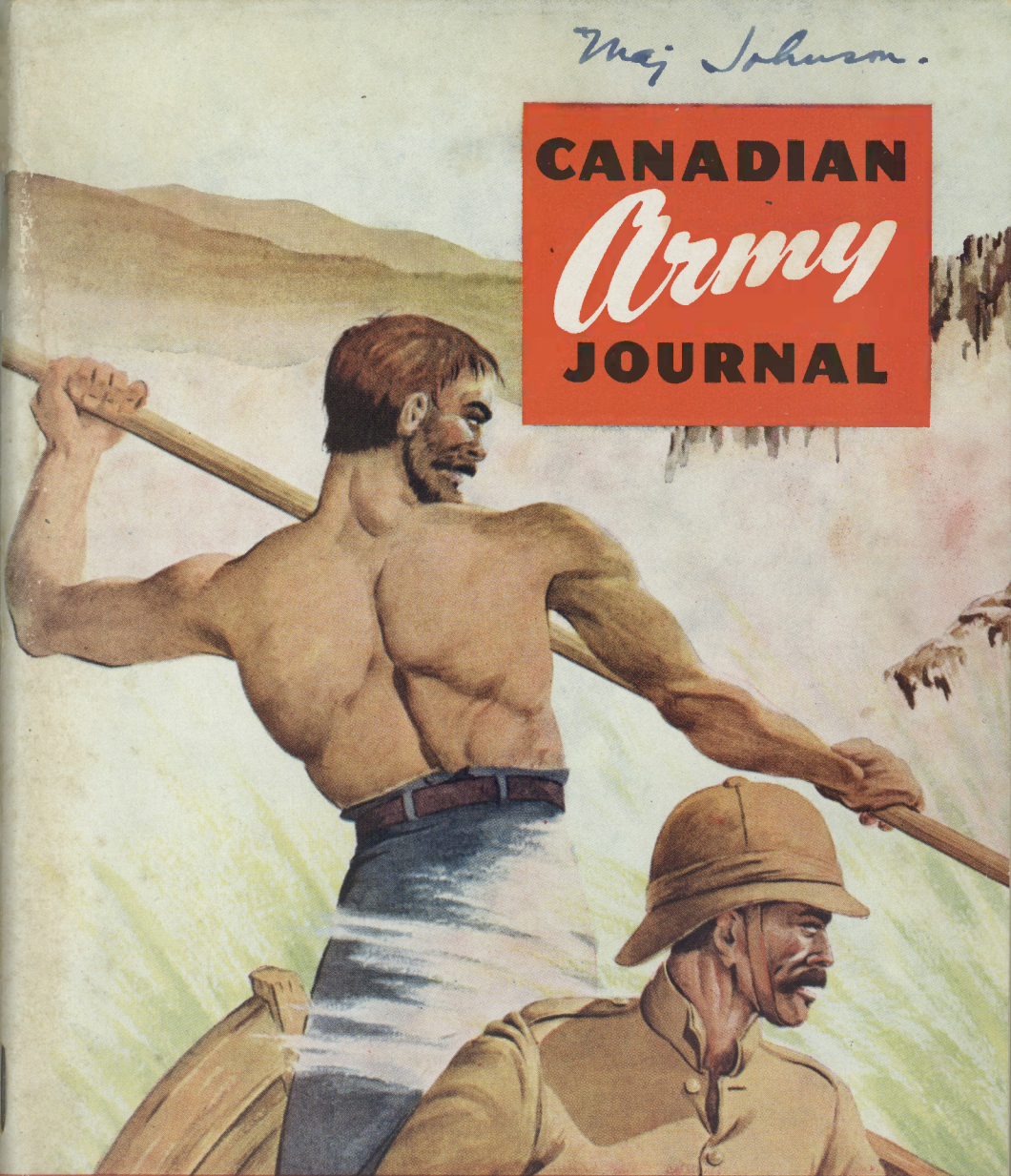
Maj Johnson.

CANADIAN Army JOURNAL



VOLUME 5 NUMBER 9 DECEMBER 1951

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The Cover

Canadians shooting a cataract on the Nile during the Nile Expedition of 1884–1885. (See article on page 16).

CANADIAN Army JOURNAL

The object of the Canadian Army Journal, which is published by the Directorate of Military Training under authority of the Chief of the General Staff, is to provide officers of the Active, Reserve and Supplementary Reserve Forces with information designed to keep them abreast of current military trends and topics, and to stimulate interest in current military affairs.

THE SOLDIER AS A PEACEMAKER

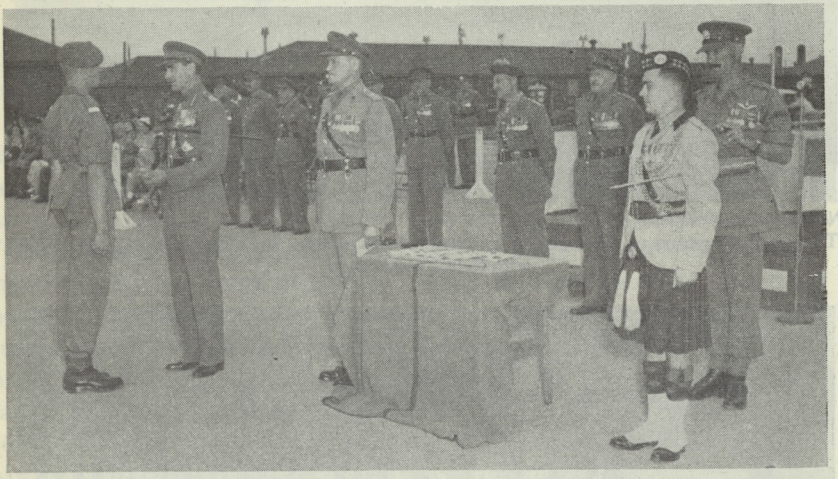
By
MAJOR-GENERAL W. H. S. MACKLIN, CBE, CD, ADJUTANT GENERAL OF THE CANADIAN ARMY*

Lieut.-Col. Dare and Gentlemen:

I am pleased and honoured to have the opportunity of taking this parade today, and of congratulating the members of this class on successfully completing their first lap on the course that leads to His Majesty's Commission in the Canadian Army.

I want to say a few words about the profession which you have chosen. It is a profession that for many years had little attention and less honour paid to it in Canada. Indeed, it was ridiculed and even despised. For too long the soldier was painted from rostrum and classroom, from pulpit and editorial sanctum as a "Militarist" or "War-Monger". The truth

*This address was delivered to cadets of the Officer Candidate School, Camp Borden, of which Lieut.-Col. M. R. Dare, DSO, is Commanding Officer.—Editor.



