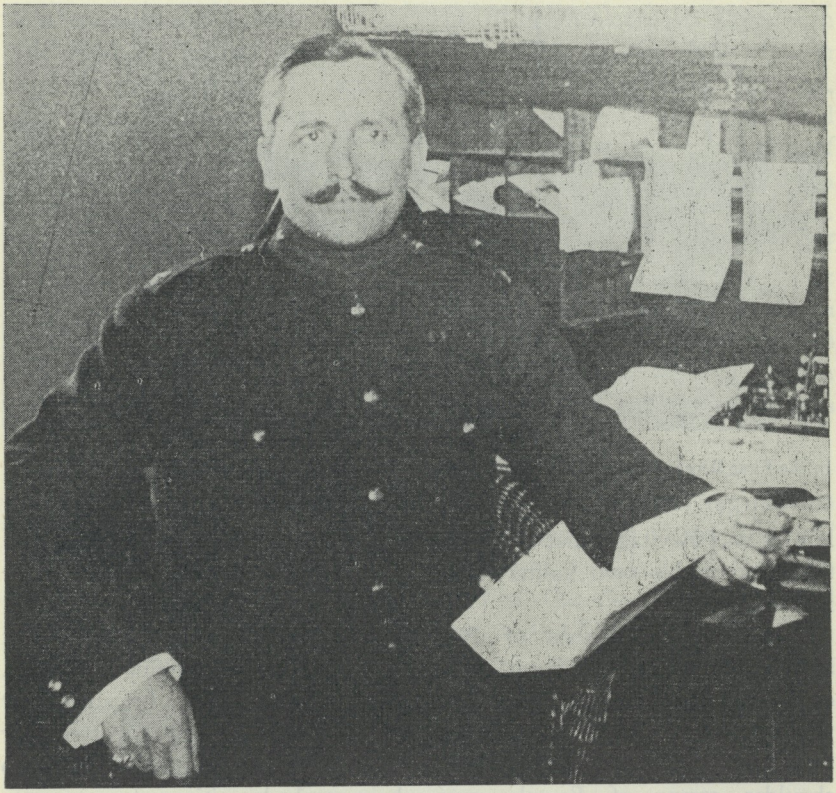
Ranking among the various factors which have gone together to make 1953 a significant year in the history of the Canadian Army, is the celebration of the fiftieth birthday of the Royal Canadian Corps of Signals. This historic milestone in the development of the branch of the service that organized and operated the complex communications systems of two world wars, built the vast radio network that unites the Northwest Territories and the Yukon, and brought this country's military communications to its present high standard, is to be observed with fitting ceremonies at Vimy Barracks, Kingston, on October 24th.

The Father of the Corps

It was on that date in 1903 that the Corps came into being as the "Signalling Corps (Militia)". The publication of General Order 167 of that year, which authorized the formation of the new Corps, did not, of course, occur spontaneously. It was, in fact, the result of a prolonged campaign relentlessly pursued by a young staff officer who has since come to be regarded as the father of the Royal Canadian Corps of Signals.

The officer whose foresight was responsible for the launching of this forerunner of the present Royal Canadian Corps of Signals was Captain (later Major) Bruce Carruthers, a staff officer at National Defence Headquarters whose duties included responsibility for the various signalling methods in use by the Army at the time. A graduate of The Royal Military College of Canada, he had served with the 21st Lancers at Omdurman in 1898 and in the South African War. Envisaging the growing significance of military communications, it was Captain Carruthers who conceived the idea of a separate Corps of the Canadian Army to look after its signalling problems.

With the authorization of the



Major Bruce Carruthers, who was responsible for the Signalling Corps (Militia) in 1903, and for its early development.

"Signalling Corps (Militia)" and its diminutive entitlement of eighteen officers and sixty men for all Canada, he achieved a Canadian "first". It was not until after the First World War that independently organized signal corps were authorized in any other part of the British Empire.

It is unfortunate that Major Carruthers did not live to witness much of the development he had foreseen. He died in 1910 and was buried at Cataraqui on the outskirts of Kingston, present home of the Royal Canadian School of Signals.

Five years went by before Carruthers, now a major and holding the appointment of Assistant Adjutant-General for Signalling, was able to initiate orders designed to give the Corps its own badges, uniforms and colours. With no tradition to guide

In the First World War, signalmen led glamorous lives as they laid cable from a six-horse cable wagon driven at a gallop.

him, it was inevitable that he should fall back on his own military connections.

The dress regulations of 1908 authorized a blue uniform with collars and cuffs of French grey—the traditional lancers' colours. Service dress was the standard khaki with shoulder straps of French grey. Crossed blue and white flags were substituted for the crossed lances of the 21st Lancers (Empress of India's Own), as the chief motif of the new Corps badge. The numeral "XXI" became the letters "C S C", the regimental name was replaced by the Corps motto, *Velox, Versutus Vigilans*, in a scroll surrounded by maple leaves, and the whole surmounted by a beaver and crown.

The choice of Major Carruthers' successor turned out to be a portent of things to come. Captain F. A. Lister of The Royal Canadian Regiment, who had been his assistant, filled the post until the First World War and, after winning the DSO, went on to become a brigadier later in his career, setting a pattern for many subsequent Signals officers who have reached positions of prominence in the Canadian Army.

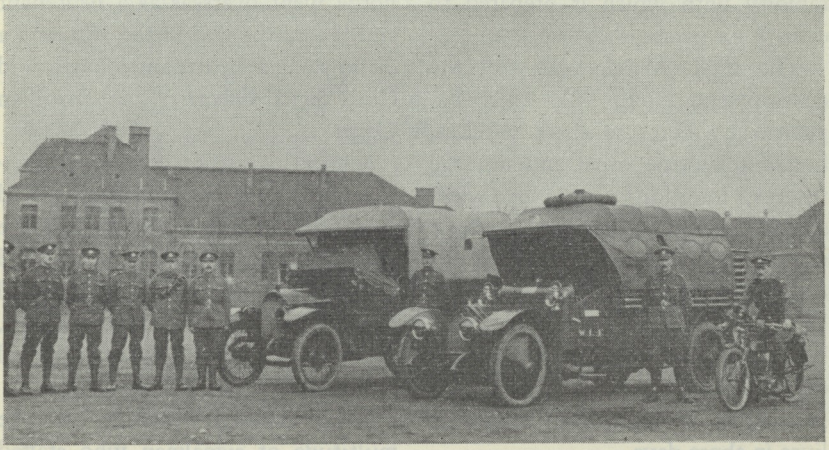
Among the officers who joined the infant Signalling Corps from other units, there came from the 77th (Wentworth) Regiment a subaltern who was to win for the Corps a prestige such as its founder must never have dreamed possible. In 1903 the Colonel of the Wentworths had recognized in one of his junior officers a man capable of organizing a signalling detachment for the regiment. With considerable knowledge

of telegraphy to his credit, and an enthusiasm for military communications generally, young Lieutenant Elroy Forde had gone to work with a will. As might be expected, his equipment was none of the best, but he had achieved some success in flag, lamp and heliograph instruction. He had come to appreciate the greater possibilities offered by the newly organized Signalling Corps, so that when the opportunity for transfer presented itself in 1907, he was quick to avail himself of a posting as a District Signal Officer.

