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"POSTURI "ID PLAY"

LEARN TO PLAY THE GAME WITH OTHERS (This poster to be placed in Barrack Rooms, Canteens and on Units Notice Boards)

> CRESTS SHOWN

> > 2/3

ACTUAL

SIZE

POSTURE

YOUR POSTURE IS OFTEN JUDGED AS A SYMBOL OF YOUR CHARACTER. STAND UP STRAIGHT, LOOK ALERT AND SOLDIER-LIKE. BE SPOKEN OF AS A "GOOD SPORT," NOT A "SLOUCH."

PLAY

LEARN TO PLAY A GAME PROPERLY AND YOU WILL ENJOY IT. PLAY FAIR, PLAY HARD AND PLAY TO WIN FOR YOUR SIDE. IT'S WHAT YOU LEND TO TEAMWORK THAT COUNTS.

OBJECT

In the Posture and Play plan you are taught correct posture and poise and Canadian major games by Army Sports Coaches in the same period. You will be developed physically and made mentally alert by an interesting and

pleasant method that will assist you in other phases of your Military Training. Playing games develops Character, Leadership, Courage, Resourcefulness, Loyalty and the Will to Win. Canadian games, properly coached, develop Canadian Personality.

CANADIAN ARMY SPORTS

WIN A CREST

To qualify for a crest, you must attend the prescribed number of Coaching Lessons for each game during training hours. Records of your achievements are kept and when a fair standard of play and a knowledge of the rules have been attained, the

player then enters into six test games in off-training hours under a Sports Coach who judges his ability. If you do not pass, further coaching will be given to qualify you. Win your crest and wear it. It is proof that you know "How to Play the Game."



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Canadian Army Photo

Col. W. W. Murray, M.C. Director of Military Intelligence from July 1942 to February 1946.

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INTELLIGENCE CORPS

It is entirely coincidental that CATM features The Canadian Intelligence Corps this month, which marks the termination of my own connection with it. This preface, therefore, assumes something of the character of an "Ave atque Vale!" In October 1942 the Corps was an obscure seedling, dwarfed by the surrounding forest-growth of other military arms which, with their wealth of honourable history and their background of heroic achievement, already possessed the stimulus of a great tradition. The Canadian Intelligence Corps had to confront its tasks deficient in these things. But through three years of war, on many fronts, the hardihood, the capacity and the diligence of its members built up a record which is one of the proudest in the military history of the country.

Personnel of the Corps served in North Africa, Sicily, Italy, France and Northwest Europe. They served in India, Australia, Burma, Borneo, the Phillipines, China and Japan, and be it never forgotten that they also served in Canada. Theirs is an adventurous story. Part of it may at some future time be written; some portions will not. But whether it is inscribed in some printed document for all to read, or embalmed in the sepulchre of inaccessible files, the Officers, Non-Commissioned Officers and Men of the Canadian Intelligence Corps enjoy the comforting reflection that the job they did was a vital one, and was magnificently carried out.

What is to become of the Corps in the post-war years I cannot say. However, should it be decided to continue it in either the Active or the Reserve Army, or both, the splendid tradition now developed will be an inspiration and a guidance for future achievement. It will carry on effectively and with fine purpose in that self-effacing fashion that has always characterized it, incorporating in all its work the truth that, in the duties wherein it is engaged, "the game is more than the player of the game."

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DIRECTORS OF ARMS

This month sees the new Directorates of Arms well established and functioning as advisers to the General Staff, NDHQ. This new departure in GS organization is expected to result in special advantages, principally that the Chief of the General Staff will, on any point of organization, training and weapon and equipment policy, have the benefit of advice which will represent the considered opinion of the Arm concerned.

The five Directors of Arms are Col. R. W. Moncel, D.S.O., O.B.E., Armoured Corps; Col. J. S. Ross, D.S.O., Artillery; Col. H. L. Meuser, O.B.E., Engineers; Col. D. Menard, D.S.O., Croix de Guerre et Palmes, Infantry; Col. A. E. Wrinch, C.B.E., Signals.

These Directors form a group possessing a wealth of practical experience in Canada's service. In general, they will assume responsibility for the overall efficiency of their respective Corps, for the inspection of their Corps units on behalf of the CGS, and for advising, as required, on various postings and appointments.

Units will, it is believed, welcome this new aspect of NDHQ organization as re-ensuring adequate presentation of special Corps problems and proposals.

ATLANTIC BATTLE

(From an article in "Britain." Extracted from U.S. Military Review for CATM)

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In the five years and eight months of the European war, 75,000 merchant ships were escorted across the Atlantic by the British, Dominion and European navies working under British control.

Despite the large number of ships escorted—involving some 2,200 convoys, the largest made up of 167 ships only 574 ships were lost in all, one in every 131 which sailed.

There were days in the battle when as many as 700 cargo ships were at sea in the Atlantic with 100 warships protecting them.

Of the 2,200 convoys escorted by ships of the Navy, over 1,250 were also covered by shore-based aircraft, Royal Air Force Coastal Command and the Royal Canadian Air Force flying no less than 43,800 sorties.

Over and above these Atlantic commitments, nearly 1,500 merchant ships were escorted by ships and aircraft carriers of the Home Fleet to and from northern Russia; and 173,000 merchant ships were escorted in some 7,700 British coastal convoys. Extensive convoying was also maintained in the Mediterranean and the Indian Ocean.

Four hundred and sixty German U-boats and 65 Italian have been sunk by British naval and air forces; in addition to this, from preliminary information obtained from German records and captured officers, some 120 more appear to have been sunk.

MESSAGES FROM DIRECTORS OF ARMS



Canadian Army Photo

Col. R. W. Moncel, D.S.O., O.B.E.

Director of Royal Canadian Armoured Corps

Col. Moncel joined the Royal Canadian Regiment in September 1939 and went overseas the same month. He obtained his captaincy in September 1940. During 1941 he took the 1st Canadian Staff Course overseas and was appointed G-3 Operations for the 1st Canadian Corps in the same year. Later he was appointed G-3 1st Canadian Armoured Brigade and during 1941-42 served as Brigade Major in the same Brigade. He was G-2 Operations 5th Armoured Division 1942-43 and was promoted to lieutenant-colonel commanding 18th (Manitoba) Armoured Car Regiment in 1943. During 1943-44 he was G-1 Operations 2nd Canadian Corps and was commander of the 4th Armoured Brigade with the rank of brigadier during 1944-45.

ROYAL CANADIAN ARMOURED CORPS

On the 25th January 1936 the following note appeared on the files at National Defence Headquarters:

To,

C.R.C.

Will you please create a new file entitled "Tank Training" and pass to this directorate.

Major GS For D.M.T. & S.D.

This file has, in the past ten years, grown to many volumes—volumes which trace the development of the Corps from the two Vickers-equipped Carden Loyd Carriers to the formidable Royal Canadian Armoured Corps which fought at Dieppe, through Italy, France, Belgium, Holland and Germany.

It is an inspiring story—a story of perseverance and unshakeable faith in a weapon and its possible application in time of war. This perseverance was rewarded and the faith was justified in the victorious campaigns of this last world conflict.

The honored task of writing the new chapters now lies with us. Strengthened by experience and inspired by great traditions we can look forward to the future of the Corps with complete confidence.

On this and the succeeding four pages CATM publishes messages from the five new Directors of Arms at National Defence Headquarters. These messages and the accompanying biographical sketches will serve to introduce the Directors to members of the various Corps.—Editor.

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Canadian Army Photo

Col. J. S. Ross, D.S.O. Director of Royal Canadian Artillery

Col. Ross graduated from the Royal Military College, Kingston, Ont., in 1934 and was commissioned as a Permanent Force officer in the RCA. Following service in Canada with "B" Battery, RCHA, Kingston, and "C" Battery, RCHA. Winnipeg, he proceeded to England for two years' interchange duty and was attached to the 9th Field Regt., Royal Artillery. In Sept. 1939 he went to France with this regtment, which was the first RA unit of the Brttish Expeditionary Force to land there. After service with the 5th (British) Infantry Division in France and Belgium, he was evacuated from Dunkirk on May 31, 1940, as a Battery Commander. In July 1940 he rejoined the Canadian Army and served with the 1st Field Regt., RCHA, and the 2nd Field Regt., RCA, commanding the 7/35th Fteld Battery in the last-mentioned unit. He returned to Canada and in Nov. 1940 was appointed Chief Instructor at A3 CATC, Winntpeg and Shilo. In July 1941 he was G-2 at Petawawa. He took the 3rd CWSC, which he successfully completed in April 1942, and was then appointed G-2 in DMT at NDHQ. He proceeded overseas again in Oct. 1942 and served in a series of appointments which took him through the Sicilian and Italian campaigns until Dec. 1944 when he was promoted to brigadier and to be CRA 5th Canadian Armoured Division, with which he saw service in further campatgns in Italy and Holland until the division was broken up and returned to Canada. He won his D.S.O. for action at Moro Valley and Ortona in Dec. 1943. Brig. Ross reverted to colonel to assume his present appointment.

ROYAL CANADIAN ARTILLERY

The tremendous contribution made by the Gunners to the final victory in the Second Great War has been acknowledged by senior commanders of all the Allied Armies, and by our enemies, both fully appreciating the importance of Artillery as a weapon in total war.

But now we are once more at peace and we are faced with a task fully as important as the one which we have just completed so successfully. This task is the reorganization of our Armed Forces so that we may be in a position to defend our homes again if ever we are called upon to do so.

The Royal Canadian Artillery has long played an important role in Canada's military history and has grown by leaps and bounds. It has been built around the magnificent traditions of the Royal Regiment and has relied almost entirely on the Reserve Army for its units in time of war. Our post-war plans show a great increase both in the Active Force and in the Reserve and it will be our first duty to see that these units are composed of the same high standard of officers and men which we have always maintained. The field covered by the present day "Gunner" offers unlimited opportunities to all young men with initiative and an interest in the technical and scientific arts. With current trends in electronic development there is no limit to the scope that the Artillery of the future will embrace.

The task immediately at hand is one of reorganization and the problems with which we are faced are both numerous and complex. Matters pertaining to the equipment, training and tactical employment of the Royal Canadian Artillery will in the future be handled by the Directorate of Artillery recently established under the Chief of General Staff. Our duty will be to ensure that this training is kept



Canadian Army Photo

Col. H. L. Meuser, O.B.E.

Director of Corps of Royal Canadian Engineers

Col. Meuser was commissioned an officer in the Corps of Royal Canadian Engineers by way of Royal Military College, Kingston, Ont., and Queen's University. His pre-war service was with the Geographical Section General Staff; as Works Officer in M.D. No. 6, and with the School of Military Engineering in England. His war service was with the 1st Field Company as secondin-command and officer commanding, and as Assistant Director and later Deputy Director of the Canadian Army Survey Service. After VE Day, he acted as Chief Engineer at Headquarters of the Canadian Forces in the Netherlands.

CORPS OF ROYAL CANADIAN ENGINEERS

After the war of 1914-18, the Engineers were organized under the Quartermaster-General. Under him was a Director of Engineer Services who was represented in each District by a District Engineer Officer. Nominally, the Director of Engineer Services and the District Engineer Officer were advisers on all Engineer matters. What in effect did happen was that the amount of work required of these officers in the works services forced them to neglect all other functions of the Engineers. This was detrimental to the training of the Non-Permanent Active Militia, and in many cases units were organized only on paper.

The Corps of Royal Canadian Engineers is now entering a new phase in its existence. For the first time, the Corps has representation on the General Staff of National Defence Headquarters in the appointment of the Director of Engineers. The Directorate is responsible for the organization, Corps training, requirements in weapons and equipment and the general efficiency of the Corps.

There will be A and T staffs in each District to assist in unit training and administration, and a permanent school to provide instruction in all phases of military engineering. The Engineers, therefore, will have opportunities for training and organization that have never been available in their past history.