National Defence Photograph

Lt.-Gen. G. G. Simonds, CB, CBE, DSO, CD, Chief of the General Staff, presents corps and rank badges to a member of the first graduating class of the Officer Candidate School, Camp Borden. At Lt.-Gen. Simonds left is Colonel G. W. H. Wattsford, DSO, first commandant of the School.

is that, as often as not, the soldier is the best peacemaker of them all.

In the days of the Roman Empire women could travel in security and without escort, from Hadrian's Wall in North Britain across all Europe and into Asia—the Roman Legions saw to that.

The long peace that prevailed in India before the British departed from that sub-continent was not brought into existence by moralizing visionaries, but by a succession of able soldiers—Clive, Wellesley, Napier, Nicholson, Havelock.

And the wars that were incessant in Western Asia in ancient Babylonian

MAJOR-GENERAL MACKLIN

National Defence Photograph

The graduating class of the Officer Candidate School receives the Chief of the General Staff with the General Salute.

National Defence Photograph

The graduating class moves into position for the March Past.

National Defence Photograph

Lt.-Gen. Simonds inspects the graduating class.

times were not stilled by the priests of Ishtar or Bel calling on their gods, but by a Prince of Anshan—Cyrus the Mede called the Great, and one of history's foremost soldiers.

There is no prouder privilege a young Canadian can have than that of commanding a platoon or a troop of Canadian soldiers. When King Edward VII was Prince of Wales he took a keen interest in the British Army. On a certain occasion Queen Victoria, accompanied by the Prince, was reviewing her troops at Aldershot. The day was hot, the troops were in scarlet; they had marched far and were perspiring freely. The fumes reached the reviewing stand, and the Queen said to the Prince "What is that peculiar odour?" The Prince, faintly irritated, said "Madam, what you smell is the perfume of the British Army." And so it is of the Canadian Army.

What do we demand from you as officers? We demand thirty-five years of your life, and maybe your life itself. Nothing less than a lifetime of dedicated service to the Army, and its men is good enough. As a platoon commander you will have thirty or forty men, each of whom thinks his own particular personal problems are the most important in the world—and he is right, and you must treat him accordingly. I do not mean that men are to be babied—they do not expect it. They are to be treated as men, with respect and consideration. You are never to bully them, nor permit anyone else to do so. Your business is to know everything about every one of them—and their families too if they have families.

You can take pride in your profession. Our very existence, and all we stand for, depends on your efficiency.

(*Continued on page 4*)

WEATHER AND WAR

DIGESTED FROM AN ARTICLE BY SQUADRON LEADER M. P. SRIVASTAVA IN THE "INDIAN AIR FORCE QUARTERLY" (INDIA)

No army commander would plan a military operation without taking into consideration the weather which is likely to exist at the time and place that the operation is scheduled. The movement of troops and the trafficability of roads depend on the amount of rainfall or snowfall, in addition to the terrain of the country.

Weather plays a predominant role in air operations. Information regarding the amount and type of clouds, the visibility, and the weather conditions over the target area is vital to the success of bombing or fighter missions.

The following summarizes the operational importance of clouds:

1. When pursued by enemy aircraft, a friendly plane could enter the cloud formation, change its course or altitude, or both, and escape.

2. Friendly aircraft may approach the target area under cover of the clouds by:

a. Flying within a cloud sheet on instruments until within striking distance of the target.

b. Flying above a cloud sheet on instruments until within striking distance of the target. In case they are chased by enemy planes, refuge could be sought within the cloud sheet.

Before a pilot sets out for a mission over enemy territory, he should know whether the visibility over the target is sufficient for accurate bombing or strafing, and what the visibility will be over his own base on his return.

In modern war, it is essential to gain air superiority before land or sea operations are started. No commander would ever attempt to achieve air superiority in bad weather. The importance and usefulness of accurate weather forecasting is thus illustrated.

THE SOLDIER AS A PEACEMAKER

(Continued from preceding page)

But I tell you that eminence and success in the military profession is not to be had for the asking. It needs brains, judgment, human understanding, and intense and continuous study and application.

It requires some humility also: the sabre-rattling Junkers and sword-clanging Samurai have not, in the end, been conspicuously successful these past few decades. As it says in the Old Testament—"Let not him that girdeth on his harness boast himself as he that taketh it off."

THE NORTH ATLANTIC TREATY ORGANIZATION

By
Lt.-Col. W. G. A. Lambe, ED*

Following the end of hostilities in the Second World War, the nations of the world held high hopes that universal peace might at last be achieved. However, these original hopes for peace were quickly followed by disillusionment and anxiety as a result of the blocking tactics employed by the USSR and its satellite countries. Against the threat of Communist aggression it was clear that only an alliance of free peoples, possessing sufficient strength to deter any potential aggressor, would safeguard the free institutions of the Western World.

The first action towards this end was the signing of the Brussels Treaty in 1948. This Treaty, commonly referred to as Western Union, allied the countries of Great Britain, France, Holland, Belgium and Luxembourg for the purposes of mutual economic aid and mutual defence. On the day on which the Brussels Treaty was signed, President Truman addressed the United States Congress, and in his address stated "I am sure that the determination of the free countries of Europe to protect themselves will be matched by an equal determination on our part to help them do so". This determination of the United States to assist the free countries of Europe was equalled by Canada and after several months of negotiations the North Atlantic Treaty was signed on 4 April 1949.

By signing the Treaty, twelve nations, namely the Brussels Treaty powers and the United States, Canada, Norway, Denmark, Portugal, Iceland and Italy, allied themselves in an organization to protect their way of life and to preserve peace by a united front against possible aggression.

The North Atlantic Treaty

The Treaty itself consists of a preamble and 14 articles. In the preamble, the Parties to the Treaty "reaffirmed their faith in the purposes

**The author served with Armoured units and on the staff during the Second World War. Since 1946 he has held staff appointments at Canadian Army Liaison Establishment, London, Eng., the Canadian Army Staff College at Kingston and is now employed as a GSO I in the Directorate of Military Operations and Plans, Army Headquarters, Ottawa.—* Editor.

and principles of the Charter of the United Nations" and announced their determination "to safeguard the freedom, common heritage and civilization of their peoples, founded on the principles of democracy, individual liberty and the rule of law". They also resolved "to unite their efforts for collective defence and for the preservation of peace and security". Thus from its very inception the Treaty was defensive in character and its aim is peace, not war.

The 14 articles of the Treaty may be summarized as follows:

(a) The Parties undertake, as set forth in the Charter of the United Nations to settle any international disputes in which they may be involved by peaceful means. (Article I).

(b) The Parties will contribute toward the further development of peaceful and friendly international relations by strengthening their free institutions and by promoting conditions of stability and well being. They will seek to eliminate conflict in their international economic policies and will encourage economic collaboration between any or all of them. (Article II).

(c) The Parties, separately and jointly, by means of continuous and effective self-help and mutual aid, will maintain and develop their individual and collective capacity to resist armed attack. (Article III).