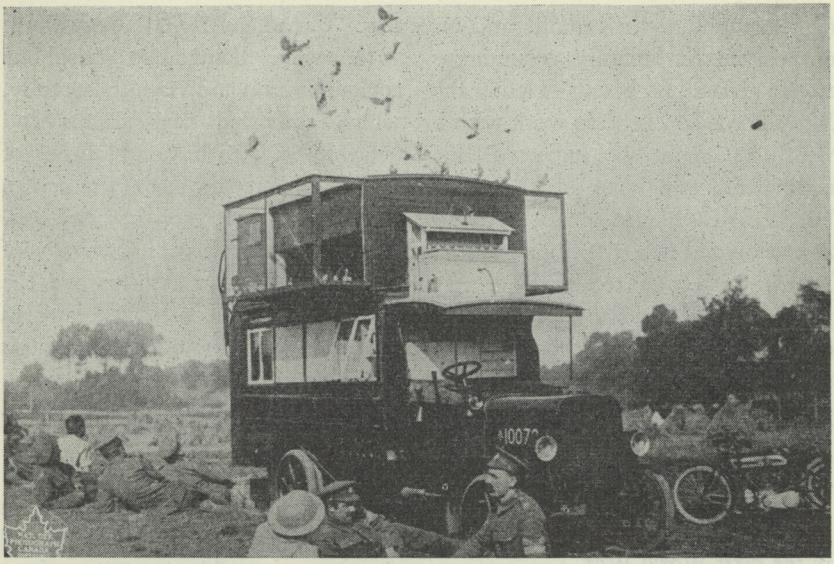
Signals' Record in the First World War

At the beginning of the First World War, the responsibilities of the Corps, which had been renamed the "Canadian Signal Corps" in 1913, were limited to telephone communication and visual telegraphy, which embraced flags, lamps and heliographs. The higher branches of signalling were then, as in the British Army, the province of the Engineers. As a result, the Signal Company of the First Canadian Division and the various Signal units formed later in the war were hybrid combinations of Engineer wireless and telegraph sections and Canadian Signal Corps sections.

It was a direct result of the far-sightedness behind the organization of the "Signalling Corps (Militia)" that it was possible, in 1914, to form the First Canadian Divisional Signal Company at Valcartier from Militia units all over Canada. This company



The Canadian Corps, using these impressive vehicles, made more extensive use of wireless communications than any other Allied Army in France during the First World War.



Pigeon communications involved the use of a mobile loft at a brigade headquarters during the First World War. Pigeons were taken to battalions by motorcycle, to be released later with messages.

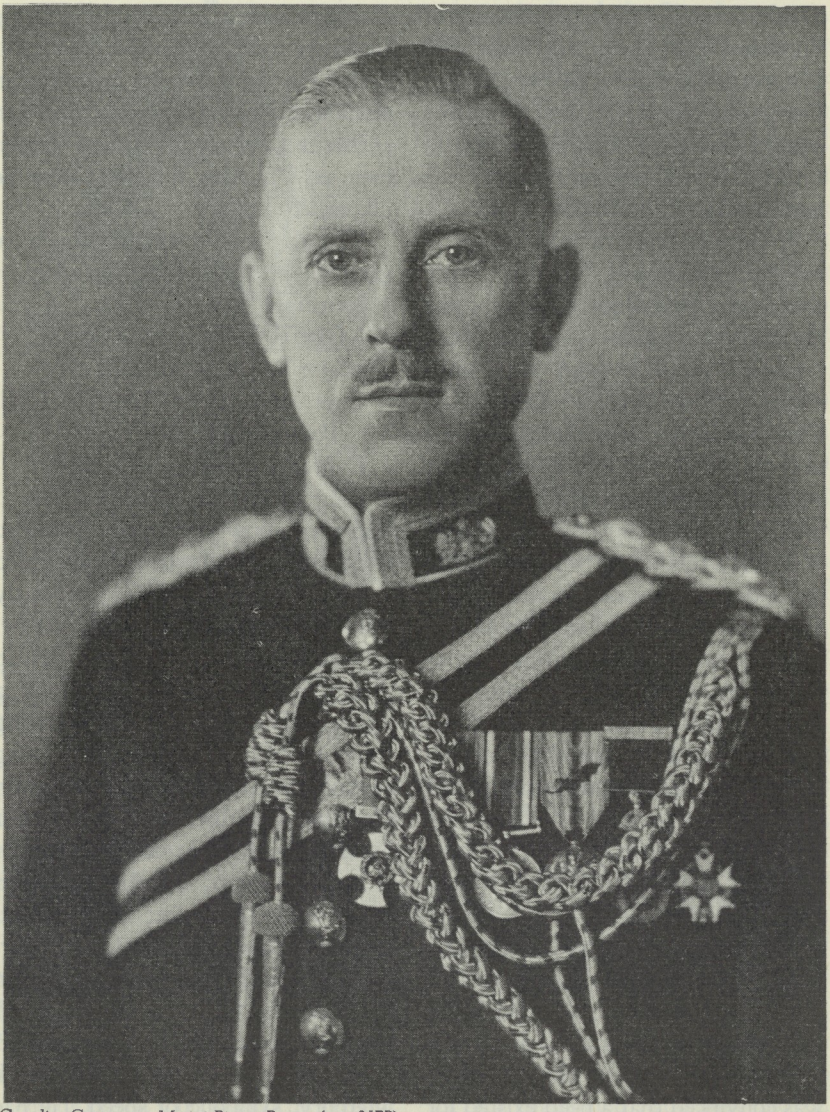
set an admirable example by the rapidity with which it prepared to embark for overseas service.

The First World War saw the development in the Canadian Expeditionary Force of spark wireless, buried telephone cable and message rockets, in addition to the widespread use of motorcyclist despatch riders, messenger dogs, carrier pigeons and the old reliable lamps and flags. Daring despatch riders and men who laid telephone cable from six-horse cable wagons driven at a gallop led glamorous, if somewhat dangerous lives in those days.

During the muddy fighting in France, one of the Corps' pioneer officers rose to prominence. Elroy Forde went overseas as a lieutenant and before the end of the war was a distinguished lieutenant-colonel, and Chief Signal Officer of the Canadian Corps.

Under his astute guidance, Canadian communications in France had developed so that at the time of the Armistice the Corps was represented by no less than four Divisional Signals, a Divisional Artillery Signals, a Field Artillery Brigade Signal Section and a Corps Signals.