The Corps will be larger than it was in the pre-war Non-Permanent Active Militia. This means that all of you who have seen service, either in Canada or Overseas, must do your share in effecting the new organization, and must help to enlist the new generation of Sappers. Only with the wholehearted assistance of all Sappers can we ever hope to maintain the high standard of efficiency and esprit de corps that the Royal Canadian Engineers have built up during the past seven years.

ARTILLERY

(Continued from previous page)

both interesting and realistic and that a high standard of efficiency is maintained. To this end we ask your help and your co-operation to bring to our attention your ideas and suggestions for improvements in training and training methods so that together we may develop an even higher standard than heretofore.



Canadian Army Photo Col. A. E. Wrinch, C.B.E. Director of Royal Canadian Corps of Signals

Col. Wrinch graduated from the Royal Military College in 1931 and was appointed to Royal Canadian Corps of Signals (Permanent Force) at that time. Subsequently he attended Queen's University and graduated in Electrical Engineering. His wartime appointments included District Signal Officer M.D. 6 on construction of fortress communications, second-in-command, 5 Cdn Armd Dio Sigs, OC 1 Cdn Corps Sigs, CR Sigs 5 Cdn Armd Dio and 6 Cdn Inf Dio (CAPF), CSO 1 Cdn Corps and Canadian Forces in the Netherlands. During this time he served in Italy and North-West Europe. He succeeded Col. W. L. Laurie as Director of Royal Canadian Corps of Signals on the retirement of the latter.

ROYAL CANADIAN CORPS OF SIGNALS

On assuming the duties of Director, Royal Canadian Corps of Signals, it is appropriate to address a few words to the Corps. During the war, we expanded many times to a size larger than that any of us envisaged during the years of peace. The expansion was not without difficulties—it succeeded only because of hard work on the part of the individuals. However, it did succeed and as a result we may look back on a very real contribution to Canada's war effort.

Our problems now that peace has returned are no less great. We are called upon to continue the services we supplied before the war but on a larger scale, and, in addition, to supply many others. Both the Active and Reserve portions of the Canadian Army will be larger than before. As a result of the war, our equipment position is a great deal better than previously and training will therefore be more interesting. We can, however, take advantage of this and re-organize into an efficient Corps again only by the hard work and continued co-operation of all ranks.

POWER OF DECISION

(U.S. Military Review)

To the natural born leader, if there is such a person, the power of decision is a second nature. It is inherent in the man. The leader must be decisive. He must have confidence in himself, and here again he must have knowledge and be physically and mentally fit. A poor decision promptly rendered and vigorously followed is infinitely better than no decision at all. Vacillation has no place in the make-up of a real leader. However, wrong decisions if made too frequently lead to loss of prestige and lack of confidence. The real leader is never a straddler.— *Maj.* Gen. H. J. Brees, former Commandant, U.S. Command and General Staff School.



Canadian Army Photo

Col. D. Menard, D.S.O. Director of Canadian Infantry Corps, NDHQ

Col. Menard attended the Royal Military College, Kingston, Ont., from 1932 to 1936. His war service follows in brief: Royal 22nd Regiment, Quebec, P.Q., 1936; exchange duty (India-China) Waziristan Campaign, 1938-40; L.O., HQ 2 Cdn Dio, 1940; L.O., HQ 5 Cdn Inf Bde, 1940; S.C. in same brigade, 1941; B.M., HQ 8 Cdn Inf Bde, 1942; O.C., Fusiliers Mont-Royal (6 Bde) 1942 (Dieppe); O.C., Regimente de Hull (13 Bde), 1943 (Kiska); A/Comd, 13 Cdn Inf Bde, 1943-44 (Kiska); O.C., Al3, Valcartier, Que., 1944-45. Decorations: D.S.O.; Waziristan N.W.F.P. 1937-39; 1939-45 Star; Defence Medal; CVSM; Croix de Guerre avec palme. Staff College: Received s.c. at No. 2 Canadian War Staff Course.

VAST ACHIEVEMENTS

All the great captains of antiquity, and those who in modern times have successfully trodden in their steps, performed vast achievements only by conforming with the rules and principles of the art: that is to say, by correct combinations, and by justly comparing the relation between means and consequences, effects and obstacles.— Napoleon.

CANADIAN INFANTRY CORPS

War always brings about the modification of the existing weapons and the introduction of new ones.

Speed, accuracy, destructive power and safety measures have been developed to such an extent that war has now become a war of scientists. Greater co-operation is expected between the fighting troops and the scientists, and, in order to do his share, the soldier must be able to have some understanding of the conditions affecting his corps.

Plans are now being made to improve the standard of education of soldiers who have joined the Active Force. Selected candidates will, with the necessary improvements in their educational qualifications, have the opportunity of obtaining commissions.

It is realized that a large number of technically-trained personnel will now be required to fight future wars. Therefore, the Army will provide educational facilities to soldiers who wish to take advantage of them, i.e., the soldiers who have attained the required educational standard—the soldiers who are bright, keen, loyal and interested.

"In spite of predictions to the contrary, the Infantry has lost none of its importance on the battlefield."—Field Marshall Bernard Montgomery.

We should be proud to belong to that arm of the service which is master of more weapons than any other arm and which has also taken part in more operations than any other arm.

Always remember that in you, the Active Force and more so the Reserve Force, rests the responsibility of keeping intellectually and physically capable of doing what was expected of you to win the last war.





If you possessed some vitally important Secret information would you treat it with indifference? Would you give a story about it to the Press? Would you talk about it casually to your friends? Would you even let it be known that you possessed such a secret?

You wouldn't? Fine! You'd guard carefully both the secret information itself and the fact that you possessed it? Better still! The reason for your super hush-hush attitude would be obvious, you say—you wouldn't want such a secret to get out. And the best way you know to safeguard it is not only to say nothing whatever about it but not even permit it to be known that you have such information in your possession. We agree!

There Are Others

But such obviously important secrets are not the only secrets that Canada has to safeguard. There are numerous others. And some of these, because of your familiarity with them, are commonplace to you. That doesn't mean, however, that foreign powers are any less anxious to possess them. It doesn't mean that you should safeguard them to any lesser extent. Like the "vitally important" information, they, too, are secret because their very nature makes it essential that they should be so treated, because nothing concerning them should be learned by a foreign power-even if you're thoroughly familiar with them yourself.

The Army still has plenty to protect in the way of information—in time of peace as in time of war—and the soldier who mistakenly decides that Security is no longer important could not be more wrong. In time of peace, indeed, the soldier must be more than ever on the alert. It's open season on military information. The major powers all have their espionage systems and there's little enough to hinder them as, quickly and industriously, their agents go about their tasks.

Remember This!

Important from the soldier's point of view, too, is the fact that, here in Canada, there no longer exists any form of censorship. When the soldier speaks carelessly, or out of turn, chances are that what he says will shortly appear in the Press for all to read. But, whether it so appears or not, there's no longer any communications censorship to keep within the country the information he has revealed. It's easy for the agent to get it out to his employers.

More than ever, in time of peace, the Army is responsible for its own Security —and that responsibility is shared by every officer and man. Treat all classified information as you would treat that pertaining to a super hushhush secret. In time of peace, as in time of war, **DON'T TALK!** Canadian Intelligence Corps

The Canadian Intelligence Corps is one of several military establishments which the pressing necessities of war brought into being. Like many others it was assembled originally as a somewhat haphazard improvisation, but, once it had achieved organic structure in a field that gave free play to Canadian resourcefulness and enterprise, it developed an orderliness, combined with a flexibility that more than matched the related qualities of older and more rigid organizations.

One vitally important thing members of the Canadian Intelligence Corps had in common with all other Canadian soldiers was pride in their Corps. The green shoulder flash, with its designation spelled boldly outright, and the silver badges, their True North and Magnetic pointers framed in a wreath of Maple Leaves, were emblems of high honour; and they were borne modestly as such for they marked him who wore them as a person possessing unique and specialized skills.

An ``Omnibus''

At its inception in October 1942 the scope of the Corps was limited. It embraced only those employed in Field Security, Special Wireless Intelligence and a few "odds and ends" who, engaged in some form of "I" work, had difficulty in finding a home elsewhere. As time went on the ramifications of the "odds and ends" resulted in the assumption of more and more duties until, at the end of the war, the Corps was a sort of omnibus carrying an amazing variety of personnel working on an equally amazing variety of tasks-but all of them having a direct association with Intelligence.

As Director of Military Intelligence, the first commandant of the Canadian Intelligence Corps was Col. W. W. Murray, M.C., who, having administered and piloted the Corps for three and a half years, relinquished the post in February 1946 to Col. W. A. B. Anderson, O.B.E.

The numerous and varied aspects of the work of the Corps were divided as between Intelligence operations in Canada—and that includes also duties performed by Canadian Intelligence Corps personnel in the United States War Department—and those overseas. Again it has to be understood that the term "overseas" embraces not only Europe and Africa, but also Asia and Australia, for members of the Corps were, and continue to be, scattered around the Orient from the Japanese islands to India.

EUROPE: When the advance divisions of the Overseas Army first reached the United Kingdom, lack of trained Canadian Intelligence officers suitable for employment in higher formations was compensated for by the appointment of a few British officers who had served in France and Belgium prior to Dunkirk. Gradually they were replaced in 1941 and 1942 as Canadians, trained in British Intelligence schools, became increasingly available.

When in October 1942 the Canadian Intelligence Corps was authorized, Canadian Intelligence (Overseas) was therefore already a lusty infant, and growing visibly from day to day. In the "field," Wireless Intelligence, Field Security and Photo "I" units were actively engaged in training or in actual operations, while Intelligence at CMHQ, London, had set up a complex liaison next with the multifarious branches of British and Allied Intelligence. The Corps had also won its first honours and sustained its first casualties at Dieppe.

Expansion Program

Establishment in the winter of 1942-43 of First Canadian Army Headquarters brought a period of tremendous expansion to the Corps, for it involved the creation of a multitude of new Intelligence establishments. To provide all the Interrogators, Documents Teams, Field Press Censors and the like, that were now required, the Army overseas was thoroughly combed, while Canada began despatching a steadily increasing stream of trained and specially selected reinforcements.

By the time the 1st Division was enroute to Sicily, Intelligence (Overseas) had acquired the permanent organizational framework which it was to maintain throughout the period of The three senior officers hostilities. mainly responsible for the direction of Canadian Intelligence Corps activities had also taken up appointment. Col. P. E. R. Wright, O.B.E., functioned at Army Headquarters. His command embraced not only Intelligence personnel directly connected with Army, but also those of all senior formations under command. During the winter of 1944-45 this involved many hundreds of officers and other ranks engaged in specialized branches of Intelligence and Counter-Intelligence. In fact, there were enough Canadian Intelligence "types" active in the Low Countries to make up a full Col. Wright's paramount battalion. task was that of Senior Intelligence Adviser to the Army Commander, Gen. H. D. G. Crerar.

The Senior Intelligence Adviser at CMHQ was the D.D.M.I., Lt. Col. (now Colonel) F. H. Walter, who added to this task that of administrator of the Canadian Intelligence Corps (Overseas). He was responsible for the supply and training of reinforcements and, by frequent visits, for direct liaison with the field. His staff maintained liaison with British and Allied Intelligence and was responsible for the co-ordination of Security measures. Detailed operational intelligence information necessary for the maintenance of the D.M.I.'s War Room in Ottawa was also the responsibility of the D.D.M.I. at CMHQ.

Actual Intelligence training in the United Kingdom was directed by Maj. (now Lt. Col.) R. L. Rayment, M.B.E., who was O.C. Intelligence Company at 1 C.G.R.U., Aldershot. Intelligence training activities expanded constantly in the last two years of the war, and when the British abandoned German **Intelligence training for Jap**anese, late in 1944, the Canadian War Intelligence Course at Aldershot was opened to British and admit Allied officers.