(d) The Parties will consult together when, in the opinion of any of them, the territorial integrity, political independence or security of any member is threatened. They agree that an armed attack against any one or more of them in Europe or North America shall be considered as an attack against all of them and that an armed attack on one or more of them is deemed to include an attack on the territory of any of the parties in Europe or North America, on the Algerian departments of France, on the occupation forces of any Party in Europe and on the islands, warships or aircraft of any Party within the North Atlantic area. (Articles IV, V and VI).

(e) The Treaty does not affect, in any way, the rights and obligations under the Charter of the United Nations of Parties who are member nations of the UN. (Article VII).

(f) Each Party declares that none of the international engagements now in force between it and any of the Parties or any third party is in conflict with the provisions of the Treaty and undertakes not to enter into any international engagement in conflict with the Treaty. (Article VIII).

(g) The Parties agree to establish a Council, on which all are represented, to implement the Treaty and to set up such subsidiary bodies as may be necessary. (Article IX).

(h) The Parties may, by unanimous decision, invite other countries, who are in a position to further the principles of the Treaty, to accede to the Treaty. (Article X).

(i) Articles XI, XII, XIII and XIV provide for the ratification and revision of the Treaty, the denunciation of the Treaty by any member wishing to withdraw, but only after the Treaty has been in force for twenty years, and the deposition of the Treaty itself.

Original Organization

The first two sessions of the North Atlantic Council, established under Article IX of the Treaty, were held in Washington in September and November, 1949. At these two meetings agreement was reached on an organization consisting of:

(a) A North Atlantic Council of the Foreign Ministers as supreme organ.

(b) A Defence Committee composed of the Defence Ministers.

(c) A Military Committee composed of the Chiefs of Staff with a Standing Group as permanent subcommittee and five Regional Planning Groups.

(d) A Military Production and Supply Board, parallel to the Military Committee.

(e) A Defence Financial and Economic Committee on a ministerial level.

As emphasis shifted from planning to implementation, the need for a simpler organization with clear-cut lines of authority became apparent. In May 1950 the Council decided to appoint Deputies to carry out its policies and formulate issues for its decision in the interval between meetings of the Council itself. On a Canadian proposal, the Council, in December 1950, authorized the Deputies to study the organization and recommend further necessary changes. Modifications in the structure resulting from the Deputies' recommendations were announced in May 1951.

The Present Organization

A chart showing the present organization and the chain of responsibility of its various components is shown at Fig. 1. Brief particulars of each component are as follows.

Political Structure

The *North Atlantic Council* remains the principal body in the structure, but since the modifications of May 1951 it now incorporates the two other ministerial committees, namely, the Defence Committee and the Defence Finance and Economic Committee. Its membership at any one session depends on the nature of the agenda to be discussed and may include all or any of the Prime Ministers, Foreign, Defence and Finance Ministers of the member nations as appropriate. It is charged

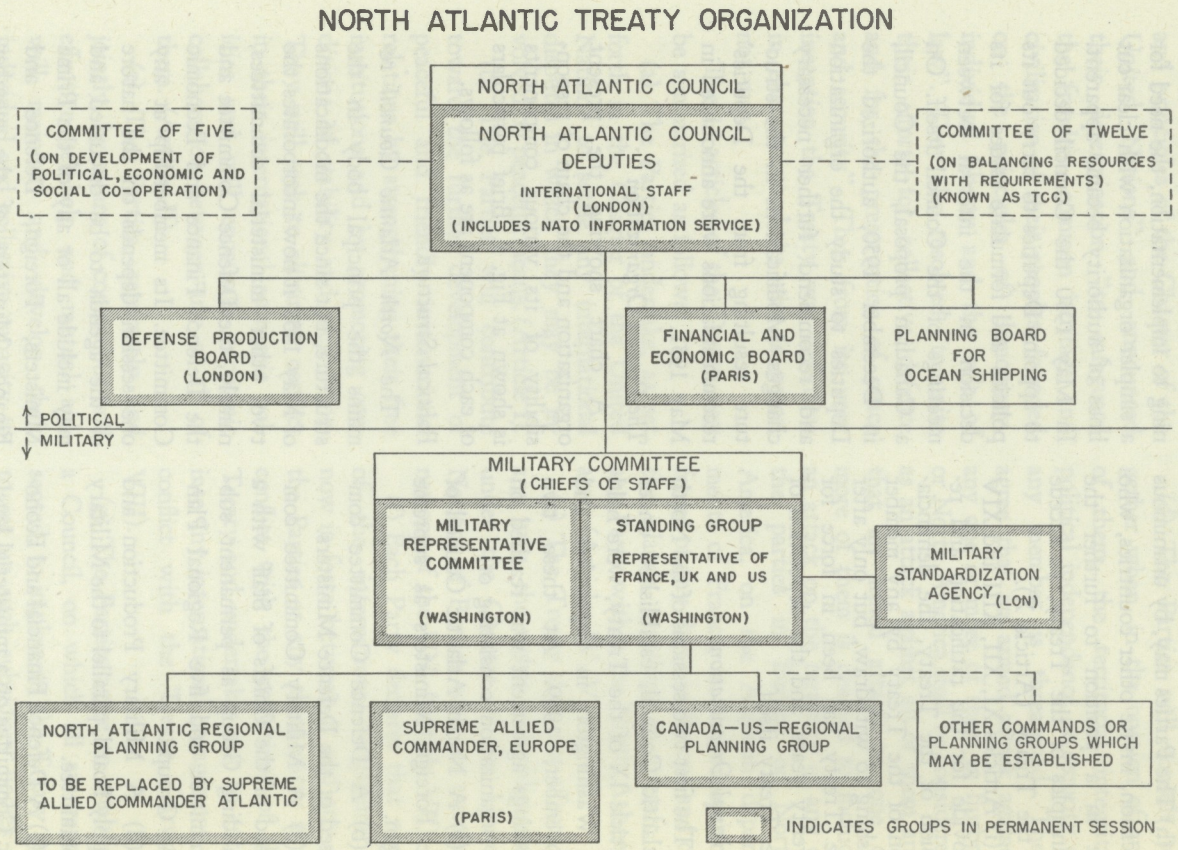

NORTH ATLANTIC TREATY ORGANIZATION
NORTH ATLANTIC COUNCIL
NORTH ATLANTIC COUNCIL DEPUTIES
INTERNATIONAL STAFF (LONDON)
(INCLUDES NATO INFORMATION SERVICE)
COMMITTEE OF FIVE
(ON DEVELOPMENT OF POLITICAL, ECONOMIC AND SOCIAL CO-OPERATION)
COMMITTEE OF TWELVE
(ON BALANCING RESOURCES WITH REQUIREMENTS)
(KNOWN AS TCC)
DEFENSE PRODUCTION BOARD (LONDON)
FINANCIAL AND ECONOMIC BOARD (PARIS)
PLANNING BOARD FOR OCEAN SHIPPING
POLITICAL
MILITARY
MILITARY COMMITTEE
(CHIEFS OF STAFF)
MILITARY REPRESENTATIVE COMMITTEE
(WASHINGTON)
STANDING GROUP
REPRESENTATIVE OF FRANCE, UK AND US
(WASHINGTON)
MILITARY STANDARDIZATION AGENCY (LON)
NORTH ATLANTIC REGIONAL PLANNING GROUP
TO BE REPLACED BY SUPREME ALLIED COMMANDER ATLANTIC
SUPREME ALLIED COMMANDER, EUROPE
(PARIS)
CANADA—US—REGIONAL PLANNING GROUP
OTHER COMMANDS OR PLANNING GROUPS WHICH MAY BE ESTABLISHED
INDICATES GROUPS IN PERMANENT SESSION

FIG. 1

with the responsibility of considering all matters concerning the implementation of the Treaty and meets once a year and at such other times as may be necessary.