The thorough training of the multitude of signalmen who staffed these units was one of the Corps' great achievements in the First



Canadian Government Motion Picture Bureau (now NFB)

The Corps was perpetuated after the First World War due to the efforts of Colonel Elroy Forde, DSO, VD, who had been Chief Signal Officer of the Canadian Corps in France. He guided the development of the Royal Canadian Corps of Signals until his retirement in 1942.

World War. In Canada, a shortage of wireless equipment and qualified instructors confined signal training to visual and line telegraphy. This was carried out at a training depot in Ottawa, by a veteran officer, the late Lt.-Col. T. E. Powers, DSO.

In England, wireless training equipment at the Signal Training Depot was equally inadequate, despite the demand for wireless operators which increased steadily from 1915 until the end of the war. In France, the Canadian Corps Signals School trained not only men for Signals units but regimental signallers of other arms as well.

In 1917 this school was finally able to undertake wireless training, but the staff and facilities were so limited that the training was given only to men who were already professional telegraphists. Nevertheless, of all Allied troops in France, the Canadian Corps made the most extensive use of wireless.

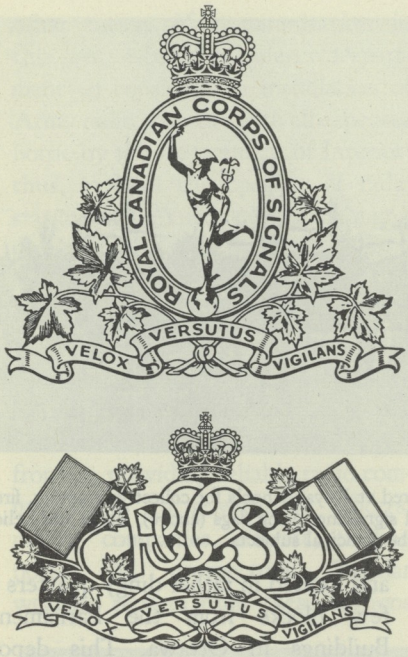
Establishment of the Corps in the Post-War Army

The Canadian Army has Lt.-Col. (later Colonel) Forde to thank that the Corps was perpetuated after the First World War. It was only by his ardent persuasion that the Staff was convinced that a need existed for Signals in peacetime and eventually, in 1919, he was authorized to take a few vacancies from the Instructional Cadre to form a "Canadian Signalling Instructional Staff" in the Permanent Force. He was fortunate in having an enviable field from which to choose an authorized five officers and fifteen men as a nucleus for the Corps he planned to build.

The original five officers who were gazetted into the Corps in August 1920 were:

Major P. Earnshaw, DSO, MC
Major W. A. Steel, MC
Capt. and Brevet Lt.-Col. T. E. Powers, DSO, VD
Capt. H. T. May, MC
Capt. E. G. Weeks, MC, MM.

Signals, now completely divorced from the Engineers, had thus secured a precarious foothold in the vastly reduced post-war Canadian Army. It was at this time that the British Army first adopted the idea of a separate Corps of Signals, reversing the usual order of things by following a precedent set in the Canadian Army. However, the distinctive badge used by the British corps was adopted, in a modified form, by the Canadian corps while the earlier badge which had been designed by Major Carruthers was changed slightly to form the present collar badge. The central figure in both British and Canadian Signal Corps badges is the Greek Mercury, symbolic of speed. He has become familiarly known by signalmen throughout the British Empire as "Jimmy". In any case, Signals in the



When the title "Royal" was granted in 1921, new cap and collar badges were adopted by the Corps. The present versions, seen here, incorporate St. Edward's Crown.

past fifty years have fully lived up to this motto and, in so doing, gained an enviable reputation for initiative, ingenuity, efficiency and devotion to duty.

In 1921, after a few months under the temporary title of "Canadian Permanent Signal Corps", the title "Royal" was granted by his majesty the King to the Permanent Force element of the Corps and the present name was adopted.

In the meantime the forerunner of the present Reserve Force was being re-organized and the Signals units in the various centres across Canada became known collectively as the Canadian Corps of Signals. The main function of the five signals officers and fifteen WOs and NCOs of the Permanent Force was to supervise the training of these non-permanent units. Several officers and NCOs from other Corps were loaned to assist as District Signal Officers and instructors. One of these was Capt. J. E. Genet, MC, of the PPCLI, who not only joined the Corps when the establishment permitted, and in 1939 took the 1st Canadian Divisional Signals to England, as a lieutenant-colonel, but served throughout the Northwest Europe campaign as Chief Signal Officer, First Canadian Army, as a Brigadier. He retired in 1947 and is now the Honorary Colonel-Commandant of the Corps.

To standardize signal training throughout Canada, all instructors were gathered together at Rockcliffe, near Ottawa, during the autumn months of both 1920 and 1921 for refresher training at "Royal Schools". The third Royal School was held at Camp Borden in 1922 and from it developed the Corps' first home, known as "The Depot, RC Signals". There was nothing very pretentious for the signalmen who first moved there in 1922. Through the indulgence of the R.C.A.F., already well established in the camp, the newcomers

National Defence Photograph

In the early twenties, Signals instructors gathered at Royal Schools for collective training, first at Rockcliffe and later at Camp Borden. Visual signalling, using flags (above), lamps and heliographs, was one of the principal subjects.

were accommodated at Borden somewhat in the manner of poor relations. For a few months one barrack room served as headquarters offices, living quarters, storeroom and classroom. With the growth of the establishment, training quarters were found, unfortunately, at some distance. Signals were fed by the RCAF kitchen, an arrangement which grew increasingly unsatisfactory as both continued to expand.

About this time another important organization that was to be a great factor in the development of the Royal Canadian Corps of Signals was formed. This was a depot for the inspection and overhaul of wireless equipment coming back from overseas, originally called the Signals Inspection and Test Department and located in rather dingy quarters a few blocks from the Parliament Buildings in Ottawa. This depot presently undertook the development, design and manufacture of wireless equipment that made much of the Corps' coming expansion possible.

The Northwest Territories and Yukon Radio System

In addition to being the fiftieth anniversary of the Royal Canadian Corps of Signals, 1953 is also the occasion for another anniversary—the thirtieth birthday of the far-flung communications network that spans the Canadian north from Hudson's Bay to the Alaska border, the Northwest Territories and Yukon Radio System.