There is no space to record here all the activities of Canadian Intelligence, or of the Canadian Intelligence Corps, in detail. Much of it had of necessity to be carried out "sub rosa," far from the white lights of Public Relations publicity. Canadian Intelligence personnel operated with the Maquis, with the Italian Army of Liberation, and personnel trained in Canada, under D.M.I. auspices, operated in Jugo-Slavia and Hungary. Psychological Warfare units of the Canadian Intelligence Corps worked on all fronts, as did the Security and Counter-Intelligence personnel. The foregoing is merely the barest outline of a job, the details of which would fill many volumes.

CANADA: During the first year of the war, Military Security and Counter-Intelligence in Canada were virtually non-existent. There was no pre-war structure on which to build, and no one had any clear ideas on where the jurisdiction of the civil authorities left off and that of the military began. This unsatisfactory state of affairs was responsible for some weaknesses.

The forerunner of the Canadian Intelligence Corps was the Military Security structure which originated in October 1940, and which eventually embarked on the serious business of instilling Security doctrine into the Army by obtaining Security instruction

as an element of Intelligence training at Royal Military College. Some effort had already been made to indoctrinate District Intelligence Officers, several of whom displayed marked aptitude and keenness for the task.

Shipping Security

However, the insistent demands from the United Kingdom for more effective measures of Security over the North Atlantic shipping route eventually pro-



Canadian Army Photo Col. W. A. B. Anderson, O.B.E., who was appointed Director of Military Intelligence in February 1946.

duced authority for establishment of the first Field Security Section in Canada, that of Atlantic Command. This was followed by institution of a similar unit on the Pacific Coast, and, subsequently, in most of the Military Districts.

But these alone did not comprise the Corps. For several years the Censorship Advisory Section, consisting exclusively of German-speaking Intelligence-trained personnel, functioned most effectively and with considerable profit to the general cause. It would be imprudent to say more at this stage, but ample evidence has already been disclosed of the substantial contribution to the great pool of excellent information made by this particular unit.

In the sphere of Wireless Intelligence, which contained the largest self-contained Canadian Intelligence Corps group, results were at times spectacular; but again little can be said about it.

At the RMC, Security Intelligence Courses for both officers and other ranks were established, and with them re-

> fresher courses in the German Language and, at one stage, in Photo Interpretation. Personnel successfully completing the Security courses were absorbed into establishments in Canada, and those of appropriate age and category eventually proceeded overseas as reinforcements to Security or Counter-Intelligence units.

> > In Canada, Canadian Intelligence Corps personnel were

eminently successful in their untiring efforts to uncover and weed out enemy sympathizers who had infiltrated into the Army—so much so, indeed, that so far Intelligence in Germany has not encountered any evidence of a single case having penetrated to the field via the Canadian Army.

Canadian Intelligence Corps staff officers worked in constant collaboration with the censorship authorities, and prepared instructive material on Security requirements for the confidential information of the Press. They also compiled pamphlets for the Security training of Canadian troops. It is appropriate to note that the Security training of the Canadian soldier, begun in Canada and completed overseas, succeeded in its purpose to such an extent that German Intelligence reports frequently carried references thereto. In point of fact, one of their own training pamphlets gave the Canadian soldier as an example that might well be copied.

The Corps functioned also in connection with Prisoner-of-War Camps and was instrumental in breaking up some sinister Nazi organizations and pressure groups, and in promoting the segregation and re-education of those whom it has been considered possible to retrieve.

Close to 80 officers and other ranks of the Canadian Intelligence Corps served at one time or another under the United States War Department. They were for the most part linguists, personnel competent in not only German but also Japanese. The American Army officers have been extremely generous in their praise of the capacity, the conscientiousness and the complete adequacy of the Canadians.

Canadian Intelligence Corps officers and other ranks accompanied No. 1 S.W.G. to Australia. For many months they operated in the vicinity of Darwin, Northern Australia, but a number of them worked in Brisbane. Early last summer, a small group was despatched to the Phillipines, arriving there before the Japanese surrender. From this party were assigned the personnel who were sent to Japan on Prisoner-of-War recovery.

Officers and other ranks of the Canadian Intelligence Corps served in Burma and Malaya. Others organized guerillas in Borneo and did effective work in clearing the Japanese out of Sarawak.

By and large, the Canadian Intelligence Corps embraces a body of men who, furnished with unique skills and placing these at the disposal of their country, contributed in no small degree to the winning of victory. It is a pity that so much of what they did will have to remain unsaid.



Reproduced by courtesy U.S. Army Weekly "Yank" 14



EXAMINATION PROCEDURE FROM THE UNIT POINT OF VIEW

Examinations of artillery equipments probably originated with the introduction of the spin-stabilized projectile into the British service about the year 1860. It can be said, then, that examinations were a product of the age when gunnery was changed from a gamble to an exact science. Since these early days, periodic examinations have become regarded as appurtenant to scientific artillery practice, but as questions as to their value are bound to occur, this article intends to clarify the general facts concerning examinations from the viewpoint of the artillery unit.

Why Examination?

Why is it necessary to have examinations at all? The answer is simple. Safety and Economy!

The modern gun harnesses immense forces which propel a projectile to its target. Frequent examinations ensure that these forces are not allowed to break their bonds and destroy our men or our equipment. Safety is attained by ensuring that an adequate safety factor exists on all components affected. Economy of matériel results both from this, and also from the fact that small defects are either rectified or placed under observation as a result of the examination.

Examination . . . When?

When should artillery equipments be examined?

This is another in the series of articles prepared specially for CATM by the Directorate of Mechanical Engineering, NDHQ.—Editor.

Equipments will be examined after they have fired the number of rounds prescribed in Canadian Army Local Electrical and Mechanical Engineering Instructions, Armament A-520.

If this instruction is examined, it will be noted that guns designed for low muzzle velocities and low chamber pressures may fire more rounds between examinations than those with high muzzle velocities and high chamber pressures. The series for each particular equipment is carefully calculated, so that a gun may not change, under normal conditions, from the "serviceable" to the "unsafe" category before an examination becomes due.

In addition, an examination will be called for should any unusual happening occur which directly affects the equipment. This may include abnormal explosions, prematures, accidents, the appearance of defects and erratic shooting. Units should also demand an examination should there be any doubt as to the condition of a newly received equipment.

What Happens?

At this point, now that we have established why and when examinations are carried out, the unit will want to know what happens during an examination. In brief, the Examining Officer, with the aid of a variety of gauges, measures exactly the condition of the equipment in order to determine its serviceability and remaining life.

Before any measurements are taken the past history and performance of the gun must be checked. This information will be found in the Memorandum of Examination of the particular gun. With a complete knowledge of past performance, the Examining Officer will now commence the actual physical examination.

He checks the condition of the bore, chamber and muzzle brake to ensure that they are free from defects such as stripped lands, excessive coppering, scoring, damaged lands, cracks or other defects. This, in general, is to ensure that when the gun is fired the projectile will have unrestricted travel and egress. Next, measurements are taken of the bore and chamber to ensure that, at any point, there is no excessive wear, local expansion or any obstruction which will affect the correct functioning of the equipment.



[&]quot;He checks the condition of the bore..."

The Examining Officer will also examine the breech mechanism to ensure that it is functioning correctly. He will then take measurements which will prove the complete mechanism serviceable or otherwise. These will



^{. . .} RCEME handle all the details. . ."

include the measuring of Cartridge Head Clearance, Striker Protrusion, Force of Blow of Striker and Striker Eccentricity.

Finally, the Examining Officer will sentence the gun as "Serviceable" or he may "Provisionally Condemn" or sentence as "Unserviceable". This sentence is passed to the Commanding Officer of the unit, and appropriate entries are made in the Memorandum of Examination, showing the "Quarter of Life" of the gun and giving the measurements of wear of the bore. This information may now be used by the unit should they wish to calibrate the gun.

Copies of the Examining Officer's report are forwarded to NDHQ. Should the sentence on the equipment fall in the "Provisionally Condemned" or "Unserviceable" categories, the Memorandum of Examination is forwarded to NDHQ with the report.

How Is This Service Obtained?

It is the responsibility of the unit to demand an examination when it is required. The Commanding Officer of the unit merely fills out three copies of AFG 875 "Report of Examination of Ordnance" and submits them together with the Memorandum of Examination of the gun to the District EME, or in the case of a Command, to the D/DME. From here on, RCEME handle all the details, from the dispatch of an Examining Officer to the final report of sentence on the equipment which is sent to the Commanding Officer of the unit.



"Keep neat and accurate records."

How Can The Unit Help?

The unit can be of very definite assistance to the Examining Officer.

I. Keep neat and accurate records: Equipment records, including Memoranda of Examination, if kept correctly, will enable the history and past performance of the equipment to be gauged accurately.

2. Request examinations promptly: A prompt rendering of the necessary forms, when an examination is required, is necessary. Needless to say, the accurate compilation of these forms is most desirable.



"Clean the gun thoroughly. . ."

3. Clean the gun thoroughly, and if possible move indoors: Prior to the arrival of the Examining Officer, the equipment should be moved indoors if at all possible. Sufficient time should be allowed so that the gun may attain room temperature before examination. The bore should be cleaned in the normal manner and wiped quite dry. The breech mechanism should be stripped, cleaned, lubricated sparingly and re-assembled. The firing gear should also be stripped, cleaned, lightly lubricated and re-assembled.

4. Have all tools and ancillaries available: Tools and ancillaries which accompany the equipment should



"... the past history ... must be checked."

TRAINING AIDS BOX

The Training Aids Box described in this article was constructed by A1 CATC, Petawawa, Ont., which has now been disbanded. The article and accompanying plans desscribe how the box is constructed and its contents. The latter may be varied according to the needs of various corps and units.—Editor.

There is no need to stress the value of Training Aids generally. Everyone is aware of the value of posters, portfolios, models, devices, film strips and films. The supply of such aids is reasonably good and usually Training Centres produce a few gadgets to assist their instructors but quite often these aids sooner or later become relegated to a storeroom or adorn the walls of lecture rooms, etc., thereby not being available when required or falling into disuse.

Then again, regiments, batteries and sub-units, especially in the field, do not have the facilities to pack around all the pamphlets, posters, etc., which are issued in the period of training and these are usually turned in. Further, Reserve Army units, especially those in cities and towns far removed from Training Centres or District HQ's, have little opportunity of using equipment and aids usually found at Training Centres and HQ's. There is also the case of troops making long sea voyages during which time normal equipment is stowed away.

It is with the idea of providing a means to stimulate training under some of the circumstances listed above that the training aids box is suggested.

THE BOX (See drawings Pages 20 and 21): This should be constructed so as to provide not only a container for the training aids but also to open out so that the lid forms a useful table and the sides lift out to form blackboards. The accompanying diagrams show a design developed at Al CATC. It is considered this design can be improved along the following lines:

1. Weight should not exceed 100 lbs. fully equipped.

2. Material: Some portions such as slides for blackboards and corners could be made of light metal, the two interior parts boxes of much lighter material. All equipment should be

EXAMINATION

(Continued from previous page)

be immediately available, and all articles should be clean. Equipment of this nature which is scaled to be with the gun should be with the gun, and not in Troop or Battery stores.

5. Co-operate: Co-operation on the part of troop officers and gun crews is desirable. This may include manual assistance in the removal and replacement of loose barrels. Information on the past performance of the equipment is always welcome.

In Conclusion

With increases in range and flexibility of equipments coincident with the use of extremely high velocity projectiles and improved ammunition, the need for a properly planned examination program becomes increasingly necessary. It is suggested that unit commanders review their position in this regard and ensure the points outlined in this article are understood by personnel under their command. If these facts are known, examinations are assured a place as an integral aid to gunnery. fastened in so that box can be shipped without damage to the contents.

The cost of the construction of box and fittings such as designed by A1 CATC was estimated to be \$75. USES:

 Blackboards complete with chalk and erasers are always in demand in any unit.

2. Accessories for sand table give the incentive to make use of this very desirable Training Aid.

3. Complete cloth model equipment provides a quick means of conducting indoor exercises.

4. Quiz cards with answers showing the official authority for correct answers are a most valuable aid and are particularly useful on long sea voyages or rainy day huddles. These can be developed for practically any military subject.

