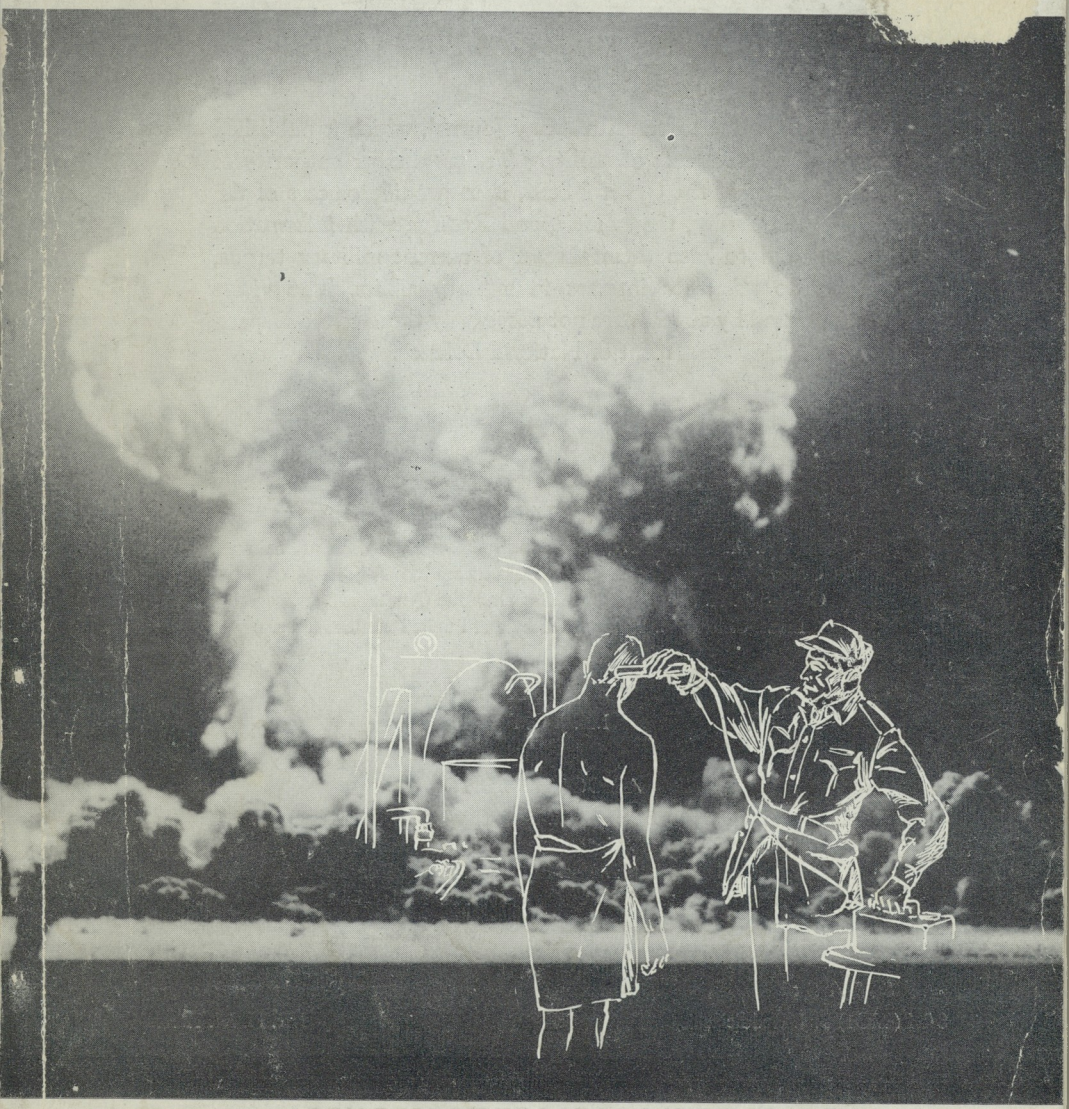
Canadian ARMY Journal



VOL. IX NO. 3 JULY 1955

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 Regular Army, the Militia, and Reserve 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 photograph of the atomic explosion at Camp Desert Rock, Las Vegas, Nevada, on 5 May 1955. The *Journal*'s artist has superimposed figures of a decontamination team at work. This was the first time that Canadian servicemen participated in an atomic exercise, and the story is told in two articles commencing on page 2 of this issue.

THE STORY OF EXERCISE SAPLING

By
Lieut.-Colonel R. A. Klaehn, MBE, CD, (Royal Canadian Engineers),
Director of "Exercise Sapling"*

This is the story of the first participation by Canadian servicemen in atomic weapons tests. In many respects it was a repetition, yet always new, of other "D Days". The usual excitement and disappointments which accompany new ventures—long hours of planning, delays, hopes, fears, and satisfaction over a job well done—all were part of a story which reached its climax with the atomic explosion at Camp Desert Rock, Las Vegas, Nevada, on 5 May 1955.

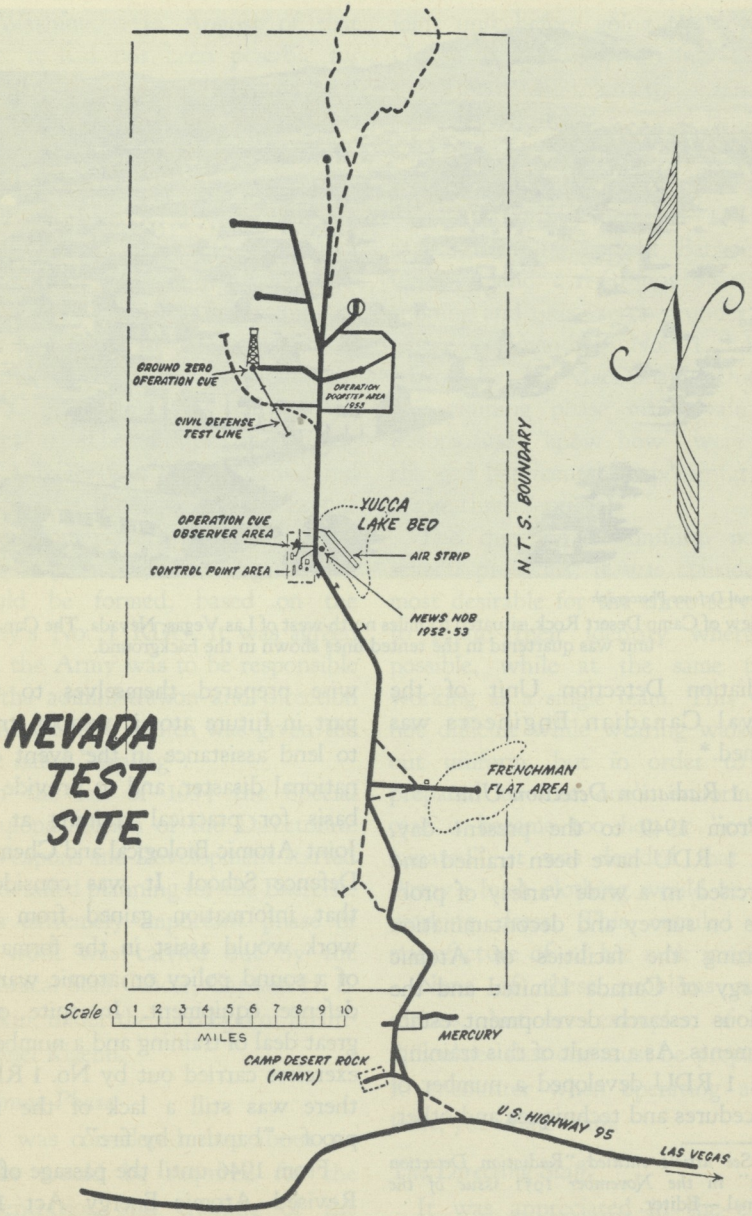
The more technical details of the many valuable lessons learned on this Exercise will in due course be available in more formal papers in order that further refinements may be made in Canada's defence measures.

The New Problem

With the advent of atomic weapons in 1945, an entirely new problem, that of radio-active contamination, faced the armed services and civil defence. It is well known that the smaller sizes of atomic weapons, when exploded in the air as a high air burst, produce their damage principally through blast and thermal radiation. It is known that a surface or sub-surface burst results in residual contamination. In more recent years the increase in size and effect of these weapons and the difficulties involved in exploding larger atomic weapons (thermo-nuclear weapons) at a sufficient height for an air burst have increased the probability of encountering large areas of residual contamination.

The nuclear radiations from the residual radio-active contamination are a hazard to personnel. Since these radiations cannot be detected by the senses, instruments are required to measure the amount of radiation in order to assess the hazard and to take appropriate counter-measures. These radiac instruments enable units and formations to assess the degree of hazard in their own localities. It was foreseen, also, that a special unit would be required to deal with problems over and above the capability of the unit equipment. For this purpose No. 1

**Lieut.-Colonel Klaehn is with the Directorate of Weapons and Development, Army Headquarters, Ottawa.*—Editor.


GROUND ZERO
OPERATION CUE
OPERATION DOPPLER AREA 1952
CIVIL DEFENSE TEST LINE
OPERATION CUE OBSERVER AREA
CONTROL POINT AREA
YUCCA LAKE BED
AIR STRIP
NEWS NOB 1952-53
N.T.S. BOUNDARY
N
NEVADA TEST SITE
FRENCHMAN FLAT AREA
Scale 0 1 2 3 4 5 6 7 8 9 10
MILES
MERCURY
CAMP DESERT ROCK (ARMY)
U.S. HIGHWAY 95
LAS VEGAS

National Defence Photograph

A view of Camp Desert Rock, situated 65 miles north-west of Las Vegas, Nevada. The Canadian unit was quartered in the tented lines shown in the background.

Radiation Detection Unit of the Royal Canadian Engineers was formed.*

No. 1 Radiation Detection Unit

From 1949 to the present day, No. 1 RDU have been trained and exercised in a wide variety of problems on survey and decontamination utilizing the facilities of Atomic Energy of Canada Limited and the various research development establishments. As a result of this training, No. 1 RDU developed a number of procedures and techniques and otherwise prepared themselves to take part in future atomic weapon trials, to lend assistance in the event of a national disaster, and to provide the basis for practical training at the Joint Atomic Biological and Chemical Defence School. It was considered that information gained from this work would assist in the formation of a sound policy on atomic warfare defence equipment. In spite of a great deal of training and a number of exercises carried out by No. 1 RDU, there was still a lack of the final proof—"baptism by fire".

From 1946 until the passage of the Revised Atomic Energy Act 1954

* *See article entitled "Radiation Detection Unit" in the November 1951 issue of the* Journal.—Editor.

in Washington in August of that year, it had not been possible for Canadian services to participate with the American forces in indoctrination trials at the Nevada Test Site of the Atomic Energy Commission (AEC).

During high level discussion between the Chairmen, Chiefs of Staff, of the two countries, arrangements were made for the training of No. 1 RDU "in a large area of contamination" at the Nevada Proving Ground following an atomic explosion. The matter of training No. 1 RDU was further considered during the Joint Special Weapons Policy Committee, and it was decided that a Joint Service Organization should be formed, based on the Army's No. 1 RDU. It was agreed that the Army was to be responsible for the administration and direction of the Exercise, which was given the code name "Sapling".

In the fall of 1954 the Special Weapons Section of the Directorate of Weapons and Development started the detailed planning for the Exercise. This extremely important phase of the work was carried out by the Technical Staff Officer, Captain H. E. Rankin, under the direction of Lieut.-Colonel Klaehn.

Training Phase

It was considered that about six weeks would be required for the concentration and training of the joint unit before going to Nevada. On the basis of an original target date of early March, it was necessary to start training in mid-January. Officers and NCOs of the Royal Canadian Navy and the Royal Canadian Air Force joined No. 1 RDU at its home station of Barriefield, Ontario, and carried out specialist training and unit exercises under the officer commanding No. 1 RDU, Major R. E. MacDonald. During this training phase many valuable lessons and "know how" were exchanged between the representatives of the three services.

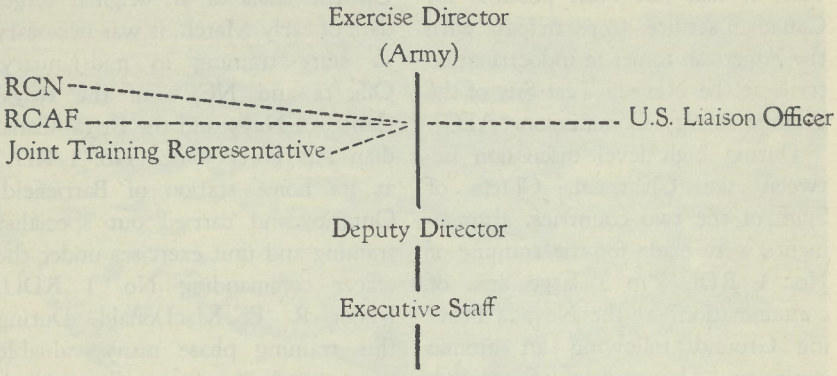
The question of uniform posed several problems: it was considered most desirable for the three services to retain their identity wherever possible, while at the same time working as a single team. This was not difficult while wearing walking-out uniform, but in order to be prepared to lose one's uniform in case it became too hot or "contaminated", it was decided that the Army's bush clothing would be the working dress. This entailed the manufacture of *ad hoc* rank insignia.

None of these problems were serious, but are examples of the difficulties that one must be prepared to encounter when operating as a joint, yet single team.

The Directing Staff

It was appreciated in the early

ORGANIZATION FOR EXERCISE SAPLING



phases of training that it would be difficult for the joint unit to participate in such a new development while divorced from its normal administrative and staff direction channels. It was therefore decided to create a small Directing Staff in order to carry out the following responsibilities:

1. To cater for administrative problems over and above the unit capability.

2. To provide the staff direction such as would be received from a command whilst in Canada or a formation headquarters in the field.

Movement of Personnel and Unit Equipment

In order to conserve "operational mileage" on the specially equipped vehicles of No. 1 RDU, they were shipped, together with other equipment, by priority freight. The personnel travelled in special cars attached to first-class trains for the long transcontinental journey. Both of these movements were made without incident, thanks largely to the officers in charge of Movements and the many co-operating passenger and freight managers of the many railways involved. A small advance party with representatives of the Directing Staff and the unit preceded the movements, vehicles were unloaded at Las Vegas and taken to the vehicle lines at Camp Desert Rock with the assistance of U.S. troops and were there awaiting the arrival of the main body.

Operation Teapot: Exercise Desert Rock

The 1955 Spring series of atomic tests conducted by the U.S. Atomic

Energy Commission was entitled "Operation Teapot". Within these AEC tests, the U.S. Army aspects are known as "Desert Rock", exercises named, of course, after the U.S. Army's Camp Desert Rock which is adjacent to the Nevada Proving Grounds. Each of the actual atomic shots is also given a code name. The shot which we attended, being the second firing of a specific test, was "Apple Two". Thus, to sum up the various code names involved, the Canadian contingent was on "Exercise Sapling" to participate at "Shot Apple Two" in conjunction with the U.S. Army's "Exercise Desert Rock" as part of AEC's "Operation Teapot".

Exercise Desert Rock was designed to permit troops in trenches and armoured vehicles to observe and experience the effects of an atomic explosion at close range. The Canadian contingent accompanied the U.S. Army into forward trenches at approximately 3200 yards from Ground Zero. At this range they were close enough to the explosion to appreciate the value of a good trench. Further description of this event is published elsewhere in this *Journal* and will not be dealt with here. Following participation in the Desert Rock

National Defence Photograph

The Canadian contingent is welcomed at Camp Desert Rock. *Left to rigth:* Major-General William F. Dean, Deputy Commander, and Brigadier-General Fred W. Sladen, Commander of the U.S. VI Army; Lieut.-colonel Klaehn, the author of the accompanying article; Lt.-Cdr. J. P. Keeling, Royal Canadian Navy; and W/C A. L. Bocking, Royal Canadian Air Force.

National Defence Photograph

Members of the Directing Staff of Exercice Sapling discuss problems common to the three services. Left to right: W/C A. L. Bocking, RCAF; Major R. F. Green, Lieut.-Colonel R. A. Klaehn, and Captain H. E. Rankin, all of the Canadian Army; Lt.-Cdr. J. P. Keeling, Royal Canadian Navy.

Exercise, No. 1 RDU was directed to commence Exercise Sapling.

The Delays

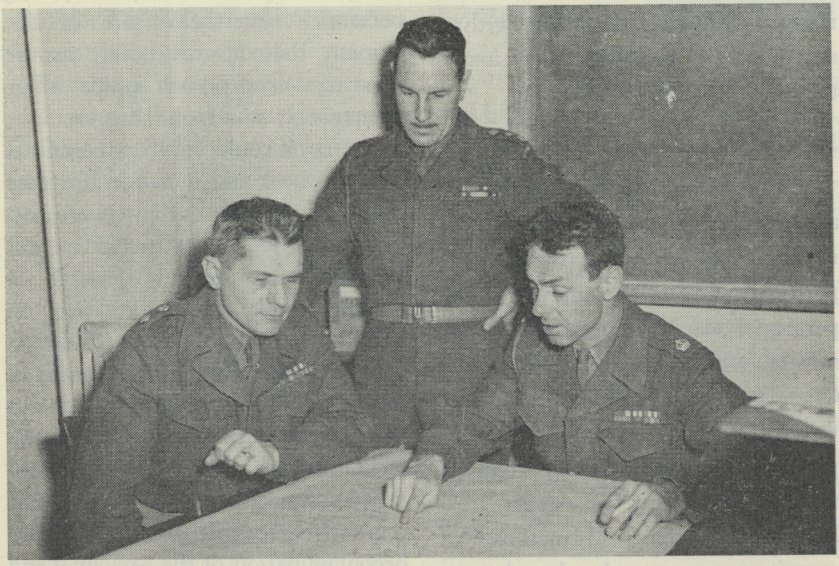
In order to carry out the atomic tests with a minimum of danger to the participants and in order to protect the surrounding surburban areas, very special precautions are taken. Conditions are chosen so that the residual contamination or fall-out will be either confined to the isolated test area itself or so widely and thinly dispersed that it will not endanger life elsewhere. This calls for a most careful prediction of the weather conditions. Unless these conditions are met, the officials directing the tests cancel the shot for a prescribed period. Much has been written in the press about these delays, and it is unfortunate that the cancellations caused disappointment to certain participating groups such as Civil Defence, who could not remain until suitable conditions were achieved. In so far as No. 1 RDU was concerned, the delays provided unexpected bonuses: they provided time for additional training in previous test areas.

Surveying the "Hot Area"

Following the participation in Exercise Desert Rock, the Canadian contingent commenced Exercise Sapling. As stated, the aim of this Exercise was "to exercise No. 1 RDU in a large area of contamination following an atomic explosion". As previously planned, full advantage was taken of the explosion "Apple Two" to make the Exercise as realistic as possible as far as field conditions are concerned. For this purpose the Exercise was conducted in three phases:

1. Prediction.
2. Aerial confirmation.
3. Ground survey.

Immediately following the explosion the "Weapons Effects Officer", together with the Staff Meteorologist, made certain calculations which permitted the Directing Staff to make a prediction as to the probable fall-out pattern. This information was passed to the Officer Commanding No. 1 RDU. Following this prediction a rapid survey by means of light aircraft and helicopters was conducted which enabled the staff to provide further information to No. 1 RDU as to the reliability of the prediction. The ground survey was then commenced and carried on



National Defence Photograph

Lieut.-Colonel Klaehn, Exercise Director, confers with Major R. E. MacDonald, commander o No. 1 Radiation Detection Unit, while Captain H. E. R. Colyer, second-in-command of the unit, looks on.

National Defence Photograph

No. 1 Radiation Detection Unit, RCE, parades at Camp Desert Rock.

until the required information had been obtained. Under field conditions this would have enabled the commander to make his plans with a minimum of casualties and uncertainty.

Personal Safety

An important aspect of conducting an exercise in a contaminated area is the problem of ensuring the personal safety of the surveyors. All personnel were equipped with dosimeters which enabled the Officer Commanding and his Medical Officer to closely follow the radiation exposure which each soldier received while operating in the danger area. In addition, the field methods of carrying out personnel and equipment decontamination were tested and found to be satisfactory.

Resumé of Lessons Learned

While appreciating the awful effects of atomic explosions, all participating personnel nevertheless are of the opinion that a great deal can be done to defend oneself against these weapons. It was found, for example, that troops could survive the effects of blast, heat and radiation if at the time of explosion they were occupying a well constructed trench. It was found entirely feasible to obtain quickly the information required concerning the areas of residual contamination. By the employment of proper techniques this information can be obtained without casualties to the reconnaissance parties. Under the conditions of the test it was learned that it is entirely feasible to carry out field decontamination of the personnel and their equipment. In sum, the aims of the Exercise were met in full.

(*Continued on next page*)

SOME HIGHLIGHTS OF EXERCISE SAPLING

By
CAPTAIN H. E. CAMERON, DIRECTORATE OF PUBLIC RELATIONS (ARMY),
ARMY HEADQUARTERS, OTTAWA.

Canada's first participation in an atomic exercise was a success in more ways than one, in the opinion of those members of the three armed services who took part in Exercise Sapling at Camp Desert Rock, Las Vegas, Nevada, last May.

The exercise itself for the Army's No. 1 Radiation Detection Unit, RCE, and attached personnel from the Royal Canadian Navy and the Royal Canadian Air Force was a distinct success from a training viewpoint.

But there were other aspects as well that were greatly responsible for the success of the three weeks' stay in Nevada. One that stood out, perhaps above all others and without which this success could never have been attained, was the excellent co-operation given Canadian troops by all ranks of the American Army stationed at Desert Rock. Everything possible was done to assist the Canadians. The many kindnesses shown by Brig. General Fred W. Sladen, Jr., Camp Commander, his officers and his men will long be remembered.

The author.

Headed by Lieut.-Colonel R. A. Klaehn of Army Headquarters, Ottawa, other members of the Di-

The Story of Exercise Sapling

(Continued from preceding page)

Conclusion

The Canadian participation in the U.S. atomic tests provided a realistic opportunity to test doctrine and procedures for atomic defence. The existence "in being" of the pioneer Atomic Defence Unit, No. 1 RDU, made it possible for the Canadian Services to avail themselves of the opportunity provided by the Americans.

The tri-service unit operated as a unified team and the indoctrination received by these individuals should provide a strong framework upon which to further the training of the Canadian forces. The U.S. Services provided every possible assistance to the Canadians, and thus contributed in a very important degree to the success of Exercise Sapling.

National Defence Photograph

Lieut.-Colonel M. K. Reed, Deputy Director of the Exercise.

recting Staff for the Canadian Services participating in the exercise were W/C A. L. Bocking, representing the RCAF; Lt. Cdr. J. P. Keeling, representing the RCN; Major R. F. Green of the Directorate of Military Training; and Major (now Lieut.-Colonel) M. K. Reed and Captain H. E. Rankin, both of the Directorate of Weapons and Development.

On 20 April the unit arrived in Las Vegas, and from that city the 65-mile trip to Camp Desert Rock was made by U.S. Army transport.

A signal honour was paid the Canadians when they arrived at the camp which was to be their home for the next three weeks. On hand to greet them in front of the Canadian lines was not only Brig.-Gen. Sladen but also Maj.-Gen. William F. Dean, second-in-command of the U.S. VI Army and winner of the Congressional Medal of Honour for gallantry in Korea.

After a day of settling down in their tented lines the unit had its first actual exercise on April 22, over country actually contaminated by an atomic bomb. Previously they had worked efficiently in radio-active fields at Chalk River and Port Hope, Ont., but this was the real thing. The area was one where an atomic shot had been fired sometime previously but there was still sufficient radio-activity on the ground to make the exercise of monitoring, surveying and plotting most realistic.

Before leaving Canada, Exercise officials were warned of the intense heat to be expected on the Nevada desert at time of year, with the result that battle-dress was discarded and bush clothing adopted for field exercises. The days were warm, but at night temperatures dropped to well below freezing, accompanied by strong winds, and it was soon apparent that the light bush clothing was not suitable dress for a long night on the Yucca Flats. The Americans remedied that by supplying combat uniforms for everyone and with these worn under the Canadian bush clothing it was a well-clad unit that left for the 30-mile

trip to the testing grounds.

On arrival at Yucca Flats just after midnight on the day originally scheduled for the shot, 26 April, the unit saw for the first time—by torch light—the trenches they were to occupy during the actual explosion. Situated 3200 yards away from "Ground Zero", they were long, narrow slit-type trenches about five feet deep. A soldier standing upright in them could comfortably rest his folded arms on the parapet.

The night was cold (22 degrees). However, as zero hour neared the cold was forgotten in the excitement. Even in the dark there was plenty to see—the continuous arrival of more troops to take up their places in the trenches, the twinkling lights of many aircraft flying high above Ground Zero, the great light atop the strange tower itself that seemed to loom closer minute by minute and far behind the many lights and circus-like activity on Media Hill where the Press and Civil Defence were concentrated.

Then suddenly, at about 0400 hrs., the loudspeakers boomed out: "The weather reports are negative. There will be no shot for at least 24 hours. Convoys will arrive as soon as possible to return troops to Desert Rock".

That was the first "night out". It was soon learned the weather would remain unfavourable for more than 24 hours and a 40-hour cancellation

National Defence Photograph

Mr. Hugh Cameron, the Canadian Army staff meteorologist, studies weather charts at Camp Desert Rock.

was ordered. The Canadians prepared for a day off and looked forward to a comfortable and quiet night. It was only wishful thinking. That evening a storm struck Desert Rock with winds reaching at times more than 80 miles an hour and for a time the whole camp threatened to be blown away. Canadian troops, many of them with plenty of experience of living under canvas, spent most of the wild night strengthening the supports of their shelters, replacing up-rooted tent pegs and doing a hundred and one other things to keep their tents intact.

The result, which made every Canadian a bit proud, was that by

National Defence Photograph

Major MacDonald, commander of No. 1 Radiation Detection Unit, gets behind the wheel of the jeep as he and Lt.Cmdr. John Norman, Royal Canadian Navy, prepare to move into a contaminated area. Note how all instruments on the vehicle are protected by plastic covers against contamination. Respirators are worn at all times when contamination is suspected.

morning 152 squad tents and marquees had been flattened in the camp but in the Canadian lines not a single tent was lost!

On the morning of 5 May everyone seemed confident that D Day had actually arrived. Even Hugh Cameron, the Canadian Army staff meteorologist, who had called every postponement correctly well in advance of the announcements, said that conditions looked good. At 0500 hrs. the welcome word finally came from the loudspeaker: "The weather is good. The shot is on."

Then came careful instructions as to the precautions to be taken. Everyone was to crouch facing the parapet with his head at least two feet below ground level. All were to remain crouched until the blast passed by and the order given to stand up.

At zero minus two minutes the order to crouch was given, and what a long two minutes they were. Finally—"It is now zero minus one" —"Zero minus 30 seconds"—Zero minus 15 seconds"—"Zero minus 10 — 9 — 8 — 7 — 6 — 5 — 4 — 3 — 2 — 1 — NOW!"

At first it was just that the trench

lighted up like the brightest day imaginable. Then it started to rock violently, like a terrific earthquake. Then the terrific blast passed overhead with the awful roar of the atomic burst.

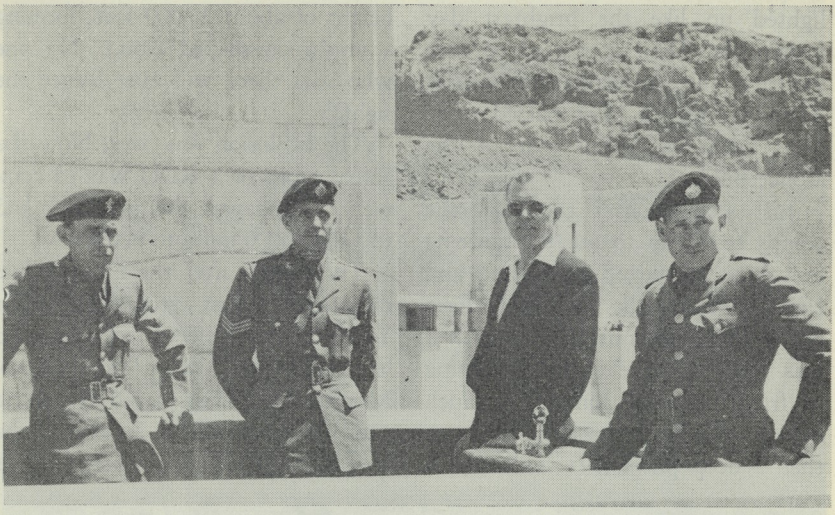
Just seconds after the blast the troops stood up to see the amazing fireball as it started to expand and climb high into the heavens to form finally the huge mushroom cloud. It was hard to believe that anything so frightful could contain so much beauty. At first fiery like the sun, then a deep purple, it climbed to a height of about 35,000 feet, forming a mushroom-shaped cloud. No one who was there will ever forget the sight.

The explosion was over. Now the actual work of 1 RDU was to commence. This was the job they had travelled 3000 miles to perform.

Two hours after the burst, while radio-active dust still hung over Yucca Flats, Major MacDonald led his unit forward toward Ground Zero. Monitoring as they moved by vehicle and on foot, they surveyed the area and reported back their findings

U.S. Army Photograph

Decontamination drill is carried out by the Canadian Army's No. 1 Radiation Detection unit. *Left to right:* F/S C. E. Webb, RCAF, tests army Cpl. D. R. Knox for any sign of radioactivity, while PO J. H. Threlfall, Royal Canadian Navy, goes over the soldier's clothes with a vacuum cleaner.



National Defence Photograph

The U.S. Army made recreational trips available to Canadian servicemen during Exercise Sapling. Four members of No. 1 Radiation Detection Unit are shown here on a trip to Boulder Dam. *Left to right:* S/Sgt. A. F. Coughlin, Sgt. D. S. Singer, Sgt. L. S. Warner and L/Cpl. J. E. Achorn.

by wireless to unit headquarters. At headquarters, which had been set up in a "clean" area, these findings were plotted on a map and gradually the picture took shape. It told what areas were dangerously contaminated and those which could be entered safely.

From dawn until late afternoon the survey went on. Then back to headquarters where personnel and vehicles were decontaminated by use of field vacuum cleaners; clothing was discarded and there were liberal applications of soap and water. Later it was found that the survey made that day conformed exactly to that of the U.S. Army Rad-Safe Team which had been doing similar work at the Nevada Testing Grounds for years.

The following two days a similar survey was made to discover by how much the contamination had diminished. On each occasion an accurate map was quickly produced.

During these last two Exercises time was taken to tour the amazing Survival City that had been set up by Civil Defence before the bomb. This gave everyone an opportunity to study the effects of heat and blast from various distances and on various types of construction. It was a very worthwhile part of the Exercise.

Many lessons were learned on Exercise Sapling. Perhaps the most important was that, according to American authorities, this group of

Canadian service men are as well versed in radiation detection and decontamination as any in the world.

At the conclusion of the exercise the Directing Staff from National Defence Headquarters, Ottawa, all agreed on the excellent results obtained and the very efficient manner in which 1 RDU had carried out its task.

No mention has been made of recreation facilities at Desert Rock. They were varied and they were plenty. In the camp itself there were good clubs for all ranks, two movies each night and a small "PX". Meals were up to the usual fine U.S. Army standard. Free transportation was available daily to nearby points of interest with practically all the Canadians making the trips to Boulder Dam and to Death Valley in California.

Then of course there was fabulous Las Vegas. Only a little over an hour away and easy to get at with buses running a frequent schedule, Canadians saw all there was to see, including the famous hotels and pleasure spots.

Army Winners in Essay Competition

In a tri-service essay competition conducted earlier this year by the Bureau of Current Affairs, Department of National Defence, Ottawa, a member of the Canadian Army won third prize. Three other soldiers were highly commended for their essays.

Subject of the essay competition was "What I Like About Canada".

The third prize winner was Sgt B. Charland, BEM, 3rd Battalion, Royal 22e Regiment.

Those who were highly commended for their essays were:

Sgt B. Carrier, 2nd Regiment, Royal Canadian Horse Artillery.

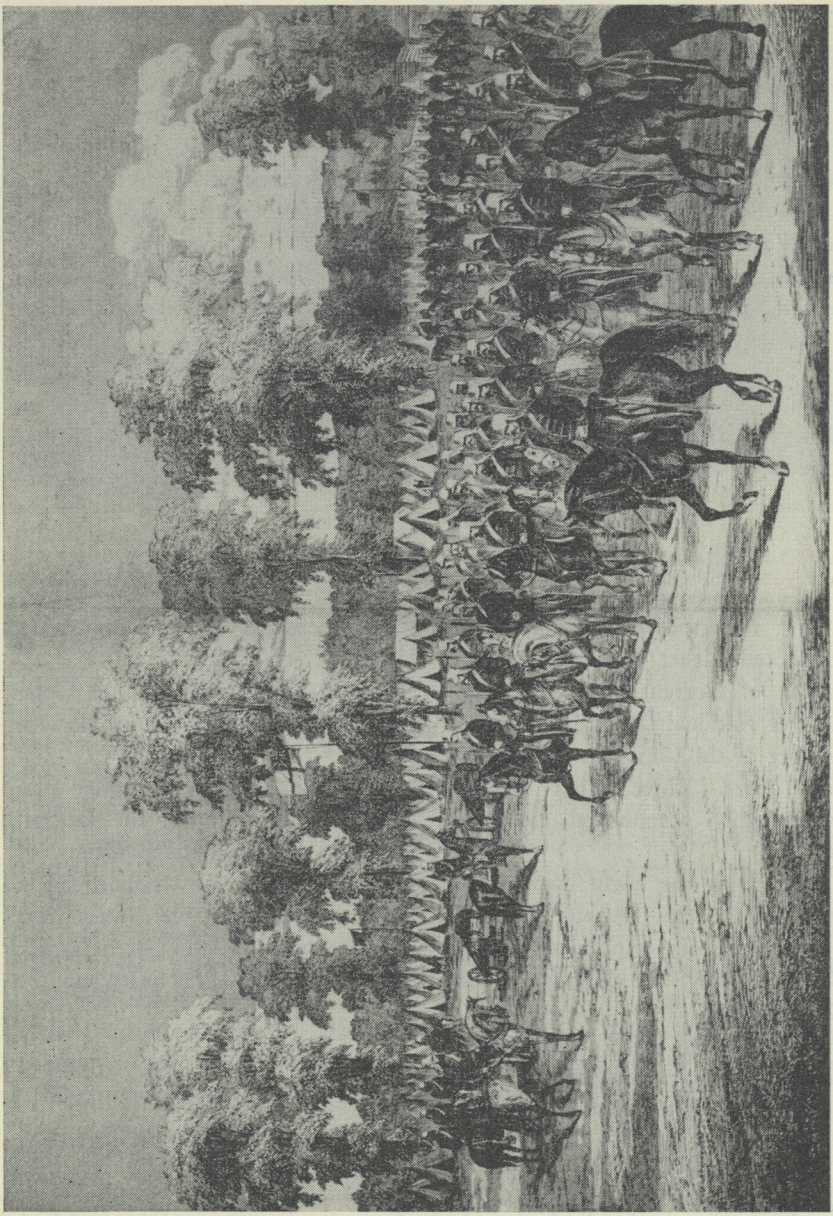
Sgt E. F. Genge, Royal Canadian Army Service Corps (employed in the Directorate of Records, Army Headquarters, Ottawa).

Pte D. Eastwood, No. 11 Company, Royal Canadian Army Service Corps.

Sgt Charland's prize was presented by the Minister of National Defence, the Hon. Ralph Campney. Personal letters of commendation from the Minister were forwarded for presentation to Sgt Carrier, Sgt Genge and Pte Eastwood.

Diplomacy

Diplomacy is the art of letting someone have your way.—*Daniele Varré.*



Flashback: No. 11

CAMP OF EXERCISE AT FREDERICTON, 1871

NARRATIVE SUPPLIED BY THE HISTORICAL SECTION,
ARMY HEADQUARTERS, OTTAWA

In the picture opposite, which is reproduced by courtesy of the Public Archives of Canada from the *Canadian Illustrated News* of 12 August 1871, the New Brunswick Regiment of Yeomanry Cavalry, now the 8th Princess Louise's (New Brunswick) Hussars (5th Armoured Regiment), are seen parading at Fredericton during a Brigade Camp of Exercise held in 1871. The Camp, styled "Camp Ross" in honour of the Adjutant General (Colonel P. Robertson Ross), was opened on 29 June.

The force assembled under command of the Deputy Adjutant General commanding Military District No. 8 (Lt.-Col. G. J. Maunsell) was the largest until then encamped in New Brunswick. Units in camp with their respective commanding officers were, Brigade Staff (9), Lt.-Col. G. J. Maunsell, DAG; N.B.R.Y. Cavalry (299), Lt.-Col. J. Saunders; 67th Battalion (323), Lt.-Col. C. R. Upton; 71st Battalion (353), Lt.-Col. J. Hewitson; 74th Battalion (52), Capt. H. Hutton; Deer Island Infantry Company (27), Capt. A. Lloyd; Gagetown Infantry Company (40), Capt. C. Simpson. The total number of men in camp was 1,411.

The Commandant's quarters are indicated by the tall flagstaff, while in front are two 6-pounders whose double report at five in the morning was an effective Reveille.

On Dominion Day the brigade was formed in line and at noon the customary *feu de joie* was fired in honour of the day. On 6 July, the Admiral of the station with the Lieutenant Governor witnessed field manœuvres (hence, probably, the White Ensign seen in the picture). On 11 July the Adjutant General arrived in camp. The next day an official inspection was followed by field operations and the Adjutant General expressed himself pleased with the appearance and condition of the men as well as their manœuvres and tactics during the engagement.

The events at this camp reflect the good condition of the Canadian Militia after five years of Fenian threats and Fenian raids. In the absence of such menaces, the efficiency of the force was soon to decline.