The *Council Deputies* constitute the permanent working organization of the Council. They are charged with the responsibility for executing approved policy and also for making recommendations to the member governments on any new issues requiring decisions that may arise between Council sessions. They also have authority to register approval on behalf of their respective governments on current matters under consideration.

At the Ottawa meeting of the Council in September 1951, two temporary committees were set up, The *Ministerial Committee of Five* was set up to consider ways of building up the inner strength of the Atlantic community, and the *Temporary Committee of Twelve* was set up to study the requirements and resources of the North Atlantic countries.

The *Committee of Five* includes representatives of Belgium, Canada, Norway, the Netherlands and Italy, and their terms of reference include consideration of the further strengthening of the North Atlantic community, especially the implementation of Article II of the Treaty. They are particularly charged with considering and making recommendations to the Council on the following matters:

(a) Co-ordination and frequent consultation on foreign policy, having particular regard to steps designed to promote peace.

(b) Closer economic, financial and social co-operation in order to promote conditions of economic stability and well-being within the North Atlantic Treaty Organization.

(c) Collaboration in the field of culture and public information.

The *Temporary Committee of Twelve*, commonly referred to as the Temporary Council Committee or TCC, was established under the chairmanship of Mr. Averell Harriman and was charged with the responsibility of studying the resources and requirements of the NATO countries and recommending to the Council methods of closing the gap between the requirements of NATO and the resources made available to NATO by the member nations. Mr. Harriman set up, as a sub-committee of the TCC, the Screening and Costing Staff (SCS) which contained representatives of all 12 nations. The particular job of the SCS was to examine the military, production and economic problems together and discover where military savings can be made in order that the economic burden of

enlarging NATO forces can be lightened.

The *Defence Production Board* consists of representatives of all the Treaty nations and considers overall military production and supply by the member nations for the defence of the NATO area.

The *Financial and Economic Board* is responsible for considering the financial and economic aspects of NATO defence programmes and making recommendations to member nations through the Council of Deputies. It also considers and makes recommendations on the best use of the financial and economic resources in member countries in support of the common defence effort.

The *Planning Board for Ocean Shipping* is responsible for making plans and recommending policy regarding the use of ocean shipping belonging to the member nations. While not very active in peacetime, it will have considerable authority in the event of war.

Military Structure

The *Military Committee* is composed of the Chiefs of Staff of the member nations with the exception that Iceland, having no military organization, is represented by a civilian observer. Its terms of reference include the following responsibilities: to provide general policy guidance of a military nature to its Standing Group; to advise the Council and other NATO agencies on military matters; and to recommend to the Council military measures for the unified defence of the North Atlantic area. The Military Committee meets annually or when called by its Chairman.

The Standing Group of the Military Committee was set up as a subcommittee of that body in order to facilitate the rapid and continuous conduct of its work. It consists of one member each from the US, the UK and France and functions continuously in Washington. The Standing Group is responsible for higher strategic direction throughout the North Atlantic area and is authorized to issue instructions and guidance on military matters to the various NATO Commands. It provides policy guidance and military information to other bodies of the organization, co-ordinates regional defence plans and makes recommendations to the Military Committee.

The Military Representatives Committee provides full-time representation of the Military Committee and includes one military member from each NATO country with the exception of Iceland. The members have authority to act in military matters except those that require full Military Committee approval. They also provide the Standing Group with the advice and help of

the NATO members not represented on the Standing Group and thus reduce the requirements for frequent meetings of the Military Committee.

The Military Standardization Agency was set up in 1951 to facilitate the standardization of the arms and equipment of the NATO powers to the extent necessary to implement defence plans. It is permanently located in London and consists of representatives of Canada, France, the United Kingdom and the United States.

Regional Planning Groups. The original organization provided for five of these groups on a geographical basis to work out detailed plans for the defence of their respective regions. After the appointment of a Supreme Allied Commander Europe, three of them—the North European, Western European and Southern European Regional Planning Groups—were phased into commands under Supreme Headquarters Allied Powers in Europe (SHAPE). The two remaining are:

(a) *The Canada — United States Regional Planning Group* with Canada and the US as members.

(b) *The North Atlantic Ocean Regional Planning Group* in which all member nations except Italy and Luxembourg participate. This group will pass its functions to the Supreme Allied Commander Atlantic (SACLANT)* if and when he is appointed.

Command Structure

The Command Structure as at present developed within the Treaty organization is shown at Fig. 2. This structure is still incomplete. Appointments to the Supreme Allied Command, Atlantic, have still to be announced, the exact limits of this Command have yet to be settled and the questions of the defence of the Eastern Mediterranean and the admission to NATO of Greece and Turkey are still under consideration. Brief explanations of the components of the present structure are as follows: *The Supreme Headquarters Allied Powers in Europe* came into being on 2 April 1951 and is responsible, under the direction of the Standing Group, for the defence of the allied countries of continental Europe against invasion. The Supreme Allied Commander Europe (SACEUR) will, in time of war, control all land, sea and air operations to this end. SACEUR's functions include:

(a) The organization and training of the various units of the armed forces of the NATO countries which have been allotted to his command.

(b) The preparation of defence plans.