5. A limited number of essential training charts could be carried.

6. Enlarged blackboard model of Artillery boards with arm and arc provides a means of conducting Artillery board work without wasting Artillery board paper, and with cardboard cutouts of dial sights and director, drill can be carried out in laying out of original line of parallelism, etc.

7. The regimental organization is laid out on cardboard cut-outs instead of blocks. This facilitates handling and allows for a description of contents of vehicle to be typed on the reverse side.

8. Tactical cards greatly assist in painting a picture in tactical schemes and deployments. They are made to represent bivouac areas, rendezvous and the various parties in the tactical set-up of the regiment and can be placed on sand tables or cloth models to show deployment lay-outs.

9. The portable Miniature Range is considered to be the most valuable Training Aid in the box. It can be set up very quickly and provides all the attributes of the larger type of range. Four of these portable ranges were in use at A1. By using this type of range classes can be broken up into four groups thereby giving individuals four times as much practice as they would get on one large range. Reserve Army units would undoubtedly benefit by having these ranges. It is possible that they could be used on board ship and most likely with units in the field.

CONTENTS: Contents of the box can be varied considerably according to the needs of various corps and units. Contents described below are those which suited the needs of A1 CATC.

1. Padlocked top hinges open for use as table.

2. List of contents inside top.

3. Outside walls slide up for two blackboards.

4. Inside walls slide up for two blackboards.

5. Two iron rods at left of box to support inside blackboards on table.

6. Chalk and eraser box inside top left centre.

7. Blackboard pointers at right of box.

8. Folding gridded board with arm arc and cardboard dial sights and directors.

9. Portfolios of Training Charts.

10. 2 pieces of Hessian 8' x 12' for cloth model.

11. (a) **Sand table accessories:** Rake, roller, road, marker, railway marker, chalk, bottles of coloured sawdust, special models screen wire, tooth picks, trees, bridges, cardboard cutouts for fields, etc.

(b) **Cloth model equipment:** Coloured canvas strips, model houses, etc., regiment deployment models and tactical cards. Tape for roads and railways.

12. (a) Smoke puff equipment (chemical) for Miniature Range.

(b) Smoke puff equipment (cigarette) for Miniature Range.

(c) Bottles of coarse coloured sawdust



SIDE VIEW

END VIEW

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CHART RACK

"Cpl. Schnozzle, will you please get me the chart showing the Slidex card and cursors."

"Yes, sir!" And the corporal dashes off to the storeroom and glances at the index on the wall. Slidex . . . P-7. Then, going to the chart rack on which all the charts are filed by letter (subject) and number, he lifts out P-7 and brings it back to Lieut. Earshot. All this has taken less than 60 seconds.

This little scene (names fictitious, of course) is enacted quite regularly at A30 CITC, Utopia, N.B. The training centre has devised a chart rack as shown in the accompanying photo for the use and preservation of training charts. As this method has been employed most satisfactorily, it is felt that other units not familiar with this system should be given the details through CATM.

Uniform Length

As shown in the photo, the slats at the top of the chart are of uniform length and extend 3 inches at each end. This supports them in the rack and also on the easel (see sketch) during use. A similar rack (not shown) is used for narrower charts.

The sketch shows the way the easels have been arranged to support the charts for instructional purposes. The pegs in the top slat support the chart and, since they hang from cords when not in use, do not interfere with the use of a blackboard on the easel.

A30 reports that as well as being a great time-saver, this simple device is an excellent method of protecting the charts.



THE DEVELOPMENT OF

IN THE CANADIAN ARMY

They were the ill-starred days of 1940: the calamitous days when France fell before the Nazi legions of destruction; when the whole civilized world found a new meaning in the last words of Edith Cavell, who said in 1915: "I realize that patriotism is not enough." Patriotism alone, in fact, was proving pitifully inadequate when opposed to the mechanised and scientifically up-todate panzer armies of Adolf Hitler.

The Canadian General Staff decided that the protection of the Dominion and possibly of the whole British Empire—demanded that Canada must have radar equipment and, within the ranks of her young army, trained personnel to maintain and operate such equipment.

Arrangements were completed for a party of Canadian officers and noncommissioned officers to visit the United Kingdom, study British radar developments, and upon their return to organize a radar school in Canada. A most happy choice was made in the selection of Maj. (now Brigadier) H. E. Taber and Capt. (now Lieut. Colonel) C. A. Manson as the two officers of the party.

British School

The latter officer attended the British Radar School at Watchet in the same year and completed the course there with a distinguished record. In the fall of 1940 he returned to Canada and opened a Canadian Radar Training Centre at Halifax, N.S., as a wing of A23 Artillery Coastal Defence and Anti-Aircraft Training Centre.

The term ''Radio Direction Finding'' (later known as Radar) in those early days—and for some time following defined a subject, the details of which were known only to those entrusted with the Army's top secrets. Lt. Col. Manson's work, therefore, was extremely confidential, and furnished the inspiration for a great deal of ingenious and original conjecture on the part of his fellow officers at A23.

At Halifax the main objective was the training of radar technicians. Later, when it was decided to instruct candidates as radar operators it was necessary to have air co-operation by the Royal Canadian Air Force, and it was found that flying conditions in the environs of Halifax were distinctly inferior for such training. Added to this was the uncertainty of being able to obtain aircraft for training exercises when they were required. These facts indicated that a more satisfactory location for the school would have to be found, and consequently in February, 1942, it was moved to Debert, N.S., although continuing as a wing of A23.

A British radar set had previously been shipped to the National Research Council in Ottawa by Birmingham University, and from this set was designed the first Canadian model, which was installed while the school was at Debert.

In the production of any type of equipment one of the chief problems is that of an efficient inspection system. In order to fill this vital need, a Radar Division in the Inspection Board of the United Kingdom and Canada was inaugurated at this time. Later, further radar sets were designed by NRC, and built by Research Enterprises Limited for deployment along the east and west coasts and for use with Canadian antiaircraft batteries in the Dominion.

In April of that year, Lt. Col. Manson was posted to the Department of Munitions and Supply, and the radar school came under the command of Maj. C. Jervis-Read, who had followed Lt.-Col. Manson at the Watchet school in England. Lt. Col. Manson's group at the Department of Munitions and Supply was later moved to the MGO's Branch and considerably expanded. The chief functions of the group were to maintain liaison with NRC and REL on matters of technical development and production, design and testing from a military point of view and trials.

Large numbers of these equipments ultimately were distributed to Allied Forces in all parts of the world. Canadian equipments could be found in Anti-Aircraft Command in the United Kingdom, in the South-West Pacific aboard Royal Navy ships and in other Allied theatres of war.

At a later date Lt. Col. Manson was appointed Officer Administering Canadian Radio Location Establishment in Ottawa. This unit had on its strength all trained radar personnel who were attached to units in Canada for duty, and part of the job was to ensure that these officers and men were properly employed within units, and kept informed of technical developments.

Equipment Produced

While the school was at Debert an extensive amount of radar equipment was produced for use in co-operation with anti-aircraft batteries and with the RCAF. While an adequate number of



This photo shows accurate anti-aircraft fire control radar equipment used to transmit the accurate position of enemy aircraft to guns. This is one equipment supplied in large, quantities to Allied Forces throughout the world.



Canadian-designed radar trailer equipment undergoing acceptance trails to determine its ability to withstand immersion in water. It is often necessary to land this equipment from a landing barge to a shore location.

Electricians Radar had been trained by the school, the release of this new equipment all at once created a shortage of radar operators, due to the fact that suitable candidates for this type of training had become extremely scarce. In order to meet the demands for trained operators, the educational requirements for candidates were lowered to include those with junior matriculation. Although some experience in electricity was desirable it was agreed that a candidate would not be refused if he lacked such experience. To prepare candidates for the specialized training they would undergo at Debert, a fivemonth course was instituted at A7 CSTC, Vimy Barracks.

After a year of intensive training, several factors indicated that Barriefield would prove a more suitable location for the school. The difficulties of obtaining efficient air co-operation, previously experienced at Halifax, persisted in some degree. Reports from the Meteorological Department and the RCAF showed that satisfactory flying conditions would be encountered in the vicinity of Barriefield. To this was added that fact that adequate guarters were available at the new location, thus avoiding any delay in the move, and the complete course of eight months could be given under the single

school. The factor which decided Barriefield as the most appropriate site was the convenience of its proximity to NRC and REL.

School Moved

The school was moved in July, 1943, and Maj. Jervis-Read was able to secure the allotment of a flight of planes to work with the training centre. It was at this time that the demand for reinforcement officers in all branches of the Army reached its climax, and the requirements for officer candidates were relaxed to some degree. Thus it was that the greatest problem at the Radar Training Centre was one of morale, for OR personnel at the school required higher qualifications than the cadets at the Officers' Training Centres. This was a problem which never was wholly solved.

In December, 1943, Maj. Jervis-Read relinquished command of the Training Centre on being appointed to a post at NDHQ. He was replaced by Lt. Col. L. G. Eon, who inaugurated the expansion of training facilities and the experimental laboratories. In February, 1945, Lt. Col. Eon was posted to Canadian Army Operational Research Group, NDHQ, and his place was taken by Lt. Col. A. C. Perron, the present commandant of the Training Centre.

Early in 1945, Lt. Col. Perron obtained permission for Capt. (now Major) V. W. Bethel to visit Great Britain and investigate British training methods and



Here is Coast Artillery fire control radar equipment. The antenna structure shown in position is used to determine accurate location and range to enemy vessels.

developments in radar techniques and equipment. At the same time Lt. Col. Perron took a party of officers to the United States for a similar purpose.

On the return of Lt. Col. Perron and Maj. Bethel, an exchange of ideas took place, and from the fusion of the systems and processes in use in the United Kingdom and the United States with Canadian developments there has emerged a training programme as up-to-date as that of any radar school in the world.

The revamping of training at the Centre is still in progress, and visits have been made to civilian electronics schools to bring the instruction completely "a la page", to quote the commandant.

RADAR'S CONTRIBUTION TO THE WAR EFFORT: In 1942 two hand-made radar sets were constructed by NRC for use on the east coast in locating any enemy craft which might have the temerity to trespass too close to our shoreline. These sets were operated and maintained by graduates of the Halifax school, and, later on, in the same year, when six coast watching sets were received from the British Army, graduates of the school were instructed in the operation and maintenance of these sets. The sets were then deployed along the east and west coasts of Canada, and were used (in conjunction with the two NRC sets on the east coast) to keep track of all sea-going craft.

Information as to the movements of ships was passed on by the radar operators to a central control room where all craft were accounted for on huge plotting boards. If any unaccounted for vessel appeared on the plotting boards its exact location could be relayed to coastal artillery batteries



Canadian Army Photo

Radar technicians undergoing training at A36 Canadian Radar Training Centre, Barriefield, Ont. Technicians are working on the main receiver rack for accurate anti-aircraft fire control radar. and the Royal Canadian Navy. Thus the coastal batteries were readily put on the alert and the navy could go forth and investigate the identity and business of the mysterious craft.

Another important feature of the valuable work of Canadian radar during the war years was the guiding of individual ships, as well as huge convoys, through vicious Atlantic gales and menacing fogs. At least six ships with precious cargoes were saved off Halifax.

MOST IMPORTANT JOB: But perhaps radar's most important job was in dealing with the submarine threat in the St. Lawrence River. In 1942 the sinking of Allied ships in this great riverway by Nazi submarine marauders reached an alarming climax. Converted Canadian radar sets were immediately deployed along the coast of the Gaspe, and a central control room was established at Mount Joli. This control room was manned by personnel of the Army, Navy and Air Force whose job it was to check, with meticulous care the passage of every vessel in the St. Lawrence. Proof of the efficiency of Canadian operators and their equipment lies in the fact that in 1943 no sinkings were reported in this vital waterway.

To supplement and improve coastal defence, Canadiandesigned and constructed radar sets were sent to the east and west coasts to be manned by graduates of the Canadian Radar Training Centres. In addition, radar sets were issued to all anti-aircraft batteries in Canada, and a high degree of efficiency was reached in all units.