CANADA'S ARMY IN KOREA

A Short History written especially for the Journal by the Historical Section, Army Headquarters, Ottawa

Part III

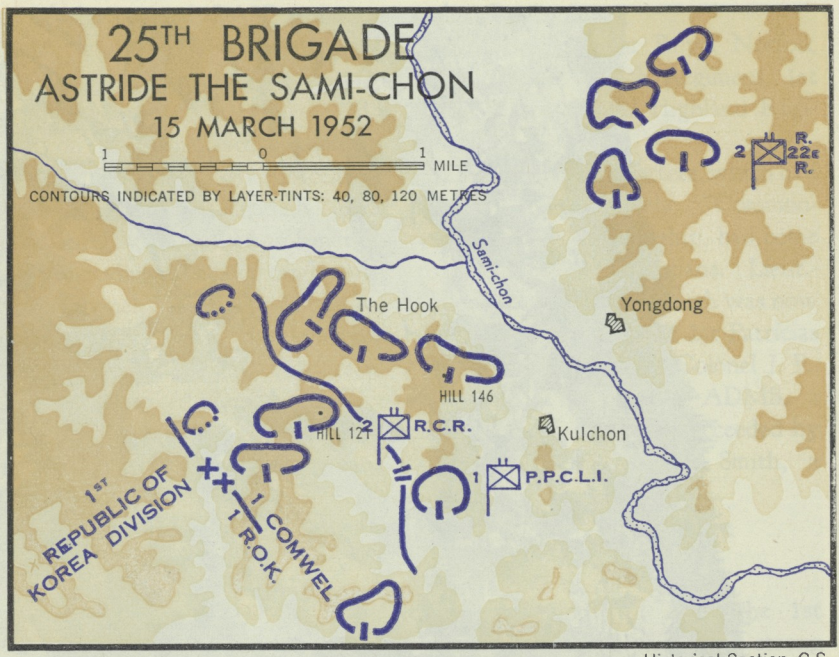
The First General Rotation

With the winter of 1951–52 a new phase of the Korean war began. Until the end of hostilities in 1953, the United Nations forces held and improved their positions, patrolled in No Man's Land and beat off local Communist attacks.

The 25th Canadian Brigade continued to hold the positions which it had taken over in November until the third week of January 1952. This period was one of what came to be called "normal" activity. Already the defensive layouts were assuming their final form and units were occupying and reoccupying the same familiar ground. The Canadians were relieved by the 28th Commonwealth Brigade and thereafter spent six weeks in divisional reserve. They then relieved the 29th British Brigade in positions astride the Sami-chon, with two battalions west of the valley and one to the east. The welcome end of winter saw some increase in enemy activity against the Commonwealth sector. On the night of 25–26 March a company of the Chinese 188th Division (63rd Army) surrounded and attacked a 1st Princess Patricia's Canadian Light Infantry platoon position immediately west of the Sami-chon, but withdrew two and a half hours later, leaving behind 25 dead and one prisoner.

By this time preparations were well under way for the rotation of Canadian units in the theatre. Advance parties of some of the relieving units had already arrived by air, the main bodies following by sea. The first major unit to be relieved was No. 54 Transport Company RCASC, which completed "handover" to No. 23 on 11 April.

Between the 14th and the 19th the divisional boundaries were shifted eastward by two battalion frontages. The new right sector was taken over by the 29th Brigade, the 28th going into reserve. The 25th Brigade's right flank—the position east of the Sami-chon, held by the 2nd Royal 22e Régiment—became the left. The 2nd Royal Canadian Regiment and the 1st Patricias, on being relieved by battalions of the 1st U.S. Marine

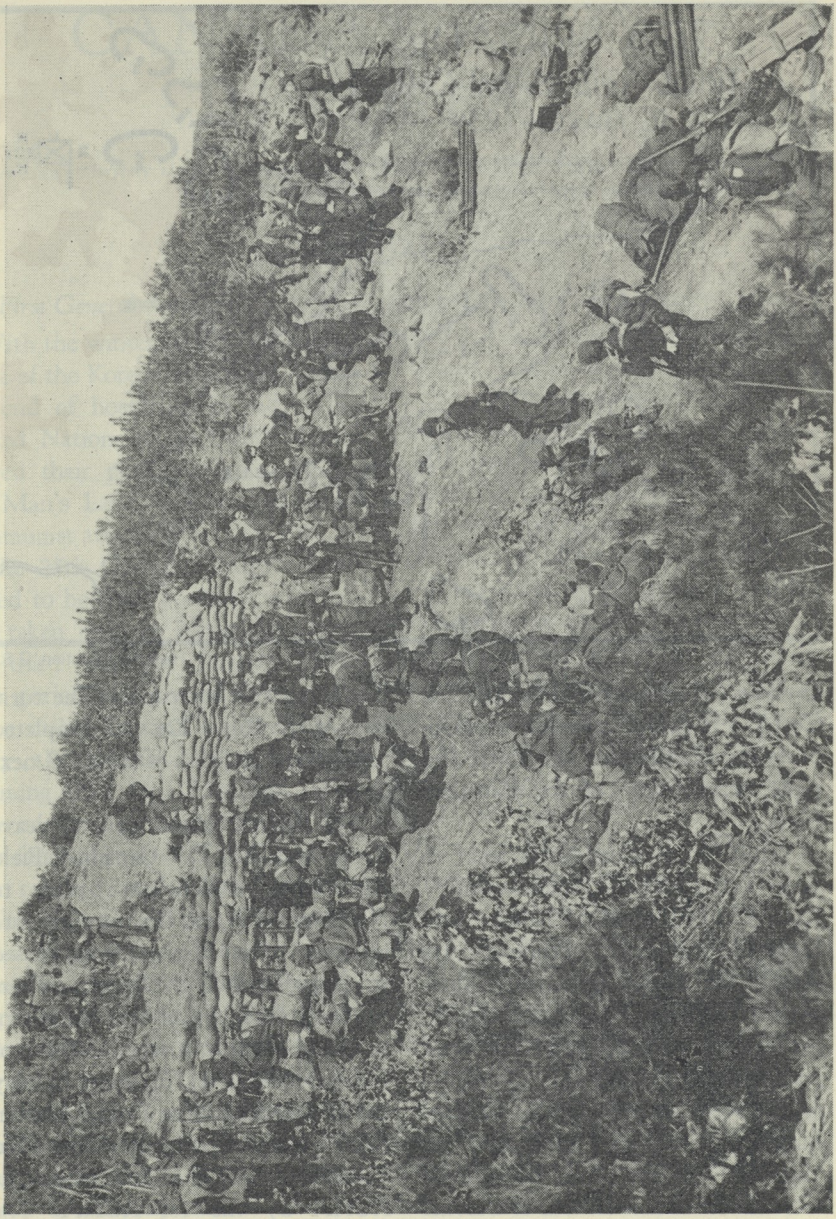


Historical Section, G.S.

Division (which now held the 1st U.S. Corps' left flank), assumed responsibility for what became the centre and right, respectively, of the Canadian front.

While these adjustments were in progress the 1st RCR, commanded by Lieut.-Colonel P. R. Bingham, and Lieut.-Colonel L. F. Trudeau's 1st Royal 22e began to replace their second battalions. Men not eligible for rotation with the 2nd RCR were concentrated in two rifle companies which were to come under Colonel Bingham's command, while the "ineligibles" of the 2nd Vingt-deux were absorbed into all four of Colonel Trudeau's rifle companies. The turnover of the Royal 22e was completed on 24 April and that of the RCR next day.

The fourth major unit to leave Korea was No. 25 Canadian Field Ambulance, which gave place to No. 37 on 27 April. On the same date command of the Brigade Group passed to Brigadier M. P. Bogert, whom Brigadier Rockingham, on his return to Canada, was to succeed as Director General of Military Training. In May the 57th Independent Field Squadron RCE was relieved by the 23rd Field Squadron, and the 2nd Regiment RCHA by the 1st RCHA. The



National Defence Photograph

last of the original CASF units to depart was "C" Squadron Lord Strathcona's Horse, which was replaced by the Strathconas' "B" Squadron on 8 June. No. 2 Administrative Unit, No. 25 Reinforcement Group and other Canadian units in the Far East continued to function under the same names, though with new personnel.

Rotation and other developments had brought about many changes in the Commonwealth Division's order of battle. By the end of June 1952 the major armoured, artillery and infantry components were:

5th Royal Inniskilling Dragoon Guards

"B" Squadron Lord Strathcona's Horse

1st Regiment RCHA

14th Field Regiment RA

16th N.Z. Field Regiment

61st Light Regiment RA*

25th Brigade: 1st Royal Canadian Regiment, 1st Princess Patricia's Canadian Light Infantry, 1st Royal 22e Régiment.

28th Brigade: 1st King's Own Scottish Borderers, 1st King's Shropshire Light Infantry, 1st Royal Australian Regiment, 3rd Royal Australian Regiment.

29th Brigade: 1st Royal Norfolk Regiment, 1st Welch Regiment, 1st Black Watch (Royal Highland Regiment).

Divisional Headquarters, which had become more widely "Commonwealth" in its membership, had come to include 27 Canadians. Lieut.-Colonel N. G. Wilson-Smith was now GSO I, command of the 1st Patricias having passed to Lieut.-Colonel J. R. Cameron. The original ADMS, a British officer, had been succeeded by Colonel G. L. Morgan Smith, a Canadian.

Patrols Against the Boot and Hill 113

In the middle of May the 1st Corps began to dispatch strong fighting patrols—one from every forward battalion each week—in order to snatch prisoners.

The 1st Patricias sent out such a patrol to an enemy-held hill known as "the Boot" on the night of the 20th–21st. The party consisted of one officer and 32 men, including two snipers, two wireless operators and two pioneers, and was divided into a firm base group, a covering fire section and a fighting section; the last-named was made up of a headquarters, two Sten groups and two Bren groups. Supporting fire was provided by a troop of the Strathconas, a troop of the 1st Regiment RCHA, and the unit

*Three mortar batteries and one locating and LAA battery.

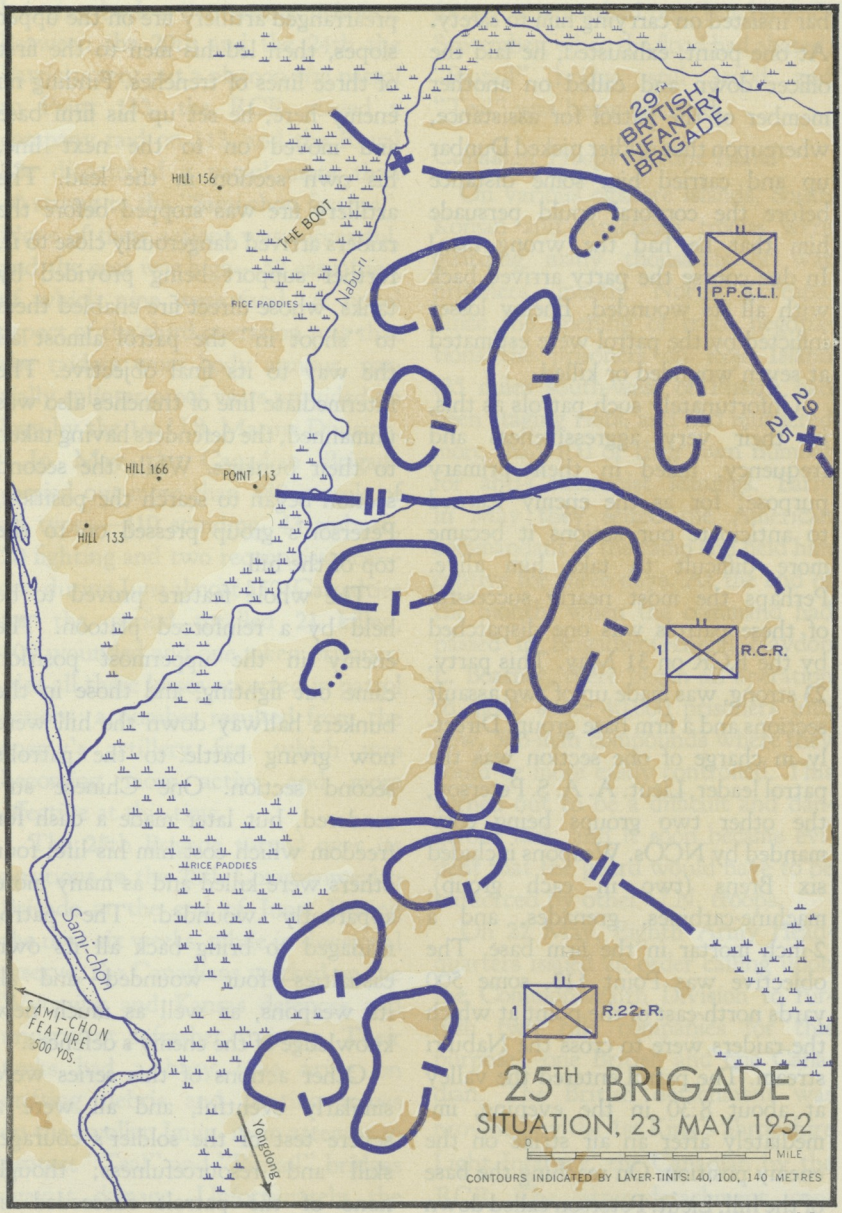
A platoon of the 1st RCR relieves a platoon of the second battalion in the area of the more southerly Hill 187, 16 April 1952.

National Defence Photograph

Field-Marshal the Earl Alexander visits the 1st Royal 22e Régiment, 14 June 1952. On his right is Brigadier M. P. Bogert, Commander of the 25th Canadian Infantry Brigade; on his left, Lieut.-Colonel L. F. Trudeau, the CO; and opposite, Major A. M. Letourneau, a company commander.

mortar and machine-gun platoons. The firm base group established itself on the floor of the Nabu-ri valley at eleven o'clock, the main body passing through at midnight. Reaching the base of the hill without interference, the covering fire section took up a position some 50 yards below the enemy's trenches, while the remainder continued on up the slope. But now, as the party came within 20 yards of his main position, the enemy opened fire with every platoon weapon. Five of the Patricias were wounded, one of whom later died; among the other four was the patrol leader, Lieut. D. A. Middleton.

His group outnumbered three to one in immediate fighting strength, Lieut. Middleton ordered a withdrawal. The second-in-command, Corporal J. G. Dunbar, supervised the recovery of casualties, and it was only at the last moment that he realized that the officer was wounded. Lieut. Middleton, anxious not to hamper the withdrawal, urged the NCO to leave him behind; but Corporal Dun-



Historical Section, G.S.

bar insisted on carrying him to safety. At one point, exhausted, he laid the officer down and called on another member of the patrol for assistance, whereupon that soldier picked Dunbar up and carried him some distance before the corporal could persuade him that he had the wrong man! In due course the party arrived back with all its wounded. Enemy losses inflicted by the patrol were estimated at seven wounded or killed.

Unfortunately such patrols as this, in their very aggressiveness and frequency, failed in their primary purpose; for as the enemy learned to anticipate our actions it became more difficult to take him alive. Perhaps the most nearly successful of these patrols was one dispatched by the RCR on 31 May. This party, 23 strong, was made up of two assault sections and a firm base group. Directly in charge of one section was the patrol leader, Lieut. A. A. S. Peterson, the other two groups being commanded by NCOs. Weapons included six Brens (two in each group), machine-carbines, grenades, and a 2-inch mortar in the firm base. The objective was Point 113, some 500 yards north-east of the point at which the raiders were to cross the Nabu-ri stream. The patrol entered the valley at about 8:30 in the evening, immediately after an air strike on the enemy position. On reaching the base of the hill, Lieut. Peterson called down prearranged artillery fire on the upper slopes, then led his men to the first of three lines of trenches. Finding no enemy here, he set up his firm base and moved on to the next line, his own section in the lead. The artillery fire was stopped before the raiders arrived dangerously close to it, further support being provided by tanks, whose direct fire enabled them to "shoot in" the patrol almost all the way to its final objective. The intermediate line of trenches also was unmanned, the defenders having taken to their bunkers. While the second section began to search the position, Peterson's group pressed on to the top of the hill.

The whole feature proved to be held by a reinforced platoon. The enemy in the uppermost position came out fighting, and those in the bunkers halfway down the hill were now giving battle to the patrol's second section. One Chinese surrendered, but later made a dash for freedom which cost him his life; four others were killed and as many more apparently wounded. The patrol managed to bring back all its own casualties—four wounded—and all its weapons, as well as much new knowledge of the enemy's defences.

Other actions of this series were similarly eventful, and all were a severe test of the soldier's courage, skill and resourcefulness; though none of the patrols succeeded in

bringing back a live enemy prisoner. Between the 20th and the 24th the Patricias sent out a platoon-size patrol to Point 133, the RCR staged a company raid on 113, and the Royal 22e dispatched a patrol more than 40 strong to the "Sami-chon feature". None of these actions was successful, and the cost was high—52 casualties, of which nine were fatal. A novel aspect of the third operation was that the raiders wore body armour, partially splinter-proof vests provided on loan by the 1st U.S. Marine Division.

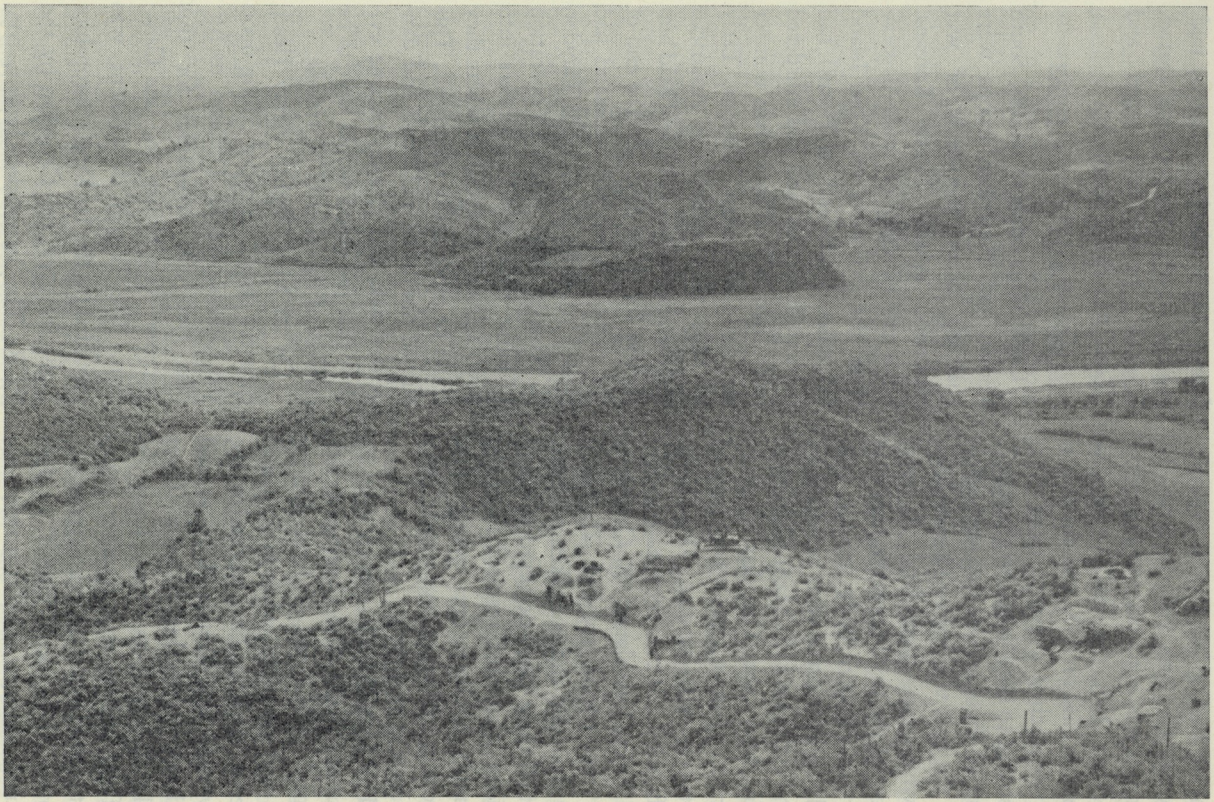
In May the Canadian Brigade carried out more than 480 patrols of all types—419 standing, 43 ambush, 20 fighting and two reconnaissance—and during June almost 550. Casualties for the period totalled 21 killed, 109 wounded and one taken prisoner. Not all these losses occurred in patrol actions: a number resulted from the enemy's artillery fire, which was becoming more active and more effective at this time.

The 25th Brigade turned over its positions to the 28th Commonwealth Brigade at the end of June. During the next six weeks, while in divisional reserve, the Canadians worked on the Wyoming and Kansas defences and underwent refresher training. Their tanks had a busy time firing on drifting debris and floating mines on the swollen Imjin, in an attempt to protect "Teal" and "Pintail" bridges against damage. Unfortunately the former was washed out; but by mid-September, when the flood had abated, "Pintail" bridge still stood and "Teal" was being restored.

Canadian Troops on Koje Island

On various offshore islands, South Korean and American troops were guarding many thousands of war prisoners, mostly North Koreans. Since the opening of truce negotiations the prisoners on Koje Island (25 miles south-west of Pusan) had been staging riots, and had murdered more than 100 of their own number for anti-Communist leanings. Early in May they seized the American commandant of the camp and held him captive for three days. At the end of the month, when the command had passed to Brigadier-General Haydon L. Boatner, there began an operation to move some 40,000 prisoners into new, 500-man compounds where they could be more easily controlled. This turned out to be a difficult and dangerous task, and it soon became evident that the guard would have to be reinforced by other U.N. troops.

On 22 May, Eighth Army Headquarters issued an order calling upon the Commonwealth Division to furnish two rifle companies for this purpose—one British and one Canadian. The British detachment was provided by the 1st King's Shropshire Light Infantry, the Canadian by the RCR. The latter detachment, con-



Historical Section Photograph

Looking southeastward across the Sami-chon, from the Yongdong feature, 26 June 1952. In the right centre just beyond the road is a tank of "B" Squadron, Lord Strathcona's Horse, in support of the 1st Royal 22e.

sisting of "B" Company and attached signallers, cooks and stretcher-bearers, left the brigade area in vehicles on the morning of the 23rd; it sailed from Pusan on the evening of the 24th, and reached the island the next morning. Meanwhile the Royal 22e, reinforced by a company of the King's Own Scottish Borderers, had extended itself to fill the gap in the Canadian defences.

The two Commonwealth detachments, of which the KSLI company commander served as co-ordinating officer, were placed under command of the American 92nd Military Police Battalion. General Boatner, greeting the Canadians on their arrival in the battalion area, informed the detachment commander, Major E. L. Cohen, that his troops might have one week to get settled in and to undergo the necessary special training. An unexpected variety of goods and services had to be requested of the camp authorities, who "co-operated admirably, and without red tape". The special training which the Canadians received consisted mainly of riot drill and instruction on the American medium machine-gun.

On 4 June the RCR detachment relieved the KSLI guard on Compound 66, which housed some 3200 North Korean officers. Both Commonwealth companies, working in 24-hour shifts, were employed here for three weeks. The time passed without any major incidents occurring in this particular compound, though in the same period Major Cohen accompanied troops of the 187th U.S. Airborne Infantry Regiment in what proved quite a bloody operation to transfer prisoners from another compound into smaller enclosures; the inmates resisted with spears, clubs and improvised grenades, killing some of their number who offered to submit. The evacuation of Compound 66, on the other hand, proceeded in a quiet and orderly manner.

Among a number of distinguished visitors whom the camp received in this period was Canada's ex-Governor General, Field-Marshal the Earl Alexander, who was now Britain's Minister of Defence. Following a visit to the front, the Field Marshal arrived at General Boatner's headquarters on 16 June, and inspected a guard of honour provided by the two Commonwealth companies.

Towards the end of June these companies assumed security responsibilities for a new enclosure; this was divided into four sub-units, each consisting of 500 to 550 prisoners. The reorganization had produced more than the desired effect: the captives were now not only docile but even friendly. Brigadier Bogert, visiting the camp early in July, attended a prisoners' sports meet, after which one of the participants presented him with a wreath. Next

National Defence Photograph

North Korean war prisoners on Koje Island, guarded by "B" Company of the 1st RCR, shovelling coal into rice-straw sacks, June 1952.

day (the 8th) marked the end of the Commonwealth force's active duty on Koje. Two days later, to the apparently genuine regret of the prisoners, the RCR detachment left to rejoin its battalion. General Boatner was on hand at the dock to congratulate the troops on their fine performance, while the 187th Regiment's band played farewell. The relations between Canadian and other U.N. troops on Koje had been friendly throughout, and the detachment had apparently made a favourable impression on all concerned, not excluding the prisoners.

The decision to detach Canadian troops for this special duty had been made by the U.N. Command without the prior knowledge of the Canadian Government. This had aroused some political concern and some discussion in Canada.

The RCR on Hill 355

Returning to the front between 8 and 10 August, the Canadian Brigade relieved the 29th British Brigade in the Commonwealth Division's right sector, opposite the boundary between the 39th and 40th Chinese Armies. The brigade front lay between what had been the villages of Paujol-gol and Kojanhari-

saemal, the Royal 22e being on the left, the Patricias on the right and the RCR, on Hill 355, in the centre. During the next three months the Brigade was to experience heavier shelling and mortaring than in any other period in the line. Heavy rains occasionally silenced the enemy's artillery, but would then further damage the trenches and bunkers; and as the skies cleared and the mud began to dry, the Chinese would resume shelling on a still greater scale. Attention was given to the improvement of defences; and at the end of the month the Canadians began once more to send out fighting patrols.

Early in September General Cassels turned over command of the Commonwealth Division to another British officer, Major-General M. M. Alston-Roberts-West. One of the first orders issued by the new divisional commander was that, in view of the continued enemy shelling, the forward troops should wear steel helmets at all times.

On 24 September the RCR sent a patrol consisting of Lieut. H. R. Gardner and five men of "B" Company

National Defence Photograph

Lieut. H. R. Gardner (left) and Corporal K. E. Fowler of the 1st RCR. This photograph was taken on 24 September 1952, the date of their intrepid "snatch".

to a known enemy position 1000 yards north-west of Hill 227. The party entered No Man's Land at approximately 3:30 in the morning and, by first light, had established a firm base some 200 yards east of its objective. Finding no one on the latter, Lieut. Gardner, accompanied by Corporal K. E. Fowler, made his way to the enemy kitchen area. Here they broke a telephone wire, and a Chinese signaller who came to investigate the failure of communications suddenly found himself their prisoner. Three would-be rescuers were killed or wounded by the firm base group. Although under fire from other Chinese, the entire patrol managed to get back safely, with the captive still in tow. The prisoner turned out to be from the 346th Regiment (of the 116th Division, 39th Army).

It was about this time that the Chinese began a series of limited attacks in the central and western sectors. Such operations did not for some time directly affect the Commonwealth Division, but an increase in hostile shelling early in October suggested that the enemy was soon to strike in this direction; another warning factor was his sharp reaction to our patrols. On the night of 12–13 October "B" Company of the RCR staged a raid against Hill 227, and was ambushed short of the objective. A brisk fire-fight ensued, during which Major Cohen received the order to withdraw. The company's casualties in this action were two killed and 12 wounded. Three nights later a 25-man patrol of the Patricias, clashing with a Chinese platoon in the area of Hill 217, lost two killed and eight wounded.

Since early September the RCR had been guarding Hill 355 (referred to by the press as "Little Gibraltar") with five companies — the four normal rifle companies plus a fifth, known as "E" Company, specially created from unit resources. Company dispositions as of the evening of 22 October were as follows: "A" in a line running due west from the summit of the hill; "B" immediately east of the saddle between Little Gibraltar and Hill 227; "E" Company to the left of "B"; and "C" and "D" Companies behind "E" and "A", respectively.

Between the 17th and the 22nd the enemy's artillery and mortars had been very active against the area which "B" Company occupied on the latter date. Consequently Major Cohen found the field defences very badly damaged and most of the telephone lines cut; and many of the weapon pits, in which were stored reserves of ammunition, had caved in. In view of the likelihood of an enemy attack the company maintained an almost total "stand to" all night, one occupant of each fighting slit watching while the other rested at the bottom

of the trench.* One man of the left-hand platoon shot three members of an enemy patrol—one of several probing parties that were reported that night.

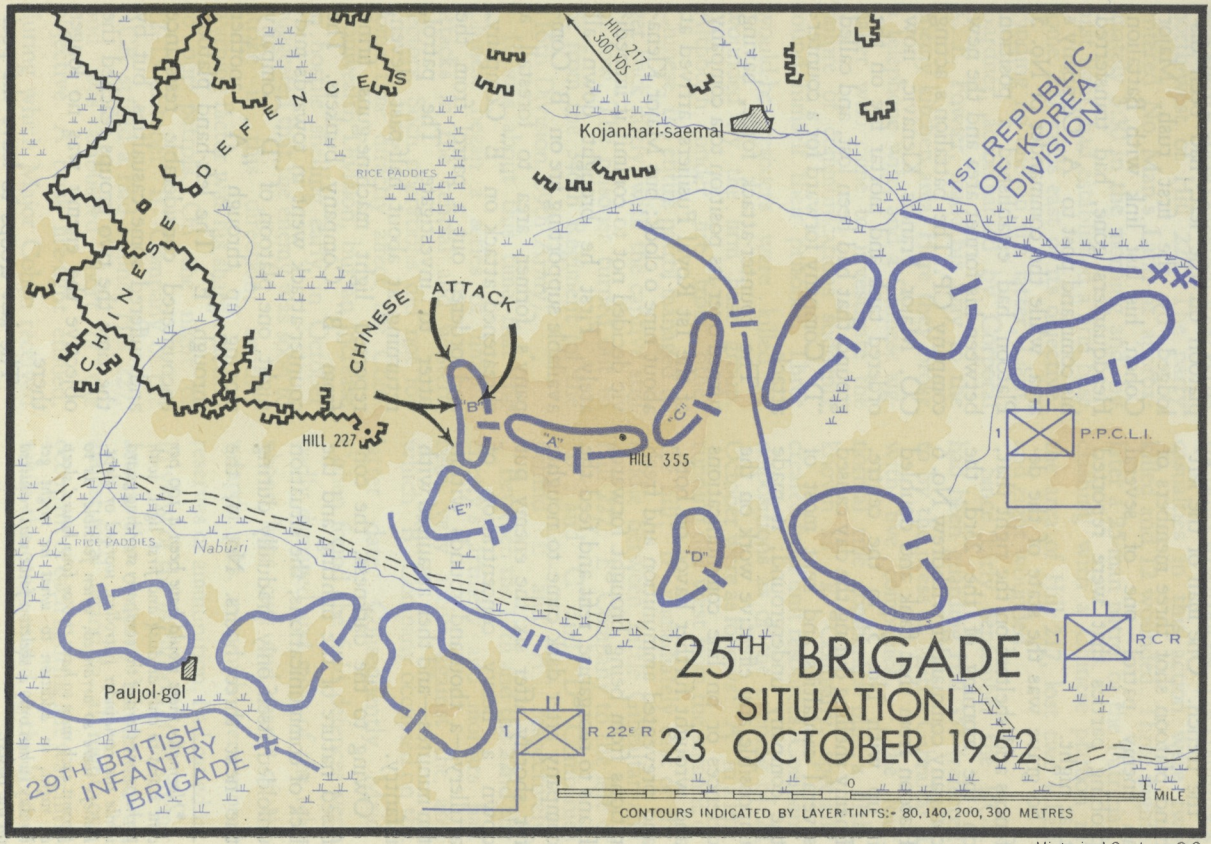
So grave was the state of the defences and shelters on the right that, on the morning of the 23rd, the company commander withdrew No. 6 Platoon from that flank and doubled it up with No. 5, in the centre. Enemy shelling during the day caused several casualties and kept most of the company underground; it made impossible any effective work on the defences or on line communications and wrought further havoc on both, and prevented ammunition and fresh rations from being brought forward. Plans to reorganize, refit and feed the company after dark came to nought; for shortly after six the enemy put down a heavy concentration of artillery—a thousand rounds within ten minutes—and then assaulted with infantry.

Owing to the darkness, the confused nature of the fighting and the lack of communications, the situation unfolded itself only gradually during the next three hours. No. 4, the platoon on the left, had been dislodged by the first rush. Major Cohen, his last link with Battalion Headquarters gone, had transferred his command post to "A" Company's area, while the commander of No. 5 Platoon had established a position between his former area and the new company CP. The battalion's acting CO, Major Francis Klenavic, now ordered tank and mortar fire on the ground that had been lost, and called "D" Company forward for a counter-attack.

The counter-attack force, having turned over its position to a company of the 1st Royal Fusiliers, arrived at about nine o'clock; but Major Klenavic decided not to commit it immediately. First he brought down all available supporting fire on "B" Company's former area to forestall a threatened attack on "E" Company, and ordered out a patrol from the latter to investigate. The patrol, returning at about half-past eleven, reported light machine-guns firing from "B" Company bunkers. The counter-attack went in towards midnight, one platoon of "D" Company moving up through "A", another through "E". The left-hand platoon encountered considerable resistance and suffered some casualties, but by the time the two groups reached the objective the enemy was no longer there.

The last troops to leave the posi-

**Normally there would have been a 100 per cent stand to only at dusk and first light, with perhaps one-third of the company standing guard while the remainder patrolled, worked or slept. Reliefs were so arranged, when feasible, as to permit each man to have two or four hours' sleep at night, in addition to what he might get by day (when only a skeleton force was required on the posts).*



Historical Section, G.S.

Historical Section Photograph

Hill 355 (left) and Hill 317 (right) as seen from Hill 210, 29 October 1952.

tion, however, were not the Chinese. Lieut. Gardner and members of Nos. 5 and 6 Platoons had held out to the traditional "last round", and then played dead. Gardner himself, after having shot five of the attackers, had been wounded.

Through shelling during the day, and in the night's action, the unit had suffered 75 casualties—18 killed, 43 wounded and 14 captured. The enemy force, estimated at one battalion, had left nine dead behind and dragged away many others. Three days later one of our patrols discovered six more dead Chinese in or near six large bunkers, which apparently had served as a forming-up place for the attack and subsequently as a regimental aid post. Pioneers of the RCR blew up these bunkers.

On the night of 26–27 October the Commonwealth Division's right boundary was shifted westward, a battalion of the 1st ROK Division relieving the Patricias. The latter moved to a reserve position on the Wyoming Line. The RCR and the Royal 22e remained forward for five more days, after which the 28th Brigade took over the Canadian sector. Thus ended one of the Brigade's

most trying periods of the war, and certainly its most costly—in less than three months the RCR had suffered 191 casualties, the Patricias 18, and the Vingt-deux 74.

The Patricias' Second Rotation

The withdrawal of the 1st PPCLI from the line marked the end of that unit's operations in Korea. Already encamped at Lieut.-Colonel Cameron's "B" Echelon was the replacement battalion, the 3rd Patricias, who had put to sea early in October. Their advance party, consisting of the CO (Lieut.-Colonel H. F. Wood) and certain of his officers, had flown to the theatre in the middle of the month; and each member was now living and working with his first battalion counterpart. Other officers and NCOs, having since landed with the main body, were attached as observers to all three battalions of the Brigade. On completion of the handover, on 3 November, the 1st and 3rd PPCLI interchanged positions; and eight days later the first battalion began its homeward journey.

This was but one of a number of rotations which had taken place within the Commonwealth Division since the early summer of 1952, as the list of infantry battalions now serving shows:

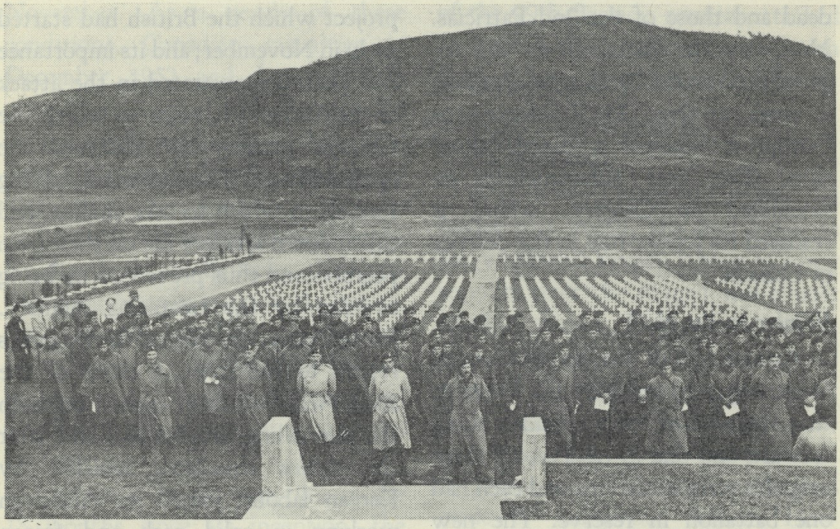
25th Brigade: 1st Royal Canadian Regiment, 3rd Princess Patricia's Canadian Light Infantry, 1st Royal 22e Régiment.

28th Brigade: 1st Royal Fusiliers, 1st Durham Light Infantry, 1st Royal Australian Regiment, 3rd Royal Australian Regiment.

29th Brigade: 1st King's Regiment (Liverpool), 1st Duke of Wellington's Regiment, 1st Black Watch.

The 29th Brigade, on the left of the 28th, held positions on either side of the Sami-chon. Flowing eastward into this river about 5000 yards above its junction with the Imjin was an unnamed stream; its valley was dominated by a crest-line which, running through a feature known as "the Hook", continued southeastward for a further 1500 yards to Hill 146. The 1st Black Watch was guarding this line with one company on the Hook, another on 146, a third company in between, and the fourth on Hill 121 (south of the Hook). One company of the Royal 22e, under command of the Highlanders, was in semi-reserve near Kulchon, midway between Hill 146 and the Sami-chon.

Standing two and a half miles north of Sanggorangpo, the Hook dominated much of our rear areas, for which reason it was a favourite objective of enemy attacks. In this same area the 1st Patricias, as we have seen, had repulsed an attack in March. The first operational role allotted their third battalion was that of counter-attacking the Hook and certain other Black



National Defence Photograph

The 1st PPCLI memorial service at the U.N. Cemetery, Pusan, 12 November 1952.

Watch positions in the event of their loss to the Chinese.

On the night of 18-19 November the enemy, attacking in battalion strength, succeeded in gaining a foothold on the Hook. The Black Watch company on Hill 146 mounted an immediate counter-attack, and while fighting was still in progress "C" Company of the 3rd Patricias came forward to reinforce it if necessary; meanwhile "B" Company had taken over the defence of 146. By first light the Highlanders had completely cleared the main position, and the PPCLI counter-attack company occupied the feature without difficulty. British and Canadian soldiers now co-operated in the evacuation of casualties, both on the Hook itself and on an outpost immediately to the north. In attempting to search a second outpost position, however, a Black Watch soldier was killed and a Canadian platoon commander wounded by enemy small-arms fire. Sporadic shelling caused a number of other Canadian casualties. "C" Company remained on the Hook until 22 November, when it was relieved by a Black Watch company, and "B" Company continued to hold Hill 146 until the 24th. The battalion spent the rest of the month in training and in preparation for the 25th Brigade's return to the line.