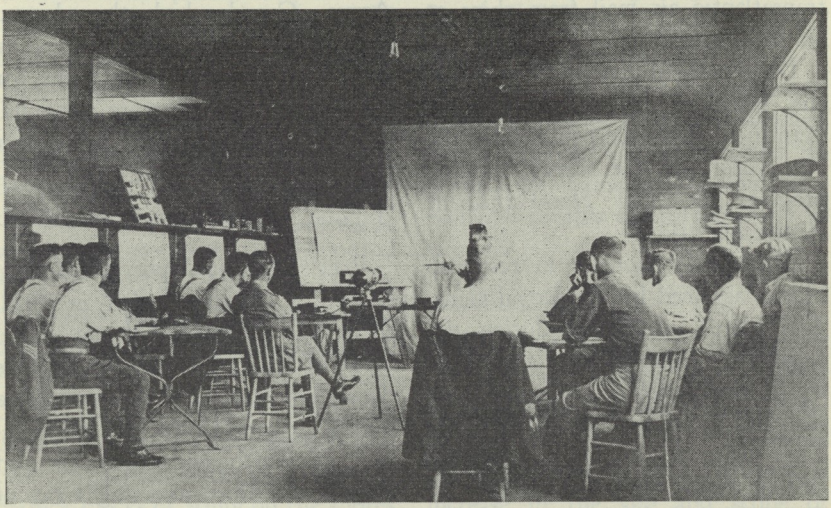
In 1922 the Department of Interior, realizing the impracticability of any

other means of communication in this area, asked the Defence Department to consider the installation of Army radio stations, with all expenses borne by the Department of Interior; thus, in 1923 the opening of radio stations at the Yukon mining communities of Mayo Landing and Dawson City heralded the coming of the System which has grown from two to twenty-one stations, ranging in size from two to nineteen men. It has become a vital link in the development of our country's rich northern frontier, providing reliable radio communication for government officers, mining companies, aircraft, trading posts and prospectors. Regular weather reports from these stations form the basis for national forecasts from the Dominion Observatory.

The early growth of this System was made possible by the manufacturing facilities of the Signals Inspection and Test Department, where most of the original wireless equipment was built.

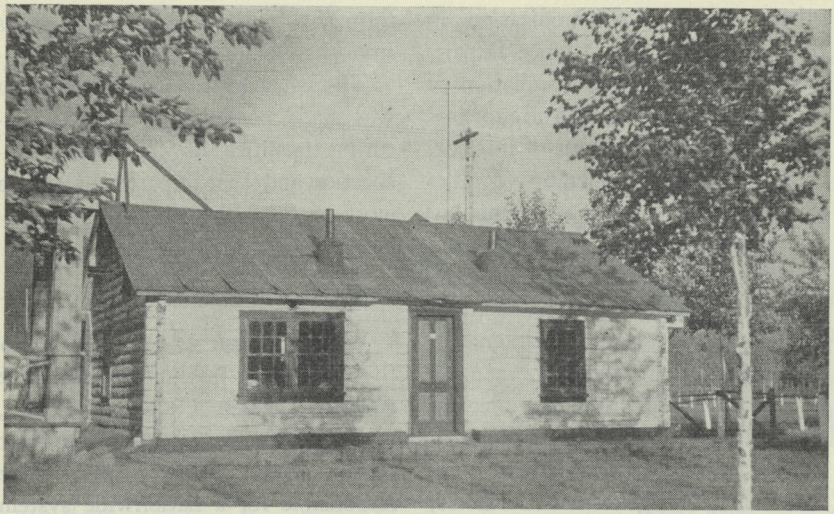
Other Peacetime Services

When air mail was introduced to the Canadian public in 1927, the Royal Canadian Corps of Signals, with its already-won reputation for reliable radio service, was made responsible for a nationwide system of radio beacons, required to guide the mail planes. The Corps also supplied communications for the first



National Defence Photograph

From the Royal Schools developed a training establishment at Camp Borden, known initially as "The Depot, RC Signals". In tarpaper-covered huts, electrical theory was taught with the aid of lantern slides.



National Defence Photograph

The opening of a wireless station in this log cabin at Dawson City and another station at Mayo Landing, in 1923, heralded the coming of the far-flung Northwest Territories and Yukon Radio System which has been operated by the Royal Canadian Corps of Signals for 30 years.

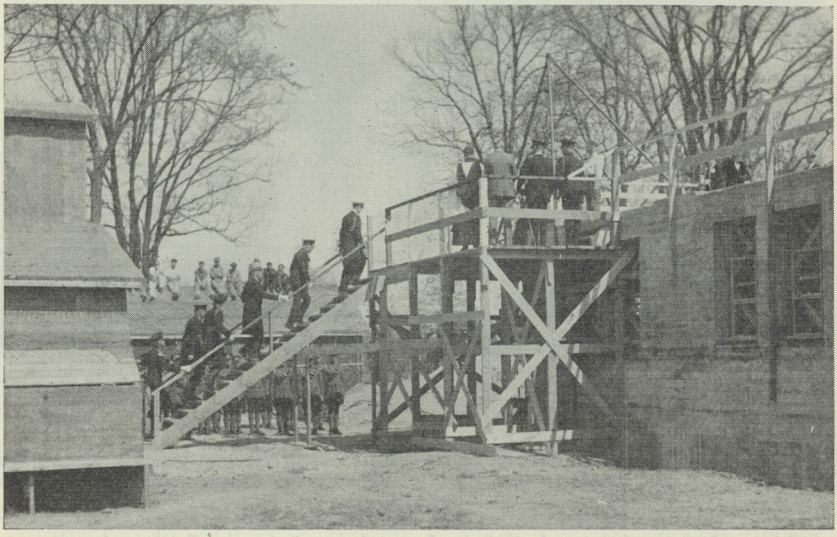
transatlantic air mail from ships at sea to Montreal.

Despite these civilian-type duties, the principal official task of the Permanent Force Corps remained the supervision of the signal training program of the Non-Permanent Active Militia.

The steady increase in responsibilities assumed by the Royal Canadian Corps of Signals during the twenties and thirties and the growing recognition which accompanied these increases, did not come automatically. They were the results of an unrelenting battle waged in Ottawa by Col. Forde who was constantly on the watch for new ways in which Signals could prove their value to the Army. Canada had the dogged determination and ardent persuasive powers of Col. Forde to thank for the fact that an adequate communications force was ready to answer the call that went out in 1939.

A Dream Realized

Ever since The Depot, RC Signals, opened at Camp Borden in 1922, there was a cherished dream at the back of Col. Forde's mind. This dream envisaged a permanent home for his growing Corps, the authorization of which he sought for ten long years before receiving a ray of hope. It was, curiously enough, an economic depression which made the building of Vimy Barracks possible.



National Defence Photograph

On 25 May 1935 the end of Signals' days in make shift accommodation at Camp Borden came in sight as His Excellency the Earl of Bessborough, PC, GCMG, then Governor General of Canada, mounted a wooden platform to lay the cornerstone of the main building of Signals' new permanent home at Vimy Barracks, Kingston.

It was authorized as an unemployment relief project and on 25 May 1935 the then Governor General of Canada, His Excellency the Earl of Bessborough, P.C., G.C.M.G., laid the cornerstone of the main building which was to bear the honoured name of Forde. Two years later a proud day came for Col. Forde as he watched the men of the Permanent Force element of the Royal Canadian Corps of Signals move from the primitive huts of Camp Borden and take up residence in the gleaming new barrack blocks of Vimy on the shores of the St. Lawrence near Kingston. By this time the name of the Depot had been changed to the Canadian Signal Training Centre.