Towards the end of the war—in March, 1945—the Department of Transport requested the Army to carry out experiments with a view to finding some means of gauging wind velocity at altitudes up to 50,000 feet. A system was therefore devised whereby a reflector was fitted to a hydrogen-filled balloon and its ascent followed by Position Finder radar. From information obtained by plotting the course of the balloon it was possible to obtain information regarding wind velocity and direction at extraordinary altitudes. In July of last year the station at Gander created a world's record by plotting the passage of a balloon up to 60,000 feet.

Since its inception at Halifax, the Canadian Radar School has trained approximately 2,000 officers and OR technicians and operators. Canadian equipment was used extensively in the defence of the United Kingdom, and Canadian and British operators manned British radar equipment in the field. The basic principle in the Canadian Army has always been that field equipment will be exactly the same as the British, although other designs may be developed for use in this country. Therefore before Canadian operators could man radar field equipment it was necessary for them to undergo a course in Great Britain.

CANADIAN RADAR DETACH-MENT LOANED TO THE AUSTRA-LIAN ARMY: Maj. H. F. Graham, who was with the Canadian detachment of 73 all ranks loaned to the Australian Electrical Mechanical Engineers, gives the following report on their trip:

"The detachment left Ottawa in July 1944, on loan to AEME for the maintenance and operation of Canadian Mk. IIIC Radar Equipment, which had been purchased by the Australian Government for use with their ack-ack batteries in the Southwest Pacific. The draft proceeded to San Francisco and later crossed the Pacific in small groups on merchant ships and tankers, landing in Australia and New Guinea to assem-

IMPROVED DISHWASHING SYSTEM

At their training camp at Farnham, Que., last summer Les Fusiliers Mont-Royal 2nd (R) Bn. made some innovations in regard to dishwashing which received favourable comment among all ranks and from inspecting officers and visitors. Details and illustrations are included in this article with a view to assisting other units interested in adopting this system during summer camp periods.

Les F.M.R. departed from the theory that rough conditions with respect to dishwashing have any special merit in a Reserve Army camp lasting only two weeks. The question of proving whether men could "take" campaign conditions was abandoned in favour of conserving health, saving time and promoting morale. Accordingly, clean water is to be preferred to dirty water, and "production line" methods to haphazard methods. In the camp the usual practice of making every man responsible for the cleaning of his issue of plate, bowl, cup, knife, fork and spoon was followed. Here are the innovations or departures from previously existing conditions:

1. Improve the mechanical cleaning (scraping) of dishes and cutlery.

2. Heat washing water in a jacket heater or boiler.

3. Provide storage of water.

4. Cause the water to flow through the washing receptacles tubs.

5. Place washing tubs in a regular "production line" arrangement and at a convenient height.

6. Control flow and temperature of water.

7. Provide controlled amounts of soap.

8. Cause dirty or grease-bearing water to drain off at the surface.

(Continued on Page 30)

RADAR

(Continued from previous page)

ble at Camp Ingleburn, NSW, in September.

"By the end of the month postings for the detachment were made and everyone was at work on radar equipment again. A majority of the detachment was retained by 2/8 Australian Advanced Base Workshops for work in tropic-treating the equipment for use on New Guinea and other islands. We were kept busy for some months, but as more Australian technical personnel were trained it became possible for some of us to get work in forward. areas. Later some of our personnel joined Services Recce. Dept., a supersecret formation, and these men more or less dropped out of sight, some going to scattered points in the South-West Pacific.

"As the war came to an end a number of our detachment joined a repatriation group in Manila, and were instrumental in the recovery of Canadian prisoners of war who had been captured at Hong Kong. In this connection, personnel of the Canadian Radar Detachment were able to raise the first Canadian flag to fly over Japanese territory at the conclusion of the war."

The contribution of Canadian Radar to the prosecution of the war against Germany and Japan has been invaluable. Plans for a permanent radar school have been submitted, but are not yet firm. One fact, however, emerges clearly: radar is here to stay in the Canadian Army.



ELEVATION



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DISHWASHING

(Continued from Page 28)

9. Provide and control disinfectant in the final rinse.

The requirement of heated water for the washing of dishes at any meal was estimated at 90 Imperial gallons. Through the co-operation of HQ M.D. 4, HQ 34th (R) Brigade and the DEO, a large boiler and reservoir capable of heating and storing 350 gallons of water were obtained as permanent camp equipment. Cost to the battalion of washing equipment (tubs, etc.) was about \$75.

(Editor's Note: In the system devised by Les Fusiliers Mont-Royal, the sequence of dishwashing was wash - rinse sterilize. However, the Director-General of Medical Services and the Directorate of Supplies and Catering, NDHQ, recommend a sequence of wash - sterilize - rinse, which is commonly employed in handwashing systems. The narrative and accompanying diagram incorporate this recommendation. The diagram shows the mechanical set-up, the numbers given in the narrative referring to those on the diagram.)

A flow of hot and cold water mixed to the proper temperature (about 130 degrees) is derived from two mixing valves (1) and conveyed through rubber hose (2) to four tubs (3), each being the rinse tub in a series of three placed upon standard tables, the tables being placed end to end about four feet apart. The overflow of the rinse water in the tubs flows through nipples (4) and hose (14) and through containers holding soap (5) into the washing tubs (6), and the overflow from these again through similar nipples (7) over the end of the tables into waste tubs (8). The purpose of setting the rinse tubs a few inches above the tables is to give a flow of the rinse water to the washing tubs. The third tub (9) on each table contains clear still water to which has been added an appropriate percentage of javelle water (chlorine solution) as indicated by the Medical Officer.

Water Distribution

A detail of the distribution of the water is to be seen at (10): i.e. "Siamese" connections enabling one line of hose to serve two tables. In order to allow the passage of the hose under the tubs, ordinary tent pegs are laid on their sides on either side of the hose (11). Washing and disinfecting tubs rest upon these, as do also the simple supports (12) for rise tubs.

The flow of water into the rinse tubs is regulated to conform to the flow through the nipples (about ³/₄ Imperial gallons per minute) and the overflow from the washing tubs into the waste tubs is carried away during the course of the washing operation by two men, and deposited in the grease traps of the camp's sewage system; a third man puts a spare tub (13) promptly in place of the one removed.

Masonite hardboard trays donated by the Masonite Company of Canada were used to carry dishes and utensils to and from the tables. Each man was required to clean food remnants and grease from his dishes before washing.

Proof of the efficiency of this dishwashing system, aside from the fact that all utensils were put through a controlled solution of chlorine, was that, even after 400 men had washed their dishes (occupying about 25 minutes) practically no grease or food particles were to be found in the rinsing tubs and absolutely none in the disinfecting tubs.

(Editor's Note: The following specific instructions are given concerning the addition of chlorine to the sterilizing and

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CANADIAN ARMY EDUCATION

HISTORICAL NOTE ON ARMY EDUCATION

PART 2

Wisdom would have decreed an earlier start than was actually made, but in 1914, as in 1939, the nation was in some senses overwhelmed by the sudden transition from peace to war. It is true that in 1914 Sir Robert Blair, of the London County Council, arranged against considerable opposition a number of lecturers for the troops in London; but not until 1917 was there anything which could accurately be called a scheme. In that year, through the efforts of regimental officers, compulsory education became a part of the training programme of certain "young soldiers" battalions; and almost at the same time, from its base camps in France the Y.M.C.A. launched a flotilla of lecturers who sailed through seas of mud as far as the brigades immediately in rear of the fighting line.

Both movements grew in volume and variety, until it became necessary to incorporate them into a general scheme, for which purpose Lord Gorell was appointed a staff officer in the War Office in May, 1918. For him and his colleagues, the remaining six months of the war were a frantic race against time, and the plans were hardly beyond the initial stage when "peace broke out".

A New Order

A few weeks after the Armistice of 1918, an Army Order announced that



*educational training could no longer be regarded as a secondary consideration, and that "as much time as could be made available from the necessities of military service should be devoted to it". Two necessities lay behind this order. One was to allay the discontentment felt by thousands who expected a new and carefree world to begin on

* I have never regarded this term "educational training" as satisfactory, and assume that it came about because, in order to provide an adequate staff, a large proportion of the training staff of Armies was turned over to organize education.— A.C.T.W.

This is the second and final instalment of an article written by Col. A. C. T. White, V.C., M.C., senior Education Officer of the 21st Army Group in the campaign through France. Belgium, Holland and Germany in the Second Great War. The first instalment, published in the February 1946 issue of CATM, reviewed the development of Army Education from 1767 to the outbreak of the First Great War. This instalment reviews progress made since that time. With permission of the author, the article is reprinted from the Journal of Education of the British Army.-Editor.

the day after the Armistice, and who found themselves bound, for months or possibly years, to sit by the dying embers of war in Archangel or Palestine, in Dublin or Baku. Even the most active and intelligent minds had immediate need of new occupations to fill the vacuum caused by this sudden emptying of effort. The other necessity was to set heads and hands feeling after the forgotten skill of civilian occupations.

Establishments of instructors varied from one force to another; in the Home Forces 4 officers and 12 N.C.O.'s were provided for each unit of 1,000 men. For their use, immense orders were placed for such books as were available, and 750,000 volumes were shipped overseas that winter. Colleges in the older Universities were turned into schools for Army instructors, amongst whom were teachers, lawyers, farmers, mechanics, shopkeepers—any class of man that had something to contribute to national reconstruction.

Army workshops and military training establishments became vocational training schools, with curricula ranging from linotype setting and stock breeding to English literature and the Malay language. Education Officers in hospitals, in close touch with the Ministries of Labour and Pensions, worked to facilitate the resettlement of the disabled.

In the expeditionary forces of the Dominions, similar activities evolved, and were coordinated with the efforts of the British Army. One of the most noteworthy aspects of the whole movement was the demand by junior officers for training to fit them to return to civil life.

Lord Gorell has estimated that about 3,000,000 men came that winter under the influence of Army education.' Tens of thousands of them owe much of their subsequent success to the scheme, with its agencies of the Universities, the technical colleges, workshops and farms. In one respect only did the organizers go astray. They expected returning soldiers to display an aversion from the old monotonous life of warehouses and factories, and in consequence the "Active Service Outline Lectures" (the ABCA pamphlets of those days) vainly stressed the facts and the opportunities of life in the Empire overseas. In any assessment of the scheme, however, it must be remembered that all hands were labouring to make up for time lost during the last months of the war, when protracted negotiations over establishments made planning difficult.

Of the Armies overseas, the Rhine Army made the most spectacular success. Requisitioning buildings from German universities and technical schools, it built up the Rhine Army Colleges, where, in the summer of 1919, 75,000 registered students were taking some regular course. The same spirit animated the officers of Gurkha regiments, camped on the empty shores of the Levant, who set their illiterate mountaineers to scratch with sticks on the sand until they had mastered a script.

Set Patterns

As demobilization proceeded and the small Regular Army took up its peacetime garrisons, the general enthusiasm for Army education (which Mr. Fisher called "the greatest military invention since gunpowder") began to crystallise into set patterns. Army Orders made "education" a subject in the promotion examinations for officers, and Lord Rawlinson, commanding at Aldershot, ordered every platoon commander to teach his men (matter unnamed) "up to the required standard". At least, the intention was excellent, but the responsibilities of the unit officer were growing so rapidly that inevitably the

execution of purely educational work fell from his shoulders on to those of the Army Education Corps.

New Corps Formed

The Corps was established by Royal Warrant in 1920. Its members, officers and other ranks, combined some of the organizers of the wartime education scheme with the surviving personnel of the Corps of Army Schoolmasters. The old Corps thus vanished from the Army List. In spite of its rigid insistence on uniformity, it produced some striking characters. Of those who will be longest remembered, my own choice halts between Schoolmaster Harmsworth, who gave two sons to the peerage, and William Thompson, who wrote "The City of Dreadful Night".