Meanwhile, on the 12th, the 1st PPCLI had reached Pusan; here, at the U.N. Cemetery, it held a service in honour of both its own

dead and those of the 2nd Patricias. Next day the battalion set sail for Japan; and on the 22nd, after spending a week at No. 25 Reinforcement Group, it boarded a Seattle-bound ship. The unit subsequently reassembled at Calgary, where it resumed its former role in the defence of Canada.

Winter on the Hook

At the end of November General West began to redeploy his forces so that, instead of two brigades being forward and one in reserve, all three brigades were in the line and each had one battalion in reserve. The new arrangement afforded each brigade commander the advantages of a narrower front to control and of defence in depth; it also provided him with a ready counter-attack force. The 28th Brigade continued to hold the Division's right sector, the British Brigade side-stepped to take over the centre of the front, and the Canadians moved up on the left. Brigadier Bogert assigned the Royal 22e to the Yongdong feature and the Patricias to the Hook, and placed the RCR (less one company under Lieut.-Colonel Wood's command) in reserve behind the PPCLI position.

The next two months proved to be a relatively quiet period, the chief activity being improvement of the defensive works, particularly on the Hook. This was a continuation of a project which the British had started early in November; and its importance had been demonstrated in the attack of the 18th–19th, prior to which the Chinese artillery had flattened the open defences. The defenders, having tunnels in which to take shelter, had called down artillery fire on their own position and thus prevented its being overrun by the assaulting infantry. Immediately on the 25th Brigade's return to the front, a troop of the 23rd Field Squadron carried on with the tunnelling programme; and later the entire squadron, assisted by Korean labour, joined in. Although working in solid rock and frozen ground, in January 1953 alone they constructed over 70,000 cubic feet of tunnel. During the whole period in the line, the infantry—with RCE and Korean assistance—deepened and extended its trenches, reinforced command posts, observation posts and bunkers, and installed additional earthworks of all types.

Patrolling, while by no means neglected, was not as strongly emphasized as it had been in the early summer; nor, at least as far as the Canadians were concerned, did any more company raids take place. The enemy's artillery was considerably less active now than it had been in previous months, and his infantry refrained from attacks on any such scale as those against the RCR and the Black Watch in October and

November. As a result of these conditions, Canadian casualties in December 1952 and January 1953 were 57—12 killed and 45 wounded — compared with 131 in May and June 1952 and 232 in September and October.

Towards the end of December the RCR relieved the Patricias, the latter becoming brigade reserve. As before, the reserve battalion contributed one company to the battalion defending the Hook. The Royal 22e remained on the Yongdong feature until 30 January.

Next day, for the first time in the 18 months since its inception, the Commonwealth Division was withdrawn into reserve; its new location was about seven miles south-west of the Imjin-Hantan junction. Only the divisional artillery remained forward, its role being to support the relieving force, the 2nd U.S. Infantry Division. (As it included a number of non-American units, this formation was sometimes referred to, unofficially, as the 2nd U.N. Division.) The Commonwealth Division remained in reserve until early April, during which time it carried out training exercises on battalion, brigade and divisional levels. In the largest of these exercises, one directed by Corps Headquarters and code-named "Eveready", Divisional Headquarters together with all its brigade and battalion headquarters and the whole of the 29th Brigade counter-attacked a hypothetical enemy penetration in the Chorwon sector.

Korean Personnel with the Canadian Forces

In their very early operations, the reader may recall, the 2nd Patricias had employed Korean labour to carry supplies over the rugged and almost roadless terrain. This custom, which practically all the U.N. forces had adopted in order to conserve their own resources of manpower, remained in effect throughout hostilities. In Japan, as well, extensive use was made of indigenous labour. How gloomy and austere would any camp there have seemed without its Japanese waitresses and housegirls! Most drivers in the base also were Japanese, and these men were found to be extremely efficient and conscientious.

In the course of the campaign the Korean Service Corps, similar to a pioneer corps, was formed as a part of the ROK Army. The 120th Regiment KSC was attached to the 1st Commonwealth Division, one company being allotted to each infantry battalion and other companies to the engineers. Although their duties were of a non-combatant nature, it must not be overlooked that in carrying them out KSC details were frequently exposed to shellfire. Light domestic services were provided by Korean boys, many of whom were homeless

war orphans. These little fellows soon developed a warm feeling towards the units which employed them, and wore their badges. In view of the numbers of attached Koreans it was necessary to engage still others as interpreters. Dealings between its own forces and those of other nationalities led the ROK Army to furnish additional interpreters and also English-speaking liaison officers. One such LO became, in effect, one of the longest-serving officers of the 25th Brigade—Lieut. Yung Jo Kim, whose association with Canadian units dated as far back as March 1951.

Shortly before its return to the line, in the spring of 1953, the Commonwealth Division was reinforced by 1000 Korean soldiers known as "Katcoms" (Korean Augmentation to Commonwealth). To help meet the special administrative problems posed by such an arrangement, the ROK Army attached a liaison mission to Divisional Headquarters. The reinforcements were allotted—approximately 100 to each infantry battalion and 30 to the divisional signals—for all purposes except pay; thus, about the end of March, the Canadian Brigade received 300 Katcoms. Since these soldiers had been trained exclusively on American weapons it was necessary for their new units to give them a short course on Commonwealth small arms. They were then assigned to rifles companies, two or three to a section, and each was paired off with a Commonwealth soldier with whom he lived and carried out all duties. Despite language difficulties the scheme proved successful; for the Korean makes a good soldier, especially in night operations.

The Second General Rotation

The beginning of the Katcom programme coincided roughly with the Division's return to the front and with the second large rotation of Canadian units. Towards the end of March the 1st Royal Canadian Regiment, No. 23 Transport Company and the 23rd Field Squadron handed over to the 3rd RCR, No. 56 Transport Company and the 59th Independent Field Squadron. The next major unit to be withdrawn was No. 191 Infantry Workshop RCEME, which had retained that title through the previous rotation; its relief was No. 23 Infantry Workshop. The 1st Royal 22e Régiment gave place to its third battalion on 21 April. Also on that date, Brigadier Bogert turned over his command to Brigadier J. V. Allard. The 81st Field Regiment RCA replaced the 1st Regiment RCHA on 22 April, and nine days later No. 38 Field Ambulance took over from No. 37. The last component to be affected was again the armour, "A" Squadron of the Strathconas taking over from "B" Squadron on 24 May. As in the first rotation, most

other Canadian units in the Far East had changed their personnel but not their designations.

With the exception of the Black Watch, whose place was taken by the 1st Royal Scots early in July, the composition of the Commonwealth Division (less services) from the end of May to the armistice stood as follows:

1st Royal Tank Regiment*

"A" Squadron Lord Strathcona's Horse

16th N.Z. Field Regiment

20th Field Regiment RA

81st Field Regiment RCA

61st Light Regiment RA

74th Medium Battery RA

28th Field Engineer Regiment RE

59th Independent Field Squadron RCE

64th Field Park Squadron RE

25th Brigade: 3rd Royal Canadian Regiment, 3rd Princess Patricia's Canadian Light Infantry, 3rd Royal 22e Régiment.

28th Brigade: 1st Royal Fusiliers, 1st Durham Light Infantry, 2nd Royal Australian Regiment, 3rd Royal Australian Regiment.

*A squadron of the 7th RTR had served in Korea from November 1950 to October 1951. The 1st Royal Tanks were relieved in December 1953 by the 5th RTR.

National Defence Photograph

"Katcom" soldiers attached to the 3rd Royal 22e are briefed for a reconnaissance patrol, 1 June 1953.

29th Brigade: 1st King's Regiment, 1st Duke of Wellington's Regiment, 1st Black Watch.

Between 6 and 8 April the Commonwealth Division had relieved the 2nd U.S. Infantry Division on Hill 355 and across the Sami-chon to the Hook. General West again employed all three brigades forward: the 28th Commonwealth on the right, the 29th British on the left and the 25th Canadian Brigade in the centre. Within the Canadian sector the 1st Royal 22e and subsequently the 3rd RCR were on the right, on ground which the 2nd RCR had captured in Operation "Commando" in October 1951; on the left, now holding the 2nd PPCLI's "Commando" objectives, were the 3rd Patricias. The last previous occupants of this position had been a unit from Thailand, one of several countries whose military contribution to the U.N. effort amounted to one battalion or battalion group; the others were Belgium, Colombia, Ethiopia, France, Greece, the Netherlands and the Philippines. In the Belgian battalion was a detachment from Luxembourg. The Turkish brigade group has already been mentioned.

Thailand, like the Republic of Korea, the United States and Australia, had furnished both naval and air force units as well as troops to the United Nations. Other countries besides Korea and the U.S.A. which had naval forces in the theatre were Canada, Colombia, France, the Netherlands, New Zealand and the United Kingdom. The U.N. air forces included Greek and South African squadrons and a number of British and Canadian pilots. Five nations had contributed medical units: Denmark, India, Italy (though not a member of the U.N.), Norway and Sweden. Japan, too, aided the U.N. cause, in serving as a base.

(To be continued)

The Elizabethan Soldier

If you be a soldier, talk often how you have been in action; as the Portingale voyage, Cales voyage, the Island voyage; besides some eight or nine employments in Ireland and the Low Countries. And, if you perceive the untravelled company about you take this down well, ply them with more such stuff. This will be an excellent occasion to publish your languages, if you have them: if not, get some fragments of French or small parcels of Italian to fling about the table.—*Dekker: "The Gull's Hornbook" (1609). Contributed by Captain F. L. Jones, late The Irish Regiment.*

THE FN RIFLE

By
MAJOR J. A. CLANCY, MBE, MC,
DIRECTORATE OF INFANTRY, ARMY HEADQUARTERS, OTTAWA

It is appropriate at this time to discuss the FN (Fabrique Nationale) rifle for two distinctly separate, but related reasons.

One reason is the forgotten place of importance of the rifle in the army, because, despite the stupendous development of various types of atomic and thermonuclear weapons in all their different applications, the requirement of a rifle for the Infantryman remains. The army is built around Infantry; the Infantry's basic weapon is the rifle. Thus the rifle is the fundamental weapon of armies.

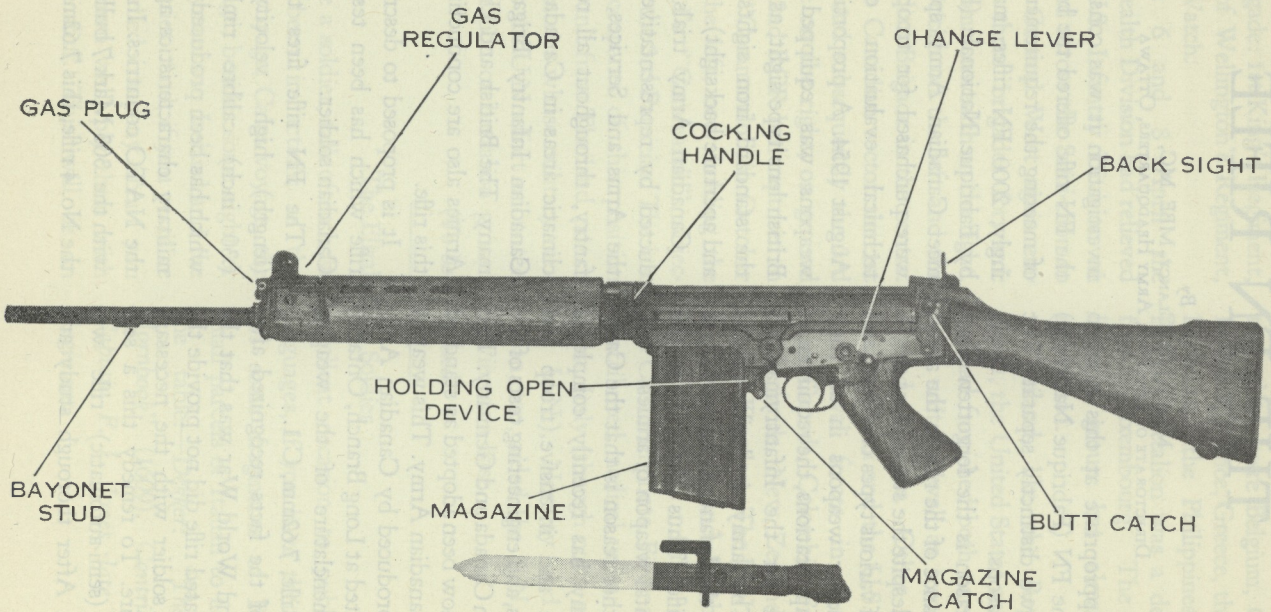
The other reason is that the Canadian Army has recently completed extensive and intensive troop and user trials, and engineering tests of the FN rifle in Canada and Germany. This rifle has now been adopted as standard for the Canadian Army. This weapon will be produced by Canadian Arsenals Limited at Long Branch, Ontario. The nomenclature of the weapon will be Rifle, 7.62mm, C 1.

One of the facts recognized after the Second World War was that the bolt-operated rifle did not provide the infantry soldier with the necessary rate of fire. To remedy this a self-loading (semi-automatic) rifle was required. After thorough study and investigation it was considered that the FN rifle offered the best promise of meeting the requirement. Accordingly, 2000 FN rifles, manufactured by Fabrique Nationale (Belgium) to meet Canadian Army specifications, were purchased for troop, user and technical evaluation commencing August 1954. A proportion of these weapons was equipped with the British lens type sight, as opposed to the standard iron sights (fore-sight and aperture backsight).

Canadian Army trials were conducted by representative groups of the Arms and Services, mainly Infantry, throughout all regional and climatic areas in Canada, and by 1 Canadian Infantry Brigade in Germany. The British and United States Armies also are conducting trials on this rifle.

It is proposed to describe the FN rifle which has been tested by the Canadian soldier.

The FN rifle fires the 2.8-inch (length) high velocity 7.62mm (.30 inch) calibre rimless round, which has been produced to meet the military characteristics agreed to by the NATO countries. In comparison with the .303 Mark 7 bullet fired from the No. 4 rifle, this 7.62mm bullet has



The FN Test Rifle

a greater velocity and is 18% lighter; its accuracy is comparable to the .303 round. The complete 7.62mm round is approximately 10% lighter. It has a maximum range of 3500 yards, and a maximum effective range of 2000 yards.

The test FN rifle weighs about 9.5 lb., compared with the 8.8 lb. weight of the No. 4 rifle. This increase in weight, though not desirable, is acceptable in a self-loading rifle of a higher muzzle velocity (2805 feet per second) and a 20-round magazine. Length of the weapon is 44.5 inches with flash eliminator attached. The 20-round detachable magazine will be interchangeable with that of the section light machine-gun.

The rifle is gas-operated and air-cooled. Control of the amount of gas acting on the piston head is achieved by means of a regulator which ensures that a reserve of power (gas) is available for firing under adverse conditions, and allows for changes in propellant. Gas escape holes in the gas cylinder permit escape of the gas after it has performed its task of forcing the piston and breech mechanism rearward. Forward movement of the mechanism is provided by a return spring in the butt.

A mechanical safety on this rifle prevents the weapon being fired until the breech block is locked, and it does not unlock until after the bullet has left the muzzle.

A feature of the rifle is the holding open device. When the magazine is empty this device retains the mechanism in the rear position until released. This allows the empty magazine to be replaced by a full magazine without recocking.

The cocking handle is not permanently attached to the breech block, and thus does not move forward or backward when the weapon is firing. This precludes the firer from forcing the mechanism forward if there are any obstructions in the chamber; possible damage is thus avoided. The working parts can be moved to the rear by use of the cocking handle, and returned forward by pressure of the return springs on quick release of the cocking handle at the rearward position.

In the forward movement of the mechanism, the round is fed from the magazine into the chamber; in the backward movement the operations of extraction and ejection are completed.

In semi-automatic fire after a round has been fired, the following is the sequence of action:

1. As the bullet passes the gas port, which is located at the top of the barrel, a certain quantity of gas passes through the gas port and hits the face of the piston. The piston is driven slightly to the rear where it strikes the breech block carrier.

2. The breech block carrier is then

driven to the rear for a distance of about half an inch. After this travel, the ramps of the breech block carrier engage cams of the breech block and the breech block is then lifted out of engagement with the locking shoulders. The action is thus unlocked, and the breech block and breech block carrier travel to the rear together, independent of the piston, cocking the hammer. By this time the work of the piston has been accomplished, and its spring returns it to its forward position.

3. During this rearward movement the breech block carries with it the spent casing from the chamber and it is ejected. The spent casing, on ejection from the weapon, lands to the right front of the firer. The breech block and breech block carrier are now brought to rest by the return springs which have been compressed in the rifle butt.

4. The compressed return springs now drive the breech block forward. The breech block takes a round from the top of the magazine, seats it in the chamber and at the same time the extractor engages the extractor groove of the round.

5. The breech block carrier then forces the rear of the breech block down to engage the locking shoulders. The breech block carrier then travels a further half inch before coming to rest, during which time the mechanical safeties are operated. The weapon is now ready to fire.

The rifle is easy to strip and has few working parts. It breaks open like a shot gun, and the breech block, the breech block carrier, and the cover can be removed and replaced quickly and easily. When required, the firing pin and its retaining pin, firing pin spring, extractor, and extractor spring can be removed by the soldier. All other parts which require cleaning can be easily stripped by the soldier.

The weapon is cleaned with the cleaning kit and a small multi-purpose combination tool. In addition, the familiar oil bottle and pullthrough are retained in the butt. The rifle is designed to accept a bayonet or a grenade launcher over the flash eliminator. To use the rifle as a grenade launcher the gas plug is rotated 180°, ensuring that all gas is available for launching and none is allowed to escape into the gas cylinder. The rifle is then manually operated using the cocking handle.

There are several interesting features in this rifle. Briefly, they are:

(a) Increased rate of effective fire—on semi-automatic 40 well-aimed shots per minute can be fired by the trained soldier; by instinctive firing, good results can be achieved with a rate of fire up to 60 rounds per minute.

(b) The weapon can be loaded either by replacing magazines com-

plete or by loading by clips from the top.

(c) The pistol grip assists in more positive control of the weapon.

(d) Control of all working parts are on the left side of the weapon. This allows the right hand to be the holding hand and the left hand is free to remove and replace magazines, operate the holding open device, the magazine catch, the butt catch and the cocking handle as well as adjusting the backsight and the change lever.

(e) Good balance and portability of the weapon.

(f) Reduced recoil compared with No. 4 .303 inch rifle.

(g) Mechanism and handling are relatively easy to teach.

(h) A general improvement in the standard of accuracy in range firing.

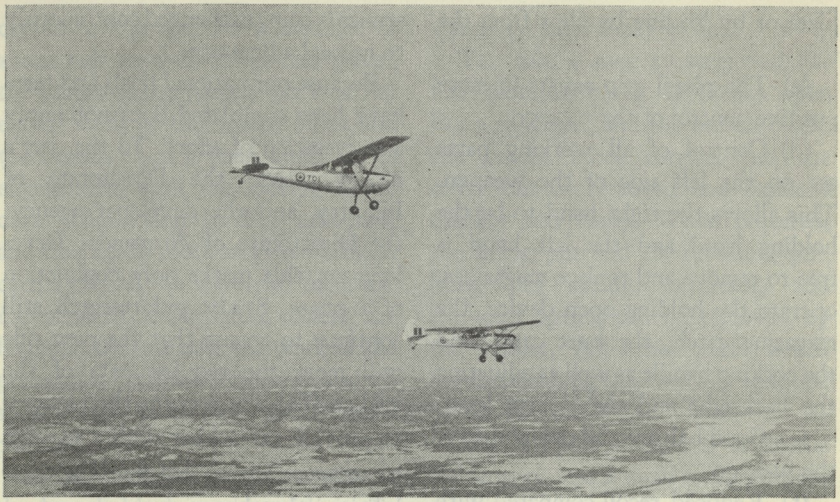
Paralleling the Canadian Army FN trials, the British and United States Armies are also conducting large-scale trials and tests. Knowledge and results gained by each of the three armies is being exchanged continuously to mutual advantage.

Because our national trials and tests have been completed does not imply any cessation of effort. To the user's representative, the Directorate of Infantry, and the developer agency, the Directorate of Armament Development, this marks only completion of a phase. Study and research still continue to ensure that the new rifle will meet the requirements of the soldier. The aim remains the same — to provide the soldier with a weapon to measure up to his fighting capabilities in battle.

The Canadian soldier will possess in his new rifle a mechanically sound weapon, simple to operate and maintain under all weather conditions. This rifle, with its higher rate of aimed fire by the soldier and the consequent increased volume of fire by the sub-unit, will increase the fighting effectiveness of Infantry.

The Carolina March

90 Years Ago—The following extraordinary results have been accomplished by the Carolina march: Fourteen cities, hundreds of miles of railroad, and thousands of bales of cotton have been burned; 85 cannon, 4000 prisoners and 25,000 animals have been captured, and over 15,000 white and black refugees have been set free. At Columbia, Sherman found 43 heavy guns, 5000 stands of small arms, 12,000 rounds of fixed ammunition, and a great portion of machinery sent there from Charleston for safety.—*From the files of the Army-Navy-Air Force Journal (U.S.).*



The Cessna L-19A (top) and the Auster Mk. VI.

THE AIR OBSERVATION POST

By
Major D. W. Francis, 1 Air OP Flight, Camp Petawawa, Ontario

Introduction

"One of the main problems facing every Gunner officer is how to bring observed fire speedily on to his target, and with the increased speed of warfare this problem has become ever more pressing."*

The solution to this problem was the introduction of the Air Observation Post. This article will sketch briefly the history, organization, training and employment of Air OP, which, it is hoped, will help its readers to better understand this small but important part of the Royal Regiment of Artillery.

History

For many years it had been apparent that some form of air observation was needed to supplement what could be seen from the ground. In 1911 the Air Battalion of the Royal Engineers was formed, and this unit, with the primitive aeroplane of that day, was used for reconnaissance and observation of artillery fire. Although most of the air observation duties of the First World War were carried out by balloons, improvements in aircraft

* *The Royal Artillery Commemoration Book 1939–1945, p. 557.*

and techniques gradually took place until by 1939 there were Army Co-operation Squadrons of the air force whose duty it was to provide the following types of reconnaissance:

Tactical (Tac/R)
Artillery (Arty/R)
Photographic (Photo/R)
Contact (Contact/R)

These squadrons were equipped with Lysander aircraft and did valuable work during the Battle of France, 1939–40. The aircraft were mostly engaged on Tac/R sorties, but were flown by RAF pilots trained to do Arty/R shoots. Because of the nature of their equipment and the tactics employed, losses were very heavy. One could not fly a slow aeroplane at 5000 to 6000 feet over enemy territory without running a great risk of being shot down. Moreover, these squadrons were based on RAF airfields, resulting in a considerable time lag between the initiation of a request for a sortie and the appearance of the aircraft in the forward area. "In spite of many experiments conducted with the RAF no practical solution was discovered and it became obvious to every Gunner officer who gave thought to the question that some form of aerial observation under the control of the artillery was an absolute necessity. But a solution to please both the RAF and the Royal Artillery was not easy to come by."*

Charles Bazeley, who is known as the father of Air OP, was convinced that the answer lay in having light aircraft, flown by Gunner officers, under direct control of the artillery. In 1940 he was sent to France with a few officers to try out his ideas against the enemy. Unfortunately, France fell before they had a chance to prove their worth. This was almost a fatal blow for Air OP, as it was essentially an offensive weapon, and most of the thinking after Dunkirk was along defensive lines. However, Bazeley and a handful of pilots persisted, encouraged by a few far-sighted senior officers, and were successful in pulling it through this critical stage.

In 1942 a compromise was reached with the RAF who agreed to equip 12 squadrons with Auster aircraft, loan ground crews to maintain them and train the pilots. Administration of the squadrons was to be such that it permitted the Army full operational control. This set-up was contrary to all RAF doctrine, for here were Army pilots, in slow aircraft, doing continuous low flying, carrying no armament, relying on natural features for cover, landing anywhere, and not even wearing a parachute!

First of the new squadrons went into action after the First Army

* *The Royal Artillery Commemoration Book, 1939–1945*, p. 557.

landed in North Africa; 651 Squadron assembled its aircraft at Algiers, flew up to the front near Medjez and successfully operated under difficult and hazardous air conditions, proving that Air OP was practicable, even when the RAF was having a hard time maintaining air superiority. 651 Squadron was soon joined by 654 Squadron, which quickly proved its worth in support of the Eighth Army. From this time on there was no looking back: Air OP was here to stay.

By the end of the war squadrons were in action from Burma to North-West Europe. They had fired every type of artillery from Bofors to 16-inch naval guns; they had operated from every type of landing strip from a railway platform to an aircraft carrier. Many and varied are the tales of their exploits: the story of the reoccupation of Akyab in South-East Asia* and of Brussels Airport† make most interesting reading.

Now let us look at the Canadian picture. The first indication of the formation of Canadian Air OP units was in September 1941 when three officers, Captains D. R. Ely, R. R. MacNeil and R. A. Donald, were sent on a pilot's course in England. After completion of the course it was decided that no Canadian Air OP units would be formed and these officers were loaned to British squadrons. Three months before Canadian participation in the Mediterranean Theatre they were withdrawn and posted to the 1st Field Regiment RCHA. During the attack on Ortona in December 1943 Captain Donald was killed and Captain MacNeil was captured.

During the Italian campaign it soon became obvious that Air OP was a necessary part of a modern army and in June 1944 authority was granted for the formation of three Canadian Squadrons. 664 Squadron was formed in December 1944. It went into action in North-West Europe in March 1945, served in the Canadian Army Occupation Force and was disbanded in May 1946. 665 Squadron mobilized in January 1945, was in action in North-West Europe from late April 1945 and was disbanded in July 1945. 666 Squadron was formed in March 1945, was not in action against the enemy, and was disbanded in October 1945.

Post-war army plans made provision for an Air OP Squadron, but there were no suitable aircraft in Canada, and much of the interest and joint army-air-force "know-how" had died out along with the wartime squadrons. However, the interest quickly revived in 1947 with the purchase of a number of Auster Mk. 6 aircraft from the United Kingdom. The same year saw a change in organization with the for-

* *Ibid.*, p. 560.
† *Ibid.*, p. 567.

mation of the Light Aircraft School as part of the Canadian Joint Air Training Centre at Rivers, Manitoba. A detachment of this unit was located at Camp Shilo to provide Air OP services to the Royal Canadian School of Artillery.

In 1949 the first class of student officers graduated as army pilots, and there has been a fairly steady flow ever since. This course is not restricted to Gunner officers. As the future likely will see a need for liaison, communication and light transport aircraft within the army, officers from other corps are being trained as pilots.

During the war in Korea, Canadian representation in Air OP was effected by having one pilot attached at all times to the Commonwealth Division Air OP Flight. It was while carrying out these duties that Captain J. M. Liston was shot down by enemy anti-aircraft fire; he spent a year as prisoner-of-war of the Chinese Communist troops, and was subsequently repatriated to Canada. One of his successors, Captain P. J. A. Tees, was awarded the Distinguished Flying Cross, the first such award to a Canadian Army Officer since the First World War.

Coincident with the formation of the 1st Canadian Infantry Division, and part of it, Canada's first peacetime Air OP Flight was formed at Camp Petawawa in 1953. 1 Air OP Flight, besides its role as part of the Divisional Artillery of 1 Canadian Infantry Division, carries out peacetime Air OP tasks as required in Eastern Canada. This unit has a proud link with the past in that it is situated on Silver Dart Airstrip, the site of the first military flight in Canada. Here, in August 1909, J. A. D. McCurdy and F. W. Baldwin flew their "Silver Dart" to demonstrate to the Canadian Army the military potentialities of the aeroplane.

2 Canadian Air OP Flight was organized in 1954 at Camp Shilo, under command of the Royal Canadian School of Artillery. This unit is responsible for carrying out Air OP tasks in Western Canada.

Late in 1954, a partial change-over was made from the British Auster aeroplane to the U.S.-built Cessna L-19A. The latter aircraft is a much more modern piece of equipment than its predecessor, is considerably more powerful, giving it better performance in take-off and climb, and is much more comfortable for both pilot and passenger.

Organization

The tactical Air OP unit is the flight, which consists of Flight Headquarters, including an Immediate Reserve Section, and four identical sections. The section consists of one

This U.S.-built Cessna L-19A is used in Air Observation Post flying.

aircraft, one jeep and one 3-ton truck; personnel comprise a Captain RCA, a batman driver, a driver operator, and two RCAF maintenance technicians. Flight Headquarters comprises one aircraft (immediate reserve), five vehicles, and 18 personnel. There is thus a total of five aircraft and six pilots, including the Flight Commander, who is a Major RCA. In addition to the six officers there are 19 men (RCA) and 13 men (RCAF). As might be expected, a unit of mixed services has its problems, but it works surprisingly well. It is an example of very close cooperation between the army and the air force, and within the unit there is no differentiation between personnel of the two services, except the colour of their uniforms.

In the British system, Air OP flights are RAF units, control of which is vested in the army. This, too, was the Canadian system during the Second World War. However, the present Canadian system is slightly different, in that Air OP Flights are Artillery units, and the RCAF component is attached. In effect, there is no difference between these two systems: the airforce still has the responsibility for the provision of certain equipment, servicing and maintenance of aircraft and the enforcement of flying regulations.

Air OP flights are allotted on the basis of one per divisional artillery

and one per Army Group Royal Artillery. They normally come under command of an Air OP Squadron Headquarters, situated at or near Corps Headquarters. Squadrons, in turn, come under Wing Headquarters which are situated at or near Army Headquarters.

Relying mainly on wireless for communication, the Air OP Flight is well supplied with sets. In each section there is one wireless set 62 (in the aeroplane) and one wireless set 19 (in the jeep). In Flight Headquarters there is one wireless set 19 (rear link to HQ RCA or to Squadron Headquarters), one wireless set 19 (Flight Commander's Rover) and one wireless set 52 (control set on the flight net). In addition, there are two receivers for the purpose of listening in on the Anti-Aircraft Early Warning system. This wireless set-up is extremely flexible in operations; it is possible to carry out sorties on the flight net (with a field regiment tuned in as a sub-station), on the CRA's command net or a field regimental net (with the aeroplane tuned in as a sub-station), or on a one-to-one net specially established for the purpose.

Training

Prospective Air OP pilots are selected by Army Headquarters from Field Artillery Officers who have applied for the course. Selection is rather difficult, because the requirements are difficult to meet. For example, the ideal applicant might be described as a Captain, age 22–25, with at least one tour of duty in a field regiment in operations. Such candidates are hard to find, so that a compromise is almost always necessary.

The next hurdle for the candidate is to pass the rigorous physical and mental tests required of RCAF aircrew. The would-be aviator reports to RCAF Station, Crumlin, Ontario, for this session, which lasts approximately five days, and which usually weeds out about one-third of the applicants. His next step is to report to the CJATC, Rivers, for his course. Here he lives on the station, but has no duties for the first three months other than to report for instruction to the Brandon. Flying Club. Here, under civilian flying instructors, the candidate learns to fly.

The Brandon Flying Club, under the efficient management of Ed. McGill, a well known western flier, is under contract to the army to teach candidates the fundamentals of flying and to provide 75 hours of dual and solo flying instruction. Frequent "check rides" are carried out by the Chief Flying Instructor (RCAF) of the Light Aircraft School, and if a student is not up to the mark he may be "washed out" at any time. Instruction is carried out on the Cessna 140 type, and upon successful

completion of this stage the candidate will have reached the standard required for a private pilot's licence.

The next step is at the Light Aircraft School where the candidate converts to the Auster and L-19A aircraft and progresses to more advanced sequences of flying and associated subjects. Here he receives approximately 125 hours' flying time. His instructors are army pilots, although he is still subject to "check-rides" with the Chief Flying Instructor. At the end of the course the candidate writes his final examinations and ends up with presentation of his wings on "Wings Parade".

At this point our pilot is posted to one of the two Air OP Flights for operational training. After six to eight months on course where his only worry was in passing his course, the pilot finds it a bit of a shock to have to settle down to work in a unit. Here in an Air OP Flight he not only has to put in many hours of flying to bring him up to an acceptable standard and keep him there, but he must learn how to carry out his duties as an Air OP Section Commander and, in addition, he has to carry out the functions of a regimental officer, including training of the men. He will likely inherit some of the odd jobs, such as Education Officer, MT Officer, Unit Fire Marshal, etc. One thing is certain: an Air OP officer can never afford to be idle. If

The British Auster Mk. VI.

he has no pressing duties to perform, he can always profitably spend his time in reviewing either Artillery subjects or flying subjects; no matter how good a pilot he is, there is always room for improvement.

A pilot should, if possible, fly every day. This will ensure that he maintains a high degree of skill in the handling of his aircraft. He must constantly practise short take-offs, short-landing techniques, low flying, cross-wind landings, message dropping and forced landings, to mention only a few sequences. He must keep up on his navigation techniques, photography, maintenance and servicing of his aircraft and meteorology. He must be an expert "shot" in the direction of artillery fire. He must know how to tune and operate all types of wireless sets in his unit and his wireless procedure must be of the highest order. He must be able to drive and maintain all types of vehicles in his unit. He must have a good knowledge of the principles of flight and the theory of gunnery.

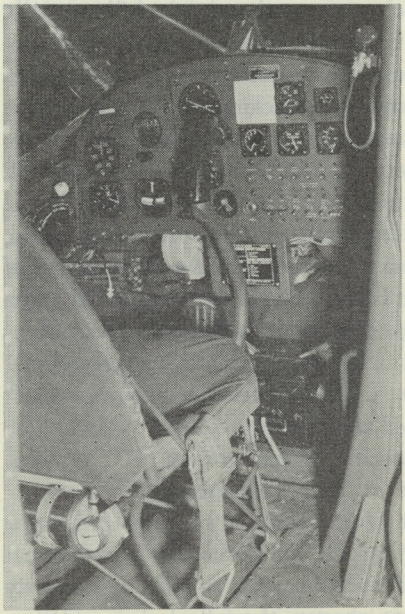
Sub-unit and unit training takes the form of section and flight exercises during which individual sections and later the complete flight move out into the field to practise the selection and occupation of landing grounds, movement and deployment, concealment, tactical flying, and living under field conditions. Each summer, Air OP flights normally undergo training with other arms in the collective training concentrations at Wainwright, Alberta, and Gagetown, New Brunswick.

Employment

As a general rule, sorties should be ordered only for a specific task: aircraft should not be ordered into the air merely on the chance that they might see something. Sorties should be of short duration and should be flown no higher and no farther forward then is necessary to accomplish the mission. These rules must be followed to minimize the risk of aircraft being shot down, and to lessen pilot fatigue. Fixed times and distances can not be rigidly followed, but an average sortie might last 20 to 30 minutes, flown at a height not exceeding 1000 feet, 1000 yards short of the enemy FDLs. Under conditions of air superiority these rules can be relaxed to the point where, as in Korea, Air OP were used at times on a continuous patrol, and sorties lasted up to three hours and were flown at heights up to 12,000 feet. Moreover, until the enemy commenced to deploy light anti-aircraft guns well forward, sorties were often flown behind the enemy lines.

One of the most serious limitations to Air OP is weather, since bad weather not only makes flying unsafe but also cuts down visibility, making observation impossible. For the same reason, sorties are not normally flown at night. However, in good weather, under conditions of half moon or better, night shooting by Air OP can be quite effective.

Within a division, the complete flight normally operates from a flight



The cockpit—the Air OP pilot's "office".

landing ground in the vicinity of HQ RCA. It is possible to detach sections to operate from section landing grounds under command of field regiments. This literally gives the field regiment commander his own Air OP, but it deprives the flight commander of a large measure of control of his unit and, more important, it is much less economical in aircraft, pilots and flying time than if all sections are concentrated.

Landing strips are usually fields or roads, which, depending on the weather and the nature of the ground, may be usable without assistance from Engineers. If the strip is to be used for any length of time or if there is much rain, it will normally require smoothing and levelling, drainage, and possibly the laying of Summerfelt tracking to prevent the aircraft becoming mired and unable to take off. In general, an Air OP strip must be 250 yards long, in the direction of the prevailing wind, fairly smooth, level and firm, clear of obstacles at both ends, with room and cover for vehicles and aircraft.

The role of Air OP is threefold:

1. The observation and adjustment of artillery fire.
2. Air photography.
3. Reconnaissance.

In its primary function of directing fire, the Air OP is normally flown at tree-top height, pulling up abruptly to observe the fall of shot and then returning to low level to order the correction and to await the next report of "shot" from the guns. The reason for these flying tactics is that the aircraft is most difficult for the enemy to see, either from the ground or the air, when it is at low level. Moreover, if attacked by an enemy fighter aeroplane, the best defence of the Air OP is to fly at very low level in areas where it is difficult and dangerous for a high-speed aircraft to manœuvre.

All aspects of the sortie are performed solely by the pilot; that is, he flies the aeroplane, conducts the shoot, operates the radio and does his own navigation and map reading. Indeed, he may be the sole occupant of the aeroplane; however, in conditions of enemy air activity, it is normal to carry a rear observer. This man is usually a volunteer selected from the ground crew of the section, and his sole duty in the aircraft is to watch for and warn the pilot of the approach of enemy fighters. This is not the only method of warning the pilot. At Flight Headquarters a listening watch is maintained on the Anti-Aircraft Early Warning broadcast and warnings are relayed to pilots in the air. In addition, all Gunner units working to Air OP are responsible for warning pilots of enemy air activity. One other major hazard with which the Air OP pilot has to contend is the shells from his

own guns. From a purely technical point of view, he can fly above the trajectory, below it, behind it, or alongside it. The decision as to his flight path can only be made immediately before the sortie when the pilot or his flight commander will have taken all factors into consideration.

In the photography role, Air OP is capable of taking both vertical and oblique photographs. This does not in any way supplant the services of the RCAF, but is intended to supplement these services. Vertical photography is not properly an Air OP task, since most of the photographs required are of enemy territory, and it is, to say the least, foolhardy for an Air OP type aircraft to fly slowly over enemy-held ground at a height of 5000 to 10,000 feet. Low level obliques are a different matter. These can normally be taken from within our own lines and at a safe (i.e. low) height. Moreover, the pilot is usually familiar with the ground and understands the problem of the ground forces, and this is often reflected in the quality of the photographs. Another point worthy of note is that by use of the "J" type trailer which may be attached to a flight, limited quantities of prints can be produced for the user in a very short time.

In the reconnaissance role, a sortie might be requested for the purpose of gaining information by looking into any area which can be seen better from the air than from the ground. The main limitation is, of course, the depth of observation possible into enemy territory. While carrying out this task, the Air OP normally has artillery on call for targets of opportunity.