In the short time that remained before September 1939, the Canadian Signal Training Centre got over its organization pains and became fully prepared to play the part that lay in store for it.

An Enviable Second World War Record

The Second World War, with its unprecedented requirement for communications befitting large-scale mobile fighting, saw a tremendous increase in the size and scope of operations of the Royal Canadian Corps of Signals. Each of Canada's five fighting divisions was furnished

Photograph by Cpl. A. E. Butler, RC Signals

In 1937 signalmen moved into barrack blocks clustered about the main building, which bears the name of Colonel Forde. Two years later Corps and Divisional Signals units were mobilized for overseas service.

with a divisional signal unit of nearly a thousand men, and the Corps also supplied a large signal unit for each of two Corps Headquarters, for Headquarters First Canadian Army and another for the Lines of Communications Area. Hundreds of trained signalmen served in base signal units and many more served in North Africa, Hong Kong and Australia. The war also brought tremendous advances in equipment and in the techniques used in military communications.

When mobilization came in 1939, Canada was thankful for the foresight which had been responsible for the raising of the force of part-time soldiers, the Non-Permanent Active Militia. While the small Permanent Force element of the Royal Canadian Corps of Signals formed a nucleus and a training staff in most units, it was the hundreds of loyal Canadians who had made a hobby of military signalling, two nights a week, who played a large part in the organization of the huge Signals force of the Second World War.

Between wars the development of signalling methods had not been particularly spectacular, but the first years of the war brought rapid strides. The No. 19 Wireless Set which was developed in Great Britain was manufactured in large quantities in Canada and became the reliable standard throughout the armies of the British Empire for short and medium-range radiocommunication. It was standard equipment in every tank, and has yet to be surpassed in its field. More powerful sets were developed for radiocommunication

over greater distances. Much of this development work was made possible by the expanded facilities of the old Signals Inspection and Test Department which, under the impressive name of the "Canadian Signals Research and Development Establishment", had moved into equally impressive new quarters among the National Research Council laboratories near Ottawa.

Between more or less fixed points, telephone was the backbone of communication, many thousands of miles of cable being laid by Signals linemen, often under very hazardous circumstances. Portable carrier equipment was developed, enabling one line to do the work of many by providing several separate communication channels.

Field teleprinters carried a great volume of message traffic, especially in rear areas. Bulky orders and urgent messages were carried over the length and breadth of the battle areas by Signals despatch riders, whose blue and white armbands allowed their motorcycles and jeeps clear passage through all barriers.

The Second World War proved that service in The Royal Canadian Corps of Signals offered a share of the hazards faced by the infantry and the tanks. Twenty-four officers and 367 men gave their lives while

National Defence Photograph

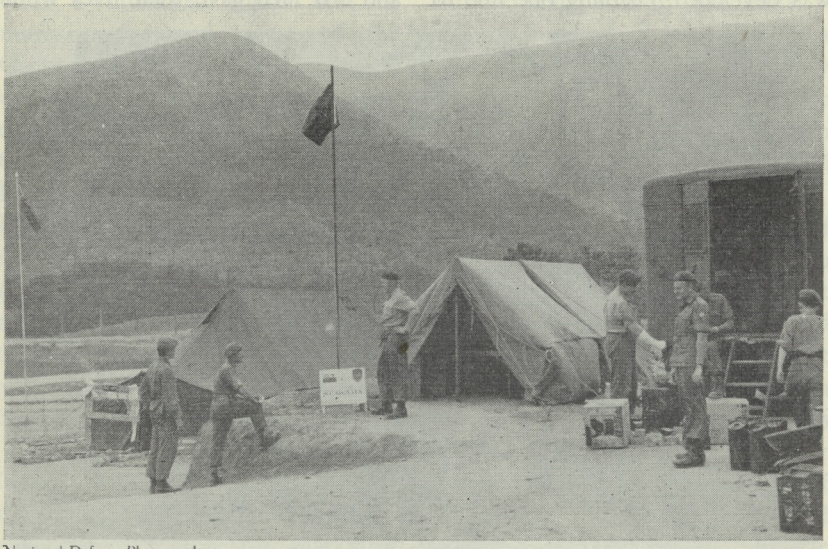
A Terminal Equipment Vehicle in use during the Second World War at HQ 2nd Canadian Corps in the Reichwald Forest just before telephone lines were connected. Inside, a 200-line switchboard is ready for operation.

serving overseas with the Corps most of whom had come from the ranks of the Reserve Force in 1939 and 1940.

Many battlefield decorations were awarded to courageous soldiers of The Royal Canadian Corps of Signals. Most of these were won by linemen and despatch riders who, realizing the importance of their missions, persevered under enemy fire—often after being wounded—to mend a broken line or deliver a vital message.

An event of lasting significance to the Corps was the kind acceptance in 1940 by Her Royal Highness, The Princess Royal, of the position of Colonel-in-Chief of the Royal Canadian Corps of Signals. Her Royal Highness, sister of the late King George VI, is also Colonel-in-Chief of the Royal Signals (British Army) and of the Signal Corps of the other nations of the British Empire. Her Royal Highness has taken a keen interest in her Canadian Signalmen and visited most of the units of the Corps which were in England during the Second World War. Since the war she has continued to follow the activities of the Corps with interest.

After seeing his Corps securely launched as an important part of Canada's wartime Army, Col. Forde reluctantly retired from the Army in



National Defence Photograph

In 1951, a large signal troops, hastily assembled and trained by Major D. H. George, MBE, MC (centre), arrived in Korea, where, with a change in personnel, it is still serving the communications needs of the 25th Canadian Infantry Brigade. A similar troop serves the 27th Canadian Infantry Brigade Group in Western Germany.

1942. As a lasting tribute to his great part in the development of the Royal Canadian Corps of Signals, a handsome portrait was painted by Kenneth Forbes and presented by his brother officers to the Officers' Mess at Vimy Barracks, where it occupies a position of prominence.