Between 1920 and 1939, the A.E.C. diminished in numbers whilst its responsibility rose with every year. Its main task was to remedy the damage done by an early school leaving age, and by the habits of the restricted circle from which peacetime recruits were drawn, and in which books and intelligent conversation were rare. (In the depots of the Northern Command in June 1939. there were 263 recruits who could not read or write.) Its success may be measured by the fact that in 1936, there were 18,000 men in the Army who possessed the First Class Certificate (equivalent to the School Certificate); 90% of these men had left school at the age of 14.

It had other tasks, however, of which the public is less well informed. Its members were largely responsible for that dramatic change in the ranks of the Indian Army, which in a generation have leapt from a prevailing illiteracy to a confident understanding of the complicated instruments of modern war.

A good deal of the teaching at Sandhurst and Dehra Dun ("The Indian Sandhurst") was given by officers of the Corps; and through the Army schools of Education, the Corps is to some extent responsible for the general level of instructional ability in the Service without which a rapid expansion from the minute Regular Forces to our present national Army would never have taken place.

The enrolment of young militiamen, drawn from all social strata and all educational levels, offered new possibilities of service in 1939. A Central Advisory Council for Education in H.M. Forces was instituted, to co-operate with the A.E.C.; but war broke out before more than the preliminary steps had been taken. By an old arrangement, members of the Corps had in peace-time been trained for various mobilization duties, with certain intelligence work predominating.

In any theatres of war, from Dunkirk through Libya, Eritrea, East Africa, Burma, and Singapore to Hong Kong, officers and other ranks of the A.E.C. have taken their share, not without casualties. It was not until the winter of 1940 that the dispersed members of the Corps were collected again to take their part in the social services of the Army, and to further those projects with which the present issues of the Journal of Army Education are concerned.

TRAINING AIDS BOX

(Continued from Page 19)

for Miniature Range.

(d) Model houses, etc., for Miniature Range.

(e) Quiz cards, **'A' Set** Gun Drill— **'B' Set** Fire Discipline—**'C' Set** Fire Discipline—**'D' Set** Equipment, A.F.V. Recognition cards; Aircraft Recognition cards; spare dial sight and director cards, set of pamphlets (Artillery Index, Vol. III; RATMs; Range Tables complete Artillery Training Gun Drill.)

13. Folding Miniature Range.

14. Situation and instructional cards for Miniature Range.

15. Blocks supporting blackboards.

CWACs RETURN TO MUFTI



Canadian Army Photo

These members of the Canadian Women's Army Corps are wearing uniforms and greatcoats which have been remodelled for civilian wear.

"A maiden's dream comes true." One hundred dollars to spend on a wardrobe. Sounds rather wonderful but in reality it is guite a difficult task to outfit oneself in these times on one hundred dollars. What to do about it? Well, here's a test for your ingenuity. Textiles are scarce and the quality of those available is not of the best. But the material in uniforms and greatcoats of the ex-service girl is well worth the time and effort one puts on it to re-model it to civvies. For the benefit of CWAC being discharged through No. 113 Depot Company, Currie Barracks, Calgary, a Remake Centre has been established for those wishing to "salvage" uniforms and greatcoats by converting them into modish civilian styles. A special feature of this setup is that the girls are not merely given instruction but actually complete the re-make job under competent supervision while in the Depot.

Under the direction of Mrs. C. B. Romney, who helped organize the Calgary Remake Centre for the Consumer Branch. Wartime Prices and Trade Board, girls coming into the Depot for discharge spend a good part of their spare time remodelling their uniforms. Mrs. Romney spends two entire days each week at Currie, directing the girls in this work, and generally by the time their discharge proceedings are completed, their uniforms and greatcoats are restyled and ready to be sent out for dyeing. Arrangements are made with local cleaners to ship the garments directly to the girl's home address, and reports are that the finished products meet with complete approval.

"POSTURE AND PLAY" PLAN

Canadian civilians or soldiers alike have sports in common and since civilians become soldiers, lets foster the sports idea.

Kecreational Training

Coaching a soldier to become efficient in Canadian Major Games during training hours is a means of physical conditioning and an innovation. The lessons being learned will impel the soldier to action in many other phases of his military training. No other form of instruction so aptly develops confidence in one's physical skill. Hardy competitive games definitely destroy fear, a great obstacle that most men must learn to overcome before they can become efficient soldiers. Major games, properly taught, attract all men and, their attitude being receptive, they produce beneficial results.

In the "Posture and Play" plan, the soldier progressively moves forward with confidence and efficiency, never losing sight of his basic pattern of fundamentals and adapts procedure to meet ever-changing conditions that confront him.

Wholesome Experience

Wholesome experience in games and sports properly coached lead directly to stronger, healthier bodies and an improved means of getting along with people in team play as well as in social and community life. The desire to engage in physical activities, as well as fitness itself, depends largely on the skill acquired in the activities pursued. Skills are learned best through practice of approved techniques. Good coaching reduces the time required to develop these techniques.

The success of post-war physical and mental fitness depends largely upon the determination of a clearly-defined and appropriate goal with an adapted policy tactfully executed by trained coaches under competent supervision.

ARMY SPORTS CRESTS

This article was written for CATM by Maj. H. C. Beaumont, M.C., Auxiliary Services, NDHQ. Elsewhere in this issue there is an insert showing the new Army Sports crests in color. Units are requested to post them in prominent places in order to promote the men's interest in sports. The crests are awarded when soldiers have attained a set standard in various games.—Editor.

FIELDCRAFT TRAINING GAMES

(British War Office Infantry Bulletin)

INDIVIDUAL STALKING GAMES

1. Object: To practice use of background, choice of approach and crawling.

2. An umpire and two or more assistants are required.

3. The men prepare for battle after they have seen the ground. This should provide good but irregular cover suggesting various lines of approach, each with advantages and disadvantages. One or two sentries are posted at a clump of bushes, a knoll or a shed. This is the objective for the stalkers, and should be such that the sentries guarding it must walk round it in order to observe every side. The remainder are started on their stalk from a concealed point some 400 yards away.

When a sentry spots a man he blows a whistle or fires a round of blank, then signals the umpire or assistant to the man he has spotted, who is knocked out. Once he has blown the whistle or fired nobody is allowed to move until the umpire blows his whistle (the signal to go forward again). The umpire must make sure that he is signalled to the exact place where a man is lying; if none is there he signals "washout" and blows his whistle. The first man home or the man who gets nearest wins —(a small prize may be offered).

Advantages

4. The advantage of this game is that it is quite cut and dried and there is no difficulty in deciding who has been seen or not; the disadvantage is that the stalkers know exactly where the observers are and what they have got to deal with. A variation can be played in which a section is concealed defending the objective, not necessarily on the objective. When they spot a stalker they fire a round of blank and the stalkers must remain still. The section commander then informs the umpire who stands sufficiently far away not to give away the exact position of the defenders. He then signals an assistant to the spot where the man has been seen.

The defenders should be able to see the assistant and can say to the umpire "forward," "back," "right," or "left." The umpire passes the message on with his arms until they say "stop." The man spotted is knocked out, the umpire blows his whistle and movements may recommence; similarly, if the attackers spot a defender they may tell the nearest assistant so that he is knocked out. But care must be taken by umpires not to give the position of the men near them away. The first man "home" or the man who gets nearest to "home" wins.

The Hunger Crawl:

1. Object: This is an exercise in observing and crawling for a small team.

2. Ground should be chosen with plenty of cover in patches—for instance, heath with gorse bushes. Low cover will allow umpires who are standing up to see what is happening; if the cover is high, umpires must be able to stand on higher ground. The game is played by two teams of three men each, but several games may be played simultaneously with one umpire watching each. (Umpiring in these games is a good test for potential NCOs, and men may be made to umpire in turns.)

Each game is played over a strip 200 yards long; the width allotted to each game must depend on the total ground available. A suitable large stone or other object is placed in the centre of the strip in an open space to represent a container of rations dropped from the 0

air. A white sheet or other conspicuous object can be hung from a bush or tree nearby to represent a parachute; thus the players can see their objective at a distance. The players are shown the ground, told their boundaries and then prepare for battle. The two teams start at opposite ends of the strip, out of sight of each other. Their aim is to crawl to the container within 15 minutes. If a player has not reached the container within 15 minutes, he is considered to have starved to death.

Each Has 'Grenade''

Each man is armed with a "grenade" (a clod of earth or a soft ball); he may throw this when he is within range of an opponent who is counted out if it falls within ten feet of him. The winning team is the one from which any member survives when all the opposing team are knocked out or if he remains "alive" beside the container, until the time limit is up.

3. A number of games can be played as a knock-out tournament and the time limit and the distance can be shortened to fit the tournament into the period available. Teams which have lost will learn a lot by watching the teams still left in.

Night Training by Day

1. A course is arranged consisting of a series of events such as:

- (a) Crossing a barbed wire obstacle.
- (b) Picking up a pick and shovel from a heap and carrying it a certain distance.
- (c) Crossing a piece of swampy ground.
- (d) Crossing a hedge, stone wall or road.
- (e) Crossing through a wood with the ground strewn with twigs and leaves.

2. Groups or sections of men under a leader (private soldier preferable) are set off at intervals to go round the course. At each "event" is an umpire; a man blindfolded and armed with a rifle and blank ammunition is posted nearby. The blindfold man has to listen, and when he hears any noise at his "event" he fires a round of blank in the direction of the noise. Experience shows he has to be posted pretty close.

3. The team wins who gets round the course with the fewest number of rounds fired at it.

WEAPON TRAINING GAMES

The following two methods of harnessing competitive spirit to improve standards of weapon training have been used by units in home forces.

1. Competition For Assembling and Firing Platoon Weapons: Teams of five men. Each man is detailed to one platoon weapon, i.e. rifle, Bren, Sten, Piat or 2-inch mortar. Teams are lined up at a suitable distance (say 20 yards) from ground sheets on which all the parts of one of each of the platoon weapons are mixed together, one ground sheet for each team. Twenty yards further on is another ground sheet on which magazines and ammunition for the weapons are mixed up, say 10 rounds for rifle, 28 for Bren, 20 for Sten, two (inert) for PIAT, two for 2-inch mortar. On the word "go" all teams rush to their respective ground sheets, and each man has to assemble his magazine and fill it with his own ammunition, then on to the firing point where he fires his allotted rounds. Time is taken from the time the word "go" is given till the last man in the team has finished firing his ammunition.

2. Golf Grenade Course: A series of holes are laid out, each representing a different position from which to throw a grenade, say from behind a wall, through a window frame, or from a shell hole into a slit trench, or from a low bank to a shell hole, and so on, the object being to cover all types of throwing at all types of targets. Each man is given so many dummy grenades, and he goes from one hole to another. The man who goes round the course with the lowest number of throws wins. It can also be arranged on a "bogey" system or any other golf scoring system desired.

FIELD FIRING EXERCISE

(Extracted from North American Training Liaison Letter as published in British War Office Infantry Bulletin.)

This field firing exercise is carried out by recruits at the Engineer Training Centre, Fort Belvoir, Virginia. They call it "Name and Address." Two platoons are exercised at a time. One advances in open order down a broken scrubby slope about 400 yards from the firing point. When they are halfway down the slope a machine gun opens fire and they are given eight seconds to find cover and take up firing positions. The instructors then walk round the platoon and stick up a target marked with his name on the position of each man, the size and colour of the target being decided by the excellence or otherwise of the position he has chosen.

Thus, when I saw it, a man who lay down on a path in full view of the firing point was given a white target fully exposed, while another who took good cover had a drab one most of which was concealed. After the targets have been set up the platoon marches back behind the firing point.

Fire at Targets

The other platoon then takes up positions on the firing point. Each section is given an arc across which they distribute their fire. Some of the targets are clearly visible, others where men took cover behind bushes, etc., are partially or wholly invisible, so that the value of good distribution of fire is emphasized. The platoon fires ten rounds a man in two minutes.