There are many other jobs which Air OP is capable of performing in addition to its main tasks of shooting, photography, and gaining information. These jobs are more properly the responsibility of other types of flying units, but can be carried out by Air OP when there is no interference with the primary role. Line can be laid from the air over any type of ground at comparatively great speed; with practice, pilots can even make crossings over roads or streams providing there are conveniently located trees which can be used to catch the line. The only additional equipment required is the specially wound reels and container which are fastened to the bomb racks of the aircraft. Another job is supply-dropping: up to 200 pounds can be carried under each wing of the aircraft, slung from the bomb racks and released from the cockpit. The only special equipment required is the containers and parachutes. Air OP aircraft can, in emergency, be used for casualty evacuation, although the aeroplane is capable of carrying only one patient

at a time unless fitted with external litters. Lastly, it can be used in a variety of ways for intercommunication, liaison and light transport.

The services of Air OP are not available solely to the artillery. There are wide possibilities for its employment with all of the other arms, with armour and infantry in particular. Requests for its use should be directed through Gunner channels.

Conclusion

An attempt has been made to portray accurately the activities of Air OP without exaggeration, mumbo-jumbo or black magic. The Air OP pilot is no "space man", but a rather hard-headed and well-trained artilleryman who does his job from the moving platform of a light aeroplane instead of from a hilltop or high building. He is only human and is subject to the usual physical limitations. His job entails a certain amount of risk and has some drawbacks, but its compensations are many and most readers will agree that the Air OP pilot plays a most interesting and useful part in support of his earthbound brothers-in-arms.

The Air OP is one more facet of the Regimental motto, "UBIQUE".

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How John Henry Became A Gunner

John Henry Lefroy came to Canada in 1842 as an artillery subaltern to take charge of the magnetic observatory in Toronto. During the succeeding two years he made a journey to Hudson's Bay Company territories to carry out a magnetic survey of the Canadian North-West. How he came to be a Gunner is quoted in his own words in the introduction to *In Search of the Magnetic North — A Soldier-Surveyor's Letters from the North-West, 1843–44*, edited by George F. G. Stanley:

> It was my ambition to obtain the Engineers, and I should probably have done so, but for a black eye with which I went up to the examination, and for which decoration I had to thank Chapman, now Colonel Chapman of the Engineers—a very distinguished officer. A nefarious attempt of his to rob my table of a very crusty loaf had led to an exchange of blows: he being the aggressor was kept back one term. I was sentenced to the Artillery, then, and long afterwards a sort of penal corps in the eyes of the authorities.

In spite of what he considered to be a blow to his career, Lefroy went on after his return from Canada in 1853 to become Director-General of Ordnance with the rank of major-general.—*Contributed by Captain C. C. J. Bond, Army Headquarters, Ottawa.*

A SUBALTERN OF 1812

By
CAPTAIN F. L. JONES, LATE THE IRISH REGIMENT OF CANADA*

The name of Laura Secord is a familiar one to Canadians but the officer to whom she brought the information which led to a triumph of arms has been forgotten. He was Lieutenant James FitzGibbon of His Majesty's 49th, or The Hertfordshire Regiment.† A name on a monument and a reference here and there in a footnote is all that remains of a fighting man whose life is full of interest to the soldiers of today.

Born in 1780, he was the son of a farmer who had a small freehold at Glin on the banks of the Shannon in Ireland. At the age of eleven he was taken from the village school to help his father on the farm. He had, however, learned to read and write and this gave him a great advantage over others born into the same station in life. When he was fifteen he joined a local yeomanry corps and three years later he became pay sergeant of the Tarbert Fencibles. This unit was sent to England in 1798 to relieve regular regiments ordered abroad. Young FitzGibbon with forty others from the Fencibles volunteered for active service. On August 6, 1799, he was posted to the 49th Regiment of Foot with the rank of sergeant. His regular army career had begun.

He saw service in Holland in the fall of that year and in 1801 had the novel experience of serving as a marine in the Royal Navy. In the eighteenth century it was the first duty of the army to man the fleet. The Admiralty was always hustling bewildered redcoats aboard ships to help forward its great ventures. The 49th was split up into detachments and distributed among the ships forming part of the fleet destined for the Baltic. The grenadier company to which FitzGibbon belonged went to H.M.S. *Monarch*. He was present in this ship when Nelson won his great victory off Copenhagen. In June 1802 the 49th was ordered to Quebec.

Life in a crowded transport, then as now, was not conducive to study. The sergeant made good use of the long voyage by mastering every detail in the "Rules and Regulations for the Field Exercises of His Majesty's Forces". He was an unusual N.C.O. for professional zeal was not high in the service at that time.

*Commissioned in The Irish Regiment of Canada in 1938, the author went overseas with the regiment and was wounded in action in Italy while a company commander. He is now engaged in commercial life in Hamilton, Ontario.—Editor.

†Now the Royal Berkshire Regiment.

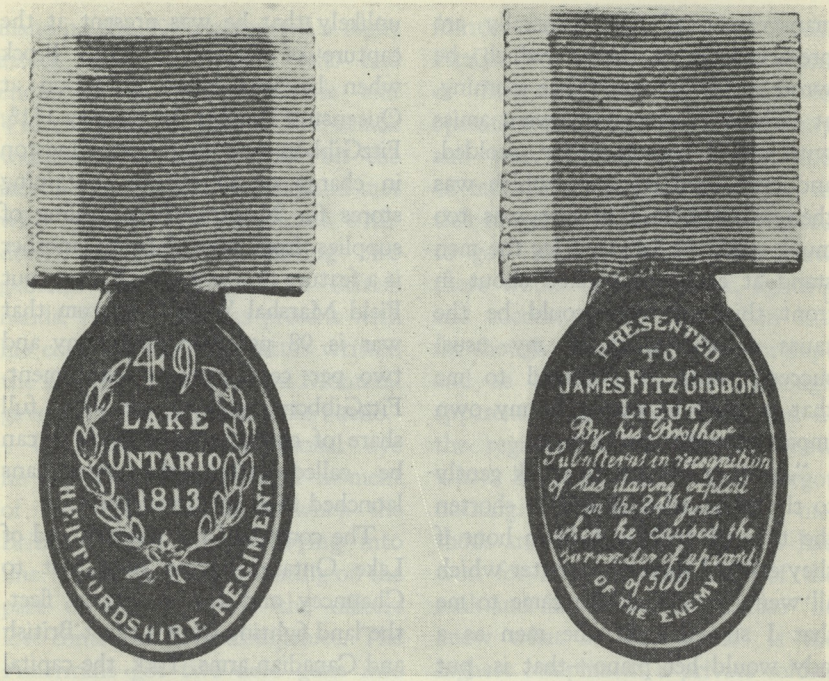
A few years later Wellington was complaining bitterly to the Military Secretary that "nobody in the British Army ever reads a regulation or an order as if it were to be a guide for his conduct, or in any other manner than as an amusing novel." FitzGibbon was intent on making his way in the service and his application and industry did not go unnoticed by his Commanding Officer.

Lieut.-Colonel Isaac Brock had been favourably impressed by the way this tall, young Irishman had carried out his duties in England. On arrival in Quebec, he promoted FitzGibbon to the rank of sergeant-major, passing over the heads of forty sergeants in the unit who were senior to him. The following year, the adjutancy of the regiment having become vacant, Brock appointed FitzGibbon acting adjutant. In 1806 he obtained an ensign's commission for him from the Duke of York, the Commander-in-Chief of the British Army. FitzGibbon had accomplished the difficult feat of rising from the ranks in the age of purchase of commissions.

Then, too, there was a prejudice against ex-rankers in the army of the early nineteenth century which found expression in Wellington's remark that "their origin would come out and you could never perfectly trust them, especially in the matter of drink." FitzGibbon was fortunate in remaining under the tutelage of Brock and in finding some friendly subalterns in the Mess who helped him. He must have been very proud of the single, gold epaulette on the left shoulder of his scarlet jacket with its green facings. It may be added that buying an officer's kit put him into debt from which he was never entirely free for years.

As adjutant of the 49th, FitzGibbon was closely associated with Lieut.-Colonel Brock, the officer to whom he owed so much. He set about remedying his lack of a formal education and has left us an amusing, little picture of Brock checking him up sharply for his pronunciation of the verb "ascertain". FitzGibbon went to a booksellers as soon as he was out of the Colonel's presence and bought a spelling book, a dictionary and a grammar. In later years he called the Orderly Room of the 49th his grammar school and the Officers Mess his university. He was promoted to a lieutenancy in 1809 and continued to be adjutant of his regiment, an appointment he held for another four years.

During this time the regiment was stationed at many posts in Lower and Upper Canada. Small detachments, usually one or two companies, found this service an arduous one especially in the upper province. The rude pioneer communities of Upper Canada had little to offer the soldiers



Society for Army Historical Research, United Kingdom

The medal presented to Lieut. James FitzGibbon by his brother officers.

in the way of amenities. There was nothing but the stockaded fort, the forest and the gleaming expanses of the Great Lakes to meet their eyes. Their solace and their ruin was rum. "Drunk before dinner although confined to barracks—sentenced to 150 lashes; drunk before morning parade although confined to barracks, 200 lashes; quitting barracks without leave after tattoo, 300 lashes". So run extracts from the returns of the 49th from November 1810 to May 1811. Yet this savage discipline did not break them, inured as they were to hardships from early youth. Brock, reporting on the regiment in 1812, writes, "Although the regiment has been ten years in this country, drinking rum without bounds, it is still respectable, and apparently ardent for an opportunity to acquire distinction".

FitzGibbon loathed the use of the lash, although he and the rest of his generation stood stolidly to attention time and time again while a man's back was cut to ribbons. It was a matter of daily routine. His thoughts on the training of soldiers and the

management of men generally are preserved in a letter which he wrote in his old age. "One morning, at early drill, everything went amiss with me. I became angry, scolded, and even used my cane which was then allowed, and in fact was too much used. At length I let the men stand at ease and walked about in front thinking what could be the cause of the want of my usual success, when it occurred to me that it must be owing to my own impatient and angry temper.

"At once I began to speak gently to the men and promised to shorten the time of drill by half an hour if they exerted themselves; after which all went well. The idea came to me that I should treat the men as a lady would her piano—that is, put them in tune (good humour) before I played upon them. Thus I soon learned that I could readily lead nine men where I could not drive one."

On the declaration of war by the United States upon Great Britain in June 1812, FitzGibbon resigned the adjutancy of the regiment and was given temporary command of a company whose captain was on leave of absence. His first war-time duty in Canada was the unromantic one of conveying supplies from Montreal to Kingston by *bateaux*. His movements for the remainder of the year are unknown but it is unlikely that he was present at the capture of Detroit or with Brock when he was killed in action at Queenston Heights. In January 1813, FitzGibbon was sent from Kingston in charge of 45 sleighs containing stores for Niagara. This hauling of supplies from one place to another is a feature of every war. It bears out Field Marshal Wavell's dictum that war is 98 per cent. monotony and two per cent. intense excitement. FitzGibbon was to get his full share of excitement—if such it can be called—when the Americans launched their spring offensive.

The control of the western end of Lake Ontario having been lost to Chauncey and the American fleet, the land fighting went against British and Canadian arms. York, the capital of Upper Canada, was taken and burned. Fort George fell to a combined land and sea assault on the 27th of May and the Niagara Peninsula lay open to the invaders. FitzGibbon was with the 49th as it trudged around the head of the lake with an American Army at its heels. The loss of the regimental records at Fort George must have been galling to the former adjutant. The retreat ended at Burlington Heights. Here Brigadier-General Vincent with his force of 1600 all ranks threw up entrenchments and prepared to face the enemy whose numbers exceeded 3000. Lieut.-Colonel Harvey, com-

manding the 49th, suggested a night attack upon the enemy who had encamped at Stoney Creek and Vincent gave his assent. The attack was made at two o'clock on the morning of the 6th of June and met with success. The Americans withdrew, badly shaken, leaving two generals and four guns in British hands. FitzGibbon was present with his company and in a letter written the next day to a friend in Montreal gave a vivid description of the battle.

With a cold, professional eye he noted that the critical moment of the attack had been when the British column was deploying into line. There was much shouting on the part of the men and the officers lost control of their companies. The Americans got two field guns into action and had it not been for the conduct of Major Plenderleath of the 49th who carried the guns at the point of the bayonet, the outcome would have been a serious reverse for the attackers. Later he made the observation that "the experience of the night affair at Stoney Creek would have been of great value to me had the war continued and opportunities afforded me of making night attacks. I think fighting at night has never been practised to one-tenth of the extent to which it is possible to carry it".

The slow process of edging the Americans back to the Niagara frontier began after Stoney Creek. FitzGibbon obtained the consent of Brigadier-General Vincent to operate well in advance of the army and was allowed one ensign and 48 men from the 49th to engage in this ranger service. "We all wanted to go," said a soldier. "We knew there would be good work, fighting and success where FitzGibbon led, for though impulsive, he was prompt and as brave as a lion. Though apparently foolhardy, every man in the regiment knew that he knew what he was about and forgot nothing." FitzGibbon's training methods and his handling of men had won for him the confidence of the rank and file. The telling phrase "he knew what he was about" is the highest compliment a private soldier can pay to an officer.

The C.O. of the 49th must have had a hand in selecting the men to go with FitzGibbon. Colonel Clark, Lincoln Militia, who was serving in the area at that time, writes in his memoirs that "Lieutenant FitzGibbon had a separate command composed of all the men whose names figured in the regimental records as notoriously troublesome characters, who were ever and anon the subjects of court-martial. They were all Irishmen, speaking the Irish vernacular, as did their countryman the chief." If anyone could manage them, the ex-sergeant-major was the man.

Perhaps the Commanding Officer despaired of ever making regular soldiers of these hard cases and felt that guerrilla activities would give them more scope.

FitzGibbon had given much thought to the problem of bush fighting and his instructions to his men make interesting reading. He taught them to make use of cover, firing from behind a tree in such a manner as to expose only a part of the head and right shoulder. In advancing, the soldier was to run diagonally to the enemy to the cover of another tree. Running at such an angle made him a more difficult target to hit than if he advanced straight to his front. His thoughts on camouflage could have come out of one of today's training manuals: "Officers and men are to be clothed in grey, not green (grey being the nearest to the colour of the forest trees, is least discernible); the caps to be of the same cloth as the dress; the jackets and caps to have loops sewn on them of the same coloured tape and so placed as when filled with small sprigs of foliage that the whole body from the waist upwards would have the appearance of a bush."

He overcame the difficulty of communication between sections in densely wooded country by providing them with cow-bells, each of a different pitch. As a student of the wood-lore of the Indians, he recommended that an intelligent Indian be attached to each regiment for a sufficient time to teach all his lessons to the officers and sergeants. It is a matter of some wonderment that an officer who had experienced to the full the stultifying effect of the parade ground could adapt himself so quickly to the changed environment of the bush. Trained in the rigid, linear tactics of the day, he became a guerrilla fighter with astonishing ease. The formalism of European battlefields where "they take your life to the sound of a fife" had no place in the forests of Upper Canada.

Establishing himself a scant 17 miles from Fort George, he began to harry the enemy's lines of communication. The men became skilful in driving in American foraging parties and ambushing small detachments who ventured too far from their base. FitzGibbon became such a nuisance that a full-scale operation was planned by General Dearborn, U.S. Army, to destroy him. Laura Secord, the wife of a Canadian militiaman who had been wounded at Queenston Heights, overheard two American soldiers discussing the plan. She made her way on foot from Queenston to Beaver Dam and warned FitzGibbon of the impending danger. This involved evading the American piquets and walking some 19 miles by a circuitous route through woods

where Indians made a point of shooting first and asking questions afterwards. Time, and the fact that it is an oft-told tale, cannot detract from the service which she rendered to her country.

The result was that Lieut.-Colonel Charles Boerstler of the 14th U.S. Infantry Regiment came under a heavy fire in the vicinity of Beaver Dam about ten o'clock on the morning of the 24th of June. This American force of 500 men with two field-pieces was suddenly assailed by Indians led by Captain Kerr and John Brant. Boerstler was 17 miles from his base at Fort George and his men had been on the road since before dawn. Instead of surprising FitzGibbon, he had been surprised in his turn. The woods were alive with a foe he could not see and the Indian screeching carried with it the menace of the tomahawk and the scalping knife. He got his command off the road to more open ground in the middle of a field. The Indians followed, snaking through the corn. After three hours of action, Boerstler became unnerved. He decided to issue whiskey rations but the incessant firing and the confusion attendant upon caring for the wounded made this difficult. Fifty-six of his blue coats had fallen. The men were exhausted in the June heat and their ammunition was running low. The colours hung listless in the sultry air.

FitzGibbon had arrived on the scene early in the action. He worked his way around the enemy standing irresolute in the middle of the corn-field and placed himself in a position to cover the road leading to Fort George. The sight of these regulars barring the line of his retreat prompted Boerstler who had been wounded to consult with his officers as to what was to be done. His second-in-command said that he would do anything, which was not particularly helpful under the circumstances. FitzGibbon called for a parley and bluffed Boerstler into thinking his position was a hopeless one. He talked of the difficulty of controlling the Indians and the ugly word massacre crept into the conversation. At that moment a British force and men of the Lincoln Militia came up providing much needed support. Lt.-Col. Boerstler surrendered, the officers being allowed to keep their swords. The colours of the 14th U.S. Infantry were handed to Captain Kerr who had commanded the Indians. Later, he presented the colours to Mrs Brant, widow of Joseph Brant, who had brought the Mohawks over to the British side in the Revolutionary War.

The action at Beaver Dam earned FitzGibbon a mention in dispatches. There being no medals for regimental officers and men at the time, it was

the custom for officers of a regiment to give one on their own to an officer who had performed some outstanding act. His brother officers presented him with a gold medal suitably engraved. No doubt FitzGibbon appreciated this gesture but a step in rank would have been even more welcome. He had been commanding a company on active service for almost a year but his captaincy seemed as far away as ever. The purchase system was in full flower. Being without private means, he could never hope to be in a position to buy a step in rank. The toast among impoverished subalterns at this time was to a "bloody war or a sickly season" in the hope that casualties in the senior ranks would open the door to promotion without purchase.

He was not to go unrewarded, however, for he was appointed to command a company with rank of captain in the Glengarry Light Infantry, a Canadian regiment which had been raised in 1812 for service in British North America. In his letter of recommendation the Adjutant General speaks of his ability as an officer of a light corps "in which line of service he has recently so eminently distinguished himself." FitzGibbon did not join his new regiment immediately but remained in the Niagara peninsula with his little command of the 49th.

At the beginning of July he moved his force near Fort Erie which the Americans had destroyed prior to their withdrawal across the Niagara River. His approach to the river had been made by night marches for he wished to conceal his return to the frontier from the enemy. FitzGibbon had in mind a hit-and-run raid upon Black Rock, an American post across the river, which was used as a stores depot. He was studying the enemy position through his glass under cover when he was interrupted by three officers, glittering in scarlet and gold, who came up in full view of the enemy. They were Colonel Cecil Bisshopp, officer commanding the advance troops accompanied by his staff adjutant and a colonel of the Canadian Militia.

Colonel Bisshopp took the projected attack out of FitzGibbon's hands and proposed to make it a larger operation, using two or three hundred men. A glance at his career carries one irresistibly away upon the full tide of the eighteenth century. Three years younger than FitzGibbon, he was the son of a baronet and had entered the 1st Foot Guards as an ensign at the age of sixteen. Finding regimental service not his *forte*, he had held numerous staff appointments and had done a tour of duty at the British Embassy at St Petersburg. The operation he was about to undertake had as its preliminary the

crossing of a wide, swiftly-flowing river followed by an assault on a fortified position with enemy reserves close at hand. It may be that Bisshopp made a faulty appreciation of the situation. The American reverses at Stoney Creek and Beaver Dam could have given him a poor opinion of the temper of the troops he was about to engage.

The crossing of the Niagara River was made under cover of darkness in the early hours of Sunday, the 11th of June. FitzGibbon moved off first with the advance guard of his men from the 49th. He had miscalculated the strength of the current and landed some distance below Black Rock. Without waiting for the main body to land, he advanced on his objective. The American Militia scampered off in the direction of Buffalo. Black Rock was taken without the loss of a man. Colonel Bisshopp arrived with main body composed of the 8th and 41st Foot with thirty or forty men of the 2nd Lincoln Militia. A blockhouse, naval barracks and a large schooner was set ablaze. Guns were spiked and the troops busied themselves in the happy task of removing American stores to the waiting boats. Forty-six barrels of whiskey which fell into their hands must have been handled with special care. Time wore on; daybreak came and with it the American counter-attack.

Canadian soldiers have an expressive word in their vocabulary to describe what then took place. The rearguard fought desperately, charging three times in an attempt to keep the Americans from the wharf and beach. Half of Bisshopp's force had embarked when he fell fighting bravely with the rearguard. He was carried to one of the waiting boats. FitzGibbon in the unfamiliar role of a harassed beachmaster finally got off what was left of the party under a storm of fire.

Colonel Bisshopp was taken to the home of a Mrs James Woodruff and there, attended by a soldier servant, he died of wounds. A stone was raised above his grave upon which sorrowing hands inscribed the usual florid sentiments of the period: "Pause o'er this shrine where sleeps the young and brave! And shed one gen'rous tear o'er Cecil's grave." An officer of today who allows his command to become disorganized after a successful assault and does not prepare for the counter-attack, may count himself lucky if he gets so pleasing an epitaph. Major-General de Rottenburg, G.O.C. Division of the Centre, in his report stated that Bisshopp "overstayed his time, contrary to positive instructions to that effect." FitzGibbon said nothing. He would never talk about Black Rock after the war.

The following month he went

down with lake fever. There is reason to believe that this was malaria, a fever which is associated with tropical countries rather than with Canada. Troops coming up from the southern states could have brought with them the mosquito which carries it. During the heat of the summer months this insect could thrive in the Niagara area and on the shores of Lake Erie.

In October the 49th were withdrawn from the theatre of war and went into winter quarters at Kingston. FitzGibbon must have been glad of the chance for a rest after his exertions during the spring and summer. In January 1814, he joined the Glengarry Light Infantry. Six months later he was *en route* once again to the Niagara frontier, commanding a company of his new regiment, a captain at last.

The summer of 1814 saw fighting up and down the frontier as hard as any experienced in Portugal or Spain. Chipawa, Lundy's Lane and Fort Erie were fought in the orthodox, text book way, line versus line. FitzGibbon regretted that these large scale operations did not give him an opportunity to distinguish himself as he had done the previous year. He continued to be employed in advance guard duties, for he had made scouting and open order fighting a specialty. He remained with the Glengarry Light Infantry until the conclusion of the war. When the regiment was disbanded in 1816, he went on half-pay. He saw no further active service.

FitzGibbon had shown an aptitude for the *petite guerre* unrivalled among his contemporaries. Had he been born a generation earlier and served in North America there would have been a place for him in Tarleton's British Legion or in Butler's Rangers. He died in his eighty-third year, a Military Knight of Windsor and a pensioner of the Crown which he had served so well. Half a century had passed since his great days in the forest war. What memories must have crowded in around him! Brock saying to him, "There is no such word as impossible, young man. That word is not found in a soldier's dictionary": the night attack at Stoney Creek when the old 49th went in with the bayonet: Black Rock and Beaver Dam and the Indian war whoop echoing through the haunted woods of 1813.

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THE ROLE OF GEOGRAPHY IN MILITARY PLANNING

By
ALEXANDER J. LAROCQUE*

To many geographers, military geography is an imprecise term. Today, this aspect of geography is thought of as the relationship of geography to military science; the relationship of some, or the total of all the environmental factors such as relief, climate and weather, vegetation, soils, lithology, drainage characteristics, and cultural features—to the solution of military tactical and strategic problems. The existence of such a relationship is not new. The elements of the environment have played important roles in all wars from those in which the stone hammer was the principal weapon down to the present time. However, the existence of a consciousness of such a relationship by the military planner dates only from the First World War. This concept of military geography was long prominent in German military thought. The Germans were the first to recognize the usefulness of geography and the natural sciences and to realize their contribution to military intelligence. A course in terrain analysis was given to German soldiers of all ranks. Nowadays, all military planners take cognizance of the military implication of the terrain elements as an integral function of effective military planning, both tactical and strategic.

The essential difference between the requirement of geography in tactical planning and strategic planning is similar to the same difference that exists between mapping areal categories on large-scale maps and mapping areal categories on small-scale maps. The mapper's requirement in presenting information on maps at different scales is determined by his objective. Similarly, the objectives of the tactical planner differ from those of the strategic planner.

The tactical planner is concerned with military problems within a small area. In a battalion command the dimensions of the area of interest may be one-half mile wide and one to two miles deep, whereas in a corps command the area may be 25 miles wide and 50 miles deep. Hence, the requirement of the tactical planner is

The author is a former member of the Defence Research Board, National Defence Headquarters, Ottawa. He majored in geography at the University of Toronto and the University of Wisconsin. This article was delivered in lecture form at the meetings of the Canadian Association of Geographers in London, Ontario, and appeared in the Association's publication, the Canadian Geographer.—Editor.

one of quantitative detail relevant to the problem. If the objective of the tactical planner is to determine the suitability of a small area for movement by a certain type of army vehicle, he will be interested in a specific phase of a soil type that may affect movement by that vehicle. The tactical planner and the geographer both realize that such quantitative details can be only presented on large-scale maps ranging in scale from 1:5,000 to 1:100,000.

The circumstances surrounding the strategic planner differ greatly from those of tactical planning. The area with which the strategic planner is concerned may be global in size or that of a continent or country. The strategic planner's global approach is a function of a geographer's training and both realize that only small-scale maps can adequately show areal patterns for such large areas. Significant qualitative generalizations are the requirement of the strategic planner and these can be only displayed on maps whose scale is smaller than 1:100,000. Such detailed aspects as a soil phase, although relevant to the tactical planner, may not be significant to the strategic planner.

Geography and Tactical Planning

The objectives of tactical planning that are affected by the elemental factors are related to movement, defences, artillery and supply in forward areas. The tactical planner's requirement is an evaluation of the terrain elements in terms of a military problem that may exist in the very near future or, if the line of battle is not fluid, for a present situation. The time factor will often ascertain the degree of interpretation that is possible. In a fluid battle situation, the geographer, employed as an intelligence officer, must provide the planner with the military evaluation in the shortest possible time. He will utilize every research source and method at his disposal—personal knowledge, literature, published maps, ground and aerial photographs, to provide a verbal or written evaluation. If the line of battle is stationary, a detailed analysis of the relevant factors may be possible and, if required, military evaluation maps may be prepared for the tactical planner.

What are some of the aspects of the various environmental factors that must be evaluated for all forms of tactical operations—ground surface, amphibious, and aerial operations?

Since modern warfare is basically a series of manœuvres upon parts of the earth's surface, an obvious element affecting all forms of tactical operations are landforms and their resultant relief. Ground operations are related to heights of land, commanding positions and the slope of

the ground. However, the introduction of modern weapons such as the fighter-bomber and cruiser tank have reduced the military significance of many such landform features because of their susceptibility to aerial observation. Nevertheless, any ground-surface operation requires the evaluation of landforms in terms of movement. Slopes on certain landforms prohibit movement by some types of motorized equipment and certain slopes may even form natural obstacles to all forms of movement.

Amphibious operations require the analysis of coastal landforms such as beaches and the landforms behind the beach area which could prevent easy access inland away from the beach or provide commanding artillery positions to the defender. In the Normandy invasion in June 1944, cliffs at each end of the beach provided the Germans with artillery positions which enabled them to slow up the Allied landings and advance inland.

Landforms also are of great significance to tactical aerial operations. They can determine local flying conditions and facilitate or prohibit air-drop operations.

The tactical planner's requirement for an interpretation of vegetation, whether it is in terms of movement by foot-soldiers or wheeled or tracked vehicles, concealment, construction, fuel, or food, can be met if the type, size, density and distribution of the vegetation are known. Movement by foot-soldiers or vehicles may be facilitated or impeded by the size, density, and wood-strength of trees. Closely spaced trees, such as are found in the Reichwald west of the Rhine, prevent tank movement.

The increased use of aerial observation during the Second World War emphasized the increased use of vegetation for concealment purposes. During the period before the invasion of Normandy, the trees, heath and scrub of Hampshire and Dorset effectively concealed evidence of pre-invasion activity and protected the troops from air attack. In Normandy, the Germans utilized the *bocage*—small fields, separated by tree hedges based in thick earth banks, or by stone walls—to conceal their defence positions and probably reduced the effectiveness of the Allied air attack by 75 per cent. or more.

Soils are another important element that affect various military activities. The determination of the bearing-capacity of soils for troop and vehicle movement, the selection of locations so as to avoid unstable soils or areas susceptible to washouts or landslides, and the locating of sources of subgrade material, are some of the military problems related to soils. Knowing the dominant soils group of an area is not adequate knowledge for the problems of the

tactical planner. The fact that a certain soil is a brown podzol takes on greater significance when the nature of the parent material or mode of origin and its position in the landscape are known. The military engineer makes practical use of the soil information and the military geographer frequently has to convert pedological units to engineering units based on the physical characteristics of the soil such as texture, structure or moisture content.

It is difficult to imagine any form of military operation that is not affected by some aspect of climate and weather. Any one of the countless climatic processes can seriously result in the success or failure of a tactical operation. Ground operations concerned with movement, construction or shelter can be affected by temperature, precipitation, floods, visibility and dry and wet periods. Thunderstorms changed the fine limon and clays to a pasty clay and made tank movement impossible during a certain phase of the Normandy invasion. Amphibious operations require an analysis of such phenomena as the degree of cloudiness, fog, temperature, winds, ice conditions and the temperature of the water. Similarly, tactical aerial operations require the interpretation of air turbulence, visibility, dust, fog, haze, winds at ground level and aloft, in terms of low-level flying.

Certain tactical situations require a knowledge of the lithology of an area. The structure and texture of the available rock determines its suitability for construction and foundation materials for roads, airfields, tunnels and large works whose locations and design depend upon the physical properties of the bedrock. In some localities, the only sources of potable water may be available only in a particular rock formation.

Drainage characteristics are of great tactical importance. Wide, deep rivers whose valleys offer concealment may provide satisfactory tactical defence or an effective barrier to offensive movement. Marsh and boglands favour defences but are unsuitable to cross-country movement. Areas susceptible to flooding such as polder land are significant to the tactical planner.

In addition to the natural elements that have military significance, many man-made features occurring on the landscape are relevant to tactical planning and must be interpreted in terms of the objective. Certain cultural features such as nucleated settlements, cemeteries, stone fences and road nets are as relevant to certain ground-surface operations as are many of the natural factors. The closely spaced villages of Western Europe provided the Germans with excellent defence sites that could be defended by a small force of infantry, artillery

and a few tanks.

Geography and Strategic Planning

Today, more than ever, the strategic planner must look at the world as a whole. He is the professional soldier, at staff level, concerned with the planning of possible military activity upon various parts of the earth's surface. The problems that the strategic planner may be concerned with include the interpretation of the terrain for movement and disposition of troops and motorized equipment over known or unknown areas; the selection of testing and training areas so as duplicate conditions of anticipated campaigns; the interpretation of terrain elements in terms of living conditions, clothing requirements and occupation; and the appraisal of sites for roads, airfields and other semi-permanent installations.

Because the objectives of strategic planning are concerned with problems over large parts of the globe, the knowledge, approach and methods of geography are closely related to the needs of the military strategist. Such planning requires the visualization of the globe as a mozaic of military regions with which the terrain elements are reasonably homogeneous or have similar diversification of environmental factors relevant to the military problem under consideration. The only cartographical method that can show the areal pattern of the relevant elements that are of concern to the strategic planner is the small-scale map. The map-scale, whether it is 1:100,000 or 1:1,000,000 or smaller must necessarily preclude the presentation of many aspects of the environment that are considered relevant by the tactical planner. All the relevant environmental factors and their ramifications that may occur within an area of 250 square miles must be contained within one square inch on the Millionth map. Therefore, only the most relevant or combinations of two or more of the more relevant factors can be considered by the strategic planner.

Geographers know that the earth is something about which we know very little. Only a small part of the land surface of the globe is covered by instrumental surveys. The selection of the significant military factor or factors in those little-known areas of the globe is an appreciable problem for the military geographer concerned with strategic planning.

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THE SOCIETY FOR ARMY HISTORICAL RESEARCH

The Society for Army Historical Research, which has its headquarters in London, England, is anxious for more Canadian members, and this notice is published to call the work of the Society to the attention of officers of the Canadian Army who may be interested.

The Society's objects are "the encouragement and development of Army Historical Research and the promotion and maintenance of regimental and military tradition". It was founded in 1921 by a group of officers and others interested in British military history. Since September of that year it has published regularly its quarterly magazine, the *Journal of the Society for Army Historical Research.* This journal has become recognized as a publication of high authority in its field.

The *Journal* has published articles on a wide variety of military subjects. Among them have been valuable studies of campaigns of many eras, and historical documents never before printed. The *Journal* has also taken a special interest in British military uniforms, and its files are now the best source of information on this particular subject. Numerous contemporary prints and portraits have been reproduced, many of them in full colour. New books on military history are authoritatively reviewed, and a "Notes, Questions and Replies" section gives scope for the exchange of opinions and information.

A particular feature of the *Journal* is its interest in Army and Regimental Museums. It regularly publishes a Museum Supplement which contains suggestions and ideas valuable to museum curators and serves as a clearing-house and forum for discussion of matters of interest to them.

The *Journal* has published numerous articles relating to the overseas forces of the Crown, including a good many of direct Canadian interest. The most recent of the latter was "The Army Origin of the Royal Canadian Navy", by Professor G. F. G. Stanley of the Royal Military College, which appeared in the Summer number for 1954.

The Society already has a number of members in Canada as well as a good many in the United States. But it needs more members to enable it to maintain and expand its work. All members of the Society receive the *Journal.* The annual subscription is One Guinea; it has never been increased since 1921. Applications for membership may be sent to the

Here is the new British gas turbine powered tracked vehicle—the first of its kind in Britain and the first ever to be shown publicly in the world. The hull in which the gas turbine has been installed provides a mobile test bed from which basic data for future applications of the engine to wheeled and tracked vehicles is being acquired.

Latest Military Transport

NARRATIVE AND PHOTOGRAPHS SUPPLIED BY THE UNITED KINGDOM INFORMATION OFFICE, OTTAWA

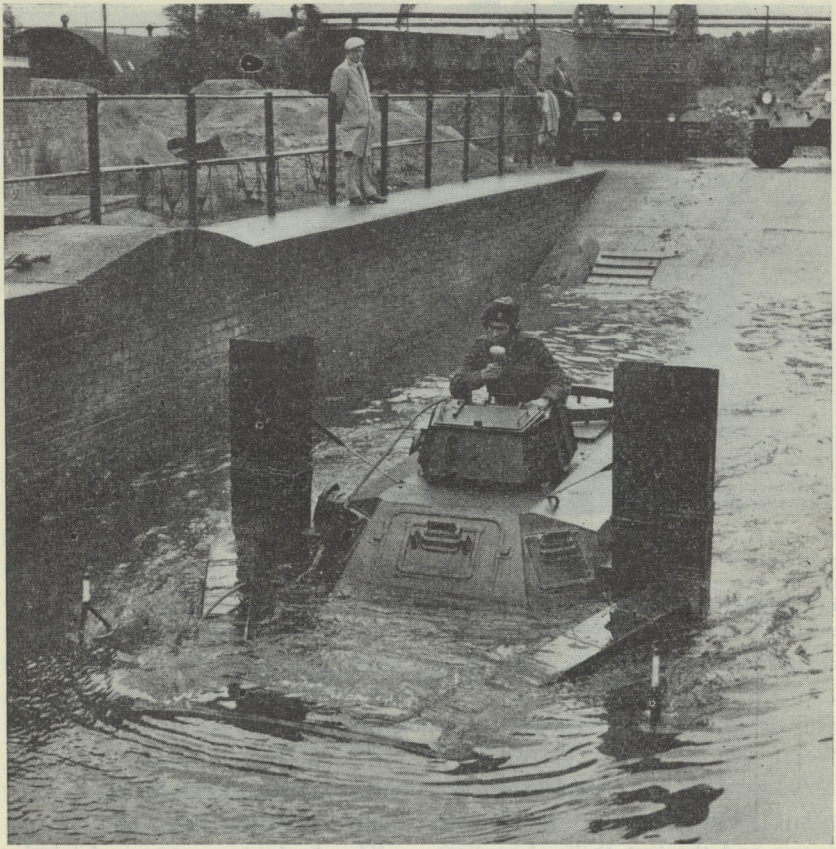
A heavy tracked vehicle powered by a gas turbine engine—the first in Britain and the first to be shown to the world—made its appearance late in 1954 at the Fighting Vehicles Research and Development Establishment, Chertsey, Surrey, England. It was the highlight of a demonstration of nearly 100 of Britain's latest military transport vehicles.

The display was organized jointly by the Ministry of Supply and the Society of Motor Manufacturers and Traders. The several hundred invited guests representing trade interests and government circles all over the

The Society for Army Historical Research

(Continued from preceding page)

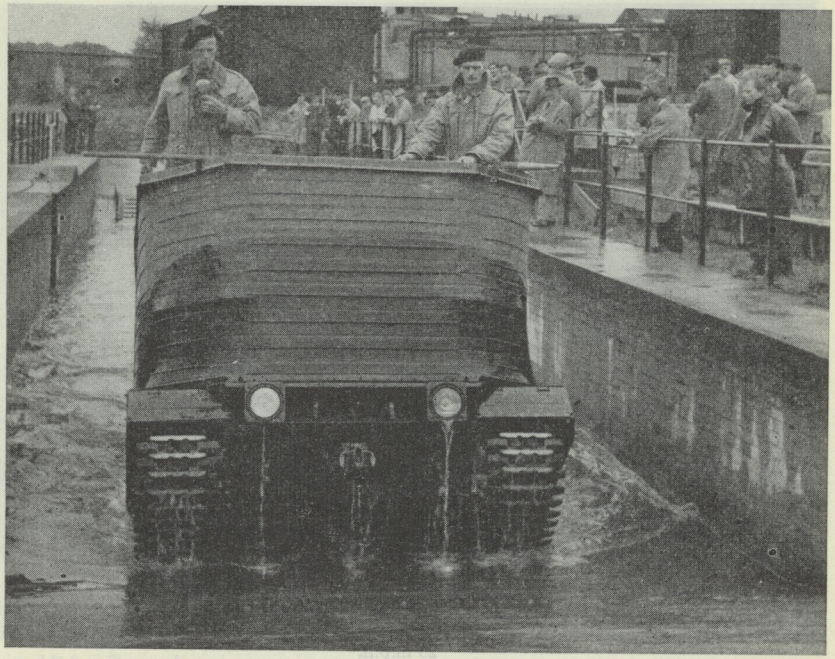
Honorary Secretary, c/o The Library, War Office, London, S.W. 1, England. Additional information if required may be obtained from Colonel C. P. Stacey, Director Historical Section, Army Headquarters, Ottawa.