The Corps in the Post-War Army

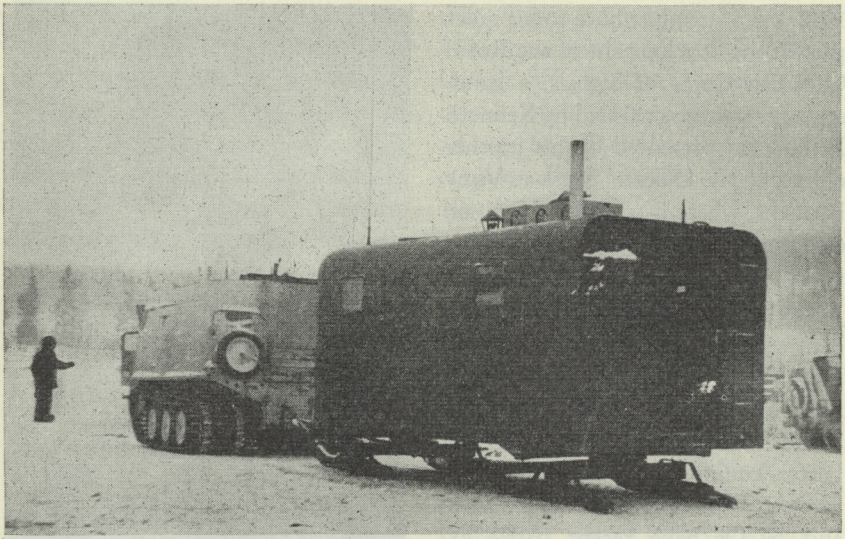
In the re-organized post-war Canadian Army, Signals play a part in both Reserve and Active Forces. Reserve Force Signals units are authorized to carry more men and better equipment than in the lean pre-war years. Many of their officers and NCOs have recent battle experience to guide them in the training of the signalmen on whom the Army must depend in a future emergency.

The Corps is represented in Korea by a large brigade signal troop and by men serving with the artillery regiments. In Germany a brigade signal squadron is undergoing field training in the shadow of the iron curtain.

In Canada, members of the Active Force element of the Royal Canadian Corps of Signals are engaged in a number of important tasks. They operate the Army component of the National Defence Communication System, a modern country-wide automatic teletype system. They maintain over twenty isolated stations of the Northwest Territories and Yukon Radio System, some of them inside the Arctic Circle. They perfect improved types of communication equipment at the Canadian Signals Research and Development Establishment near Ottawa and test some of it in the bitter winter weather of Fort Churchill. They serve in field training units ready for service anywhere on short notice, and they operate the Royal Canadian School of Signals for the training of both Active and Reserve Forces.

From a painting by Maurice Codner, R.P.

Responsible for First Canadian Army Communications overseas was Brigadier J. E. Genet, CBE, MC, who came to Signals from the Princess Patricia's Canadian Light Infantry in the early twenties. After the war he retired and became the Corps' first Honorary Colonel-Commandant.



Photograph by Lt. R. I. Thompson, RC Signals

Every winter a hardy band of signalmen penetrate the icy wilderness beyond Fort Churchill to test new Arctic communications and techniques.

This is the story of the Corps which began fifty years ago in the mind of Major Bruce Carruthers, and which established military communications as one of the arts of war, in 1914-1918. This is the story of the Corps which barely survived the First World War but, thanks to the efforts of Col. Forde and his faithful few, lived to establish a great radio-communication system in the North and to establish and train a large part-time army of eager signalmen. This is the Corps that provided the thousands of trained signalmen needed to control the vast Canadian forces of the Second World War, the Corps that, backed by a half-century of hard-earned experience, stands ready to provide the military communications whenever Canada calls.

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(*Continued on page 140*)

THE ROYAL CANADIAN ARMY SERVICE CORPS

COOKING IN THE FIELD

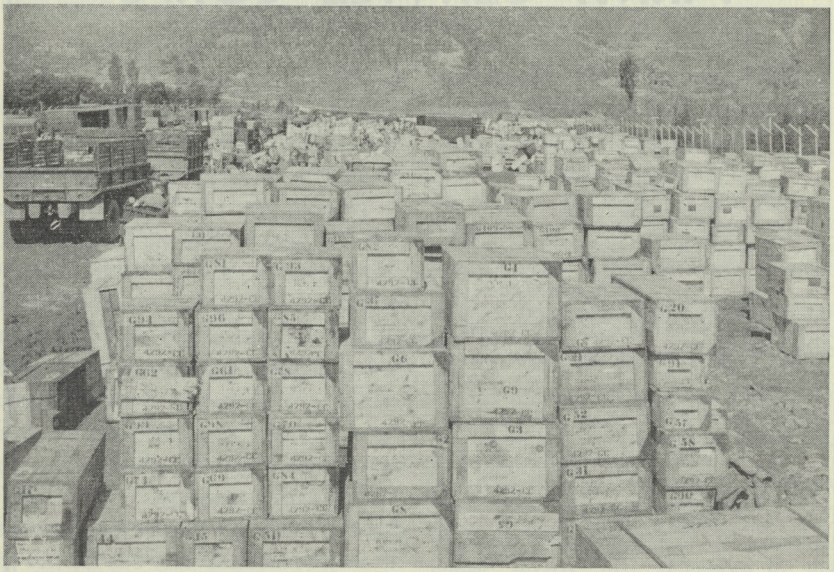
By
LIEUTENANT J. R. DREWERY, No. 25 PUBLIC RELATIONS UNIT, KOREA*

From time immemorial every cook worth his salt has aimed at the perfect combination of top-quality ingredients and skilled preparation. Under normal conditions it's a dependable formula for good food whether he's frying veal-chops or producing corn fritters.

Unfortunately the word "normal" is seldom in the warrior-cook's vocabulary and every army finds that the formula mentioned above tends to give at the seams under actual field conditions. A great deal of work has to be done to eliminate the factors contributing to its failure.

Headaches that faced the Canadian Army in Korea included the problem of providing fast transport of food stuffs from the rail-head to consumer units; the provision of adequate kitchen facilities for food preparation at the front and in rear areas; the setting up of inspection services; and the necessity of providing a field school as an initial training ground for apprentice cooks.

*This article was written before the truce in Korea. The accompanying illustrations are National Defence Photographs.—Editor.



A portion of some 30,000 crates of stores which had to be sorted and stockpiled following its arrival at Pusan.

Fresh daily rations are issued to the 25th Canadian Infantry Brigade in the lines near the Han River in Korea.

These were only a few of the multi-problems involved in feeding the 6,000 soldiers of the Canadian Brigade. Logistical knowledge gained in the Second World War, and creative Service Corps planning, have nailed down most of the problems. The planners discarded, replaced, modified and invented solutions, each of them designed to maintain financial economy and provide the best possible service.

The decision to purchase U.S. rations for the Korean Brigade eliminated unnecessary expenditure by the Canadian forces for setting up and maintaining lines of communication, parallel to the American system already in existence.

At present, food stuffs are funneled into Korea from American ships at the port-of-entry and moved by rail to a railhead behind the Canadian sector.

Daily, two-and-a-half-ton trucks of the Service Corps' 23 Transport Company load up at the railhead and roll northward over the narrow, dusty road that twists through the hills to the Imjim valley. They rendezvous at a supply point, centrally located in the Brigade area. There they are met by vehicles from each Brigade unit which queue up to pick up the day's food rations.

Briefly, that is how the raw material arrives at the brigade kitchens. It is at this point that the unsung genius of the army takes over. If there is ever a motto designed in honour of the field cook it's a certainty that the word "adversity" will be in it somewhere.