(c) Making recommendations to

**This article was written before the appointment of SACLANT (which has now been made) and is based on the organization as it existed on 31 December 1951.—Editor.*

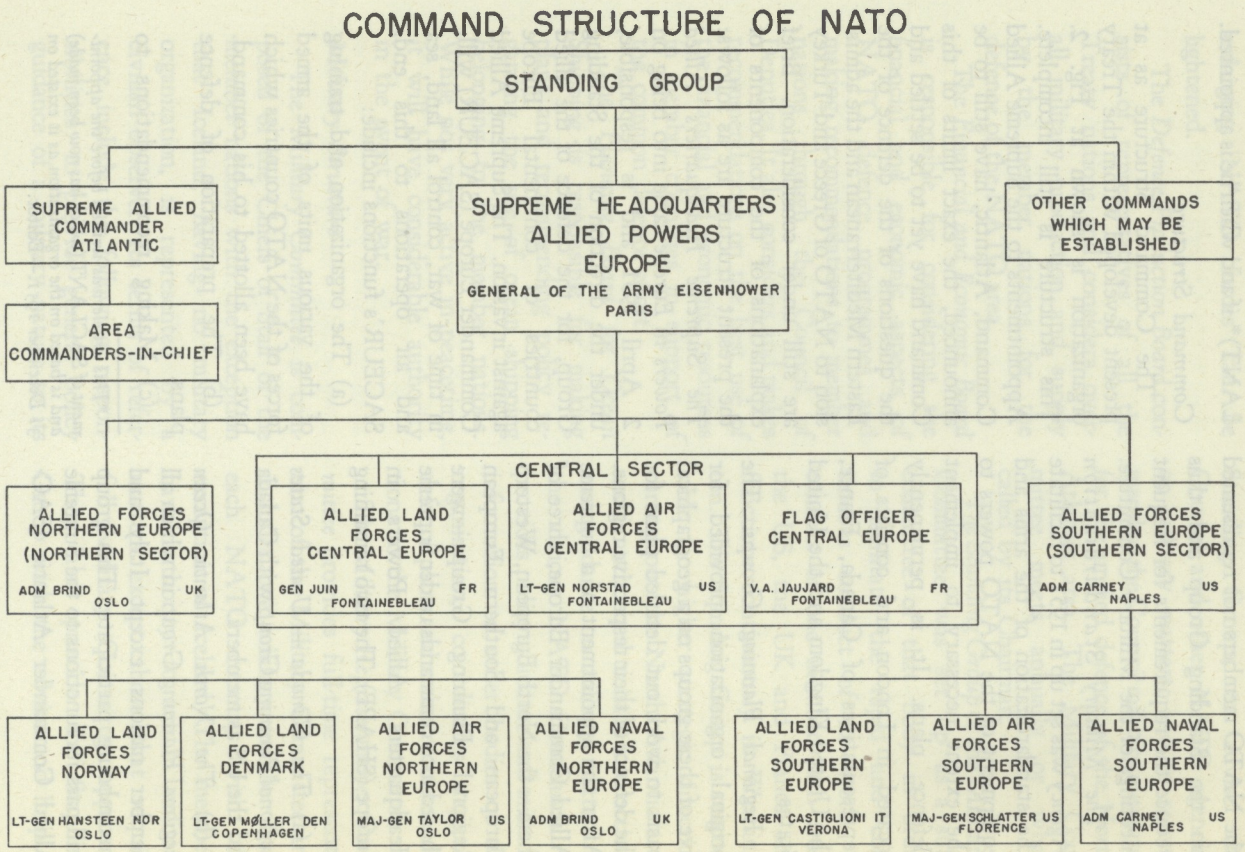

COMMAND STRUCTURE OF NATO
STANDING GROUP
SUPREME ALLIED COMMANDER ATLANTIC
AREA COMMANDERS-IN-CHIEF
SUPREME HEADQUARTERS ALLIED POWERS EUROPE
GENERAL OF THE ARMY EISENHOWER
PARIS
OTHER COMMANDS WHICH MAY BE ESTABLISHED
CENTRAL SECTOR
ALLIED FORCES NORTHERN EUROPE (NORTHERN SECTOR)
ADM BRIND UK
OSLO
ALLIED LAND FORCES CENTRAL EUROPE
GEN JUIN FR
FONTAINEBLEAU
ALLIED AIR FORCES CENTRAL EUROPE
LT-GEN NORSTAD US
FONTAINEBLEAU
FLAG OFFICER CENTRAL EUROPE
V.A. JAUJARD FR
FONTAINEBLEAU
ALLIED FORCES SOUTHERN EUROPE (SOUTHERN SECTOR)
ADM CARNEY US
NAPLES
ALLIED LAND FORCES NORWAY
LT-GEN HANSTEEN NOR
OSLO
ALLIED LAND FORCES DENMARK
LT-GEN MØLLER DEN
COPENHAGEN
ALLIED AIR FORCES NORTHERN EUROPE
MAJ-GEN TAYLOR US
OSLO
ALLIED NAVAL FORCES NORTHERN EUROPE
ADM BRIND UK
OSLO
ALLIED LAND FORCES SOUTHERN EUROPE
LT-GEN CASTIGLIONI IT
VERONA
ALLIED AIR FORCES SOUTHERN EUROPE
MAJ-GEN SCHLATTER US
FLORENCE
ALLIED NAVAL FORCES SOUTHERN EUROPE
ADM CARNEY US
NAPLES

FIG. 2

the Standing Group on any military questions which affect his ability to carry out his responsibilities in peace or war.

SACEUR ordinarily receives his directions from the Standing Group but he has the right of direct access to the Chiefs of Staff of the member nations and, in exceptional circumstances, to Defence Ministers and Heads of Governments. He obtains his political guidance through the Standing Group from the Council Deputies.

SACEUR has divided his command area into three geographical sectors. He has delegated the command of the Northern and Southern sectors to others but retains command of the Central sector himself.

The Supreme Allied Commander Atlantic (SACLANT) has not yet been appointed* although the appointment has been approved in principle by the Council since Oct. '50. The Atlantic Command covers broadly the North Atlantic Ocean but the exact limits have not yet been defined. SACLANT would exercise, in wartime, the normal powers of a Supreme Commander. In time of peace, however, he will not command any of the naval and air forces of Treaty Powers except when forces are specifically placed under his command for combined exercises, but will be responsible for the development of plans and the conduct of combined exercises of those forces which will come under his command in time of war.

Other Nations Associated with NATO

Greece and Turkey. At the Ottawa session of the Council in September 1951, unanimous approval was given to the admission into the Organization of Greece and Turkey. As the admission of these two countries into NATO has not yet been ratified by the parliaments of all the member nations, the two countries have not yet become full members. However, since October 1950, they have been associated with appropriate phases of the military planning work of NATO concerned with the defence of the Mediterranean. It is anticipated that ratification of their admission will be received from all member nations in the near future.

The Federal Republic of Germany. German participation in the defence of Western Europe has been approved in principle by the Council. In December 1950, at the Brussels session of the Council, a committee was set up, consisting of representatives of the US, the UK and France (the Occupying Powers) to discuss this matter with the West German Government. At the same time the Council noted the French

**This appointment has now been made.*—Editor.

SUBMARINE KILLER

Rear Admiral C. B. Momsen, United States Navy,
in the Army-Navy-Air Force Journal (U.S.)

Today, with the development and refinement of the snorkel breathing device, the submarine—already a fearsome weapon—has been tremendously improved as a battle unit. The increased underwater range, speed and other factors now in its favour give us a combatant vessel that for the first time approaches a true submarine. The latter, we believe, will become a reality when the atomic submarine, now building, joins the fleet, for atomic power will permit an underseas craft to operate naturally in its medium. It will be the first vessel designed as a submersible, capable also of being operated on the surface. This is in contrast to all earlier submarines that were constructed as surface vessels which could be made to dive and operate for a limited time submerged.