The Saracen Mk. 1 Armoured Personnel Carrier, sealed for wading, is driven through the water tank. It carries a total of 12 men, including commander and driver, and has a .30-inch machine gun mounted in the turret. A mounting ring is also provided for a Bren .303 anti-aircraft machine gun. It is so built that it can be converted rapidly into a load carrier and a navigational vehicle.

world included H.M. King Feisal II of Iraq, military experts from member countries of the North Atlantic Treaty Organization and from the British Commonwealth, and high-ranking representatives of many foreign countries.

The programme of events covered a wide and varied field. There were load and personnel motor vehicles ranging from 5 cwt. to 30 tons' carrying capacity, workshop lorries, mobile cranes, tankers, trailers and armoured cars taking part in spectacular demonstrations of their qualities on test circuits. Tracked vehicles including



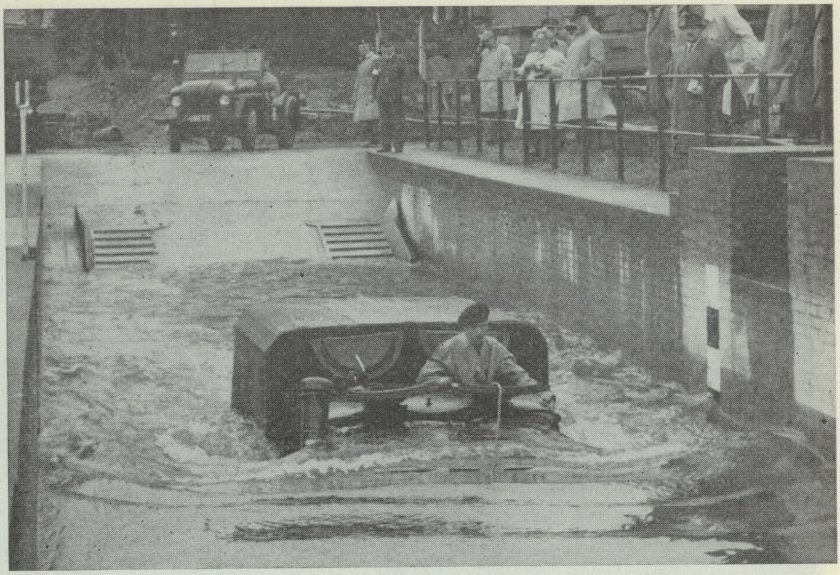
This Cambridge Universal Carrier seen coming out of the wading tank during the demonstration takes seven men with full kit and has a laden weight of 9½ tons. It is powered by an 8-cylinder V-8 engine which gives it a maximum speed of 33 miles an hour.

tanks were shown in action on cross-country testing ground. Trucks and carriers were put through their paces over a special rough road area.

A popular and impressive feature was the "wading" tank demonstration. Various vehicles were driven through six-foot deep water with driver and passengers, in one instance, completely submerged.

Many of the vehicles shown are ideally suited to the numerous specialized tasks demanded of transport (both military and civil) throughout the world today, particularly those assignments calling for exceptional mechanical power and structural strength.

An ancillary display which attracted the attention of many visitors from abroad was the section devoted to engineering exhibits. There were special apparatuses for measuring stresses, temperatures, torque and the like; plastic fuel tanks and special hoses; new types of brakes and their protective equipment; standardized electrical components for civil and



This Humber one-ton load carrier has built-in waterproofing, fully tropicalized components and lashing points for airportability. Its average speed on the road is 40 m.p.h. and across country, 25 m.p.h.

military vehicles; and a variety of instructional aids for the education of recruits in Service schools.

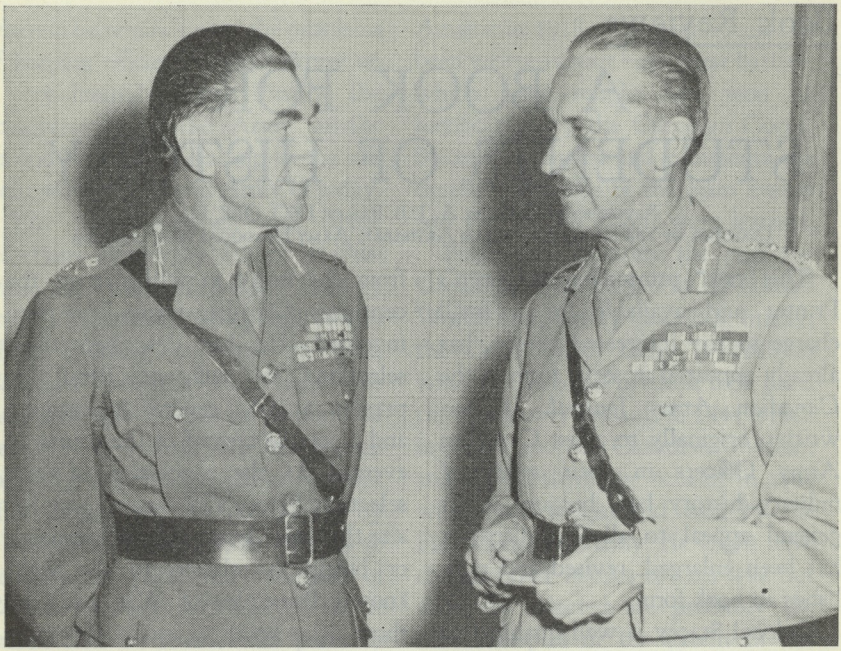
The main object of the display was the promotion of exports of British vehicles, for, although many of the exhibits were developed to meet the specifications of the Ministry of Supply for Britain's Armed Forces, they were equally suitable for specialized civilian work requiring exceptional mechanical performance.

New Survey Method Developed

From "Armed Forces News", Directorate of Public Relations, National Defence

The Army, together with the Geodetic Survey of Canada, has tested a new method of surveying which it is hoped will greatly facilitate the mapping of the Canadian Arctic.

Army personnel involved were members of the Army Survey Establishment, a military unit based in Ottawa. The unit, commanded by Lieut.-Colonel J. I. Thompson, of Ottawa, has for many years been actively surveying and mapping the Canadian far north. But the job has



National Defence Photograph

General Sir Gerald Templar, GCB, GCMG, KBE, DSO, ADC (right), Chief of the Imperial General Staff Designate, was a visitor to National Defence Headquarters in June during a week's visit to Canada. He is seen here being greeted by Lieut.-General G. G. Simonds, CB, CBE, DSO, CD, Chief of the General Staff of the Canadian Army, on his arrival at Army Headquarters, Ottawa

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been long and arduous.

The new method, developed by C. H. Ney of the Geodetic Survey of Canada, employs an electric light on a high-flying aircraft as a survey marker.

The theory behind the method is that if a plane equipped with a powerful light circles over a triangulation point on the ground, observations can be made on the plane from points up to 100 miles away. Shots of this length require a target 5000 feet above sea level and are only practicable if the target is mounted on a plane.

The fact that the target is moving and never really directly over the triangulation station is compensated for by theodolite observations taken on the plane by men at the station below.

Modern Swiss survey instruments with camera-recorded dials are used.

A BOOK FOR STUDENTS OF HISTORY

Reviewed by Colonel A. J. B. Bailey, DSO, OBE, ED,
Director of the Royal Canadian Artillery, Army Headquarters, Ottawa

This book*, printed by the Queen's Printer and available for a small charge to any interested person, has already appeared in serial form in the *Canadian Army Journal*. It was written originally to assist Canadian Army Officers in their study of military history but, because of its general appeal to all Canadians, it has been enlarged, revised and published in book form.

Colonel Stacey is well qualified to edit a book of this type. A keen student of general history, he is fast becoming an authority on military history, particularly of that in which Canadians were involved. He writes with a clear and logical hand in a style which is, at once, both interesting and simple.

With an eye on the lessons to be gained from the study of military history, if the value of that study is to be realized, Colonel Stacey has reviewed nine campaigns and battles from the many in which, over the centuries, Canadian forces have been involved. He has described these selections in sufficient detail to present a good general background and a concise resumé of the course of events. At the conclusion of each selection Stacey's comments emphasize the major lessons of the campaign or battle in relation to the well-known Principles of War and, for those who want to study the campaigns in more detail, he lists a bibliography for further reading.

The book commences with a summary of the development of the Canadian Army from the seventeenth century until the present day. Starting with the little known, but very interesting, activities of the old Militia under both French and British rules, Stacey leads us to the Militia Act of 1855 at which time the Volunteer Militia bore the brunt of the responsibilities for the defence of Canada. He then describes the build-up for the First World War and the magnificent contribution made in that war by the Canadian Army. Following is the period of peace

*Introduction to the Study of Military History for Canadian Students. (Fourth Edition, Enlarged and Revised, 1955). Edited by Colonel C. P. Stacey, OBE, CD, Director of the Historical Section, Army Headquarters, Ottawa. Queen's Printer, Ottawa. 50 cents.

wherein he reminds us of the problems of keeping efficient a small Army on a very limited budget. Finally, the achievements of the Army in the Second World War lead up to the efficient and well-trained Army of today.

The nine campaign and battle selections chosen by Stacey to illustrate the study of military history are, in themselves, absorbing stories of a growing country. In fact, Canada's progress can only be measured against the background of her military events. He has chosen carefully. Beginning with an account of an abortive attack on Quebec by a British force in 1690, he goes on to describe, in part, the conquest of Canada by the British in 1758–60, at which time he reaches the point in our history when, at last, Canada is united under one rule.

Canada having reached unity, Stacey describes the defence of our country against a foreign invader (in this case, the Defence of Upper Canada against the Americans in 1812), and the quashing of an internal rebellion—the North-West Campaign of 1885. Now with full unity, Canada begins to assert herself as a world power by pouring into Europe a tremendous Army during the First World War. Stacey has chosen only two of the many battles of this war, but those he has selected are peculiarly Canadian: the Capture of Vimy Ridge in 1917 and the Battle of Amiens in 1918. Although much has been written about both these battles, which were fought and won at terrific cost by the Canadian Corps, Stacey's summary and comments are excellent versions of the main events and the lessons which were learned.

Finally, to illustrate the part the Canadian Army played in the Second World War, Stacey describes, briefly, the Conquest of Sicily in 1943 in which a Canadian division took part; the Normandy Assault in 1944 which involved another Canadian division; and the Battle of the Scheldt in 1944 which was fought and won by the First Canadian Army. He might have chosen other battles of this war but those he selected are probably the best examples of the extent of the Canadian Army contribution.

At the end of the book three Appendices are included. One describes the Principles of War, as approved by the Canadian Chiefs of Staff; a second shows some basic terms commonly used in military history; and a third contains a list of books for further reading.

Colonel Stacey has written a useful and interesting book. His narratives are well presented; he has included maps to illustrate the course of action; and his comments are logical and pointed. It is a book which will serve not only the student of military history but the student of general history, as well.

THEY CALLED HIM STONEWALL

Reviewed by J. Mackay Hitsman,
Historical Section, Army Headquarters, Ottawa

This is military biography* with a difference. Historical fiction addicts will enjoy an enthralling story of the underdog; students of the American Civil War will recognize an excellent and colourful summation of the activities of Lieutenant-General T. J. Jackson, both as an independent commander in the Shenandoah Valley and as the most able of Lee's Lieutenants; military students will further be able to discern how the eccentric "Stonewall" Jackson managed to create an unbeatable fighting force from troops who were generally ragged and often starving. And every reader can follow the battle tactics and the strategy of Jackson's campaigns from the simply drawn maps.

Even before Colonel G. F. R. Henderson published his monumental biography of *Stonewall Jackson* in 1898, an aura of greatness surrounded this most feared of the Southern leaders, who had died midway through the conflict as a result of wounds mistakenly inflicted by his own men during a night alarum. By virtually ignoring the military failures and continuing certain of the earlier misconceptions, Colonel Henderson raised Jackson's stature to unwarranted heights. The present author goes out of his way to admit the impossibility of achieving absolute accuracy in the myriad affairs of the Civil War: even the late Dr. Douglas Freemen* who uncovered a number of serious errors made by Colonel Henderson in regard to official orders, time sequence, dates and geography, was not blameless. However, by profiting from the experience of those who have gone ahead and literally soaking himself in the literature of the Army of Northern Virginia, Mr. Burke Davis appears to have avoided most of the pitfalls. His "Stonewall" Jackson is a robust and strong-willed soldier, a bold and resourceful leader, but by no means an infallible military genius. His weaknesses as well as his strength become all too evident as the narrative proceeds.

*They Called Him Stonewall: A Life of Lieut.-General T. J. Jackson, C.S.A. By Burke Davis. Rinehart & Company, New York (Canadian Agent: Clarke, Irwin & Company Limited, Toronto), 1954. $5.00.

*Long to be remembered for his monumental four volumes on *Robert E. Lee* and three companion volumes on *Lee's Lieutenants*.

Serious readers may bemoan the absence of footnotes and look askance at the style. Dialogue has been freely manufactured, even though based on contemporary sources and the recollections of participants, and a strict chronology has not been adhered to. A prologue describes the execution of the famous abolitionist John Brown, at which the guard provided by cadets from Virginia Military Institute was commanded by a gawky Major T. J. Jackson, the obscure Professor of Natural and Experimental Philosophy and Artillery Tactics. The story proper then opens with 80 pages on the Shenandoah Campaign of May-June, 1862, the fighting from Front Royal to Winchester which illustrated the lack of control Jackson possessed over cavalry and artillery at this stage of his career. Then, and only then, is there a brief account of his boyhood and chance entry into West Point, where he had to work doubly hard to offset the disadvantages of an irregular boyhood schooling.

Like many other West Pointers he had no boyhood dreams of glory and, had it not been for the outbreak of war with Mexico, would likely have soon abandoned the army for the greater opportunities available in civilian life. But outstanding and front-line service in Mexico persuaded him to make the army his career. The author suggests that it was his observations of the Roman Catholic clergy, rather than any real interest in the tenets of their faith, which kindled an interest in religious matters. Although Jackson was to be baptized an Episcopalian he became a staunch Presbyterian following his appointment to the staff of Virginia Military Institute. Two marriages do not appear to have influenced his life nearly as much as "the powerful whirlpool of God—ambition—war—sacrifice, which appeared to grow within him". Until the end he was to abstain from any activity on the Sabbath, if humanly possible, and during the Civil War he was to worship with his favourite preachers whenever an opportunity was presented. Appropriately enough, it would seem to modern readers, one of his favourite hymns was "There is a Fountain filled with Blood". Religious sentiment was expressed in fulsome terms one hundred years ago, however, and contemporaries could scarcely have regarded him as an "Old Testament Fanatic", even though they questioned his obsession with theology and his practice of consulting the Lord about major decisions.

"Old Jack", as he soon became known to the troops who respected and trusted him, overlooking his eccentricities and idiosyncrasies, was a stern disciplinarian and hard taskmaster. One of his subordinates

summed up Jackson's state of mental attitude as follows:

> He had small sympathy with human infirmity. He was a one-idea'd man. He looked upon the broken down men and stragglers as the same thing. He classed all who were weak and weary, who fainted by the wayside, as men wanting in patriotism. If a man's face was as white as cotton and his pulse so low you could hardly feel it, he looked upon him merely as an inefficient soldier and rode off impatiently. He was the true type of all great soldiers . . . he did not value human life when he had an object to accomplish. He could order men to their death as a matter of course.

His men were no better or worse than others on both sides, but the existence of most of the gambling and drinking and the presence of women was generally kept from him, since he fought sinfulness with rigid bans and "revival" meetings. There were few aristocrats and slave owners among his Valley troops. Most of them were tenants and laborers from little towns and villages.

They travelled light and it was this insistence on no unnecessary baggage and equipment that enabled them to cover the distances they did. The well-fed Federals, on the other hand, were over-loaded with 60 pounds of equipment and had adopted the expedient of littering the roadside as they passed with anything and everything that had suddenly become too heavy.

Even as early as the summer of 1862, too many of the rebels were without boots or proper clothing and all were forced to live off the land, while the limited resources of the Confederacy fell more and more into the hands of speculators and war profiteers. One occasion when Jackson relaxed his strict discipline and let his men take what they wanted from a captured Federal depot is described as follows:

> Men long near starvation, plagued with dysentery from a green corn diet, now gobbled delicacies of which most of them had never heard: canned lobster salad, pickled oysters, wines from Europe, fine brandies. There was coffee by the barrel . . . one man [was] bending beneath the weight of a score of boxes of cigars. Another had coffee to last through the winter, and many wore shoes tied in great bunches around their necks.
>
> It was a moment of paradise to the tattered troops, and though Jackson was likely unaware of the stimulus to morale in this glimpse of life led by the enemy, it was to help in future engagements. When the ragged butternut files charged over battlefields with such verve, it was not always Native Southern Courage which drove them. They were often simply scampering to be first among the fallen foe, to seize shoes, clothing and food and to loot the knapsacks filled as their own had never been. . .

No single excuse is offered for Jackson's sorry showing during the "seven days" of fighting before Richmond in July 1862, when a prompt and determined attack against the exposed right flank of the Federals would have made possible a decisive victory: "Perhaps Lee's plan was too unwieldy; perhaps Jackson had been given more than he could accomplish; perhaps poor maps and ignorance of terrain was fatal; perhaps Jackson was just slow-witted from a touch of fever or lack of sleep." The chapter

entitled "Longest of All Days" concedes that the day of inertia and indifference spent in the swamps, while other Confederate commanders including General Lee waited for him to advance, was the low point of a brilliant career. Coming so soon after the successful conclusion of a campaign in the Shenandoah Valley which Washington had feared and which had immobilized along the Potomac some 175,000 Federals scheduled to have participated in the encirclement of Richmond, many were led to false conjectures that Jackson could shine only as an independent commander of small forces.

Writing of the same unsuccessful days, however, Colonel Henderson concluded that:

> The real daring of the enterprise lay in the inferiority of the Confederate armament. Muskets and shot-guns, still carried by a large part of the army, were ill-matched against rifles of the most modern manufacture; while the smooth-bore field-pieces with which at least half the artillery were equipped, possessed neither the range nor the accuracy of the rifled ordnance of the Federals.

This is a considerably more profound summing up than anything attempted by Mr. Davis. The latter is content to work such implications into his text, as expressed by Jackson's continued anxiety to get his few rifled cannon to the forefront of any engagement and his touchiness over the knowledge that his troops considered it necessary to throw away their own inferior weapons whenever enemy small arms were captured. Nor does our author set out to explain the tactical significance of Jackson's oft repeated statement: "My men sometimes fail to drive the enemy from his position, but to hold one, never!" Actually, it was no longer feasible to charge across the open and carry breastworks defended by men armed even with muzzle-loading rifles. And time and again failure to recognize that such Napoleonic tactics were obsolete brought heavy casualties to the massed columns that tried: "Where Jackson's old division had been attacked, at least three-fourths of the men who made the charge had been killed and lay in a line as they had fallen."

Maps were primitive by present standards, or lacking, and were a contributing cause to much of the confused movement of this war. Furthermore, Jackson was never able to envisage the full possibilities of a military landscape until he had seen it himself. But, in the Shenandoah Valley at least, this handicap was offset: his engineer staff officer was able to provide excellent drawings after studying a particular terrain and to explain the salient points clearly to the commander; the local inhabitants were Southern sympathizers and ready to provide the good intelligence denied the Federal commanders; while his later movements profited from the first-hand

knowledge picked up earlier.

Much is made of Jackson's love of secrecy, which kept plans and intentions hidden both from his personal staff and subordinate commanders. His staff were little more than messenger boys, for he planned every tactical and administrative detail himself: none of them were professional soldiers and it would seem that the Rev. Dabney was more of a religious confidant than a chief of staff during the Valley Campaign of 1862. Much of the almost constant friction with one or other of his subordinate commanders may be attributed to their resentment at being kept in the dark as to future plans: if they had been told a bit more, and had understood the reasoning behind Old Jack's cryptic orders, they might have reacted more quickly to orders which often seemed to them to have no particular urgency. Moreover, should Jackson have become a casualty who would have been able to continue the manœuvre as he had planned it?

On the other hand, it must be remembered that he was commanding a force of amateurs and that early failures by timorous subordinates undoubtedly reinforced his belief that secretiveness was a cardinal virtue. In any case, almost invariably Jackson was able to make his own prescription for victory work: "Always mystify. Mislead and surprise the enemy if possible."

* * *

Fighting Planes

Reviewed by Squadron Leader N. W. Emmott, Air Force Headquarters, Ottawa

"The World's Fighting planes"* was prepared by the authors of the much larger book "The Aircraft of the World". It is intended as a handy reference for military and Staff College students, and for those who do not need the more extensive coverage of the more elaborate book.

The book contains photographs, three-view silhouettes, and descriptions of 228 different types of aircraft. One four-by-seven inch page is devoted to each aircraft, with about a hundred words of general and historical description and 40 or 50 words of specifications.

Aircraft flying with the air forces of 18 countries are included. Each country's combat aircraft (including trainers) are dealt with in alphabetical order of their manufacturer's names. Where an aircraft is no longer used

* *The World's Fighting Planes*. By William Green and Gerald Pollinger. Thomas Nelson and Sons (Canada), 91 Wellington St. W., Toronto. 237 pages. $3.00.

in the air force of its country of origin but still serves with other air forces, it is included among the air force of the country by which it was built. Aircraft built under licence and not used by their country of origin (as is the case with many German aircraft) appear among the aircraft of the country by which they were most recently manufactured.

The scope of this little book is excellent: all aircraft used by the RCAF, for instance, are included. The smaller air forces such as those of Ethiopia, Israel, and Spain are well covered, and the new Russian aircraft are described as well as possible. The very latest developments such as the vertical take-off fighters are also found within the covers of this book.

The quality of the illustrations is excellent and they are well laid out. The handy size of the book makes it convenient for reference.

The book does, however, have some defects. A good many of the specifications listed appear to be wrong. The description of the De Havilland Beaver contains six errors, and that of the Otter four. The CF-100 is credited with carrying 120 rockets, whereas it actually carries 58. The indexing by manufacturers' names makes it hard to find a specific aircraft by name and number.

"The World's Fighting Planes" would make a fairly good addition to the library of all those interested in aviation.

* * *

Five Ventures

Reviewed by J. Mackay Hitsman, Historical Section, Army Headquarters, Ottawa

The Middle East was not a highly publicized theatre of operations during the Second World War and what little did appear in the press about British activities in Iraq, Syria, Persia, Madagascar and the Dodecanese Islands meant little to most Canadians. In the light of post war events and knowledge, however, readers of this *Journal* will find much to interest them in this latest (sixth) volume in the British series of popular military histories of that conflict. Drafted by the late Christopher Buckley, *Five Ventures** is a readable and concise little volume on five minor combined operations of war, complete with 20 full-page photographs and 18 sketch maps.

It must be stressed that for each

* *Five Ventures*. By Christopher Buckley. London, 1954. $2.40. Available from United Kingdom, Information Office, 275 Albert Street, Ottawa.

of the separate episodes dealt with in this book the available forces were inadequate. Moreover, as well as being insufficient in quantity, most of the weapons and equipment available were obsolescent—or obsolete. Fortunately, therefore, the opposition faced in Iraq and Persia did not comprise first-class troops imbued with a clear-cut will to win. While the French troops encountered in Vichy-held Syria and Madagascar put up a stubborn resistance they were completely cut off from France and could not resist indefinitely. Only in the Peloponnese were Germans encountered. Here the enemy was victorious: as well as being in larger numbers and better equipped, he was supported by a Luftwaffe still capable of maintaining local air superiority.

Iraq, Syria and Persia represented potential tools in the hands of Nazi diplomacy and, eventually perhaps, a jumping-off place from which the Wehrmacht might actively intervene in the long dreamed of *Drang nach Osten*. In 1941 the only possible British counter was to gamble with inadequate forces before the Nazis might be in a position to follow up the customary "tourists" and technicians with troops.

The first, short-lived affair in Iraq belongs more properly with the last of the colonial wars, for it saw the British Embassy in Bagdad under virtual siege for several days. Meanwhile, the Service Flying Training School at Habbaniya was attacked by a strong force of infantry and artillery, supported by aircraft more modern than those of the makeshift defending squadrons. Fortunately the pro-German prime minister was *persona non grata* with the Arab rulers of the neighbouring states and many of the Iraqi officers were none too keen to die in his cause. In precisely a month, therefore, the situation was cleared up by an Indian brigade diverted to Basra and a very mixed force which had proceeded overland from Palestine.

The occupation of Vichy-controlled Syria turned out to be a more difficult matter. Hitherto, Free French pressure to occupy Syria had been resisted, because of the more pressing demands upon General Wavell's forces elsewhere and the fear in London that another fiasco like de Gaulle's abortive expedition to Dakar would do untold harm. Furthermore, neither the colonial troops nor Foreign Legionnaires possessed any of that patriotism that had split Frenchmen into supporters of either de Gaulle or Petain and they could be expected to fight bravely for the régime that was paying them. By the late spring of 1941, however, occupation of Syria had become inevitable in order to safeguard the British northern flank in the Middle East.

The British, Australian and Indian troops which crossed the border on 8 June 1941 were inferior in numbers to their opponents, but markedly inferior in tanks and available air power. The mountainous country of western Syria was ideal for a defence which was conducted with ability and energy. Yet by battle and manœuvre the Vichy forces were ejected from one position after another during five weeks of campaigning.

In August, Persia was occupied by British and Russian forces. Resistance was slight and, once again, Germany was too busy elsewhere to send assistance. Henceforth, Persia was to serve as a base for transmitting supplies to Russia, as well as being a continuing source of oil for the Allies.

With the entrance of Japan into what now became a global conflict one further diversionary action became necessary against the possessions of Vichy France. Yet, although the maintenance of a safe convoy route round the Cape of Good Hope made it expedient to occupy Madagascar before the Japanese Navy could cross the Indian Ocean to intervene actively, the demands on British forces were such that little could be spared. The force eventually scraped together comprised the four battalions of the 29th Independent Brigade, two brigades of the 5th Division slated for India, a Commando and a few small tanks and guns. Operation Ironclad got off to a good start on 5 May 1942, with the capture of the principal port of Diego Suarez, but the attackers soon bogged down in a country that was difficult of penetration and full of malaria. Before the campaign ended on 5 November the attackers had been joined by a South African Infantry brigade with attached units, while brigades from East Africa and Northern Rhodesia had replaced the two British brigades sent on to India.

From the outset, British occupation of the Dodecanese islands of Cos, Leros and Samos during the autumn of 1943 would appear to have been a foolhardy venture. Had it been possible to occupy Rhodes at the time of the Italian armistice there might have been a different ending, but troops and landing craft had been more urgently required elsewhere. As soon as it was realized that the Germans could not be prevented from mounting sea and airborne operations the islands of Cos and Leros should have been evacuated. As it was, the policy of wait and see resulted in the loss of six destroyers, one submarine and four smaller craft, while four cruisers, six destroyers and eight smaller craft were damaged; the RAF lost 100 aircraft and had a further 25 damaged, while army casualties totalled 5046. Only then was Samos hastily abandoned.

(Continued on next page)

GOVERNOR GENERAL TO PRESENT MASCOT TO ROYAL 22e RÉGIMENT

A REPORT ISSUED BY THE DIRECTORATE OF PUBLIC RELATIONS, ARMY HEADQUARTERS, OTTAWA

With the permission of Her Majesty the Queen, the Governor General, His Excellency the Rt. Honorable Vincent Massey, will present a "Royal" mascot to The Royal 22e Régiment, Royal Canadian Infantry Corps.

Her Majesty is Colonel-in-Chief of The Royal 22e Régiment and of its affiliated British Army regiment, the Royal Welsh Fusiliers.

A white goat, traditionally the mascot of the Royal Welsh Fusiliers, has been chosen from the Royal Herd in the London Zoo, and official presentation will be made by the Governor General at the Citadel, Quebec City, on October 1.

The custom of the Royal Welsh Fusiliers having as its regimental mascot a goat is so old that no record exists of the first "Billy". It is recorded, however, that the Regimental Goat was in action with the regiment at the Battle of Bunker Hill in 1775.

Queen Victoria approved of the custom and in 1844 presented a Royal Goat from the Royal Herd at Windsor Castle to each of the two regular battalions of the regiment. The original pair, from which the Royal Herd was started, was a gift from the Shah of Persia to Queen Victoria.

The possession of the goat by The Royal 22e Régiment will automatically create the traditional appointment of a Goat-Major. This vacancy will be filled by a specially selected junior non-commissioned officer whose duties will include leading the regimental mascot on appropriate parades.

Regimental jewellers for the Royal Welsh Fusiliers are providing copies of the design of the harness and brass plates for the goat. On his head he carries a silver shield embellished with the regimental crest and engraved with an inscription stating that he was presented by the Governor General.

Five Ventures

(Continued from preceding page)

And, at a time when the Allied Armies were forging ahead in Italy and preparing for an invasion of North-West Europe, the possession of these islands had little or no strategical significance.

ROYAL CANADIAN ARTILLERY

HER MAJESTY SENDS BIRTHDAY MESSAGE TO ROYAL CANADIAN ARTILLERY

FROM A REPORT ISSUED BY THE DIRECTORATE OF PUBLIC RELATIONS, ARMY HEADQUARTERS, OTTAWA

Birthday messages congratulating the Royal Canadian Artillery on the completion of its first 100 years of service have been received from Her Majesty, The Queen, and from Field Marshal Viscount Alanbrooke, Master Gunner, St James Park.

The messages were addressed to Maj.-General H. O. N. Brownfield, of Brockville, Ont., Honorary Colonel Commandant of the Royal Regiment of Canadian Artillery. Canadian artillerymen everywhere on May 26 participated in centennial celebrations honoring the 100th birthday of their corps.

As Captain-General of the Royal Canadian Artillery, The Queen sent the following message to General Brownfield:

"I sincerely thank you for the kind and loyal Message which you have sent me on behalf of the Royal Canadian Artillery. Please convey my warm congratulations and good wishes to all ranks on the occasion of your Centenary".

Her Majesty's message was in reply to a letter from General Brownfield containing the good wishes of Canadian gunners. Text of his message: "On the occasion of the Centenary of the Royal Canadian Artillery, on the 26th of May 1955, the Officers and Men of the Royal Canadian Artillery send Greetings to Your Majesty, our Captain-General. They express the wish for Your Majesty's continued health and happiness and they pledge anew their everlasting loyalty and devotion".

In his message to General Brownfield, Lord Alanbrooke, as Master Gunner of all Commonwealth artillerymen, said:

"On the occasion of the Centenary of the birth of the Royal Canadian Artillery I take this opportunity of writing to thank you again for your recent invitation that I should visit Canada at this time. Your invitation was a clear indication of the bonds which bind all Gunners together, and it is a great disappointment to the Royal Regiment, and to myself in particular, that I am prevented from accepting your invitation. On behalf of all ranks of the Royal Regiment of Artillery I send our felicitations on this historic occasion, and our best wishes for the future".

GUNNER Centennial

PREPARED FOR THE CANADIAN ARMY JOURNAL BY GUNNER OFFICERS
UNDER THE DIRECTION OF THE DIRECTOR OF ARTILLERY

Part II

The Birth of Modern Artillery

In 1893, Lieut.-Colonel (later Major-General) C. W. Drury, Commandant of the Royal School of Gunnery at Kingston, was posted to Woolwich, England, where he attended a course in the latest methods of gunnery. His return marks the birth of modern artillery in Canada. In 1894, battery commanders from the militia artillery attended a course at Tête du Pont Barracks (now Fort Frontenac), Kingston, where they were instructed in fire discipline, range finding and field manœuvres.

It may shock the modern Instructor in Gunnery to reflect upon the happy abandon with which the Gunners went about their chores prior to 1894. Fire discipline was of the most casual nature and without the aid of modern methods of communication, officers, NCOs, and sometimes drivers, just repeated loudly any orders they heard—a technique which might well have been the forerunner of the Boy Scout game "Repeat the Message". Engagement of targets was by direct laying only, and the gun numbers exercised their own judgement as to the fuze length required. Not for them the æsthetic joy of:

> *. . . framing with sharpened pencil stroke*
> *A barrage of predicted smoke,*
> *Worked out for sixteen different breezes*
> *With extra graphs in case it freezes,*
> *For non-rigidity corrected,*
> *and on a Merton Grid projected. . .*

In 1895, as Commandant of the new artillery camp at Deseronto (near Kingston, Ontario), Lieut.-Colonel Drury put his newly-acquired

Major-General Drury

methods to the acid test. Modern targets, fixed and movable, were installed to make the shoots more realistic and thereby increase the enthusiasm of the participants. Competitions were held in fire discipline and gun drill for Dominion Artillery Association prizes. All militia batteries were also required to send a detachment to the Regiment's camp at Laprairie, Quebec, to take part in field manœuvres under service conditions.

Meanwhile, two important changes took place in the permanent component of the Regiment in 1893. In June, the Queen graciously bestowed upon it the distinction "Royal" and, later in the same year, the Royal Canadian Artillery was reorganized into batteries and companies. "A" and "B" Field Batteries were stationed at Kingston and Quebec, respectively, with Nos 1 and 2 Royal Canadian Garrison Companies (RCGA), at Quebec.*

South African War 1899–1902

On 30th October 1899, shortly after the outbreak of hostilities in South Africa, Canada dispatched to that theatre the 2nd (Special Service) Battalion, The Royal Canadian Regiment, with a strength of 1000 men. The adjutant, many of the company officers and a number of the men were Gunners of the Militia or Permanent Force who had volunteered to go "in any capacity" in order to see action.

A second Canadian contingent to the theatre consisted of a brigade of field artillery (composed of "C", "D" and "E" Batteries) and a battalion of Royal Mounted Rifles.

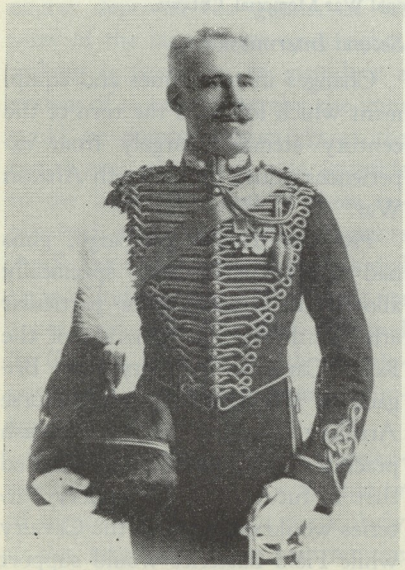
Each battery was equipped with six 12-pounders, rifled breech loading. The artillery brigade was theoretically under the command of Lieut.-Colonel Drury, but in practice, owing to the circumstances of the fighting which necessitated the dispersal of forces—a battery here, a

* *Canada and Britain had agreed to share the defence costs of Esquimalt in 1893. "C" Battery (Garrison) handed over the barracks to British troops. On "C" Battery's return to Quebec, its personnel were distributed—along with the dismounted portion of "B" Battery—to form the two Garrison Companies.*

section there—Drury soon found that he was commanding bodies of mixed troops.

Many famous actions were fought by the batteries. Captain (later Major-General) H. A. Panet, in command of "C" Battery guns when General Plumer relieved Mafeking, 15th-17th May 1900, was awarded the DSO. Lieutenant (later Major-General and CCRA in the First World War) E. W. B. Morrison, one-time editor of the *Ottawa Evening Citizen*, was awarded the DSO while serving with "D" Battery at Leliefontein. "E" Battery took part in the action at Faber's Put, 30th May 1900.

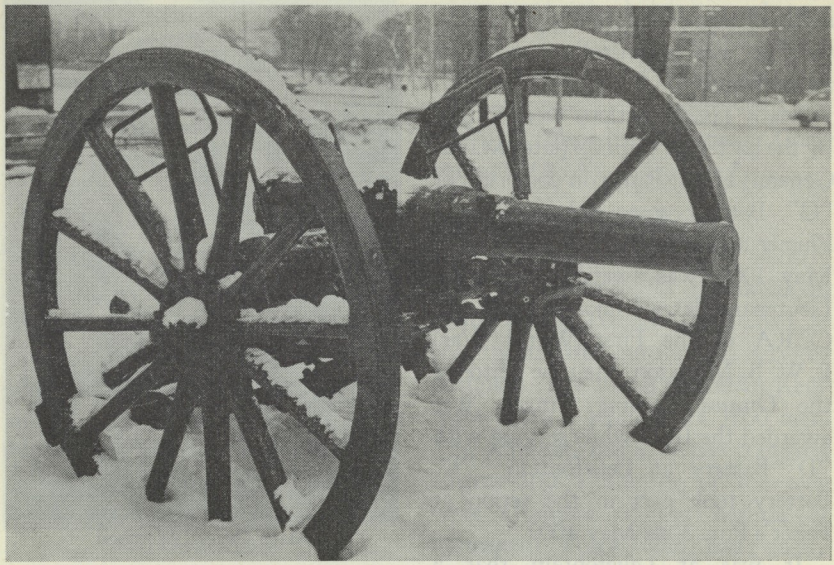
It was at Leliefontein that a historic and successful rear-guard action was fought by a handful of "D" Battery personnel and dismounted Royal Canadian Dragoons (the Gunners were under the command of Lieutenant Morrison of the 2nd Ottawa Field Battery), against an attack by some 200 Boers who had charged to within 70 yards of their position. Three of the Dragoons (all volunteers from the Non-Permanent Active Militia) were awarded the Victoria Cross for this action. The gun involved now rests in retirement near the National War Memorial at Ottawa.



Major-General Panet

Major-General Morrison

The stubborn tenacity displayed by the Gunners throughout this campaign in their determination to prevent their guns from falling into enemy hands, was in the finest



The gun used in the successful rear-guard action fought at Leliefontein in the South African War by a handful of "D" Battery personnel and dismounted Royal Canadian Dragoons. The gun now rests in retirement near the National War Memorial, Ottawa.

Gunner tradition. Guns are to the artilleryman what colours are to the infantryman,* the capture of either being considered an everlasting disgrace.

In appreciation of the outstanding contribution made by Canadian Gunners in this theatre, the RCA was honoured in 1901 by having Field Marshal Earl Roberts, Commander of all British Forces in South Africa, appointed as its Honorary Colonel.

Second Intermission

Changes in techniques and equipment which followed the turn of the century stemmed largely from experiences gained in the South African War.