In a typical front line kitchen two

A sergeant and lance-corporal of 54 Transport Company, RCASC, check the ration supplement before they are issued to units. This photograph was taken in Korea.

cooks are responsible for producing three hot meals a day for approximately one hundred and twenty men. Since the enemy doesn't always confine his shelling to the front line positions, the kitchen—usually a two-stove squad tent—is protected by a three- or four-foot sandbag wall. In particularly hot positions the company kitchen is dug into the reverse slope and braced with heavy timbers and sandbags. Last December, a Royal 22e Régiment company kitchen operated through five days of shell fire pounding the hill around it.

Ready to be moved out at a moment's notice, the 30 x 14-foot tent-kitchen is bare of cumbersome work-saving gadgets and unnecessary utensils. As a result the cook's ability to improvise is the measure of his success.

For instance, the problem of keeping food hot led to much experimentation and subsequently to a unique solution. They manufactured a steam table. First they found a discarded petrol drum, wound a strand of cordtex detonating fuse around each end of the drum, packed the fuse with mud and attached a 15-second burning fuse. When the fuse was lit the

Three riflemen lend a helping hand to their hard-pressed cook while on duty in Korea. They're frying doughnuts.

resulting explosion whipped off the ends of the drum.

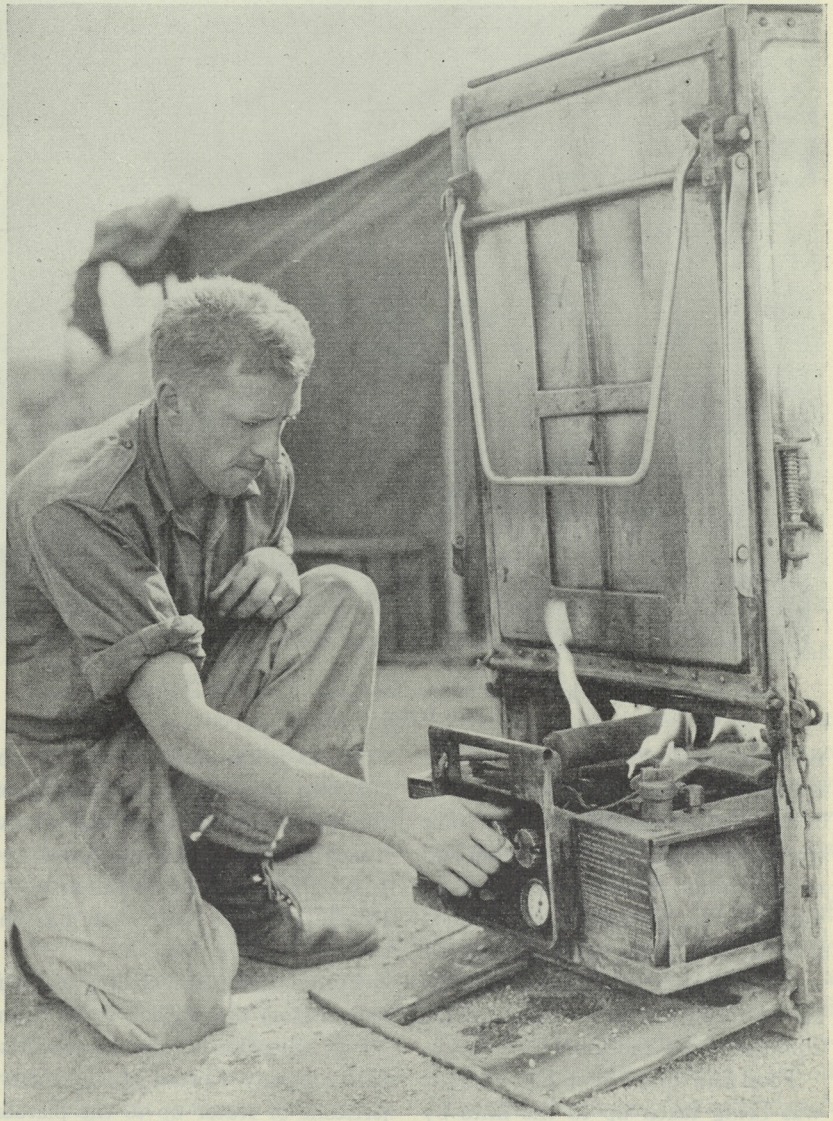
Next they installed a fire unit from a field range in the bottom end of the drum. As the unit is fed by vapour under pressure, they attached a generator, a gas tank and an air cylinder which was pressurized by an ordinary bicycle pump. This equipment did the job.

Food had to be kept hot while it was being taken up to the lines by Korean bearers. The answer to that one was insulated containers which are effective in the coldest weather.

A 45-gallon drum, with a door cut into the end and insulated on the outside with mud and straw, makes an ideal oven for bread and pastry. Charcoal or wood in a fire trench provides the heat for the oven.

Pure drinking and cooling water is hauled from the brigade water point by a 250-gallon trailer attached to each company. Korean labourers carry jerricans of water up to the platoon areas.

A self-heating beverage container developed in England during the

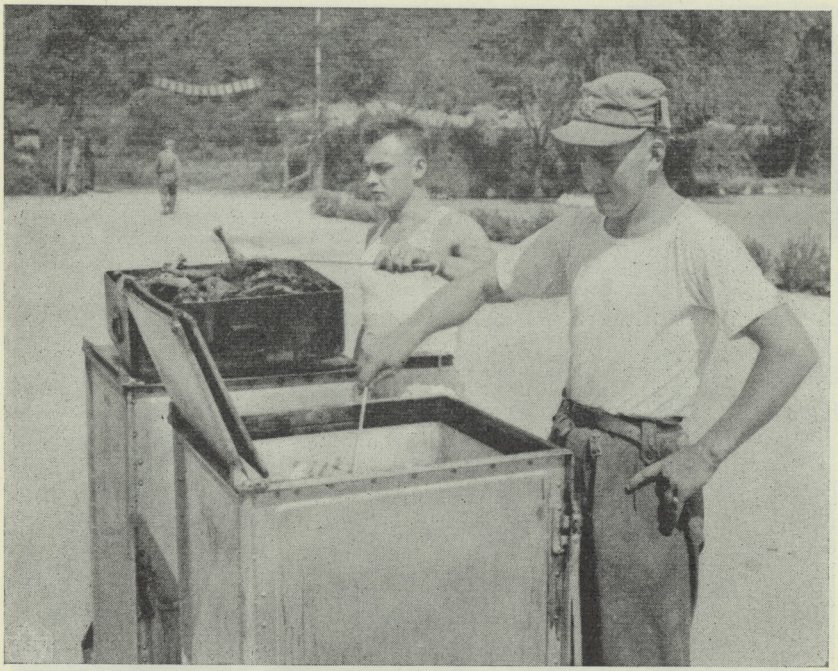


A soldier with 54 Transport Company, RCASC, adjusts the burner of a field range.