Now, with submarines capable of travelling vast distances without serious danger of detection (one of ours "snorkled" 5,200 miles continuously), the attacker from beneath the seas has, in its magazine, guided missiles to launch against seacoast cities, improved offensive mines to

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THE NORTH ATLANTIC TREATY ORGANIZATION

(Continued from preceding page)

Government's intention of convening a conference in Paris to discuss the "Pleven Plan" for a European Army. This conference was convened in February 1951 and since that time various conferences and meetings on the subject have been held. No final agreement has yet been reached but it is expected that agreement will be reached in the near future on the establishment of a European Defence community which will include Western Germany and that the forces of this defence community will form part of the joint defence forces under the NATO Supreme Command.

Conclusion

Such is the North Atlantic Treaty Organization. It is now a functioning defensive unit that is daily growing in strength. But it must not be forgotten that the North Atlantic Treaty Organization is more than a defensive alliance. It is the nucleus of a future community of free nations, a community in which the promotion of closer political co-operation and the improvement of economic and social conditions is the major goal.

harass coastal shipping, and much better torpedoes than we had at the beginning of World War II. Additionally, new basic types of submarine, such as the troop-carrying USS Perch, have proved their value, some by landing United Nations' commandos behind Red lines in Korea, others by maintaining radar picket stations which surface craft would find untenable in the face of air attack.

Anti-Submarine Manoeuvres

Sometime ago, while carrying our regular training forward and testing prototypes of guided missile submarines and others of unconventional design, we began a long series of anti-submarine warfare manœuvres with air and surface units. One of the purposes of these tests was to evaluate, if possible, the vulnerability of the modern submarine when under attack by the best of existing anti-submarine warfare units.

We felt that the result of these ASW practices indicated that both a new anti-submarine weapon and new and aggressive theories of anti-submarine warfare were necessary. As a weapon, we designed the SSK, popularly called the "Killer sub", and decided upon a campaign of aggressive blockade and attack against enemy submarines at strategic points.

The K-boat, which we now have begun to test in ASW operations, is approximately half the size of our conventional submarines, but it is packed with the latest in electronics equipment and is armed with our best torpedoes.

But we could not concentrate only on making this boat an efficient killer. We had to provide comfort for the crew of about 40 men so they will be able to remain on station for long periods without losing battle efficiency.

The function of the Killer subs in a war situation would be two-fold. Primarily, it would detect the approach of an enemy submarine as it tries to slip to the open ocean and begin its run on an American port for a guided missile attack, or to begin a systematic prowl of the sea lanes. Once detected, the Killer sub would strike from its silent ambush, destroying the enemy with electronic homing torpedoes. Or, failing to make a kill, our boat would report the passage of the enemy to the open seas. This would give us and other units an opportunity to organize further counter-measures while we still knew the approximate position of the enemy.

The second function of the K-boats on aggressive blockade would be to delay the egress of enemy submarines until they and their bases could be attacked by bombs or by guided missiles from our own submarines.

1884–1885

CANADIAN VOYAGEURS IN THE SUDAN

By
Colonel C. P. Stacey, OBE., and Mr. E. Pye, Historical Section, Army Headquarters
Ottawa.

Part III

The River Column

Sir Herbert Stewart's Desert Column, marching across the short route to the Upper Nile, had fought the battle of Abu Klea and reached the river near Metemmeh before General Earle's River Column moved off on its longer journey. It took time to concentrate the river force at Hamdab, a considerable distance above Korti, and to bring up the necessary supplies. Only on 24 January 1885 did the column start up the Nile from Hamdab, with the South Staffordshire Regiment leading the waterborne force and the small mounted component reconnoitring ahead along the shore. Denison's diminished contingent of Canadian Voyageurs — there were 67 with the column — were distributed among the boats.

Black Rock and White Water

General Earle's orders were to push up the river, capture Berber, and then "use every endeavour to forward as many supplies as possible to the force [the Desert Column] which will have proceeded by land to Khartoum". In carrying them out he was likely to meet obstacles from both man and nature. The Mahdi's army was certain to resist his advance; and while not much was known of the country and the river above Hamdab, and the available maps turned out to be almost useless, what information there was indicated that the country was inhospitable and the river full of rapids.

These reports turned out to be only too true. The banks were "tumbled masses of black rock" offering every opportunity for ambush, and in addition to the known cataracts there were others not marked on the maps at all. The troops by now were boatmen of some experience; even so, they and

the Voyageurs had their work cut out. The cataracts of Edermi, Kab el-Abd, Um Habwa and Rahmi proved difficult and dangerous, and the advance was slow. However, on 1 February the vanguard occupied the town of Berti, which the enemy evacuated without a fight; and by 5 February it was several miles beyond it. That day the column commander received grim news. Khartoum had fallen to the Madhi.

We have seen that the Desert Column had met General Gordon's steamers from Khartoum on 21 January. Not until the 24th, however, did Sir Charles Wilson start upstream with two of the steamers, carrying a few British and Sudanese soldiers, to make contact with the beleaguered garrison. With what seems exaggerated prudence, he had felt it necessary, before leaving his small force at Gubat, to reconnoitre northward in the steamers, for it had been reported that the enemy was advancing from that direction. This precaution, and repairs to the vessels, account for the delay.* On 28 January Wilson's steamers finally reached Khartoum and found the Egyptian flag no longer flying and the town in

enemy hands. On the morning of the 26th the Mahdi's men had launched an assault which the half-starved garrison could do little to resist. The Governor General himself died in the massacre. So Gordon was gone; after all its months of toil and struggle, the relief expedition's advanced guard had arrived just two days too late. Rarely has a military enterprise ended in such heartbreak.

The Battle of Kirbekan

The message from Lord Wolseley's Chief of Staff advising Earle of the fall of Khartoum directed him to stand fast where he was until further orders. Two days later, however, he was told to continue his advance as

**On 28 January, when he had heard of Sir Herbert Stewart's wound and the failure to take Metemmeh but not of the later events, the Commander-in-Chief wrote to Lady Wolseley, "Sir C. Wilson, very useful for the political work, is no soldier: this is his first dose of fighting, and it has evidently hurt his nerves."*

far as Abu Hamed. The same day Wolseley heard from London that the Government had decided that the power of the Mahdi at Khartoum was to be overthrown; and Earle was now ordered to advance on Berber. The plan was that the River and Desert Columns would make a combined attack on that place. The Desert Column was now commanded by Major-General Sir Redvers Buller, who had hitherto been Chief of Staff to Wolseley.