Previous to this campaign, guns had not normally been specifically allotted in support of a particular arm. With the redesignation of the Royal Canadian Artillery Field Brigade to the Royal Canadian Horse Artillery Brigade in 1905, a British practice was adopted. It was decided that in future, Horse Artillery Batteries would gallop with the Cavalry while Field Batteries would support the more slowly moving Infantry.

* *In fact, Regulations and Orders for the Active Militia of the Dominion of Canada 1870, still in effect, state: "A Battery of Artillery with its guns is equivalent to a Battalion with its colours, and is to be saluted accordingly."*

Dispersal of units (a new principle) was necessitated by the introduction of a more lethal artillery projectile (lydite filled) and by the mobile tactics of the Boer War.

Perhaps the most significant innovation to emerge from this campaign resulted from the Boer's incredible long-range marksmanship and his efficiency in the use of camouflage. Until this campaign, artillery had always faced the enemy in the open, with no attempt whatsoever at concealment. This practice now proved suicidal and the deployment of guns in concealed positions became mandatory; also the value of smokeless powder was realized for the first time.

The concealment of the guns of course deprived the gunner of his view of the target over open sights, making it necessary to introduce a system of sighting whereby the guns could be pointed accurately at the target even though it was invisible to the layer. The first of these improvized sights was the "Gunners Arc", the fore-runner of today's dial sight. "Indirect fire" thus made its appearance, and was first practised in Canada in 1905 at the newly-purchased Petawawa summer training camp.

Concealment, besides being defensive, also presented the opportunity of surprising the enemy, particularly if the target did not first require "ranging-in", thus disclosing the Gunners' position and intention. If the distance, bearing, and angle of sight to the target could be ascertained from a map, and allowances made for certain meteorological conditions, the rounds, when fired, would hit the target (predicted fire). The availability of more accurate maps, together with the meteorological reports, introduced immediately prior to the First World War, solved this problem.

Certain practical measures were undertaken in keeping with these technical developments. Beginning in 1906, new artillery pieces were introduced. Orders were placed to supply Horse and Field Batteries with 13- and 18-pounders, respectively,* Coastal Batteries with 6-inch howitzers and Heavy Batteries with 60-pounders. Instructors were allotted from the Royal Schools† to the militia portion of the Regiment as early as 1905. Petawawa became a training centre where field firing exercises were carried out during the summer and the first Artillery Staff Course was enrolled in 1907, at Quebec.

Before passing on to the First

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* *Gun shields were introduced with 13- and 18-pounders to protect gunners from shrapnel. These were not used before, since it was considered "poor sportsmanship" and not in keeping with true artillery tradition!*

† *With headquarters at Quebec, the Schools were now divided into three branches: Horse and Field Artillery at Kingston; Heavy at Quebec; Coast Defence at Halifax and Esquimalt.*

World War, one episode should be mentioned which ended a long chapter in Canadian and British military history. The final withdrawal of British troops from Halifax took place in 1905 and from Esquimalt in 1906, and to provide for these defences three additional Companies of Royal Canadian Garrison Artillery were raised. The disposition of RCGA Companies in 1906 was: Nos 1 and 2 at Halifax, No. 3 (later 3rd Medium Battery) and No. 4 at Quebec and No. 5 at Esquimalt. Many of the Gunners of the withdrawing British batteries took their discharge from the Imperial Army and enrolled in the newly-formed RCGA companies. A number of serving Gunners are the sons of these men.

First World War

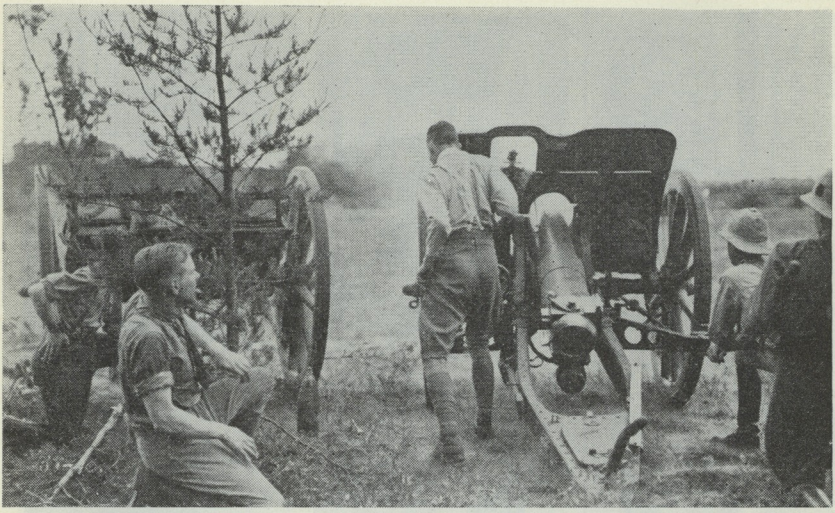
Ten weeks after Germany's historic violation of Belgium's neutrality, Canadian troops (the 1st Division CEF, including the divisional artillery) were training on Salisbury Plain, England.

Of approximately 44,000 Gunners who enlisted, some 38,000 saw service abroad. The remainder were required to service the depots, instruct at the schools and man the coastal defences in Canada. Painful though this last experience was to many, nothing could approximate the envy and disappointment felt by those who maintained a constant vigil on our Eastern seaboard. They watched the convoys come and go. Several attempted to stow away aboard the troopships but, although some successfully reached France, they were invariably caught and returned to Canada for the sake of maintaining discipline.

It was therefore an occasion of great joy when the government authorized the formation of the 9th Siege Battery at Halifax in 1916, and ordered it to proceed overseas.

By 1918, Canada had produced for overseas service five divisional artilleries, an army field brigade, an anti-aircraft battery and three brigades of garrison artillery (this included two heavy batteries). The RCHA Brigade, first under Lieut.-Colonel (later Major-General) Panet and later under Lieut.-Colonel (now Major-General) W. H. P. Elkins, was part of the Canadian Cavalry Brigade. This brigade served in the Canadian Corps and also in the Indian and British Cavalry Corps. Two Canadian field batteries served in North Russia and one in Siberia, while a coast defence company garrisoned the Island of St Lucia in the British West Indies.

The main armaments used by Canadian Gunners during the war were: the 13-pounder in the Horse Artillery and the 4.5-inch howitzer and 18-pounder in the Field Artillery; the "turned up" 13-pounder mounted



Artillery officers manning a 4.5-inch howitzer during Non-Permanent Active Militia training at Petawawa Summer Camp, 1935. The officer in the centre with his back to the camera is now Deputy Director of the Royal Canadian Artillery at Army Headquarters, Ottawa — Lieut.-Colonel G. P. Marriott.

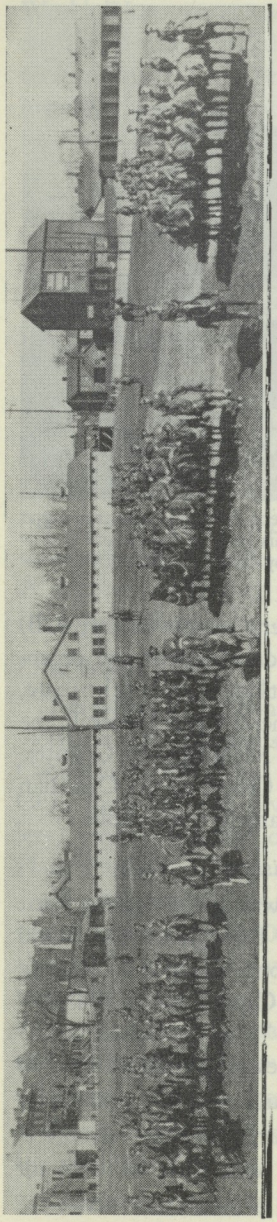
on a truck in the Anti-Aircraft Artillery; and 60-pounder, 6-inch, 8-inch and 9.2-inch guns in Garrison, Heavy and Siege Artillery Companies.

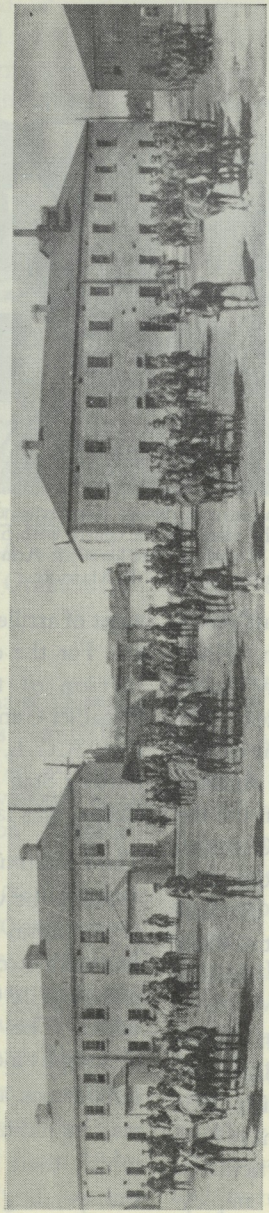
The gas attack at Ypres, the battles of the Somme, Passchendaele, Amiens, Arras, Cambrai and Mons mark the road trodden by Canadian Gunners, but in possibly no battle did they stand more gloriously than the first Canadian Armaggedon at Vimy Ridge, where such great sacrifice reaped so little reward.

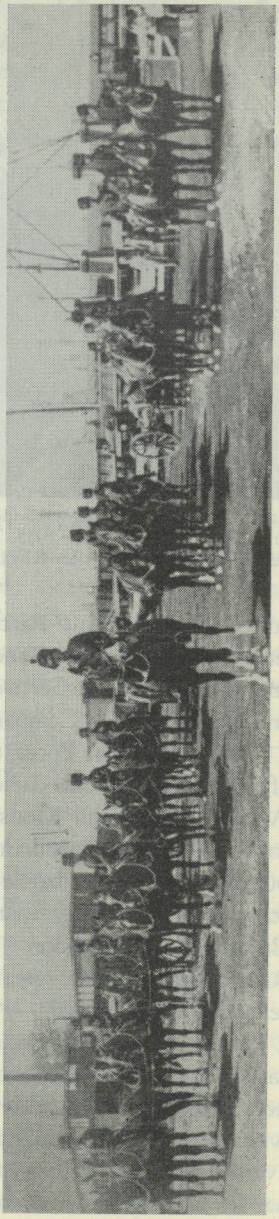
Of the total Canadian battle casualties for the war, Canadian Gunners suffered 9984, of which 2031 were fatal. The losses might have been even heavier, at Amiens particularly, had it not been for a new employment of artillery counter-battery (CB) fire. For the development and organization of this new technique, Brigadier-General (later General) the Hon. A. G. L. McNaughton, Counter-Battery Staff Officer of the Canadian Corps, was largely responsible.

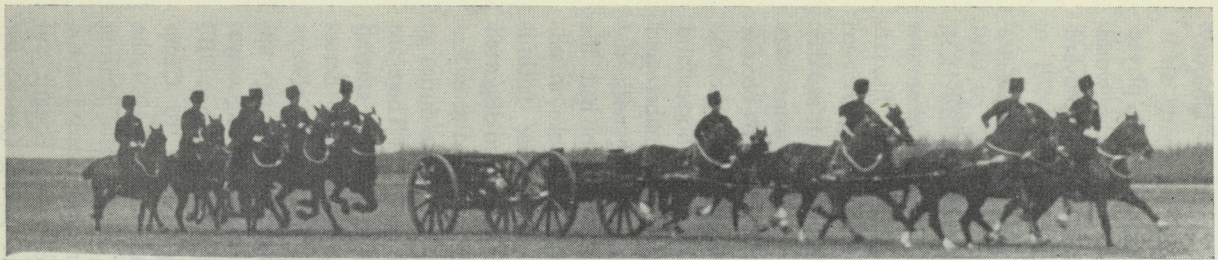
Third Intermission

After the war, the prevailing spirit of optimism throughout the world exerted a strong influence on military planning in Canada, as it did elsewhere. The "war to end all wars" philosophy inevitably resulted in public indifference and even in contempt for matters military, creating a climate in which there was little support for the spending of funds on defence.









Page 100—*Top:* The last parade of "B" Battery, RCHA, as a horse-drawn unit, Kingston, Ont., 1930. The officer mounted on the horse with the white blaze is the present Vice Chief of the General Staff, Major-General H. A. Sparling. *Centre:* Last parade of "A" Battery, RCHA, as a horse-drawn unit, Kingston, 1930. *Bottom:* Detachments of "B" Battery, RCHA, at the Canadian National Exhibition, Toronto. The officer in charge is now Chief of the General Staff, Lieut.-General G. G. Simonds. **Page 101**—*Top:* "A" Sub-Section, "C" Battery, RCHA, at Winnipeg during the 1920's. *Bottom:* "A" Battery, RCHA, at Toronto, 1926.

It was decided to maintain a nucleus of young officers, NCOs, and specialists around which expansion could be quickly effected in the event of an emergency. Non-Permanent and Permanent Militia artillery units attended courses at the Royal Schools, at their own unit headquarters, or at summer camps. Firing practice at camp was very seriously curtailed, shortly after the war, and in 1925 a supplementary vote had to be taken to allow detachments of above 35% of establishment strength to resume practice. But although the groups were small they were keen, and the enthusiasm shown at the annual competitions sponsored by the Canadian Artillery Association was reassuring.

In the twenties, several notable events were recorded in the history of the Canadian Artillery. In 1920, six years after becoming allied with the Royal Artillery, the RCA was honoured by having as its Honorary Colonel Commandant His Majesty the late King George V,* and in 1926 His Majesty consented to the RCA adopting the motto "Ubique . . . Quo Fas et Gloria Ducunt" (Everywhere . . . whither right and glory lead).† While other arms display battle honours on their colours, the Gunner is proud to wear the motto "Ubique" on his cap badge, signifying as it does the distinguished part played by his corps in battles the world over. The word intrigued Rudyard Kipling, who was to write:

There is a word you often see, pronounce it as you may—
'You bike'—'You bykee'—'Ubbikee', alludin' to RA
It serves 'Orse, Field an' Garrison as motto for a crest,
An' when you've found out all it means
I'll tell you 'arf the rest.

In 1929 the inevitable but sad day arrived, when the Regiment was informed that it was to become mechanized. Everyone had become deeply attached to the horses and each was assigned a number and name, the name starting with the battery letter. Each man had his favorite to whom he spoke in endearing terms, but these faithful steeds must often have been disgusted to hear themselves referred to in less seemly terms during stable duties at 0500 hours each morning! There are few military spectacles more stirring or picturesque than that of horse-drawn artillery, and crowds always turned out when the batteries appeared on the streets or highways. It is even recorded that when "B" Battery was proceeding to Camp Petawawa in the summer of 1909, the inhabitants of Smiths Falls, hearing that a stop-over was intended on the outskirts of their town, bought and laid 300 feet of piping (gratis) for

* *His Majesty became Colonel-in-Chief of the RCA in 1929.*

† *Canadian Gunners had been using this motto intermittently and without authority for some thirty years previously!*

watering the horses.

The first unit to become mechanized was the 3rd Medium Battery RCA (the old No. 3 Heavy Company RCGA which had been redesignated in 1924). This battery was issued four 6-wheeled Leyland tractors in 1929 to tow its 60-pounders. The RCHA Brigade, except "C" Battery,* was mechanized in the following year. Actually, the process of completely converting the RCHA Brigade to mechanized equipment extended over several years, and it was not until 1937 that "C" Battery parted with its last remaining horses. In 1931, seven field brigades, one medium brigade and one medium battery, Non-Permanent Active Militia (NPAM), were placed on the mechanized establishment.† No mechanized transport, however, was issued to these units for several years.

In keeping with advancements made in air warfare, the first peacetime anti-aircraft (AA) component of the Regiment was raised in 1937. Designated the 4th Anti-Aircraft Battery, it was, in fact, a descendant of No. 4 Company RCGA which, for reasons of economy, had been disbanded in 1922. This Battery was equipped with four 3-inch 20-cwt. guns, and first conducted firing practice at Point Petre on Lake Ontario in the fall of 1938. In the following year it proceeded overseas as part of the 2nd LAA Regiment.

Second World War

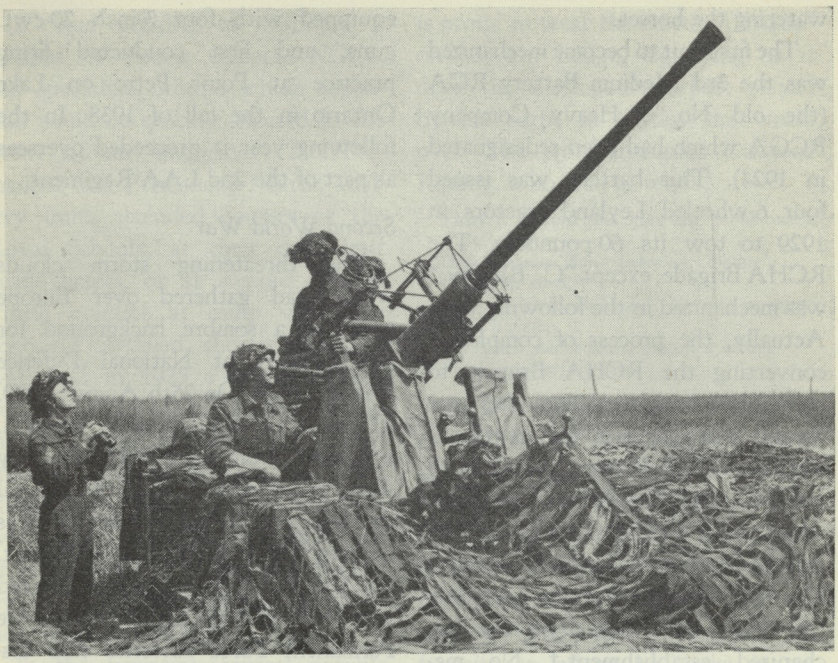
The threatening storm clouds which had gathered over Europe provided a sombre background for the planners at National Defence Headquarters. On 25th August 1939, in view of the growing tension, volunteers from the NPAM artillery were called out to man the coastal defences and 4th AA Battery was ordered from Kingston to Halifax. On 10th September Canada declared war. Within two days, each of the Permanent Force batteries had dispatched 25 of its personnel to cities and towns across the country, to act as assistant gunnery instructors for the NPAM artillery units responding to the call to arms.* By 3rd December the 1st Divisional Artillery began to concentrate at Halifax, and by 10th December the first convoy was sailing the Atlantic.

In England, although training was intensive and continuous, the biggest handicap at the outset was the desperate shortage of equipment.

* "C" *Battery was raised again in 1914 as a depot battery for the RCHA Brigade. In 1920, on the return of "A", "B" and No. 3 Heavy Company RCGA to Kingston, "C" was moved to Winnipeg.*

† *But like the sedentary or paper force militia of bygone days these units were equipped with "paper trucks" for many years.*

* *Gun drill for field units was conducted at first with First World War 18-pounders and 4.5-inch howitzers. Some units had to improvize with barrack-room furniture and a chalked outline of a gun on the floor.*



National Defence Photograph

Canadian Gunners manning a light anti-aircraft gun in Normandy during the Second World War.

Great strides were soon made to overcome this difficulty, the field regiments* progressing from the 18 pounder to the 18/25-pounder and finally to the 25-pounder gun-howitzer. The mediums received the 5.5-inch and 4.5-inch guns. Anti-tank units, an innovation in this war, were supplied first with the ineffectual 2-pounder, then the more penetrative 6-pounder and finally the powerful towed and self-propelled 17-pounder and the American self-propelled M10 (3-inch). Light anti-aircraft (LAA) batteries were given the dependable 40-millimetre Bofors gun for the engagement of low-level aircraft, while the Heavy AA guarded the skies with 3.7-inch guns. Anti-aircraft guns were often employed in the ground role in support of Infantry after Allied Air superiority had been established.

In late 1944 the 1st Rocket Unit RCA was formed and equipped with 12 rocket projectors, each projector having 32 barrels.

To overcome the limitations of

* *Pre-war brigades were now designated "regiments".*

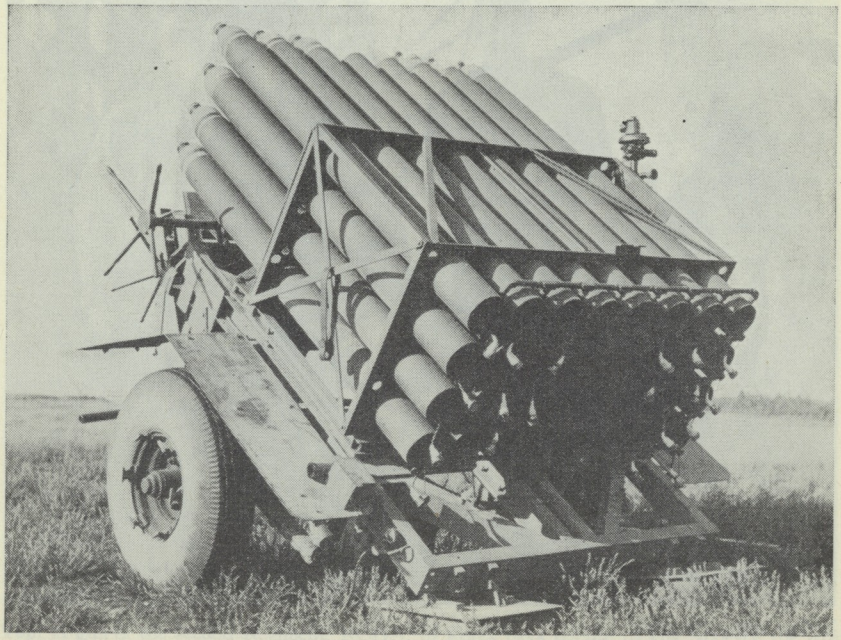
ground observation, artillery officers were trained as pilots and soon became adept at manœuvring their small Auster aircraft (Air Observation Posts), while at the same time calling for and correcting artillery fire onto enemy positions.

During the long waiting period spent in England, the training of Canada's Gunners varied with the lessons being learned in other theatres. For some time troop and battery "crash actions"* were conducted with monotonous regularity, this technique being considered ideally suited for the lightning mobile tactics of desert warfare. With the invasion of the "Fortress of Europe" looming large on the horizon, however, the nature of the obstacles to be encountered, and the type of warfare envisaged, demanded a fresh approach.

Napoleon once said, "Who ever manages to bring by surprise a mass of guns to a certain point is sure of carrying the day", and one of the

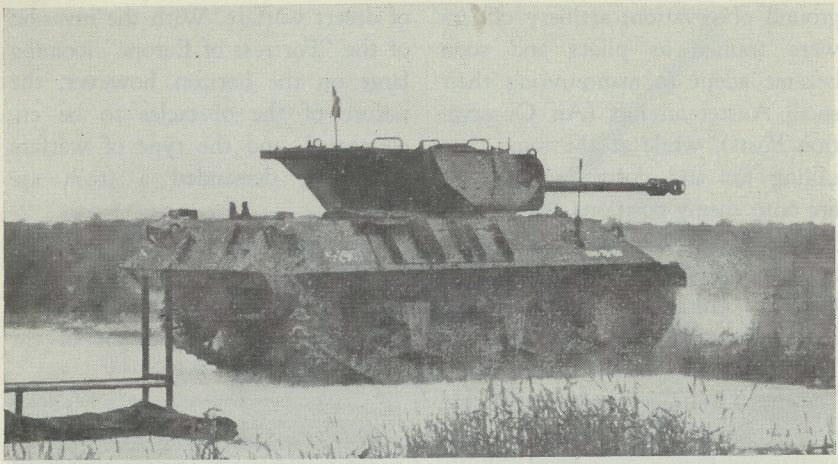
(Continued on page 108)

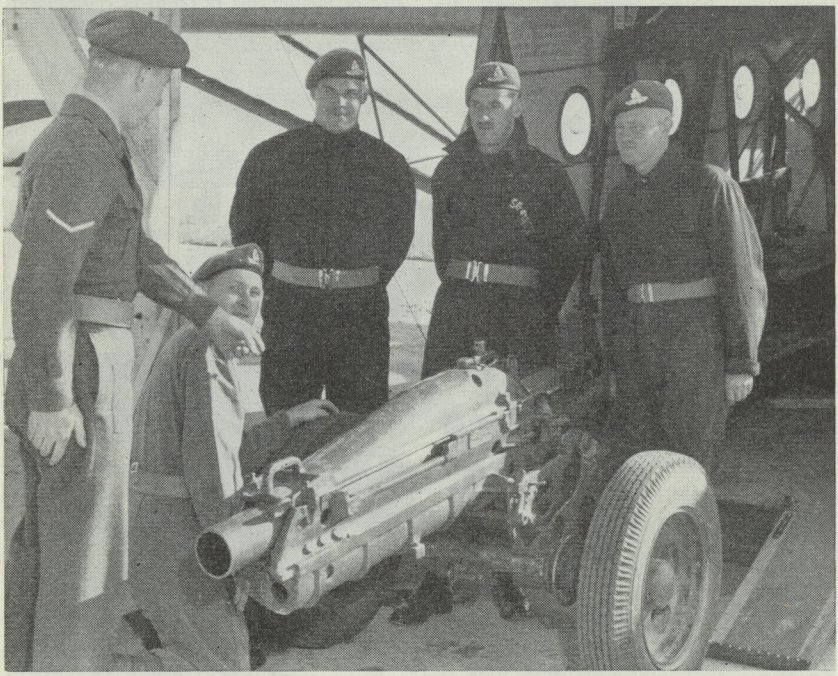
* *Crash action: Orders are given to artillery units while on the move. There is no time allowed for previous reconnaissance of the gun area or for thinking in terms of concealment, etc. They must deploy and open fire immediately onto a given target.*



National Defence Photograph

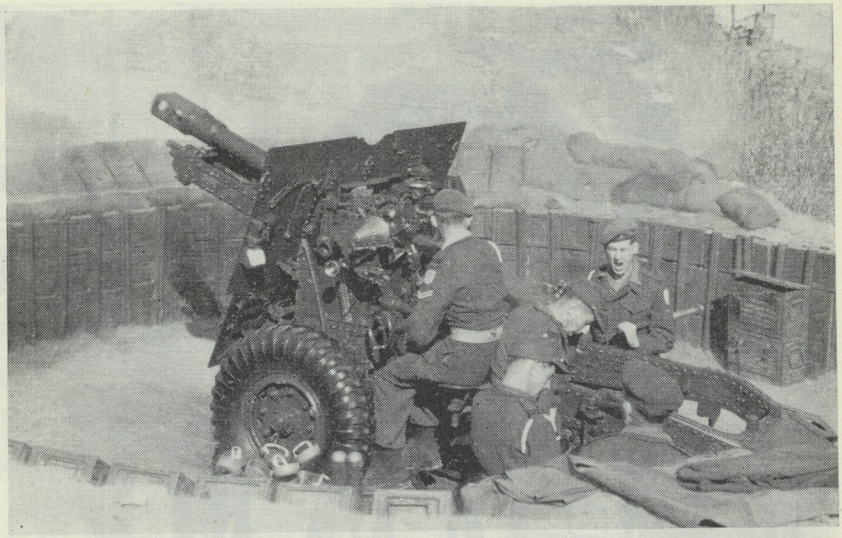
A view of a "landmattress" in North-West Europe during the Second World War.





National Defence Photographs

Top: A self-propelled 17-pounder anti-tank gun.
Bottom: Airborne artillerymen receive instruction in air supply.



National Defence Photograph

Top: A gun of the Second Regiment, RCHA, in Korea pays tribute to His Majesty the late King George VI as it fires a salute at the time of his death. *Bottom:* Mortars in action during winter training—"Z" Battery (Para), 1 RCHA.

National Defence Photograph

The Royal Canadian Horse Artillery mounted escort at the Coronation, 1953.

principal aims of the new training was to see how quickly the artillery fire power of a whole regiment, division, corps or army could be produced.* This entailed the development of rapid survey methods to place all guns on a common survey grid whence the necessary data could be deduced mathematically to ensure that all guns within range could accurately engage the target without the necessity of ranging. Napoleon's ghost was placated.

The ubiquitous guns of the RCA became a familiar sight in the fields, farmyards and orchards of Europe. 1 RCHA was the first to test Continental hospitality, having spent a very short sojourn in France in 1940, immediately prior to the collapse of that country, but gained glory in bringing all its guns back to England. Elements of 2nd Divisional Artillery —prepared to man any captured enemy guns—were landed on the Dieppe beaches in 1942, and in 1943 the guns of the 1st Division supported our tanks and infantry through Sicily.

* *Regimental shoots theoretically employing 24 guns were first conducted in Petawawa in 1939.*

Leaping over to the Italian mainland, 1st Divisional Artillery, augmented later by 5th Divisional and 1st Corps Artillery, assisted in smashing a way through the crack German Paratroop Division before Ortona, on through the Gustav, Hitler and Gothic Lines and onto the Plains of Lombardy.

On 6 June 1944, that memorable day in the history of armed conflict, the Gunners of our 3rd Division, their self-propelled 105 millimetre howitzers blazing from the landing craft, accompanied the first wave of assaulting infantry on the "run in" to the Normandy beaches. The great build-up period began. 4th Division and 2nd Canadian Corps joined the 3rd Division. Such foreign place names as Authie, Buron, Bretteville, Caen and Carpiquet became household words in Canadian homes.

At last, after the long awaited battle of the Falaise Gap, the front bounded forward. The rush up the Channel Coast, the drive through Belgium to the Scheldt, the south-east punch through the Hochwald, the battle of the Rhine—barrages, concentrations, ceaseless bombardments with the Germans bitterly contesting every inch of the way—this was the road to victory. When it was won finally, the Commander in Chief of 21st Army Group, Field Marshal B. L. Montgomery, paid tribute to the part the Gunners had played when he said, "I think all the other arms have done very well too. But the artillery has been terrific . . ."

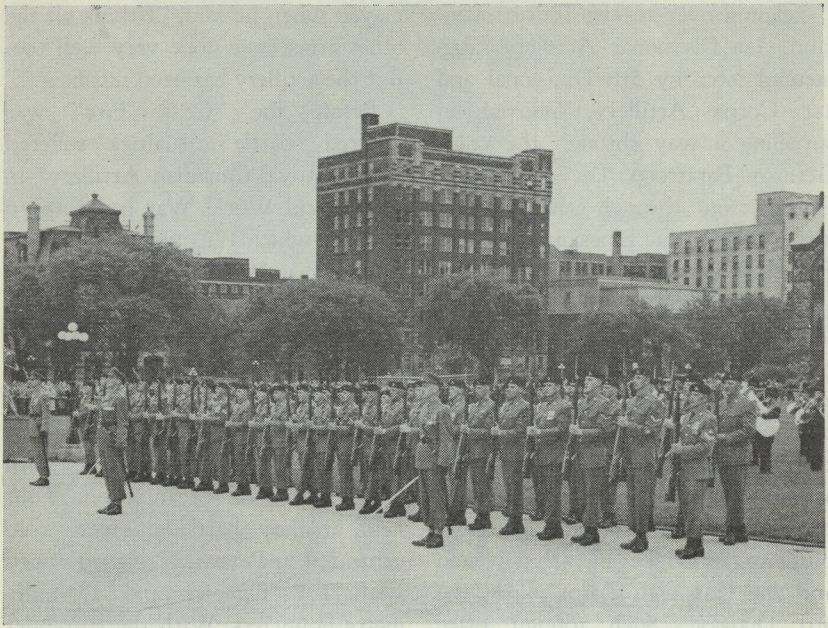
Before the "Cease Fire" was ordered, battle casualties suffered by the Royal Canadian Artillery* in the Second World War had totalled 5592, of which 1223 were fatal.

Immediately following the cessation of hostilities in Europe, volunteers were called to form the 6th Canadian Division, Canadian Army Pacific Force (CAPF), for service in the Far East. The Division was to be organized and equipped in accordance with U.S. tables of organization. Four field artillery battalions were concentrated in Petawawa and equipped with 105-millimetre and 155-millimetre howitzers. With the surrender of Japan, however, the CAPF was disbanded.

In support of the First Canadian Army (commanded by General McNaughton and later by General H. D. G. Crerar, both ex-Gunners) had been two Army Groups of Artillery (AGRAs), two Corps Artilleries, and five Divisional Artilleries. RCA anti-aircraft units had been integrated into the AA defence network of Great Britain and additional RCA units had been formed in Canada and in the United Kingdom for training and defence purposes.

(*Continued on page 113*)

* *In 1935 the title "Royal" was conferred upon all Canadian artillery units.*

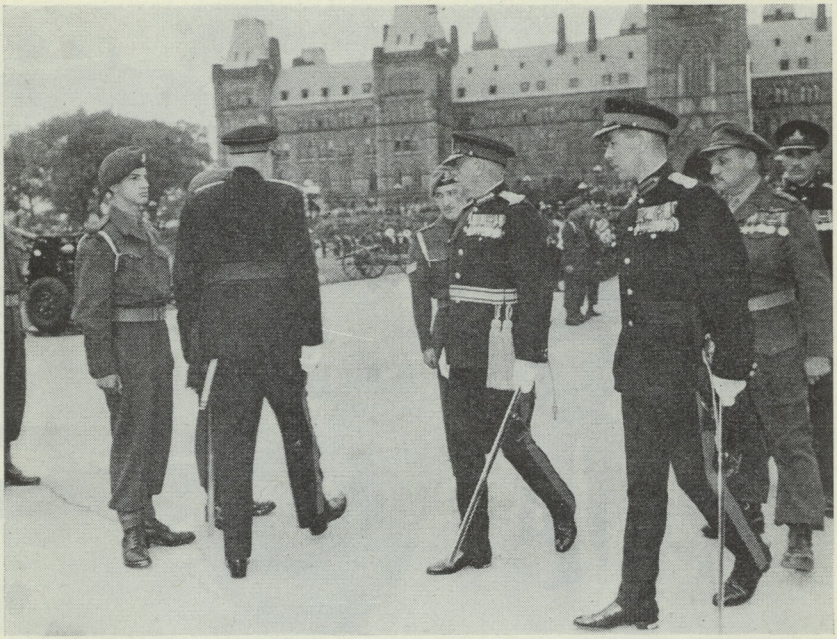


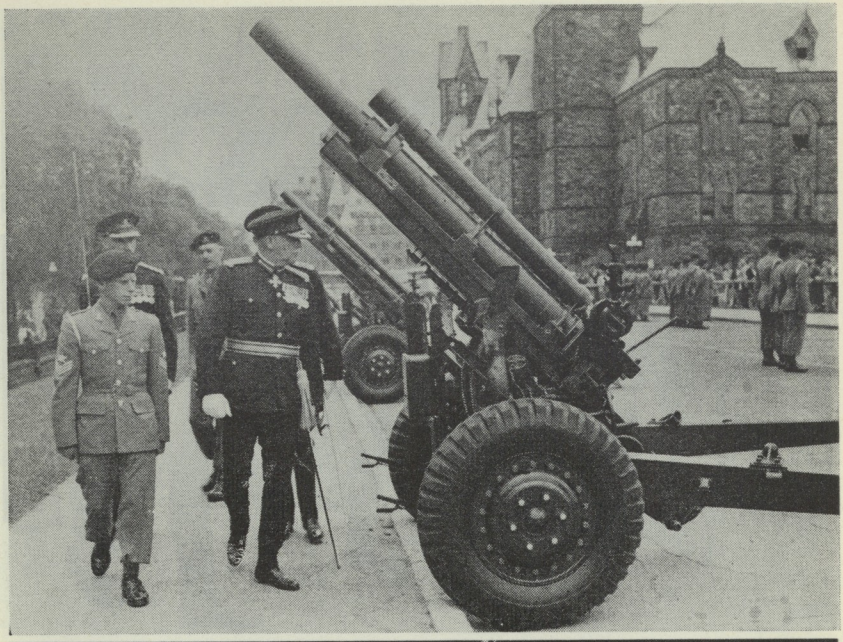
The National Defence photographs appearing on these pages were taken during the Royal Canadian Artillery centennial celebrations held in Ottawa on 26 May this year.

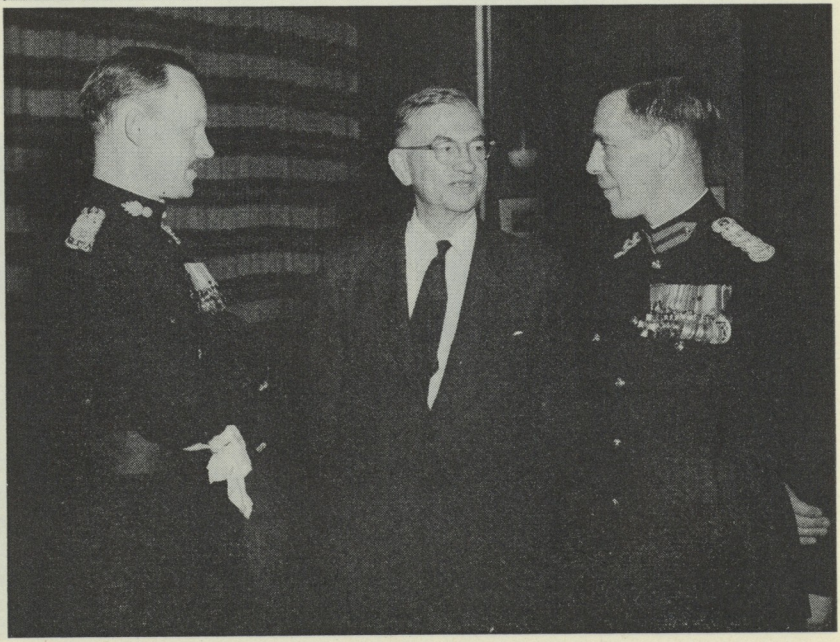
Above: General salute to Major-General H. O. N. Brownfield of Brockville, Ont., Honorary Colonel Commandant of the Royal Regiment of Canadian Artillery, by the Guard of Honour from 1 Light Anti-Aircraft Regiment, RCA, on Parliament Hill.