Chicken is served for supper by a soldier in Korea, while a happy South Korean soldier looks on.

last war is issued to troops on night patrols or in outposts where movement or a cooking fire would attract enemy attention. Soup, malted milk and cocoa are in special cans with a chemical fuse in a metal tube running through the centre of the can. When the fuse is lit it burns down through the tube with an almost invisible blue flame. The intense heat generated from the metal wall of the fuse heats a can of beverage in less than five minutes.

Early last year a catering department for apprentice cooks was added to the Non-Commissioned Officers' School at Ui-Jong-Bu. As part of their course, the fifteen cooks attending each five-week course cook for the school's dining table. According



More chicken.

to latest reports the experiment has been successful—with no casualties on either side. On graduation the cooks return to their units for more practical training.

Organization and inspection of Canadian catering facilities are in the capable hands of Captain A. E. Tilley, Brigade Catering Advisor, of Ottawa, and WO 2 L. W. Ranger, Kitchen Organizer, of Camp Borden, Ont.

In the back areas the food is more elaborately prepared and served. However, there is an overall high standard of quality.

Detailed and practical planning for the feeding of the 25th Canadian Infantry Brigade has paid off for the Canadian Army. One of the most important rules of maintaining morale among an organized group of men is to safeguard the individual's physical well being. Good food then is as important to a soldier's fighting efficiency as good weapons.

THE ROYAL CANADIAN ORDNANCE CORPS

A TIE THAT BINDS

By
Lieut.-Colonel E. C. Cowan, CD, Command Ordnance Officer,
Eastern Command

Foreword

"The rifle is still the most important part of a soldier's equipment, and we must ensure that we are in a position at all times to extract the maximum value from its use.

"In a Technical Corps such as the R.A.O.C., it is not always possible to devote the time on the Open Range one would like, more especially during the winter months, therefore, we must find a means of maintaining our 'Skill at Arms' throughout the year.

"To this end, I submit that Small Bore Shooting provides the opportunity of retaining our interest during the winter, a further step towards greater perfection, since it requires closer grouping, and in the case of the Young Soldier, it is a prelude to Full Bore Competition Shooting at the Mecca of all rifle shots—BISLEY.

"The 'Corps' intends to hold a high place in the Army Small Bore world, but this cannot be achieved if the skill and enthusiasm is not forthcoming at Unit level."

(From the RAOC Rifle Association Handbook 1950-51).

* * *

With characteristic British appreciation of the efficacy of competition in stirring up enthusiasm, improving performance, and initiating friendly rivalry, the Royal Army Ordnance Corps Rifle Association in 1949 instituted a Commonwealth Army Ordnance Small Bore Challenge Match which is rapidly becoming an annual event of great interest in the RCOC.

The match, which can be fired on an indoor or outdoor 25-yard rifle range, is open to teams of eight members of any rank, male or female, representing the ordnance services of member countries of the Commonwealth. The Royal Army Ordnance Corps Rifle Association generously provides a large gilt medal to be presented to each member of the winning team and a small gilt medal to the runners-up and members of the team gaining third place. The National Small Bore Rifle Association (UK) target used is printed on off-white cardboard, and the aiming mark (1¼ inches) is unusually small by Canadian standards. The bullseye which is 5/16 of an inch in diameter is very close to that of the Canadian Army Recreational Shooting Target.

Teams are required to shoot collectively or individually at any available range under strict rules. The completed cards are collected and forwarded to the United Kingdom for marking by a special Match Committee.

Through a lucky combination of circumstances when the first match was fired in the spring of 1950, practically all the first-class small bore shots in the RCOC were in the general area of Montreal and Ottawa, and it was possible for the team captain, Major W. J. Strachan, to arrange practices and selective trials. The result was that the RCOC team bested the RAOC by shooting 3147 (out of 3200) against their 3124. This works out to over 98.3% which, it must be admitted, was a surprisingly high result for a group of eight firing at an unfamiliar target. In 1951 the tables were reversed and the RAOC won with 3124 against 3116 for the RCOC. In 1952 the scores slipped a little but the RAOC repeated their win with 3117 against 3113 for the Canadians. At this point the small bore shots of the RCOC were beginning to wonder if they had lost their touch or if the difficulties encountered in trying to organize a shoot of this nature were going to preclude their ever gaining the lead again. When the result of 3126 was achieved for 1953, however, it was felt that, with some luck, the team would come out on top again. Much to everyone's surprise, the shoot between the RCOC and the RAOC was a draw at 3126. Considering the number of cards completed by each team a draw of this nature must be a near record in the history of small bore shooting. Happy to relate, the RCOC team was given precedence in the draw as they score 173 carton bullseyes against 170 scored by the RAOC. The carton (centre or x-ring, in Canadian rifle parlance) is about 3/16 of an inch across.

An interesting feature about the shoot is that so far it has been a race between the RAOC and the RCOC for leadership. The Royal Australian Army Ordnance Corps has come third each time, followed by the Ceylon Army Ordnance Corps, the Pakistan Army Ordnance Corps and the Indian Army Ordnance Corps. It is anticipated, however, that as the marksmen of these other ordnance corps become more familiar with this type of shooting, the race will become a closer one.

Teams are selected on merit alone, and in 1953 all teams included both officers and other ranks. Between 1950 and 1953 the RAOC and RCOC teams have included members ranging from private to lieutenant-colonel. The majority of RCOC units competed in the trials in 1953, and every command in Canada, save one, was represented on the team selected.

The turnover in the constitution of the team itself is surprisingly high and it is gratifying to note that four new shots have acquired a degree of proficiency which has enabled them to oust four of the original team of eight which set such a high record in 1950.

From the foregoing, it is evident that interest in small bore shooting in the RCOC has been stimulated considerably by the initiative of the RAOC Rifle Association in the establishment of this annual match. It is sincerely hoped that the good effects of increased interest in small bore shooting will spread and raise the standard of efficiency with all small arms. The RCOC is grateful to its mother corps for initiating this event, and looks forward to its indefinite continuance.

Scores 1950—1953

	RAOC	*RCOC*
1950	3124	3147
1951	3124	3116
1952	3117	3113
1953	3126	3126

Fifty Years

(*Continued from page 128*)

Suggested Reading

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85 Years Ago

Notwithstanding attacks made on the Signal Corps, military men generally have come to the conclusion that such a corps is not only an important, but an absolutely essential part of the organization of a grand army. Although we have still much to learn in this branch of the military art, our progress has already attracted the attention of foreign powers, which have asked permission to have officers of their army instructed in our system of signalling by means of flags and lights, as well as in the use of the telegraph. It is undoubtedly destined to play an important part in future wars.—*Army-Navy-Air Force Journal (U.S.).*

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