The River Column resumed its advance on 8 February. That day the advanced guard made contact with the enemy; and on the 9th he was found in position on a rocky ridge known as Jebel Kirbekan and on nearby hills or "koppies". These positions entirely commanded the line of advance both by river and by road. Reconnaissance showed, however, that they were quite capable of being turned by a flank movement. Earle decided to attack them with his two leading battalions, the South Staffords and the Black Watch. By the evening of 9 February almost the whole of both battalions had come up, and they bivouacked on the river bank only a mile from the enemy. Colonels Denison and Alleyne, reconnoitring the river channel with a party of Voyageurs, had been fired on that afternoon but withdrew without casualties.

Early on the morning of the 10th, "the troops, having breakfasted, formed up as ordered, South Staffordshire Regiment in red,* Highlanders in kilts". The boats were left in a defensive "zareba" on the river bank, guarded by one company of the Black Watch. Colonel Alleyne, with two companies of the Staffords and two guns, went forward to hold the enemy's attention in front; and the two battalions, each six companies strong, moved off on their encircling march. They passed completely round the enemy's inland flank without interference and by half-past one the Black Watch had charged up the koppies from the rear and the Staffords had assaulted the main ridge, and the Dervishes who had held these positions were dead or in flight. A good many of the defenders had slipped away before the actual attack, and only a few hundred, not all armed with rifles, remained to meet it; but these died hard. The British had 60 casualties, only 12 of which were fatal; but the three officers killed were General Earle himself, who had gone into the assault with the Black Watch in the old-fashioned way, and Lt.-Cols. Coveny of that regiment and Eyre of the Staffords. It is clear that the

** This was one of the last campaigns in which the red coat was worn in action. Strange as it seems, this and other passages in the British narratives appear to indicate that the troops wore khaki as a working dress but put on scarlet for battle!*

British officer of those days had no use at all for the idea of leading from behind.

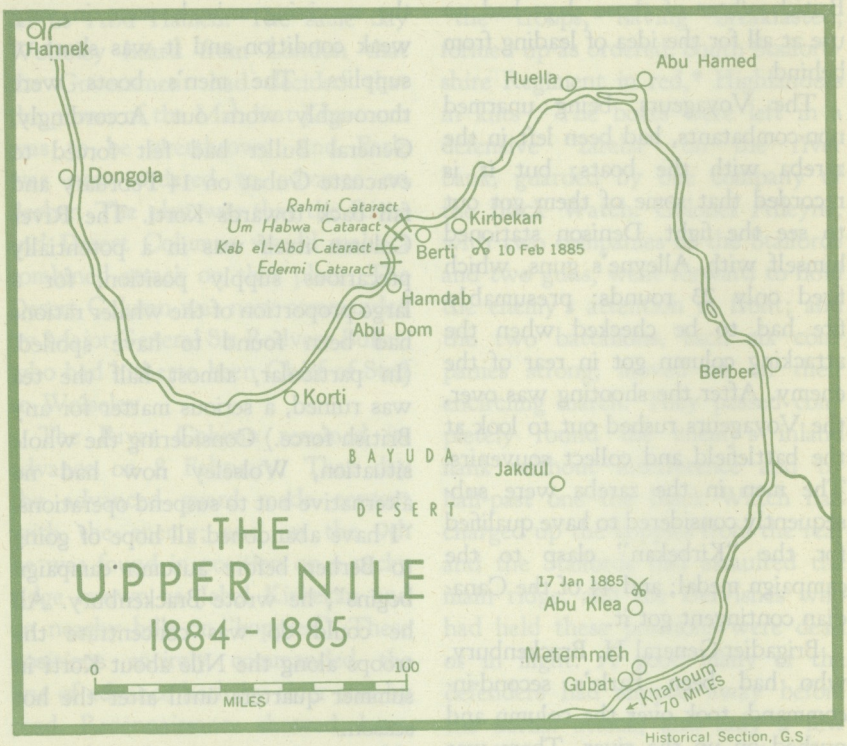
The Voyageurs, being unarmed non-combatants, had been left in the zareba with the boats; but it is recorded that some of them got out to see the fight. Denison stationed himself with Alleyne's guns, which fired only 23 rounds; presumably fire had to be checked when the attacking column got in rear of the enemy. After the shooting was over, the Voyageurs rushed out to look at the battlefield and collect souvenirs. The men in the zareba were subsequently considered to have qualified for the "Kirbekan" clasp to the campaign medal; and 44 of the Canadian contingent got it.

Brigadier-General H. Brackenbury, who had been Earle's second-in-command, took over the column and pushed on up the river. There was no more opposition from the enemy, but unmapped rapids continued to delay the advance. It was necessary to cross to the right bank of the river before reaching Abu Hamed, and the whole mounted force was successfully ferried over on 20 and 21 February. By the 23rd, the column had reached a village called Huella, which proved to be its farthest limit; for next morning orders arrived from Wolseley to retire. The Desert Column's transport had broken down; many of its camels were dead, the surviving animals were in very weak condition and it was short of supplies. The men's boots were thoroughly worn out. Accordingly, General Buller had felt forced to evacuate Gubat on 14 February and fall back towards Korti. The River Column itself was in a potentially precarious supply position, for a large proportion of the whaler rations had been found to have spoiled. (In particular, almost half the tea was ruined, a serious matter for any British force.) Considering the whole situation, Wolseley now had no alternative but to suspend operations. "I have abandoned all hope of going to Berber before autumn campaign begins", he wrote Brackenbury. All he could do was concentrate the troops along the Nile about Korti in summer quarters until after the hot season.

The Retreat Down the Rapids

Within a few hours of the receipt of the new orders from the C.-in-C., the River Column's movement had been reversed and the boats were sliding downstream. The Voyageurs' greatest trial and greatest triumph were now at hand. The column was going to run the rapids, and the British soldiers and the Sudanese were to see a striking demonstration of the skill of Canadian rivermen.

Colonel Denison led the boats down the river. Careful orders were



Historical Section, G.S.

issued for controlling the movement; the final paragraph read, "In difficult rapids special arrangements will be made for taking each boat through with Canadian pilots." The mounted troops marched along the right bank. There was some apprehension of enemy interference with the retreat, but none materialized. The sharp reverse inflicted upon the Mahdi's men at Kirbekan had doubtless made them chary of further contact with the column.

There were over 200 boats, and only 67 voyageurs; and the Canadians were kept more than busy. At the Rahmi Cataract on 1 March, for instance, it was necessary for every boat to be piloted by a voyageur. This meant that each voyageur had to make three or four trips, walking back each time. In the very bad rapids, where two voyageurs per boat were needed, each man made seven trips.