When the firing ends the instructors check the targets and make a list of the number of hits on the target bearing each man's name. Meanwhile the officer in charge has formed up both platoons and made them a speech telling them they are about to take part in a funeral ceremony. He then orders hats off. The names of the men whose targets have been hit and the number of hits on them are read out and as each man's name is called he is made to come out in front and lie down with his helmet on his chest in a growing line of "corpses."

This exercise, besides adding interest and amusement to training, introduces a number of valuable lessons for both sides. Realism is added at Fort Belvoir by the instructors telling the advancing platoon that they are really going to be shot at. The value of this is, however, questionable. The man who laid down in the middle of the path was obviously not impressed while on the other hand two men were so much impressed that when the machine gun opened up they disappeared into the woods and firing could not begin till they had been found and brought back out of the danger area.

WINTER TRAINING



Here are members of the 99 (R) Field Battery, RCA, on a winter training scheme in the Wingham, Ont., area. Complete with skiis and white winter parkas, the men are on a tactical exercise. This photo was forwarded for use in CATM by the Officer Commanding the Battery through DOC M.D. 1.

EXERCISE MUSK OX



Canadian Army Photo

Here are two photos taken during the course of the current Exercise Musk Ox—a joint Army and RCAF exercise in Canada's Barren Lands to test equipment and gather vital information on travel conditions in the far north. In the top photo two members of Musk Ox are shown standing guard on the ancient battlements of Fort Prince of Wales at Churchill, Man., starting point for the 3,100-mile expedition. Construction of the fort was started in 1733 by Samuel Hearne, who set out from there 160 years ago to discover the Coppermine River and the Arctic Coast of America. The bottom photo shows the type of parachute being used by the RCAF to drop supplies from two-engine Dakota aircraft to the moving force. These two 24-foot 'chutes have safely brought their loads to earth, and their red-and-white stripes make them clearly visible from a distance on the snow-covered ground. (For route of this expedition, see tip-in map facing page 48 of December 1945 issue of CATM.—Editor.)



MILITARY CUSTOMS AND SURVIVALS

This is the first instalment of an article dealing with the traditions of the service and written by Mai. T. J. Edwards, M.B.E., Fellow of the Royal Historical Society. It was extracted from the British Army Quarterly, and CATM is publishing this catalogue of some of our military customs in the hope that they will be of general interest to readers and also, in the words of the author, "that they may be of some assistance to those on whom the duty falls of lecturing to the uninitiated." Further instalments will appear in future issues of CATM.-Editor.

Great institutions of long standing seldom divest themselves completely of their early forms and ceremonies, and those that do survive the process of evolution are usually nothing but symbols of functions or practices long since dead. It will be remembered that at the Coronation of His Majesty King George VI much of the service had little or no practical relation to present-day affairs, being bound-up with the historical past.

In the case of the Army, many of its present-day customs are survivals of long ago, and their historical background is little, if at all, understood by the general public, who are inclined to dismiss them as meaningless items of military routine. In some instances these customs have become a part of our national life, e.g. Trooping the Colour and the Aldershot Tattoo, both of which developed from simple military ceremonies. The boy-officers of the seventeenth century, trudging the rainsoddened streets of Flanders towns at night to see that the beer-taps were turned off in the inns where our troops were quartered, could have had no idea that this simple duty would blossom into the grand spectacle one now witnesses in the Rushmoor Arena at Aldershot; yet such is the case.

The purpose of this article is to give a catalogue of some of our military customs and to explain their origin and significance in the hope that they may be of some assistance to those on whom the duty falls of lecturing to the uninitiated.

***REGIMENTAL COLOURS**

Although Regimental Colours have long ceased to be borne in action they are still carried, and there are several interesting customs connected with them.

From the days of early man, some sort of insignia has been employed to distinguish families, tribes and nations. When, in prehistoric times, the head of a family wished to adopt a distinguishing mark he sought it among the animal and bird life around him. He compared the qualities which he possessed or wished to acquire with those of the animals, etc., and adopted the form of his choice accordingly. For instance, the strong would adopt the lion or the bear, the fleet of foot a running deer or a bird in flight and the wise an owl or a serpent. These forms, which became their family badges or crests, they painted on their bodies and dwelling-places. In passing it may be noted that one authority upon the science of heraldry has stated that the origin of heraldry lies in this early practice.

When preparing for battle the family badge was carved in wood or metal

^{*}The expression "Regimental Colours" embraces cavalry Standards and Guidons.

and fixed to a pole, so that all could note the position of their leader in the conflict. This custom survives to some extent in the totem poles of the Red Indians, a practice adopted by Boy Scouts. In the age of chivalry the need for indicating the position of leaders of bands and companies was just as great-notably during the Crusadesand the nobility copied the practice of early man and put their family badges (armorial bearings) upon their banners to indicate their presence. They also put their badges on their surcoat (hence coat-of-arms) and upon the trappings of their horses.

The practice of placing private arms upon banners was carried over to the present Standing Army and persisted until 1751, when it was expressly prohibited by a Royal Warrant of George II.

It will be seen later that our present custom of having regimental badges had its origin in these badges on Colours.

The loose formation of armies was beginning to give place to a system of regimentation during the early part of the seventeenth century, Gustavus Adolphus, the soldier-king of Sweden, supplying much impetus in that direction. A definite number of troops and companies, respectively, was allotted to cavalry and infantry regiments, with a Standard or Guidon to each troop and a Colour to each company. The practice of each company having a Colour remained to the beginning of the eighteenth century, at which time regiments were reorganized in three divisions for tactical purposes, the number of Colours per regiment being correspondingly reduced to three. In the middle of the eighteenth century the number was reduced to two per regiment, which corresponds to our present practice of having two per battalion—the King's Colour and the Regimental Colour.

The idea of "Company Colours" still persists in the regiments of foot guards, wherein the old company badges are borne in rotation on the Regimental Colour, the change taking place when Colours are renewed.

Regiments which carry Colours, etc.: Not all regiments and corps carry Colours. Originally, only the Household Cavalry and horse regiments (the latter now Dragoon Guards) bore square standards; Dragoons bore swallow-tailed Guidons and foot regiments bore Colours. When Dragoons and Light Dragoons were converted to Hussars or Lancers they ceased to carry Guidons, their honorary distinctions being borne upon their drum banners.

All infantry battalions, with the exception of Rifle Regiments, carry Colours.

Originally the role of Rifle Regiments was skirmishing well ahead of the main body, speed and concealment being essential features in the execution of this duty. It is obvious that such regiments, if they displayed Colours in

the field, would give away their position

and thus defeat their purpose. Therefore, Rifle Regiments did not carry Colours, and, alt hough their special role ceased nearly a hundred years



ago, they maintain the custom of not carrying Colours.

Colours of the Foot Guards: The Colours borne by regiments of Foot Guards are opposite in description to those borne by Line Regiments, in that the King's Colour is crimson and the Regimental Colour the Great Union. This is a survival of the Company Colour days, and originated in 1660 with the first issue of Colours to what is now the 1st Bn. Grenadier Guards.

When the proprietary system was abolished about 1855 the State undertook to provide the Colours for regiments, and the first Regulations issued thereafter in 1857 laid down that the King's Colour shall be the Great Union and the Regimental Colour the colour of the facings of the regiment (with a few exceptions). The Guards appealed to Queen Victoria to be allowed to retain their crimson Colours (hitherto provided by the Sovereign from the Great Wardrobe) as the Queen's Colours, and Her Majesty granted their petition.

The Sergeant-Major's Colours: In the New Model Army of the Commonwealth and in the present Standing Army, for a long time the field officers of a regiment (equivalent to a battalion now) were colonel, lieut.-colonel and sergeant-major. Each had a company, the colonel's being commanded by a captain-lieutenant. Towards the end of the seventeenth century the word "sergeant" was dropped from "sergeantmajor,'' thus giving us our present "major." In the days when each company had a Colour the colonel's was a "plain" Colour (i.e. it had no features to denote rank upon it); the lieut.-colonel's was the same as the colonel's, but with the addition of a small Union (Union Jack) in the upper corner nearest the pike; the sergeantmajor was the same as the lieutenantcolonel's with the further difference that, issuing from the lower inner corner of the small Union, was a "pile wavy" in gold (a flaming ray)*.

These distinctions still denote the King's Colours respectively in the 1st, 2nd and 3rd Battalions of Foot Guards.

Trooping the Colour: One of the most picturesque ceremonies associated with Colours is the trooping, the origin of which is usually, but quite erroneously attributed to quard mounting.

As early as the sixteenth century at least, the Colour of a company was always placed in safe-keeping in the ensign's quarters, or elsewhere, at the conclusion of a day's parade or, when on active service, after a day's fighting. In fact it was lodged in guarters in the same way as a member of the company was lodged. When the Colour was marched off the parade to be lodged it was done with due ceremony, which became known as "Lodging the Colour." At the outset the ceremony was simple, but gradually it acquired dignity and complexity, and a number of seventeenth and eighteenth century military writers give the full procedure, including the words of command, in great detail. In 1755 the ceremony became a regular part of the guard mounting parade of the Foot Guards in order to add interest to the occasion. The music played during the Lodging was called "a troop," hence "Trooping the Colour," a ceremony which was two centuries old when it was tacked on to guard mounting.

The expression "Trooping the Colour" did not take root immediately, and we find in a Guards Brigade Order of 4th of May, 1792 (republished on the 28th of November, 1810), the expression "Lodging" the Colour.

Consecration of Colours: Flags and kindred insignia were closely associated with the Church from the

^{*}Oddly enough, this "pile wavy" or flaming ray denoted the Colours of the 2nd Bn. The Royal Scots in the eighteenth century.

earliest times. The Israelites, for instance, carried the sacred standard of the Maccabees, which bore the initial letters of the Hebrew text "Who is like unto thee, O God, amongst the gods" (Exodus xv. II).

In the armies of pagan Rome the ensigns were worshipped with religious adoration and were always placed on an improvised altar in the field when not in active employment.

As regards the service of consecration, the Scriptures provide but little evidence. In Psalm xx. 5 we find: "In the name of God we set up our banners," which might be accepted as referring to a religious service. In A.D. 1060 Pope Alexander II blessed a banner of the Normans before they set out for the conquest of Sicily and the same Pope blessed a banner of William the Conqueror which was carried at the battle of Hastings. At the battle of the Standard in 1138 the banners of St. Peter of York, St. John of Beverley and St. Wilfrid of Ripon were erected on a wagon and moved with the troops.

Blessing of Flags

In the British Museum is a form of service for the blessing of flags, which from its style of Latin is considered to apply to the fourteenth century. A piece of seventeenth-century evidence regarding the blessing of Colours will be found in Barry (1634), where it is stated that the first thing a "Capitaine" must do is "to cause the Colores to be blest." There is evidence in pictures and regimental histories that the consecration of Colours formed an established part of the ceremony of presentation, although it was not until about 1830 that the question of standardizing the service arose.

The earliest reference in official Regulations to consecration of Colours will be found in the "Queen's Regulations" for 1867; it merely states that a form of service may be procured from the Chaplain-General's office. In the 1899 Regulations, however, the ceremony is referred to in much greater detail. Eventually services were devised for use by Protestant, Presbyterian and Roman Catholic regiments. These services referred entirely to infantry Colours and it was not until 1927, when King George V presented new Standards to the Household Cavalry, that the infantry service was adapted for the use of presentations to cavalry. The 1928 "King's Regulations," however, provided for a consecration service for cavalry Standards and Guidons.

The act of consecration undoubtedly puts Colours in a higher category than any other flags which have not been so blessed.

Laying-up Colours in Churches, etc.: The reverential attitude adopted towards Colours and their association with religion secures for them on their retirement from active service an appropriate resting-place in a sacred edifice or public building, where they will be preserved with due regard to their symbolic significance and historic associations. This is no modern attitude towards Colours and their predecessors. Norman ensigns were hung in public places, and Chaucer in "The Knight's Tale" in the "Canterbury Tales" tells us that the Knight hung his banner in the temple.