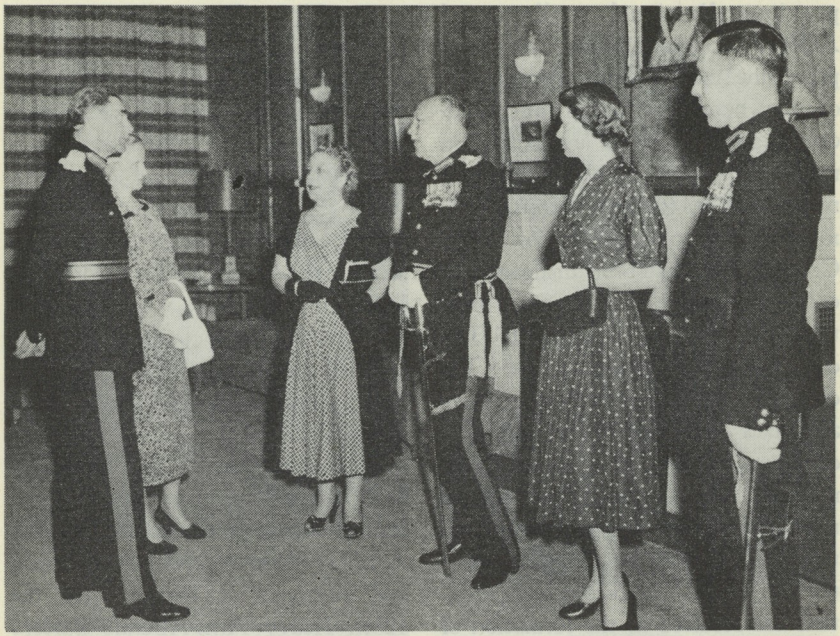
Top Right: Accompanied by Colonel A. J. B. Bailey, Director of the Royal Canadian Artillery, Major-General Brownfield inspects detachments of 2nd Battery, 30th Field Regiment, RCA, on Parliament Hill. This Battery perpetuates one of the original volunteer batteries formed by the Militia Act, 1855.

Bottom Right: The Honorary Colonel Commandant inspects the Royal Canadian Horse Artillery Band of Winnipeg, Man.









Above: Major-General Brownfield and Mrs. Brownfield were guests of honour at a reception held at the close of the centennial celebrations. *Left to Right:* Lieut.-General G. G. Simonds, Chief of the General Staff, and Mrs. Simonds; Mrs. Brownfield and Major-General Brownfield; Mrs. Bailey and Colonel Bailey. **Page 112**—*Top:* Major-General Brownfield inspects the 105mm howitzers on Parliament Hill. *Bottom:* Seen chatting during the reception are, left to right, Lieut.-Colonel Marriott; the Hon. Brooke Claxton, former Minister of National Defence and a Gunner in the First World War; and Colonel Bailey.

Post-War Vigilance

After a brief period of transition following the war, legislation was passed in 1946 authorizing an Active Force of 25,000. Further expansion was made in succeeding years commensurate with the increased extent of Canadian international commitments.* The militia component of the Regiment, equipped with the latest in guns and methods of gunnery, was first grouped into divisional artilleries and AGRAs. In the reorganization, several famous infantry battalions were converted and joined the artillery in an AA role. Anti-tank regiments, observation regiments, locating batteries and anti-aircraft operations rooms were formed.

In 1954, on the basis of recommendations submitted by a special committee, a further reorganization was effected in the Militia. The

* *In June 1946 the Militia of Canada was redesignated the Canadian Army; the former PF became the "Active Force", and the NPAM became the "Reserve Force". In 1954 the components were redesignated "Regular" and "Militia".*

previous divisional artillery and AGRA headquarters became, as a peacetime measure, an integral part of the new Militia Group Headquarters. These latter are located in major centres, and have certain responsibilities towards all units within the area, regardless of type. Certain units have been amalgamated, converted to other arms, or to new types of artillery equipment. The coast defence batteries, so long the champions of solid constancy, have also had cause to reflect upon a changing world. Because of new methods of detection, the former role of these batteries has been partially taken over by the Navy and the Air Force. The recent reorganization has resulted in the formation of two harbour defence* batteries, one on each coast, replacing the coast defence units.

A new responsibility undertaken by RCA units is the artillery training of high school cadets in those communities where the school cadet corps and the RCA militia unit are affiliated. Students are receiving training at the hands of competent unit instructors, either during evening classes or at week-end camps.

Expansion in the Regular component of the Regiment is keeping pace with modern technical trends and with Canada's increasing international commitments.

In 1946, the 71st Field Regiment RCHA (now 1 RCHA) moved from Petawawa to Camp Shilo, Manitoba, when the latter was chosen as the permanent site for the Royal Canadian School of Artillery (Field Branch). With the Regiment went the 68th Medium Battery, a counterpart of the old 3rd Medium. 127th Anti-Tank Battery was formed at Shilo during this period.

At Picton, Ontario, the Army took over a wartime RAF station and formed the Royal Canadian School of Artillery (Anti-Aircraft). Also formed and stationed at Picton were the 128th Heavy Anti-Aircraft Battery and the 129th Light Anti-Aircraft Battery. The Picton units used the firing point at Point Petre.

In May 1948 a third artillery school was opened at Esquimalt, British Columbia, and designated Royal Canadian School of Artillery (Coast and Anti-Aircraft). 129th Light Anti-Aircraft Battery was redesignated Heavy Anti-Aircraft and moved to the West Coast.

During the post-war years responsibility for anti-tank defence was assumed by the Royal Canadian Armoured Corps. Consequently in

(Continued on page 118)

*The term "coast" artillery has been replaced in Canada by "Harbour Defence".

On the accompanying pages are the photographs of some of the Canadian Gunner officers who have risen to prominence during the two world wars.

General Sir Arthur Currie

General A. G. L. McNaughton

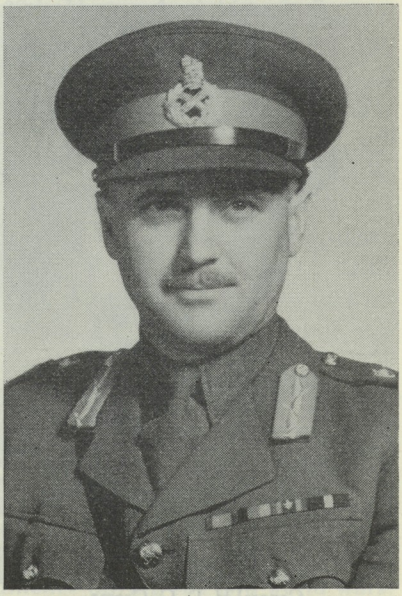
General H. D. G. Crerar

Lieut.-General J. C. Murchie

Lieut.-General G. G. Simonds

Major-General W. H. P. Elkins

Major-General J. H. Roberts



Major-General A. B. Matthews

Major-General A. E. Walford

Major-General R. H. Keefler

Major-General H. O. N. Brownfield

Major-General H. A. Sparling

Major-General M. H. S. Penhale

Major-General R. O. G. Morton

Major-General E. C. Plow

1950 the 127th Anti-Tank Battery was redesignated the 127th Anti-Aircraft Battery and is now located at Picton. At the same time the 119th Anti-Aircraft Battery was formed and stationed at Esquimalt.

In 1946, Coast Artillery establishments were formed on both coasts, at Halifax and Esquimalt. In 1948 the Esquimalt unit was absorbed by the Royal Canadian School of Artillery (Coast and Anti-Aircraft). The Halifax unit, in 1949, was redesignated the 49th Coast Battery. In 1954, due to the changes in commitment, the term Coast Defence was changed to Harbour Defence.

In response to the United Nations

appeal for the provision of troops to resist aggression in Korea, the 2nd Regiment RCHA was raised in 1950 as part of the Canadian Special Force. Volunteers for the Regiment were received from the 1st Regiment RCHA, the RCSA, and from selected militia artillery units. Fighting in Korea in support of the 25th Canadian Infantry Brigade Group, and later with the 1st Commonwealth Division, 2 RCHA was considered to be one of the most efficient units in the Commonwealth Divisional Artillery —a reputation upheld by 1 RCHA in the following year. 4 RCHA and 3 RCHA were later to maintain the same high standard in that theatre.

In accordance with Canada's undertakings with respect to the North Atlantic Treaty Organization, the 27th Canadian Infantry Brigade Group was raised and dispatched to Europe in 1951. The 79th Field Regiment (now 3 RCHA) was the artillery element. In the following year the 81st Field Regiment (now 4 RCHA) was raised to allow rotation overseas of the several artillery units.

In 1949 1 RCHA was given the honour of forming "B" Battery (Light), the airborne artillery component for the Mobile Striking Force. This battery later became 1st Light Battery (Para) RCA, and in 1953 when a light battery armed with 4.2-inch heavy mortars was added to the establishment of a field regiment, 1st Light Battery (Para) RCA again became part of 1 RCHA and was redesignated Z Battery (Para) 1 RCHA.

The late Major-General R. W. Rutherford, a well-known Gunner and talented Artist. Several of the paintings hanging today in Gunner messes across Canada are from his brush. This photograph was taken when he held the rank of lieutenant-colonel.

During the period 1953–1954, Headquarters RCA 1st Canadian Infantry Division, 1st Light Anti-Aircraft Regiment, 1st Locating Battery and 1st Air Observation Post Flight were formed to complete the artillery element of the 1st Canadian Infantry Division.

Epilogue

All Gunners may view with pride the achievements of Canadian artillerymen over the past eventful century.

The primitive organization and the technical requirements of one hundred years ago are in sharp contrast with those demanded today. This is to be expected as the "science of gunnery" harnesses more and more the technical advancements made in the modern industrial age. It calls for inventiveness on the part of the "Gunner scientist" to translate these developments into new skills and techniques for practical gunnery; it calls for an ever-increasing knowledge on the part of the Gunner to master the new skills and techniques so applied.

In recognition of the position of the artillery in the armed forces, His Majesty the late King George VI honoured the Regiment in 1952 by becoming its first Captain General—a distinction enjoyed by no other corps. Her Majesty Queen Elizabeth II has graciously accepted to honour her Gunners in like manner.

Except on the practice range, our guns are now silent. Should the need arise, they will be manned again in the finest tradition of the Regiment. That this will not be necessary must be the prayer of all. Meanwhile as the watchdogs of peace and the guarantors of our integrity, the present role of the guns has been captured in spirit by the lines of Thomas Hardy:

Great Guns were gleaming there—living things seeming there
Cloaked in their tar cloths, upmouthed to the night,
Wheels wet and yellow, from axle to fellow,
Throats blank of sound, but prophetic to sight.

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THE CORPS OF ROYAL CANADIAN ENGINEERS

ROYAL CANADIAN ENGINEERS MILITIA TROPHIES

WRITTEN SPECIALLY FOR THE JOURNAL BY THE OFFICE OF THE CHIEF ENGINEER, ARMY HEADQUARTERS, OTTAWA

The competitive spirit is a quality that has never been found lacking in the Canadian soldier. The desire of a man, unit or formation to be not just as good as, but better than, any other is as strong today as it has ever been in the history of the Army. This attitude is found not only in the units of the Regular Army but also in a very high degree in the units of the Militia.

To maintain this spirit and to reward efficiency in training, six trophies are open to annual competition among the Militia units of the Royal Canadian Engineers.

With the exception of the cup awarded for marksmanship, entries for each trophy are assessed by the Chief Engineer, who nominates a winner to the Competitions Committee of the Military Engineers Association of Canada (MEAC). The competition year is from the 1st of September to the 31st of August and the winners of all trophies are announced at the annual convention of the MEAC, which is held in October.

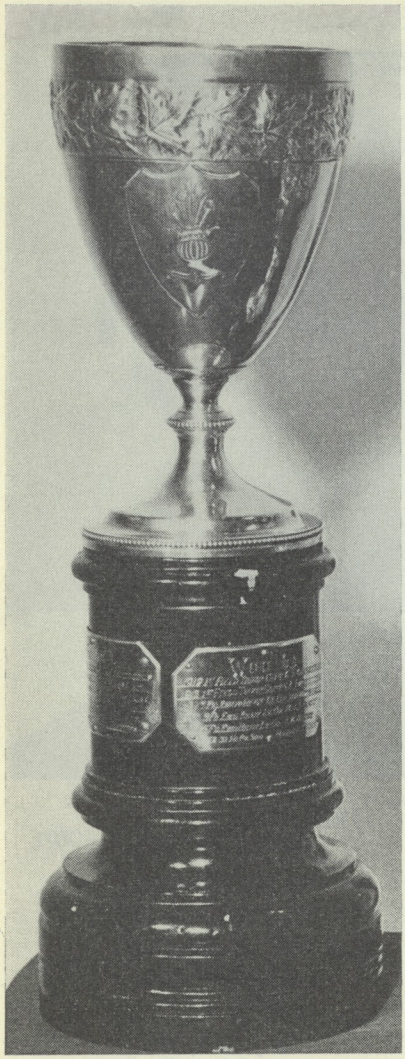
All trophies are permanently held at RCSME for safe-keeping and each annual award is made in the form of an appropriate miniature which is retained by the winning unit.

Gzowski Cups

The oldest of these trophies are the Gzowski Cups. In 1885 Colonel (later Sir) Casimir Stanislaus Gzowski presented two silver cups for annual competition among the Companies of the Militia Engineers. Col Gzowski was a Polish nobleman who, by 1875, had become prominent in the engineering field in Canada and was instrumental in the construction of many public works, the most notable of which was the International Bridge over the Niagara River.

Under the original terms of the award these cups were designated as first and second prizes and a report by the Inspector of Engineers shows that in 1885 these awards were made to the Charlottetown Engineers and the Brighton Engineers, respectively.

On the outbreak of The Great War, 1914–1919, the cups were withdrawn from competition and it was not until 1948 that steps were taken, with the support of the MEAC, to revive the competition and change the conditions of the award.



Gzowski Cups.

With the consent of Lieut.-Colonel H. N. Gzowski, son of the donor, it was decided that the two cups should be of equal value and awarded to the two RCE units of the Canadian Army (Reserve Force)* placing first in each of two General Efficiency Competitions to be held during annual camp training. One competition for units of Western and Prairie

*The official name at that time—now the Militia.—Editor.

MEAC Challenge Trophy.

Commands is held at Camp Chilliwack, B.C., and the other for Central, Quebec and Eastern Command units at Camp Petawawa, Ontario.

General efficiency, in the terms of the award, is intended to include both administrative efficiency and the technical ability to function as an Engineer unit. Assessment is based on the unit's state of training and administration on arrival at camp and the progress made while there. The Chief Engineer, on advice from the senior Regular RCE officer attending each summer camp, assesses the competing units and recommends the winner.

The winners of these trophies since 1949 have been:

Eastern Competition

1949—3 Fd Sqn, Ottawa, Ont.
1950—56 Indep Fd Sqn, St. John's, Nfld.
1951—2 Fd Engr Regt, Toronto, Ont.
1952—56 Indep Fd Sqn, St. John's, Nfld.
1953—56 Indep Fd Sqn, St. John's, Nfld.
1954—30 Fd Pk Sqn, Halifax, N.S.

Western Competition

1949—7 Fd Engr Regt, Vancouver, B.C.

The Honorary Colonel Commandant's Trophy.

1950—14 Fd Sqn,
Regina, Sask.
1951—6 Fd Engr Regt,
Winnipeg, Man.
1952—31 Fd Pk Sqn,
Winnipeg, Man.
1953—21 Fd Sqn,
Flin Flon, Man.
1954—33 Fd Pk Sqn,
Lethbridge, Alta.

MEAC Challenge Trophy

Ranking second in age among the RCE Militia trophies is the MEAC Challenge Trophy. In 1936 the Military Engineers Association of Canada, in order to foster marksmanship among Engineer units, instituted this trophy for annual competition in rifle shooting on the indoor range. Under the original terms of reference both the Permanent Force and Non-Permanent Active Militia units were permitted to participate. However, this regulation was in effect only for 1936 and competition was restric-

Hertzberg Memorial Trophy.

ted to Engineer units of the NPAM in subsequent years. Competition was suspended during the Second World War and was not resumed until 1946.

The competitive rules are the same as those governing the winter season indoor small bore rifle competition sponsored by the Dominion of Canada Rifle Association (DCRA). Briefly, the team which has the highest aggregate for three practices held in January, February and March of each year is declared the winner. Targets are marked by the DCRA and at the end of the competition, scores are tabulated by the Honorary Secretary of the MEAC.

In recent years the trophy has been shared by two units. In 1950 and 1951, 18 Fd Sqn, Hamilton, Ont., was judged the winner, and since 1952 the annual recipient has been 6 Fd Engr Regt, Winnipeg, Man.

The Honorary Colonel Commandant's Trophy

The annual meeting of the MEAC at Chilliwack in 1950 saw the birth of two additional trophies. At this meeting Brigadier J. L. Melville, CBE, MC, ED, Honorary Colonel Commandant of the Corps of Royal Canadian Engineers, donated a trophy for inter-regimental competition. This trophy, named the Honorary Colonel Commandant's Trophy, is awarded annually to the Militia field engineer regiment displaying the greatest general efficiency during the competition year. General efficiency for this award is defined to include all those qualities which add to the effectiveness of an Engineer unit, and assessment is based on the progress and initiative in training, conduct of schemes and exercises, recruiting, performance at camp, and quality of unit administration.

The units are assessed on the basis of information obtained from visits by representatives of the Chief Engineer and from special report *pro formæ* originated by the unit commander and confirmed by Command or Area Engineers.

2 Fd Engr Regt, Toronto, has been the annual winner since 1952.

Hertzberg Memorial Trophy

The other trophy resulting from this meeting was presented by the MEAC and named the Hertzberg Memorial Trophy in memory of Major-General C. S. L. Hertzberg, CB, MC, VD, who was Chief Engineer, First Canadian Army, during 1942–43. This trophy is awarded annually to the Militia field squadron performing the most outstanding Sapper task during the competition year. Competing units submit entries in the form of a comprehensive report on the task or project which is to be assessed. The assessment is based on the magnitude of the task, degree of success, per-

Lindsay Memorial Trophy.

sonnel employed, ingenuity, technical skill, and state of training displayed; and the amount and nature of publicity which the task obtained in the local press and on the radio.

Recent winners of this trophy have been:

1952—30 Fd Pk Sqn, Halifax.
1953—1 (Brighton) Fd Sqn, St. John, N.B.
1954—30 Fk Pk Sqn, Halifax.

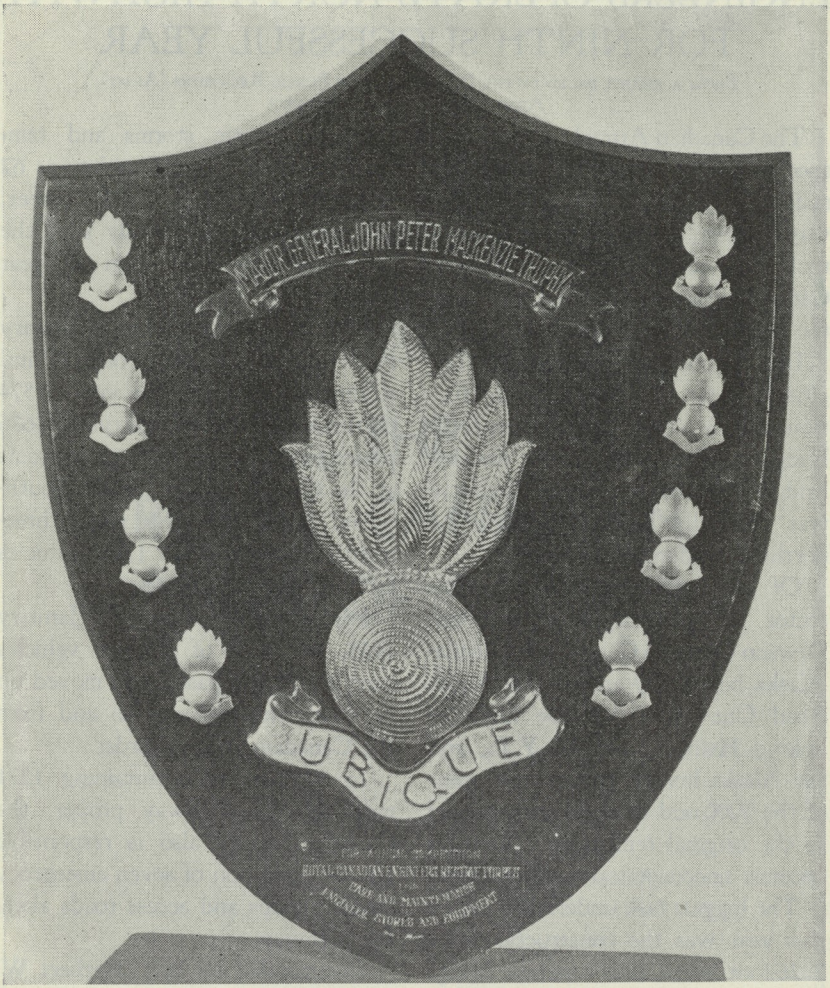
Lindsay Memorial Trophy

The sixth trophy was made available through a public appeal for funds and its introduction was announced by the MEAC in 1952. This trophy commemorating Major-General W. B. Lindsay, CB, CMG, DSO, who was Chief Engineer, Canadian Corps during the Great War, 1914–1919, is known as the Lindsay Memorial Trophy.

The annual competition takes the form of a map exercise to be solved by the officers of competing squadrons. The complete exercise is prepared by the staff of the Chief Engineer and is distributed to all Militia field squadrons each spring. Solutions are assessed by the Chief Engineer and recommendations for the award are submitted to the Competition Committee of the MEAC.

The winners of the Lindsay Memorial Trophy have been:

1952—7 Fd Sqn, London, Ont.
1953—15 Fd Sqn, Thetford Mines, Que.



Major-General John Peter Mackenzie Trophy.

1954—44 Fd Sqn, Trail, B.C.

New Trophies

A seventh trophy has recently been donated by Major-General J. P. Mackenzie, CB, DSO, ED, who was Quartermaster-General during 1942–43. The terms of award for this trophy, which has been named the Major-General John Peter Mackenzie Trophy, are now being prepared and on completion this trophy will be open to competition among the Militia units of the Royal Canadian Engineers.

ENGINEERS OPERATE NORTH HIGHWAY FOR NINTH SUCCESSFUL YEAR

From a report issued by the Directorate of Public Relations (Army), Army Headquarters, Ottawa

The Canadian Army has completed another successful year operating and maintaining the North-West Highway System, its ninth since Canada took over control of the 1221-mile Canadian stretch of the highway from the United States April, 1946.

During the past year Army Engineers began or completed construction of 13 new steel or concrete bridges replacing temporary wooden bridges erected when the highway was originally pushed through the northern wilderness in 1943.

Of 161 bridges on the Canadian sector of the highway between Dawson Creek, B.C., and the Canada-Alaska border, 29 are on the Haines Road Cut-Off, a 117-mile highway linking Haines Junction, Y.T., and the Alaska border. Bridges and some of the 7000-odd culverts are replaced as the original temporary structures become uneconomical or hazardous.

The biggest task undertaken earlier this year was the construction of a 2326-foot steel and concrete bridge across an arm of Nisutlin Bay near the Yukon-British Columbia border. The longest bridge on the highway, it will replace a trestle structure that each spring gives highway engineers and truckers cause for concern. The new bridge will be completed by December of this year.

Despite arctic storms and temperatures that dropped as low as 62 degrees at Snag, Y.T., last December, the Army has successfully kept the great northern road open all year round.

From November 1954 to 31 January 1955—three of the coldest and stormiest months of the year—1574 northbound vehicles carrying 4676 passengers checked through customs at the Canada-Alaska border. Southbound traffic for the same three-month period totalled 1,606 vehicles carrying 2620 passengers.

For the year ending 31 January 1955, a total of 25,423 vehicles carrying 59,561 passengers moved up or down the highway to and from the Canadian-Alaska border.

In addition to maintaining 1221 miles of the highway proper, the Canadian Army also is responsible for the operation of seven emergency landing strips and access roads along the highway.

Commanded by Brig. Herbert W. Love, OBE, CD, of Ottawa, operation of the highway is controlled from Whitehorse, Y.T. Officers and men currently employed on the highway number about 700, with about 800 civilians under Army supervision. There are 18 maintenance camps along the road.

THE ROYAL CANADIAN CORPS OF SIGNALS

"The Message Must Get Through!"

TRADITIONS OF THE ROYAL CANADIAN CORPS OF SIGNALS

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

Acknowledgment is made to S/Sgt. F. W. Pratt of the Directorate of the Royal Canadian Corps of Signals who wrote this article.—Editor.

* * *

Although the Royal Canadian Corps of Signals* is just over fifty years old,† which is comparatively young for a Corps of the Canadian Army, it is not without its traditions. Respect for these makes the Signalman proud of his own particular branch of the Army.

Guiding Principle

Whatever side issues may divert it from time to time, the Corps exists for but one purpose—that so well expressed in the unofficial but traditional principle: "The Message Must Get Through!" The job of every man in Signals, however minor, contributes to that end. This principle has been honoured in two world wars by Signalmen of all Commonwealth countries, and has been immortalized in "Through", Corps picture of Royal Signals, British Army.

It has been said that the heat of battle brings forth great deeds from the smallest of men. For example, even amid the fury of Dieppe, the one thought "the message must get through" remained uppermost in the mind of Signalman J. F. Crosby, MM, over the more basic instinct of self-preservation.

Crosby had been one of the men who, with No. 18 sets strapped to their shoulders—the protruding aerials making them conspicuous targets—had scurried up the fire-swept beach and huddled against the sea-wall, accompanying their battalion commanders in their desperate attempts to cross the boulevard.

When his set was shot off this Signalman's back, the Essex Scottish was cut off from its Brigade Headquarters. Nearby a regimental signaller of "C" Company lay dead beside his set, indicating that the

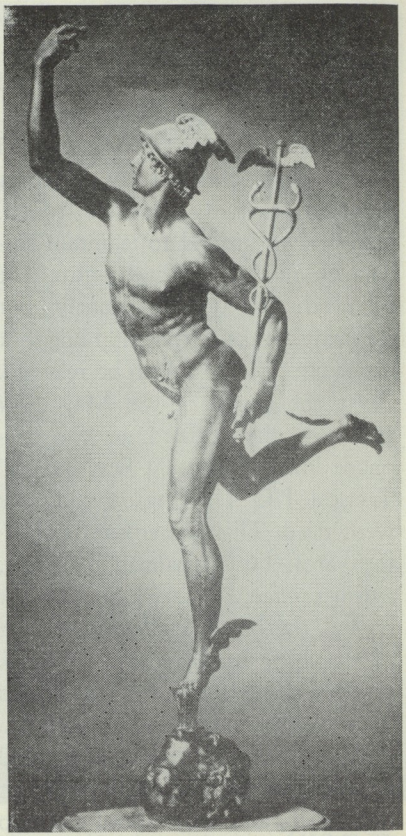
*Full title: Royal Canadian Corps of Signals; *short title, for use in unofficial publications, in conversation and on visiting cards:* Royal Canadian Signals; *abbreviated title for use in official publications and after a unit's title or officer's name:* RC Signals; *abbreviated title for use in the field:* RC Sigs.

† See Fifty years of Canadian Military Communications, *Canadian Army Journal, October 1953.*

CO was cut off from his companies as well. It was a matter of minutes before Crosby had his colleague's set in operation. Displaying great coolness and skill, Sigmn. Crosby was able to keep the companies of the Essex in communication with their headquarters and, by quickly changing frequency, to put his set on the brigade command net and relay valuable information back to higher formations. As any wireless operator knows, this was no mean feat, particularly when the set is a No. 18, and the operator under heavy fire.

Before being taken prisoner, Sigmn. Crosby managed to report to the Headquarters ship *Calpe* the location of a gun emplacement that was playing havoc with retiring troops. Acting on his information the *Calpe* steamed in close to the beach and destroyed the target, meanwhile drawing heavy fire on herself.

The traditional hazards of dispatch-riding, renowned in the First World War, were soon found to be equally prevalent in the Second World War. In Hong Kong, for example, DR runs on the north side of the island were extremely dangerous affairs in the days immediately after the Japanese crossing, and eventually only those who, knowing "the message must get through" and volunteered to risk the heavy fire, were sent out. Of these, Corporal R. Speller survived, but two others were caught by machine-gunners on an open stretch of road.



The statue of Mercury by Giovanni da Bologna in the *Museo Nazionale*, Florence, which served as a model for the figure on the Royal Canadian Signals' cap badge.

With the telephone serving as the backbone of wartime communications, it was natural enough that linemen should be among the most conspicuously courageous signalmen. While the Loyal Edmonton Regiment was fighting its way into the heavily fortified outskirts of Ortona during

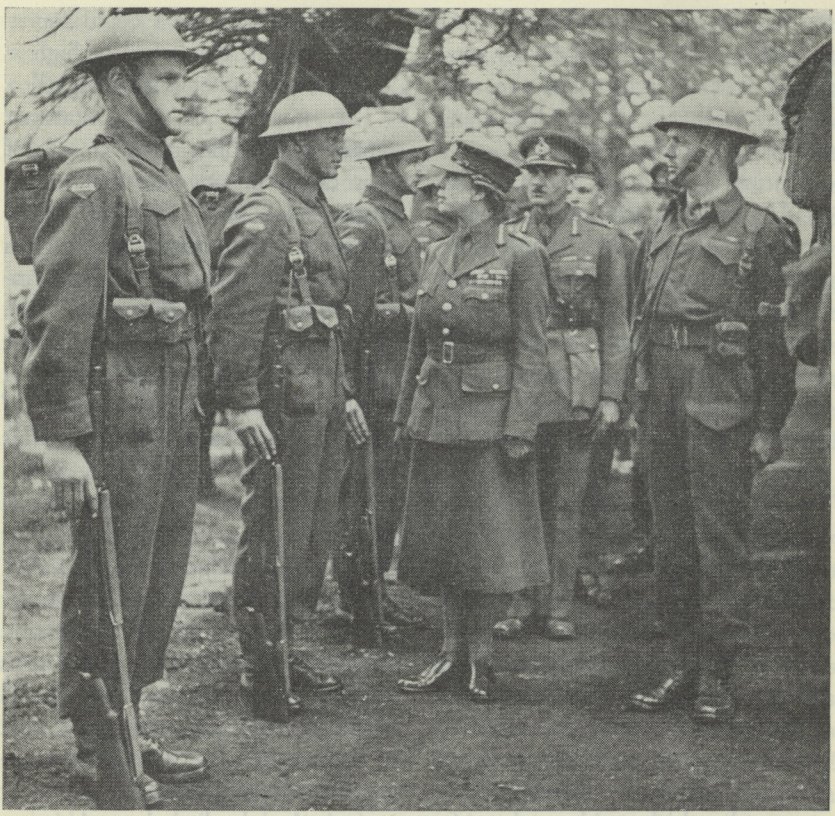
Christmas week, 1943, it was in constant touch with its Brigade Headquarters, thanks to an iron-nerved lineman of 1st Divisional Signals. Corporal J. Hayley, MM, dragged assault cable forward by hand at night over two miles of rough, mine-strewn ground to maintain this contact. In the days and nights that followed, he was constantly out repairing breaks in this vital line, but never once did he ask to be relieved.

At the height of the May 1944 attack on the Hitler Line, the telephone line between 1st Division and Tactical HQ 1st Brigade suddenly went dead. This line crossed a shell-torn area, but Signalman J. Foran, a driver, offered to take a lineman out to find the break. Half-way out the battle-weary lineman suffered shock amid bursting shells and Foran did some quick thinking, administered a stunning blow to the shell-shocked lineman, stowed him in a convenient slit trench, and went ahead alone to find and mend the break, despite a limited knowledge of the trade. The job done, he returned with his patient and turned him over to the medical orderlies, and the GOC was again in contact with his leading brigade.

In Ceprano, Lance-Sergeant R. F. Seabrook, MM, and his linemen of "J" Troop, 5th Armoured Divisional Signals, had set up their switchboard in advance of the brigade's arrival and faced the task of laying lines to new battalion positions. Before reaching the first position the jeep struck a mine, and Seabrook was severely wounded. Realizing that the brigadier was in urgent need of the lines, he continued with his detachment until he fell exhausted, but his perseverence and example encouraged the men to complete the task.

This sort of spirit was not, of course, confined to linemen. In mid-afternoon of July 13th, 1944, Cpl. M. S. Scott, MM, was on duty at the 9th Brigade rear-link wireless set working to 3rd Divisional Headquarters in Normandy. Enemy shells began to fall in the very courtyard in which Scott and a fellow operator had sited their vehicle. Scott's companion was wounded and his vehicle perforated. Clambering from the lorry, Scott laid remote control lines into the safety of the building and connected them to the sets. The result was that both the brigade command set and the rear-link set continued to operate at a critical time, the one to divisional headquarters and the other to the forward battalions.

When HQ 3rd Canadian Division was at Cormelles the Signal Office area received several direct hits which killed or wounded most of the shift on duty and disrupted all line communications to the brigades. Sgt. G. H. Bird, the superintendent, although wounded in the face, body and legs, was found nonchalantly giving in-



National Defence Photograph

In 1940 the Royal Canadian Corps of Signals was honoured by the appointment of H.R.H. The Princess Royal, sister of His Majesty the late King George VI, as Colonel-in-Chief. Her Royal Highness is seen here inspecting the 2nd Canadian Corps Signals in England during the Second World War, accompanied by Lieut.-General G. G. Simonds, CB, CBE, DSO, CD, now Chief of the General Staff, Canadian Army. The Princess Royal inspected most of the Canadian Signals units overseas, and has continued to take an active interest in Corps activities.

struction regarding security documents, repairing equipment, and ensuring that the office would be in a position to carry on with message traffic. When ordered to leave his post, Bird declined until he was satisfied that all was well. The 3rd Divisional Signals' fatal casualty list that day included nine names.

Nearby, Signalman J. J. Stearne sat at the tactical headquarters' wireless set operating the RT link to the brigades. A bomb destroyed part of his vehicle and wounded a staff officer. Signalman Stearne, ignoring the threat of bombs falling all about,

remained at the set and kept the net in operation throughout a very vital period when wireless was the only link between the headquarters and the forward troops.

During the fighting near Olendon on August 15th, 1944, the Canadian Scottish Regiment was almost overrun by a particularly fierce German counter-attack. The RC Signals' rear-link wireless operator volunteered to deliver orders from the commanding officer to a machine-gun emplacement some 200 yards distant. His route lay across an open field in full view of the enemy and he was killed by a sniper's bullet in a gallant attempt to "get the message through".

"Living dangerously" is an experience common to all dispatch riders in the Corps. After the fall of Falaise, Signalman Breeds of "L" Section, 2nd Divisional Signals, came up to a brigade command post and was ordered to go forward in an armoured vehicle with packets for the South Saskatchewan Regiment. It was late twilight and the route was strange, and before long Breeds and a companion found themselves in the midst of a German convoy. Hand-to-hand fighting ensued, and Breeds was seriously wounded in the encounter; but the packets were delivered, and he received the highest tribute his brigade commander could pay:

> "One of the best DR's who ever rode. If Breeds took an important dispatch I could forget about it. Come hell or high water, he would get it through."

The number of such stalwart signalmen is uncounted, most of their deeds unsung. In the Second World War the stress of battle seemed to bring forth the best in everyone and there were many occasions when a crew of two or three signalmen saved the day. During the last week of February 1945, 6th Field Regiment was firing in support of 2nd Division troops about to assault the plateau south of Calcar. When heavy shelling severed the lines to all three batteries at 0430 hrs. the duty Signals NCO, Cpl. A. E. Kimball, went out on patrol at once, and under intense fire repaired all breaks and continued to patrol the lines, thus enabling the fire orders to be relayed from the regimental command post to the batteries supporting the infantry. For this NCO the night's work was routine: he had done the same thing many times since the regiment landed in France.

The 4th Division was operating on the south flank of the 2nd during the last week of February when a similar feat by a wireless sergeant saved communications in one of the armoured regiments. Just as the Grenadier Guards were reaching their objective, the tank carrying their rear-link wireless set was knocked out and communication lost. It was the

critical moment of the attack, and it was imperative that the brigade commander keep in contact with this regiment. Sgt. T. W. Brydon of "W" Troop hurried forward in the only available vehicle, a Humber scout car, making his way across territory laced with anti-tank fire, and managed to reach No. 1 Squadron of the Guards. He re-established communications with brigade headquarters and remained with the squadron in his unarmoured vehicle, under heavy mortaring and shelling, until the action finished.

Mines were even more plentiful in this region than before and they added to Signals' hazards in devious ways. Two linemen from First Canadian Army Signals, for example, were building a route through the forest. While erecting poles the previous day they had walked over the road verges several times, and so had no suspicion of mines. One lineman put a ladder to a pole and climbed it; a second stood below to steady it. While the work was proceeding above, the man at the base of the ladder moved his feet ever so little, but enough to explode a mine. This signalman lost both feet, the price of getting the line through.

In Korea, for Signals linemen it was the same thing again, only more so; nowhere had worse ground conditions for line-laying been encountered. There were other difficulties, too. One night Cpl. L. Roberts of 25th Infantry Brigade Signal Troop took a two-man line party out to check a dead cable. They isolated the break as being between two particular test points, but there the easy part of the job ended. Although they searched all night at great personal peril, no trace of the line could be found, let alone the break. It turned out that someone who likely had a desperate need of wire had made off with an entire section of the line, but the repair crew didn't realize this until dawn.

On another occasion, Cpl. Roberts' men risked their lives during heavy shelling to go out and repair a line to a forward company and found that enemy shells had had nothing to do with disrupting the circuit. Natives doing laundry for front-line troops had been using the line to dry clothes and had over-estimated its strength!

Nor have instances of signalmen endangering their lives "that the message might get through" been confined to times of war. In the far north, for example, signalmen of the North-West Territories and Yukon Radio System never know when their courage and stamina will be put to the test. The history of the System is filled with instances of heroic action.

Typical of these incidents was the case of the Hay River rescue. An ice jam had blocked the mouth of the river in May 1950. Behind the dam of

ice, swirling waters had risen some ten feet above their normal level, flooding a good part of the town of Hay River, NWT, which straddles the stream at this point. With the pressure of the rising water threatening to burst the ice jam at any moment, any attempt to cross the ice was a decidedly risky business but there was no other way to reach the far side.

At 0200 hrs. on 5 May, a message was telephoned to Signalman M. T. Carter at the local RC Signals radio station. Across the water in the Hay River Hospital, an Indian woman lay in a serious condition, and the nurse in charge was in need of medical instructions. Towards 5 a.m. Carter received the required instructions by radio from a doctor at Yellowknife. However, river ice had by then severed the telephone line to the hospital and there was but one way to deliver the message. Knowing the risk involved, without hesitation Carter made his perilous way over the ice just before dawn and, without regard for his own safety, returned with a further message for the doctor.

Orders to evacuate the patient for an emergency operation came at 0800 hrs. and Carter again crossed the hazardous ice, which was now straining visibly under the weight of water above. He then helped to carry the patient back over the river to the airport, minutes before the raging water broke through the ice-jam, and the hospital was completely isolated. For his unselfishness and fearless conduct on this occasion, Sigmn. Carter was awarded the King's Commendation for Brave Conduct.