Up to 1898 colonels of regiments, on behalf of their regiments, disposed of old Colours in a variety of ways, but the "Clothing Regulations" of that year definitely stated that they must be laid-up in churches or public buildings, and that Regulation stands today.

Why Colours are not now carried on Active Service: The last time Regimental Colours were carried in action was on the 26th of January, 1881, at Laing's Nek. They were carried by the old 58th Regiment, now the 2nd Bn. The Northamptonshire Regiment. Colour-bearers were always a target for the enemy's marksmen, and on this occasion the officer carrying a Colour was mortally wounded. Lieutenant Hill Walker remained behind to bring him in, and was awarded the V.C. for his gallant conduct; he is now the senior holder of the V.C.

The question of the continuance of carrying Colours had been raised in Parliament in August, 1880, and all Commanding officers were, in February, 1881, asked for their views upon it. The consensus of opinion favoured the retention of Colours for use in time of peace, but that they should not be taken on active service. An Order was consequently issued in January 1882 giving effect to these views on the grounds of the altered form of attack and of the increased range of firing.

A substitute for Colours: For its distinguished service during the siege

of Delhi during the Indian Mutiny the Sirmoor Battalion was accorded the honour of carrying a third Colour and was also converted to a rifle regiment. As rifle regiments did not carry Colours the officer commanding suggested that they be granted a truncheon instead of the third Colour and to replace the two other Colours now discontinued being carried. This was agreed to. and Queen Victoria devised and sent out the truncheon. In appearance it resembles a drum major's staff. It is accorded the same honours as those normally paid to a King's Colour, is carried on parade by a jemadar with an escort of two havildars and two naicks, and all recruits touch and salute it on enlistment.

The Sirmoor Battalion is now the 2nd King Edward VII's Own Gurkha Rifles and the granting of this truncheon is noted in the Indian Army List.

DISHWASHING

(Continued from Page 30)

rinse tubs in accordance with the requirements of DGMS... It has been assumed that the tubs are 8-gallon size, and that they will normally contain six gallons of water:

(A concentration of from 25 to 50 P.P.M. of chlorine may be maintained in the final rinse tub by adding $1\frac{1}{2}$ ounces (3 level tablespoons) of "Mother Solution" of chlorine when dishwashing is commenced and subsequently each 4

minutes during operations (i.e., twice during the time it takes the overflow tub to collect 6 gallons.)

(The required 200 P.P.M. of chlorine for tub (9) is obtained by adding 6 ounces of "Mother Solution." The addition of a greater quantity would be in no way harmful and would create a safety factor; thus it would be feasible to add 1 cup (8 or 10 ounces) of the "Mother Solution.")



"Universal Military Training" by Col. E. A. Fitzpatrick, U.S.A., 374 pp. \$3. Published by Whittlesey House, McGraw-Hill Book Co., Inc., New York, 1945.

This is a comprehensive and methodical treatment of a subject which is as controversial in the U.S.A. as in Canada. The late President F. D. Roosevelt, in a news conference on August 18, 1944, proposed that the people of the United States should start to form their opinions on the subject of universal military training. It has been a live subject ever since in many forums, from Congress to the Gallup Poll. The final answer in our neighbor country remains to be given, but it cannot be much longer deferred.

Debates and arguments on universal service tend to be animated by prejudice and preconceived ideas rather than informed by study, and the value of this book is that it presents many relevant facts and the experience of past history in a dispassionate way, examining all sides of the case where advocates clash.

The jacket note says: "The policies involved in universal military training are not military policies, even though they are in the realm of grand strategy, but are public policies to be decided by the whole citizenship."

General George Washington's plea for a "Hardy, Respectable and Wellestablished Militia," which the author quotes, reads with almost the same freshness in 1946 as when written in 1783 immediately after the formal cessation of hostilities with Great Britain:

"I come next in the order I have prescribed myself, to treat of the Arrangements necessary for placing the Militia of the Continent on a respectable footing for the defence of the Empire and in speaking of this Great Bulwark of our Liberties and independence, I shall claim to indulgence of suggesting whatever general observations may occur from experience and reflection with the greater freedom, from a conviction of the importance of the subject; being persuaded that the immediate safety and future tranquility of this extensive Continent depend in a great measure upon the peace Establishment now in contemplation; and being convinced at the same time, that the only probable means of preventing hostility for any length of time and from being exempted from the consequent calamities of War, is to put the National Militia in such a condition as that they may appear truly respectable in the Eyes of our Friends and formidable to those who otherwise might become our enemies."

When Washington wrote, it seemingly had not occurred to the statesmen of the period that there was any alternative than "Mercenaries" or "Militia" for a state's land defence. Very shortly

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WOMIT PROGRAM

Notes on the War Office Method of Instruction Teams and the methods employed by them contained in this article were prepared by the School of Infantry, Warminster. This material was extracted from the British War Office Infantry Bulletin for CATM—Editor.

War Office schools and training establishments will assume responsibility for providing teaching in methods of instruction from within their own establishments in due course. These teams will then be disbanded.

The War Office Method of Instruction Team has its headquarters at the School of Infantry. The team gives a series of demonstrations to both the officers and N.C.Os' wings. Potential instructors arriving as students for training at the school have the equivalent of one working day devoted solely to learning the best ways of imparting the knowledge they assimilate. The N.C.Os' wing at the school gives instruction in the necessary demonstrations, and indicates the correct application of the method charts, models, epidiascope, film strips and blackboard technique.

The following are the six demonstrations which are normally given at the school:

1. The Objective and Rules of Instruction— (a) the sense; (b) the brain; (c) confirming instruction.

2. The Man in the Squad—This deals with discomfort, monotony, waste of time, question time and types of questions, use of jargon, the rear rank soldier.

3. Aids to Learning—Before, during and after learning. They include use of visual aids such as posters, films, film strips, etc.

- 4. Preparing a Lesson.
- 5. Question Technique.

6. Specimen Lesson, incorporating the above.

Old Ideas Banned

It will be seen from these demonstrations how ruthlessly the old methods of much talk and little activity are avoided. The trainee is made to realize the great part **all** the senses play in teaching. He is conscious, by the various charts he sees, that his own senses are being livened in order to maintain his interest. Up-to-date ideas are put to him.

For example, one of the first charts put before him tells him that he must be:

1. The Salesman—enthusiasm, approach, persuasion.

2. The Showman—showmanship, preparedness, power to attract attention.

3. The Friend—consideration, friendly attitude, good manner.

He is made to realize that: DOING+THINKING=Best HEARING+SEEING=V. Fair HEARING ONLY=WORST

The bad habits which were such a feature of past instruction are avoided. The pitfalls are clearly marked, e.g.:

1. Unnecessary "waffling" by the instructor.

2. As a result, insufficient activity by the trainee.

3. Trying to teach manipulative skills through the eye and ear, instead of by actual practice.

4. Insufficiency of equipment, due to the failure to stagger lessons and thus pool the equipment.

5. The use of jargon.

6. Bad question technique.

7. The old type of lecture, i.e., 45 minutes of continuous talk by the instructor without visual aids.



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

General Training

- 1. MN-3721 Film Tactics (20 mins)
 - (a) A US Navy training film demonstrating the proper use of films as training aids.
 - (b) Distributed to Command, District and Camp HQ Film Libraries.

Chemical Warfare

- 1. CA-24 Smoke of Battle (35 mins)
 - (a) A Canadian Army Film Unit presentation dealing with use of smoke, including weapons used, factors which affect smoke screens, types of screens and tactical employment.
 - (b) Distributed to Cdn Army School of Instr, S-17 CS of I, A-3 CATC, A-6 CETC, A-33 C Armd CTC and RMC and also to Command and District HQ Film Libraries.

Medical and Hygiene

- 1. SS-607 Possibilities of Cineplastic Amputation (20 mins)
 - (a) An Australian Army medical film prepared by Dr. Ben Rank which illustrates the possibilities of cineplastic prosthesis and what has been done in this field.
 - (b) One print of this film is available and may be obtained on loan on request to the Army Central Film Library, NDHQ.

Rehabilitation

- 1. **SS-412** Back to Work (15 mins)
 - (a) Shows the procedure laid down to aid service men and women to get "back to work" following discharge.
- 2. SS-524 Road to Civvy Street (20 mins)
 - (a) Gives a picture of the rehabilitation set-up through an interview given to a newspaper reporter by an executive of the Re-establishment Division.
- 3. SS-538 This is Our Canada (20 mins)
 - (a) Shows what "home" means to every Canadian by giving a bird's-eye view of Canada from East to West to North both town and country.
 - (b) The above three films have been distributed to Command, District and Camp HQ Film Libraries and also to all District Depots.
- 4. SS-451 Road to Recovery (20 mins)
 - (a) Outlines steps being taken by Department of Veterans' Affairs to assist in the rehabilitation of disabled Veterans from the time they return to Canada until they are discharged from hospitals and find employment.
 - (b) Distributed to Command and District HQ Film Libraries.
- 5. MN-3428d Combat Fatigue—Assignment Home (28 mins)
 - (a) This film produced for the US Navy is designed to assist returned servicemen including former neuro-psychiatric patients, refit themselves into civil life.
 - (b) Distributed to all District Depots.

Educational and Vocational

- 1. SS-599 Principles of Refrigeration (20 mins)
 - (a) Outlines basic principles of refrigeration as applied in modern household and commercial use.
- 2. SS-597 Paper Making (20 mins)
 - (a) Film traces paper making from the cutting of the timber to the finished product.
- 3. SS-595 Plastics (15 mins)
 - (a) Depicts the development of plastics and many of the uses made of this material during the war.
- 4. SS-596 Rectilinear Co-ordinates (10 mins)
 - (a) This Knowledge Builders film presents in diagrammatic form the rectilinear co-ordinates systems.
- 5. SS-507 Woollen Goods (10 mins)
 - (a) The carding, spinning and weaving of wool by spinning wheel and handloom is contrasted with that done by power driven machines.
 - (b) The above films have been distributed to Command, District and Camp HQ Film Libraries.
- 6. SS-608 Painters of Quebec (20 mins)
 - (a) A technicolor production which discusses various prominent Canadian painters and shows how their work has developed.
 - (b) This film may be obtained on loan on request to the Army Central Film Library, NDHQ.

General Interest

- 1. SS-564 Fall of Berlin (70 mins)
 - (a) A Russian documentary film, with English commentary, depicting some of the campaigns leading to the downfall of the Nazis, and showing the actual drive on Berlin.
- 2. SS-605 Appointment in Tokio (55 mins)
 - (a) An American documentary film, supplemented by captured Japanese film, showing the sequence of events in the Pacific between May 42, when the Americans were driven from the Phillipines, and Sep 45, when General MacArthur as Supreme Allied Commander presided over the official surrender of Japan.
- 3. SS-606 Surrender in the Pacific (20 mins)
 - (a) This film describes the surrender of Japan to the allies and the occupation programme which followed.
 - (b) The above three films have been distributed to Command. District and Camp HQ Film Libraries.

BOOK REVIEW

(Continued from Page 45)

thereafter, at Valmy, Europe was introduced to the ''Nation in Arms'' as represented by Dumouriez's ill-booted but enterprising levies who made short work of the Duke of Brunswick's diagrammatic gambit.

This book will interest all who care to examine the arguments on the comparative suitability of the "Mercenary," "Militia" and "Nation in Arms" principles for a state's reliance in the Atomic Age.—C.D.C.

THE CANADIAN ARMY AT WAR

Following are three booklets being produced by the Department of National Defence in the series "The Canadian Army At War":

- 1. "The Canadians in Britain, 1939-1944."
- 2. "From Pachino to Ortona."
- 3. "Canada's Battle in Normandy."

These are available at 25c each for paperbound copies and 50c each for clothbound copies. Orders should be addressed to The King's Printer, Ottawa, Ont., and be accompanied by Money Order or Postal Note. State clearly which books in the series are desired.





CATM dedicates its cover this month to the Canadian Intelligence Corps. This Corps boasts a record which is one of the proudest in Canadian military history.

Next Month-THE CANADIAN OFFICERS TRAINING CORPS

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