It is to such men that the communications of the Canadian Army have been entrusted. Their example, and that of their predecessors, is in the highest tradition of the Royal Canadian Corps of Signals.

Corps Appointments

Only four Corps of the Canadian Army have been honoured by the appointment of a member of the Royal Family as Colonel-in-Chief: Royal Canadian Engineers (HM The Queen),* Royal Canadian Signals (HRH The Princess Royal), Royal Canadian Army Service Corps (HRH The Duke of Gloucester) and Royal Canadian Army Medical Corps (HM The Queen Mother). The Princess Royal, sister of the late King George VI, is also Colonel-in-Chief of Royal Signals, and of the Signal Corps of South Africa, India and Australia, and of the Canadian Scottish Regiment (Princess Mary's). During the Second World War she visited most Signals units of the Canadian Army Overseas, and has continued to take an interest in Corps activities, particularly Signals

*In addition, HM The Queen is Captain General of the Royal Canadian Artillery.

Courtesy "The Wire"

This well-known painting of a tragic incident which occurred during the First World War depicts a Signals lineman who met death by enemy fire, but not before he had mended a broken telephone line to uphold the tradition that "the message must get through!"

Welfare Incorporated, the only Corps organization of its kind in Canada.

The senior Corps appointment in Canada is the Honorary Colonel-Commandant. The holder of this office* is appointed by the Minister of National Defence, in recognition of outstanding service to Royal Canadian Signals, and becomes titular head of all elements of the Corps during his term of office. He is second only to the Colonel-in-Chief, and his is a position of great responsibility, which entails considerable labour. His most important duty on behalf of the Corps is acting as the link between the Colonel-in-Chief, Her Royal Highness the Princess Royal, and her Corps. The great interest taken by Her Royal Highness in all Corps activities is perhaps not generally appreciated and the Honorary Colonel-Commandant is the channel through which information reaches her and through which she makes her wishes known.

Corps Badge, Motto and Emblem

When the Corps was first formed, in 1903, under the ægis of Captain Bruce Carruthers, then "A.A.G. for Signalling" at NDHQ, it was natural

**Presently Brig. A. W. Beament, CBE, VD, CD.*

that he should turn to his British Army Cavalry background for guidance in the question of badges and colours.

A former 21st Lancers officer, Captain Carruthers ingeniously adapted the badge of his old regiment (consisting of crossed lances and pennants behind the Roman numerals XXI, surmounted by the Royal Crown) by converting the lances and pennants to crossed signalling flags and XXI to CSC (Canadian Signal Corps). The Royal Crown remained, and the whole design was surmounted upon a beaver and a sprig of maple leaves, a scroll beneath bearing the Corps motto signalmen have come to know so well: VELOX VERSUTUS VIGILANS.

The first and last words, of course, mean "speed" and "watchfulness", but the interpretation of the Latin word *versutus* is a little ambiguous, meaning among other things anything crafty, deceitful or sly; but in its connection with the Corps motto, it is generally interpreted as "accuracy". Just which English word Captain Carruthers had in mind when he selected it will, unfortunately, never be known, for he died in 1910 at Kingston, later to become the home city of the Corps he founded.

In 1920 the newly-formed Royal Corps of Signals in the British Army adopted a badge consisting of Mercury (the messenger of the Gods, in Roman mythology) running upon the globe, bearing in his raised right hand the torch to light his way, and in his left, the cadeuceus or special stick, with serpent entwined, in which the ancient messenger carried his dispatch.

Like Signals' blue-and-white armband of today, the cadeuceus was the emblem which cleared his way. At some period the torch appears to have burned out, as it is seldom seen in current forms of the badge. In the original British other ranks' badge, the figure was enclosed in a scroll bearing the words ROYAL CORPS OF SIGNALS, replaced in the officers' badge and the present men's badge by a scroll beneath the globe bearing the motto *Certa Cito*, the Royal Crown surmounting the whole. This badge has been adopted intact by the Royal Australian Corps of Signals, and with variations by the Corps of Indian Signals and the Ceylon and Pakistan Signal Corps.

When the Canadian and British Corps became allied, it was decided that Canadian Signals would conform generally to the dress and badges of Royal Signals. In changing the badge, however, it was agreed that, while conforming to that of the Royal Corps of Signals as closely as possible, the sentiment and tradition embodied in the old one would not be relinquished entirely. Therefore, the present cap

badge* was designed, showing Mercury (fondly called "Jimmy") running upon the world and enclosed in an oval scroll bearing the words in relief CANADIAN CORPS OF SIGNALS but, as distinct from the British badge, supported by the beaver, sprays of maple leaves, and the original motto of the old CSC badge, the whole surmounted by the Royal Crown.

The old CSC design has been retained in the present collar badge, practically unchanged except that the badge has been designed in pairs (the beaver facing inward on both right and left badges) and the letters CSC replaced by RCCS.†

Corps Colours and Corps Flag

The Corps Colours are those of the Royal Corps of Signals: Light Blue, Dark Blue and Dark Green, in the proportions of one dark blue to three light blue and three dark green. When displayed horizontally, the light blue will be uppermost; when arranged vertically, it will be to the observer's left.

These colours are to be found in the Corps Flag (normally 3 feet by 2 feet with Corps Colours in three horizontal bands in proper proportion), the Corps Tie (navy blue silk material with Corps Colours in diagonal stripes sloping from right shoulder to left hip) and are used in decorative displays and printed material on Corps occasions.

Another colour combination traditionally associated with Signals is the horizontal grouping of two bands of colour, blue and white (white uppermost). This combination is used principally in the field, in the armband and in vehicle tactical signs, as a means of quick identification. In the First World War, the blue-and-white armband gained the reputation that any man wearing it could be entrusted with the delivery of message by the most expeditious means, and it guaranteed its wearer precedence over other road traffic. In recent years it has been used mainly for the latter purpose by dispatch-riders. In vehicle tactical signs, and those posted outside signal offices, red figures are superimposed, outlined in white where they cover the blue portion.

Corps March

The regimental quick march, "The Royal Signals March" approved for Royal Signals in 1929, has been adopted by the Royal Canadian Corps of Signals. It is based on the traditional airs "Begone, Dull Care" and "Newcastle".

**Officially described as "an oval surmounted by a crown with the figure of Mercury inset, standing on a globe. Partly encircling the oval two sprays of maple leaves with stems crossed, the whole resting on a scroll inscribed: VELOX·VERSUTUS·VIGILANS."*

†Although it appears on the approved collar badge and brass shoulder titles, "RCCS" is not a correct abbreviated title for the Corps.

Distinction in Dress

Two distinctions in dress practised by Royal Signals have been adopted by Royal Canadian Signals: a dark blue silk knotted Corps lanyard worn by all ranks on the right shoulder and a metal Figure of Mercury badge worn above the chevrons on both sleeves by Sergeants and Staff Sergeants. In addition, a distinctive buckle for the web waist belt* has been approved for off-duty wear by Royal Canadian Signals, but is not provided at public expense.

Pride In Their Corps

The traditions which have been honoured by Canadian Signalmen in two world wars and in Korea, during rigorous duty in Northern Canada, and as they have gone about their daily work under less trying conditions, and which have contributed to a feeling of pride in their Corps, may be summarized briefly:

Guiding Principle: "The Message Must Get Through!"

Colonel-in-Chief: HRH The Princess Royal.

Corps Motto: "Velox, Versutus, Vigilans".

Corps Emblem: Mercury ("Jimmy").

Corps Colours: Light Blue, Dark Blue, Dark Green.

Corps Flag: Corps colours, arranged horizontally.

Corps Badge: (See illustration of badge on title page).

Regimental March: "Begone, Dull Care".

Distinctions in Dress: 1. Dark blue silk lanyard on right shoulder; 2. Corps buckle for web waist belt (off duty).

*Not yet available for general issue.

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A Pyrrhic Victory

Pyrrhus, when he was congratulated on his victory after the Battle of Asculum, 279 B.C., said: "Another such victory and we are undone."

And so a Pyrrhic Victory is one which hurts the victor more than it benefits him.

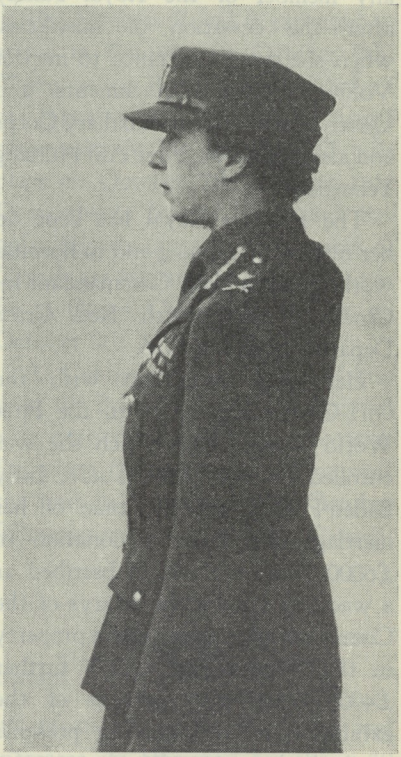
THE PRINCESS ROYAL TO VISIT SIGNALS

PREPARED SPECIALLY FOR THE CANADIAN ARMY JOURNAL BY THE DIRECTORATE OF SIGNALS, ARMY HEADQUARTERS, OTTAWA

Ever since the late King George VI approved the appointment of his sister, HRH the Princess Royal, as Colonel-in-Chief of the Royal Canadian Corps of Signals in 1940, it has been the ambition of the Corps to welcome Her Royal Highness to Canada. At last, this ambition is going to be realized. Her Royal Highness has graciously accepted an invitation from His Excellency the Governor General to visit Canada in October this year as the guest of her Corps, and a Corps Committee under the chairmanship of the Honorary Colonel-Commandant, Brigadier A. W. Beament, CBE, VD, CD, is working on plans to make this Royal Visit a memorable one.

Although the Colonel-in-Chief visited almost every Canadian Signals unit overseas during the Second World War, there are many serving in the Corps today who have not had the opportunity of meeting her.

The Princess Royal, only daughter of the late King George V and Queen Mary, was born at York Cottage, Sandringham, on 25th April 1897, and christened Victoria Alexandra Alice Mary.



The Princess Royal.

During the First World War the Princess Royal—then known as Princess Mary—took up nursing. She formed a Voluntary Aid Detachment with a group of her friends who met at Buckingham Palace for lectures

and examinations. As a VAD she attended at the Great Ormond Street Hospital for Sick Children in London and continued to work there until 1920. Shortly after the Armistice she paid the first visit overseas of any member of the Royal Family after the cessation of hostilities, when she went to France to inspect Voluntary Aid Detachments and Queen Mary's Army Auxiliary Corps and also visited the First Aid Nursing Yeomanry.

The Princess Royal has kept up her interest in nursing and in hospital work. She has been Commandant-in-Chief of the British Red Cross Departments since 1926.

Her long association with the Girl Guides also began in the First World War, during which she was enrolled by the Chief Guide, Lady Baden-Powell. At the time of her marriage she made a donation of £6000 from the sum subscribed as a wedding gift by the Marys of the Commonwealth to acquire a property in the New Forest, and a further £4000 from the proceeds of the exhibition of her wedding presents to equip it as a training centre for the Girl Guides.

During the Second World War she presented the Admiralty with 20 motor ambulances bought with money collected by the Girl Guides.

In 1921 the engagement was announced of Princess Mary to Viscount Lascelles, later 6th Earl of Harewood, and they were married in Westminster Abbey in February 1922. The present Lord Harewood, who succeeded to the earldom on his father's death in 1947, was born in 1923 and his brother, the Hon. Gerald Lascelles, who inherited the family sugar estates in Barbados, in the following year. Both brothers served in the Second World War, holding commissions in the Grenadier Guards and Rifle Brigade, respectively. Lord Harewood married in September 1949 and the Hon. Gerald Lascelles married in July 1952.

After her marriage Princess Mary spent much of her life in Yorkshire, first at Goldsborough House and later, after her husband succeeded to the earldom, at Harewood House. Harewood remains her home, but when in London her official residence is St James's Palace.

In 1932 King George V conferred on Princess Mary the title of Princess Royal. The late Lord Harewood was a Steward of the Jockey Club, and the Princess Royal shared his interest in the Turf and both breeds and owns race-horses.

The Princess Royal accepted the position of Colonel-in-Chief of the West Yorkshire Regiment in 1947. She has been Colonel-in-Chief of the Royal Scots since she became twenty-one, and is also Colonel-in-Chief of the Royal Corps of Signals in the

United Kingdom, of the Signal Corps of a number of Commonwealth countries, and also of the regiment which bears her name, the Canadian Scottish Regiment (Princess Mary's). She joined the ATS (Auxiliary Territorial Service, now the Women's Royal Army Corps) shortly after its formation in 1938 and took the rank of Controller in Yorkshire. Early in 1940 she became Chief Controller and in August 1941 accepted the position of Controller Commandant. As Controller Commandant of the WRAC she today holds the rank of Major-General.

The Princess Royal received the Imperial Order of the Crown of India in 1919, the GBE in 1927, the GCVO in 1937, and is a Dame Grand Cross of the Order of St John.

The Princess is expected to arrive at Quebec City in late September, where she will be met by representatives of her Royal Canadian Corps of Signals. She has been invited by His Excellency the Governor General to be his guest at the Citadel in Quebec City, his official summer residence, and later at Government House in Ottawa.

The Princess Royal is expected to arrive in Kingston on October 7th. There, at the Royal Canadian School of Signals, the Corps' principal ceremonies in her honour will take place on October 7th, 8th and 9th. Detachments from Militia and Regular Signals units from all parts of Canada are expected to be in Kingston for a Corps Ceremonial Parade on October 8th.

As Colonel-in-Chief of the Militia unit, the Princess Royal has accepted an invitation by the Canadian Scottish Regiment (Princess Mary's) to visit the unit in Victoria in mid-October following events in Eastern Canada.

Water Distillation

Britain's Royal Naval Scientific Service has developed a new method of distilling fresh water from seawater at a saving of $1,500,000 a year. This is done by introducing a new chemical compound into existing evaporators. The new compound prevents scaling and the formation of foam. It prolongs the operating life of an evaporator five times and increases its efficiency by about 30 per cent. With the new compound fresh water can be produced on board ship at a cost of about $1.68 a ton, as against $2.52 a ton before the present method of treatment.—*From the Marine Corps Gazette (U.S.).*

Presentation Commemorates Unique Commonwealth Signals Partnership

A report issued by the Directorate of the Royal Canadian Corps of Signals, Army Headquarters, Ottawa

Among the various historic mementos which decorate the Royal Canadian Signals Officers' Mess at Kingston few are more unique than the most recent presentation to the Corps — a silver statuette of a "KATCOM" lineman.

The statuette is a gift from the officers of the 1st Commonwealth Divisional Signal Regiment, a unit unique in the history of Signals, in that officers and men of four Commonwealth Signal Corps served side-by-side in it. Duplicates were presented to Royal Australian, Royal New Zealand and Royal Signals, to commemorate the fine record of the Regiment, and to perpetuate the spirit of co-operation and friendship which existed among all who served in it.

The figure personified in the trophy is representative of the Korean Army signals tradesmen attached to the Regiment for the past year and a half. The cheerful manner in which they served with complete strangers and foreigners typified the spirit of the Regiment.

AS YOUNG AS YOUR FAITH

Youth is not entirely a time of life—it is a state of mind. It is not wholly a matter of ripe cheeks, red lips or supple knees. It is a temper of the will, a quality of the imagination, a vigour of the emotions. . . Nobody grows old by merely living a number of years. People grow old only by deserting their ideals. . . You are as young as your faith, as old as your doubt; as young as your self-confidence, as old as your fear; as young as your hope, as old as your despair. In the central place of every heart there is a recording chamber; so long as it receives messages of beauty, hope, cheer and courage, so long are you young. When the wires are all down and your heart is covered with the snows of pessimism and the ice of cynicism, then, and then only, are you grown old.—*General Douglas MacArthur.*

THE ROYAL CANADIAN ARMY SERVICE CORPS

CORPS SENDS GREETINGS TO COLONEL-IN-CHIEF

Contributed by the Director of Supplies and Transport,
Army Headquarters, Ottawa

As is the custom each year, birthday greetings were dispatched to the Colonel-in-Chief, General His Royal Highness, The Duke of Gloucester, Earl of Ulster, KG, KT, KP, GCB, GCMG, GCVO, by the Honorary Colonel Commandant, the Royal Canadian Army Service Corps, Colonel O. H. Barrett, OBE, ED, for the 30th March, 1955.

Following is the message:

Ottawa, Canada,
30th March, 1955.

General His Royal Highness,
The Duke of Gloucester,
York House, London (England).

ALL RANKS ROYAL CANADIAN ARMY SERVICE CORPS SEND THEIR BEST WISHES ON THE OCCASION OF THE BIRTHDAY OF THEIR COLONEL-IN-CHIEF.

Colonel O. H. Barrett,
Honorary Colonel Commandant,
Royal Canadian Army Service Corps.

The following message was received in reply from His Royal Highness, on the occasion of his birthday, 31st March, 1955:

Buckingham Palace,
London, 31 Mar 55.

Colonel Barrett,
Royal Canadian Army Service Corps, OTTAWA.

MY SINCERE THANKS TO ALL RANKS ROYAL CANADIAN ARMY SERVICE CORPS FOR THEIR KIND BIRTHDAY CONGRATULATIONS.

HENRY COLONEL-IN-CHIEF.

FLAME THROWER FUEL— ITS USE IN KOREA

By
Lieut. R. T. Preston, No. 5 Transport Company,
Royal Canadian Army Service Corps

Introduction

During the Second World War in North-West Europe, all flame thrower fuel supplied to Commonwealth troops was factory-mixed in England. The more recent trend has been towards the mixing of flame thrower fuel (FTF) on a divisional, or lower, level. Although the demands were not nearly as high in Korea as they were in North-West Europe, some lessons have been learned which should prove valuable if this level of mixing is standardized in the future.

FTF was classified in Korea as an ammunition. All First Commonwealth Division requirements were prepared, stored and issued by the composite platoon personnel of No. 5 Canadian Transport Company, Royal Canadian Army Service Corps. The actual mixing, accounting and issuing was done by a Corporal Driver Mechanic on establishment as the FTF Corporal, along with one Korean labourer as his assistant.

Description of Equipment

The apparatus for the preparation of FTF in Korea was of U.S. design and manufacture. It was termed the M4 Field Service Unit and was designed to service a U.S. tank-borne flame thrower with flame fuel and propellant air pressure. The unit, the basic component of which is a water-jacketed, 250-gallon mixing tank, is mounted on a 2½ ton GMC truck. A fuel batch can be agitated in the tank by means of an impellor blade, additional mixing being provided by continuous circulation of the tank contents from the bottom of the tank through a gear pump and reintroduction into the top of the tank.

Power for the unit is derived through a power take-off from the truck engine. The fuel mix may be heated by circulation of the engine coolant through the jacket surrounding the tank, the temperature being controlled by adjustment of two plug cocks located on the coolant lines leading from the motor. In addition to the mixer, a 4-stage 200 cubic feet per minute, 2500-pound per square inch air compressor is mounted on the truck in such a manner that both units may be operated singly or in unison.

Operation

When the mixer is in operation, the vehicle must be stationary. Once the motor is running at governed speed and the power take-off engaged, the pump and impellor can be thrown in gear by means of lever-operated clutches mounted adjacent to the mixing tank. The required amount of gasoline is pumped into the tank using the gear pump. The coolant flow is then adjusted and the gasoline allowed, under continual agitation, to heat up to the desired mixing temperature. The remaining ingredients may then be added in turn.

Under summer conditions, where the gasoline is normally close to the ideal mixing temperature, two 250-gallon batches can be prepared within an hour or 4000 gallons in an 8-hour day. In cold weather where prolonged pre-heating is necessary this rate may be reduced by one-quarter so that only 1000 gallons are produced in 8 hours.

Conscientious maintenance of the mixer is very important. The initial cost of the equipment is very high and replacement parts are almost unobtainable. The present machine has not been in use for long; however, it was manufactured during the Second World War and consequently rubber gaskets and drive belts have deteriorated. This mixer was the second one to be used by the Commonwealth Division, the first having been backloaded because of irreplaceable worn-out parts.

Ingredients of the Fuel

The basic ingredient of FTF is gasoline. This acts as a solvent for the other ingredients and is the only inflammable agent. Almost any type of gasoline, regardless of octane rating, will suffice so long as it is free from water. Water content, although not high enough to affect the performance of the gasoline in engines, is sufficient to impair the quality of the FTF. Consequently, various other gasolines have been employed in this role. 80 Octane Avgas has been used successfully but its relatively high cost is prohibitive. Unleaded 60 octane gasoline, primarily intended as a fuel for lanterns and certain stoves, was used by No. 5 Transport Company. This gasoline arrived in 45-gallon drums directly from source, so that it was relatively free from moisture. When required, it was pumped with the gear pump on the mixer directly from the containers into the mixing tank.

A thickening agent was employed to increase the viscosity of the gasoline and make it suitable for projection from a flame thrower. This agent is an aluminium soap. It forms a solution with gasoline resulting in an elastic, jelly-like substance capable of clinging together in a solid rod when fired from a flame thrower.

The time required for dissolution of the thickener in the gasoline is dependent upon the mixing temperature. The higher this temperature, the faster the absorption takes place. The thickening agent used in Korea was shipped from Canada in moisture-proof bags each containing 9 lb. 5 oz. of powder. The bags were crated four to a wooden box for overseas shipment. The required amount of powder for any one batch was weighed on a platform scale and added to the gasoline when the proper temperature was reached.

To facilitate mixing, as well as to produce better burning qualities in the final product, a third ingredient termed a peptizer is added. This peptizer is an organic liquid. It assists in the solution of the thickener by permitting a lower mixing temperature to be used. The thickening agent, when dissolved in gasoline, reduces the vapour pressure of the gasoline and hence lessens the flammability to a degree proportional to the quantity of thickener employed. Addition of a peptizer tends to neutralize this effect. It was shipped to the theatre in 5-gallon cans, two to a crate. Prior to addition to a mix, it was decanted and weighed, as was the thickener. After the latter had been thoroughly dispersed throughout the gasoline, a period of 10 minutes usually, the peptizer was introduced and mixing continued for a further 10–15 minutes or until a noticeable thickening of the mix took place. This is called the "stir" point and is distinguished by a lack of frothiness and the disappearance of the usual vortex created by the impellor blade. The mix may then be pumped into 45-gallon drums.

All the ingredients, except gasoline, were stored along with the platform scale in an IG half-round shelter in the mixing area adjacent to the location of the mixer itself. Drums of gasoline and maturing fuel were stored in the open under tarpaulins.

Five basic fuels were mixed at various times in Korea. These were summer and winter fuels for the Wasp and man-pack flame throwers and a year-round fuel for use in flame landmines.

Stability of the fuel in storage is a major problem in Korea. Wide temperature variations from day to day and day to night result in "breathing" through the bung-holes in the drum. Because of the very humid air, especially in summer, the "breathing" creates moisture condensation on the interior of the drums which very quickly lowers the viscosity of the fuel and eventually leads to a complete break-down of the gel structure, rendering the fuel useless for flame throwers. The same result occurs if the ingredients are not almost completely anhydrous. Similarly, the

drums to be filled with fuel must be inspected for traces of moisture, and if found, must be discarded as no proper drum cleaning facilities exist.

Selection of Suitable Fuels and the Determining Factors

The relative suitability of a fuel for use in a flame thrower is determined by a measurement known as a Gardner Reading. It is obtained through the use of a Gardner Mobilometer. The instrument consists of a vertical tube in which a piston-like plunger and rod move up and down. In operation, the tube is filled with a sample of the fuel to be measured, weights are placed on the rod and the time this weight takes to force the plunger down through the fuel is recorded. A number of such readings, not less than three, are taken and the results are plotted on a graph. The Gardner Reading is a measure of the fuel's relative viscosity.

A usable FTF must have certain characteristics. The three most important ones are these: it must be capable of being projected in a solid stream from a flame thrower; it must be readily ignitable; and it must be stable in storage. In general, the smaller the amount of additives in a fuel the thinner or less viscous the fuel, and hence its stability and resistance to shattering in flight, which reduces the range of the shot, are decreased, while, on the other hand, its ease of ignition and general burning qualities are improved. A phenomenon apparent in flame shots is that an ignited one always travels at least twice as far as an unignited one; hence, to achieve maximum range, the rod must be burning fiercely in flight. Obviously a compromise must be achieved amongst these characteristics to produce the best results from fuel under a given set of circumstances.

The types of flame weapon in which the fuel is to be used must be considered. In the Wasp flame thrower, where the diameter of the ejected rod is fairly large, the shattering force is great, hence a heavy fuel is required to withstand the shock of projection and to achieve maximum range.

In the smaller man-pack flame thrower, a pyrotechnic cartridge ignition system is used which is less efficient than the one used in the Wasp. However, the projection force is less as well, and thus, a lighter, more readily ignitable fuel must be used for the best effect. For landmine fuels, the most important characteristic is stability for long periods of time. The terrific force produced upon explosion of the mine also demands a fuel of great resistance to shock, otherwise the fuel would shatter too badly and reduce the flame-spreading effect of the mine. Hence, a very heavy fuel is employed

in landmines.

One must also consider the weather. In summer, the large variations in temperature assist in the break-down of fuels. The higher temperatures raise the vapour pressure of the gasoline, thus increasing the fuel's ignitability. These factors then suggest the use of heavy fuels. The reverse is true in winter. Cold weather reduces burning qualities and increases stability, thus suggesting a lighter fuel. As stability is the only major factor for landmine fuels, the same fuel is used year-round for convenience.

Storage and Issuing Procedures

Immediately after mixing and draining into 45-gallon steel drums for storage, the fuel resembles applesauce. It is termed "short" because of its lack of elasticity. In this stage it is immature and must be stored for a curing period of at least 24 hours prior to issue. At the completion of this period the fuel is a homogeneous mass and it exhibits marked elastic properties.

Under ideal conditions, the fuel should mature at a constant temperature of approximately 70°F. This is not possible in cold weather, so in winter a period of 48 hours should be allowed prior to issue. In both summer and winter the drums are stored outside under tarpaulins.

The issuing procedure is simple. Units submit demands at least 48 hours in advance through their respective BRASCO's stipulating the type of weapon for which the fuel is required. Demands are then picked up by unit transport.

Issues of fuel were very low in Korea. Because of the static nature of the battle, and the fact that flame is primarily an offensive weapon, it was not used extensively during the campaign. Most of the above issues were to replenish broken-down stocks.

Summary

Experience gained in Korea showed that the field mixing of FTF on a divisional level is feasible. It is felt that the existing establishment of personnel and equipment is adequate and would suffice even in a mobile war where flame is used extensively. The necessity for the use of anhydrous ingredients and careful technique in their mixing is markedly evident when mixing under field conditions.

Sent to Coventry

The expression "Sent to Coventry" originated in the Civil War, when the Parliamentarians sent useless officers or soldiers to the garrison at Coventry.

National Defence Develops New Textile Process

A REPORT PREPARED BY THE DIRECTORATE OF PUBLIC RELATIONS (NATIONAL DEFENCE), OTTAWA

The Department of National Defence has perfected a new method of processing yarn which increases the strength and durability of textiles five to ten times that of ordinary material.

The new process, regarded as a major development in the manufacture of textiles, is based on a method of twisting fibres into yarn. The yarn is now being produced commercially for military use.

Durability of clothing and the necessity of replacement has always been a major problem for the Department of National Defence.

Colonel H. A. Delcellier of Ottawa, Director of Inter-Service Development, began exploration of the problems of strengthening fabrics several years ago. Dr. J. V. Weinberger of Ottawa, well-known textile consultant and head of DID's special projects section, was assigned to direct this particular project.

Patent applications covering the new yarn process have been filed in Canada, the United States and Europe in the names of Colonel Delcellier and Dr. Weinberger by the Department of National Defence. Numerous licensing applications already have been received from private industry.

Cloth produced by the new method is not confined to any specific raw material. All textile fibres such as cotton, wool and various synthetics can be used. The manufactured fabrics benefit to the same degree in strength and durability regardless of the raw material used. In addition to these qualities, the texture of the fabrics is soft and pleasing.

Important to the textile manufacturer is the fact that existing equipment can be adapted easily to handle the new process.

A Critical Comment

When Hannibal was an exile at Ephesus [after a defeat in 202 B.C. at Zama, which brought to an end the Second Punic War with Rome], he was invited to hear a lecture from one Phormio, a philosopher. The lecturer discoursed on things in general and on the duties of a commander-in-chief in particular, and was warmly applauded by his audience. Some of the hearers turned to Hannibal and asked him what he thought of it. "I have seen," said he, "plenty of old fools in my time, but this man beats them all."—*Encyclopædia Britannica (9th ed.).*

THE CANADIAN PROVOST CORPS

A Very Short History

THE CANADIAN PROVOST CORPS

By
Major Q. E. Lawson, MBE, CD, Deputy Provost Marshal,
Army Headquarters, Ottawa

"*The Englishmen which went a-lande fell to drinking of hot wynes and were scarce masters of themselves. Some ran to the Stewes, some broke hegges and spoyled orchards and wyneyards and orynges before they were ripe, and did many other outragious deeds. Wherefore the chefe of the town of Caleys came to complaine to the lord Darcie in his shyppe, which sent forth his Provost Marshal which scarclie with payne refrayned the yomen archers, they were so hot and wilfule: yet by commandment and policie, they were all brought on borde their shyppes*".

This incident, according to the "Biography of Thomas, Baron Darcy" and referring to a British expedition in the year 1511, shows that the troubles of the then Provost Marshal, "Henry Guylford, Esquire, a lusty young man and well-beloved of the King", differed not greatly from those who followed him at Avellino, Groningen, Soest and Sin-San-Ni.

The Articles of War of the various British monarchs from the Middle Ages until the passing of the Army Act in 1879 make many references to the Provost Marshal and his Provost Company and their duties, which were connected largely with discipline. In 1557, under Bloody Mary, he had as part of his Headquarters establishment a chaplain, two judges, two gaolers and two hangmen. History would lead us to believe that they were all busy. And in 1625 during the reign of Charles I we see that the Provost Marshal was responsible for the execution of punishment awarded by Military Court as well as being allowed to take summary action:

" . . . *hath charge of all manners Tortures; as Gyves, Shackles, Bolts, Chains, Bilbowes, Manacles, Whips and the like, and may by his Ministers use them, either in case of judgement or commandment from a Marshal Court, or otherwise upon unruliness at his own discretion. He is by his officers to see that all places of Execution are prepared and furnished with engines fitting to the judgement; whether it be Gallows, Gibets, Scaffolds, Pillories, Stocks or Strappadoes, or any other engine which is set up for terror and affright to such as behold it.*"

Although today there are no "Tortures, Stocks or Strappadoes",

the provost service is responsible to carry out military punishment whether the sentence be one of detention or death.

The history of British and American armies are replete with stories of the duties and importance of the provost service, which in campaigns added such "Q" duties as requisitioning and control of the wagon trains to its "A" aspects of impressment, discipline and supervision of camp followers.

It is surprising that Canadian history is devoid of any mention of a provost service prior to 1914. During the First World War, Military Police (CEF) were employed on detachments at the various military districts in Canada and on 3 April 1918 the Corps of Canadian Military Police with an establishment of 850 in Canada, 294 in England and 160 in France was formed. There were 34 horses on strength and the ever-present notes on the establishment authorized "50% of L/Cpls may be graded as A/Cpls without pay" and " . . . duty pay of 20/c per diem . . . for all NCOs."

On 1 November 1918, Colonel Gilbert Godson-Godson, DSO, DCM, ADC, was appointed as Provost Marshal, Dominion of Canada. He held this appointment until 9 March 1920, when the office and the Corps of Canadian Military Police ceased to exist.

On the outbreak of war in September 1939 each District Depot had a number of Garrison Military Police on its war establishment. These, together with battalion and other regimental police, patrolled streets in the larger cities and operated guard-rooms at the various centres of troop population. From this inauspicious start, what was later to be the Canadian Provost Corps grew to a strength of approximately 8000 officers and men at the end of the war.

The Field Force

During the First World War, traffic control in active theatres gradually became the responsibility of mounted military policemen. With the decline of the horse and the advent of mechanization in the British Army, the military policeman and his motorcycle became an integral part of the division. In 1936, provost companies were formed and trained in the art of traffic control.

In Canada, there were no military police in either the Permanent Active Militia or Non-Permanent Active Militia but the mobilization plan included a provost company with each formation. On 1 November 1939, Canada's first provost company was formed from volunteers from the Royal Canadian Mounted Police. This small force congregated at Rockcliffe Barracks in Ottawa, spent one day being outfitted, one day learning military law and three days

transferring their equestrian abilities to Norton motorcycles. Their "basic training" completed, they went overseas with the main body of the First Canadian Infantry Division. Of this original group more than 50 per cent. were later commissioned and served with the different provost units overseas and in Canada.

As the Second Canadian Infantry Division was being mobilized, No. 2 Provost Company (CASF) was formed and trained by sections in the different military districts. This company which had a high percentage of civil policemen arrived in Aldershot at the time of Dunkirk. It was placed under command Seventh British Corps until October when it rejoined its parent formation. At this time No. 3 Provost Company arrived overseas with the advance contingent of First Canadian Corps. The three field companies then began "to learn the hard way" during division and Corps manœuvres in the winter of 1940–41.

As each successive formation arrived overseas it was accompanied by its own provost unit and by the end of 1941, in addition to the field companies, there were two base companies, a detention barracks, a field punishment camp, a training depot and a special investigation section.

During 1941 and early 1942 the training continued and after Exercise Beaver III an Independent Brigade Group Detachment from No. 2 Company slipped away to the Isle of Wight for assault landing training. On 19 August 1942 the Canadian Provost Corps was blooded at Dieppe. Their role was to be control of the beach and guarding prisoners of war but in the debacle that followed the landing, the men joined and fought with the infantry and engineers. Twenty-eight of the 42 who embarked were casualties. This same company a couple of years later signed and controlled the roads to Dieppe but this time from the landward side.

In July 1943, No. 1 Company landed in Sicily and were joined in Italy later in the year by Nos. 3 and 5 Companies with First Canadian Corps. An L of C Company and Military Detention Barracks were also in the theatre. With the Eighth Army the Corps came into its own, first during the advance up the Adriatic and then through the Liri Valley to Rome. At the Moro River in December 1943, L/Cpl. Butler was awarded the Military Medal. This was the first of 67 British awards, 13 foreign awards and 111 mentions during the war.

As the Provost in Italy were painting and erecting "Out of Bounds" signs while "at rest" just north of Naples, word came through that D-Day for France had arrived. No. 4 Company landed with Third Cana-

dian Infantry Division and was joined at intervals of a few days by Nos. 2, 13, 8 and 11 Companies. These companies, backed up by the British traffic control units with First Canadian Army, had virtually no rest from the time they landed on the continent until the following summer. They were joined by the "Spaghetti-leaguers" in February 1945 and men from every company eventually became part of 2/4 Provost Company when the Occupation Force was formed.

The history of the Canadian Provost Corps in Europe is naturally bound up with its work on traffic control, the prime function of provost in battle. Despite battle, however, the need for disciplinary patrols never ceased and the investigators were always kept busy. The work of the Special Investigation Section and investigations successfully completed by company NCOs is a history in itself.

In Canada

As the field force grew, so did the numbers of Military Police at home. The term "MP" was dropped and the name "Provost" substituted. A new badge, embodying the Royal Cipher, was authorized and on 15 June 1940 the Canadian Provost Corps was born.

For the first few months provost duties consisted entirely of disciplinary patrols, but as new jobs of a quasi-police nature appeared, these responsibilities were accepted. In the spring of 1941, the Canadian Provost Corps assumed the responsibility for the movement of prisoners of war and internees and during the next two years 26000 prisoners were escorted to and from various camps across the country.

Administration of Detention Barracks was a provost responsibility from the start. At one time 31 barracks with a staff of more than 800 had rooms for 2000 "non-paying guests".

In July 1942, the responsibility of apprehension of absentees and deserters was taken over from the Royal Canadian Mounted Police and special powers were granted by Order in Council to provost personnel so that they could require any person to produce his national registration. That these sweeping powers were used wisely was attested when the National Defence Act of 1951 also gave special powers to all trained provost.

One further duty of the provost was the policing of all dock areas, railway stations and mainline trains.

On 1 November 1942, A-32 Canadian Provost Corps Training Centre was established to produce a monthly requirement of 80 reinforcements for field units and 50 for home units, and finally, in September 1942, Canadian Women's Army Corps Provost

were added to the list. By 1945 the strength of the Canadian Provost Corps in Canada reached 3500.

Post-War

In 1946 under Plan H the peacetime strength of the Regular portion of the Corps was cut to 17 officers and 222 other ranks. Other ranks were further reduced in 1947 to the extremely low figure of 118. This number was supposed to do the normal provost duties including special investigation, operate six detention barracks and conduct training at a corps school. The strength of the corps was gradually increased; the Korean War followed by the NATO European contribution built up the strength to its peacetime peak of 100 officers and 1400 other ranks. This has now been restricted to coincide with the existing manpower ceiling, but with fewer disciplinary duties the Canadian Provost Corps is now well-balanced. Trades pay is now at the Group 3 level, detention barracks staff are being trained in modern penal methods and a staff of special investigators is being formed and trained.

The Canadian Provost Corps School at Camp Shilo is one of the best in the Army, training has reached a very high standard and, as an indication of the Corps' skill in musketry, the rifle team from No. 1 Provost Company won the Brigade championship last year in Germany.

Despite the dearth of provost in the Regular Army after the Second World War, an excellent Militia organization was established. Six divisional companies and two corps companies dispersed across Canada kept the corps spirit alive, and through these eight units more than 1000 young men found their way into the Regular forces.

The Far East

During the Korean War, a Canadian Provost force of 150, integrated with the British and Australians, were a part of the famous Com· · wealth Division. The Cana operated the only Detention Barracks in Korea and supplied police and criminal investigators from Tokyo to Seoul. One award and four mentions were made to members of the detachment operating with the Twenty-fifth Infantry Brigade during the period of hostilities.

Great strides have been made since the formation of the Corps of Canadian Military Police in 1918 and its successor, The Canadian Provost Corps in 1940. The superior ed· · tion, intelligence and physique demanded of a recruit before admission to the force has developed a corps which is second to none. The "C Pro C" realizes, however, that it has a long way to go before it reaches its goal—the *corps d'élite* of the Canadian Army.

OTTAWA
EDMOND CLOUTIER
Printer to the Queen's Most Excellent Majesty
1955

19,255—7-55-(8443)
H.Q. 4521-C-3