Of all the cataracts, the one that gave most trouble was probably Um Habwa, which was passed on 2

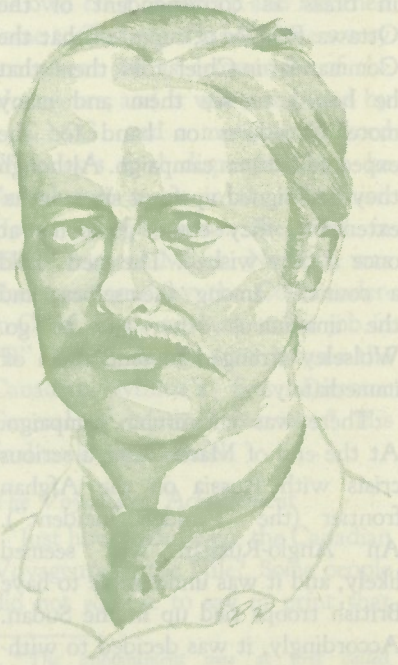
and 3 March. General Brackenbury's own account of events here, in his book *The River Column*, deserves to be quoted at length:

> . . . Colonels Denison and Alleyne examined the river in front. Alleyne returned presently and told me there was a choice between two passages. That to the right was straight, but there was a clear fall of nearly three feet at one place. That to the left had no actual waterfall, but it was a rushing inclined plane, its worst feature being that the channel was narrow, and turned at right angles in the very worst part of the shoot. They had elected for this latter passage; but considered no one should descend it except the necessary two voyageurs (bowman and steerer), and the six men required to row each boat. All others were ordered to walk, and all arms were portaged.
>
> The voyageurs walked to see the shoot, before attempting to pass it. They said it was bad, but practicable. To me it seemed as bad as bad could be. The channel turned to the left, and then sharply at right angles to the right. Just at this turn, two great rocks stood out in mid-stream. It was necessary to pass between them. The least error in steering would be fatal. To make the turn too soon would bring the boat on to the right-hand rock; to wait too long would sweep her on to the left-hand rock. Sitting under the shadow of a great rock, I watched this triumph of skill over a difficulty that to any one unaccustomed to such work would have seemed insuperable. Boat after boat came down at lightning-speed, the men giving way with might and main to give steering power; the bowmen standing cool and collected watching the water, and only using the oar should the steersman seem to need help; the steersmen bringing round the boat with marvellous judgment at the right moment. Now and then an error of half a second brought a boat on to the edge of the left-hand rock, and she rose and fell like a horse jumping a fence. But in the day's work only one boat of the Gordons and one of the Staffords were wrecked. . .

The official history seems to indicate that during the whole journey back to Hamdab ten boats became total losses. Only three lives were lost, all in the swamping of one boat in Kab el-Abd rapid on the last day.

The infantry bivoucked at Hamdab on 4 March. The column was back at its starting point, having descended in nine days a stretch of river which had taken thirty-one days to ascend.

At Abu Dom on 6 March General Brackenbury reviewed the River Column — "the first and the last time it was ever inspected on parade" — and bade it farewell. Drawn up at the flagstaff on the saluting base were the Canadian Voyageur Contingent,



FIELD-MARSHAL LORD WOLSELEY

with Colonel Denison in command; and in his account of the occasion the general pays them a high and obviously sincere compliment. "Without them, the ascent of the river, if not impossible, would have been far slower, and attended with far greater loss of life. Without them, the descent of the river would have been impossible. Officers and men, they had worked with unceasing energy and a complete disregard of danger."

At Korti a few days later the Voyageurs paraded before Lord Wolseley, who addressed them. Foreman A. McLaren of Ottawa, who doubled in brass as correspondent of the Ottawa *Free Press*, reported that the Commander-in-Chief told them that he hoped to see them and many more Canadians on hand for the expected autumn campaign. Although they had signed up for a six months' extension, they could go home at once if they wished. The men "held a council" among themselves, and the unanimous vote was to go. Wolseley arranged to send them off immediately.

There was no autumn campaign. At the end of March came a serious crisis with Russia on the Afghan frontier (the "Panjdeh Incident"). An Anglo-Russian war seemed likely, and it was undesirable to have British troops tied up in the Sudan. Accordingly, it was decided to withdraw the army, and an expedition which had been sent to Suakin — where it was joined by a New South Wales contingent — was recalled. The Sudan was abandoned to barbarism; but not for ever. In 1898 it was reconquered by Sir Herbert Kitchener with an Anglo-Egyptian army which included a smart young cavalry subaltern named Winston Churchill. The army of the Mahdi's successor melted under the fire of the Lee-Metfords at Omdurman, and next year the Sudan was organized as an Anglo-Egyptian condominium.

The Return Home

Captain Aumond took the first and largest group of Voyageurs (261 of them) home to Canada. They travelled in the transport *Poonah*— which they didn't like at all — as far as Queenstown, Ireland, where they were transferred to the liner *Hanoverian*. There was some disturbance among the men at Queenstown, and the newspapers even talked of a "mutiny". The party reached Halifax on 4 March 1885, and in Ottawa on the 6th the local contingent received a civic welcome and were considerably lionized.

The men who had re-engaged reached Cairo on 13 April. There Colonel Denison fell ill with enteric fever and was left behind in hospital. Colonel Kennedy took the 80 Voyageurs on to England. They were

given a good time in London, but their stay was spoiled by the Colonel's tragic death. He had caught smallpox, and it killed him on 3 May. On the 5th he was buried in Highgate Cemetery with military honours. A former foreman from Three Rivers, S. J. Remington, took charge of the party and they reached Canada later in the month.

Although these re-engaged men, most of whom had gone up with the River Column, deserved more public acclaim than those who had come home earlier, they of course got less. But they had had the special satisfaction of seeing London, and they doubtless got much satisfaction too from a letter written by the Queen's secretary, General Ponsonby. Her Majesty, he said, had expressed a wish that the Voyageurs "might come to Windsor, where the Queen might see them and personally convey to them her Majesty's high sense of the good services they have performed with the expedition on the Nile". Unfortunately the outbreak of illness in the Contingent had prevented this; and the Queen had therefore directed General Ponsonby to ask the Commanding Officer to "let the men know how greatly pleased her Majesty has been by the reports she has received of the energy and devotion they have shown in the arduous duties required of them on the Nile".

The Voyageurs had been non-combatants, but their work had been hazardous in the extreme and had taken its toll. Colonel Kennedy's death raised the total of fatal Voyageur casualties to 16. One man, it will be remembered, had died *en route* to Egypt; and fourteen had left their bones in the Nile valley. Six had been drowned in the cataracts, two had been killed by falling from a train, and the rest had died of one or another of the diseases that plagued the expedition. Enteric and dysentery were the great killers.

Colonel Denison recovered from his own bout of enteric and returned home to Toronto. He had done a very competent job as commander of the Voyageurs, and it was recognized by a C.M.G. and a mention in Lord Wolseley's final dispatch. Later he served two terms in the Dominion House of Commons. He died in 1896. Surgeon-Major Neilson was also mentioned by the Commander-in-Chief. He went back to his job in "B" Battery and in 1898 became the Canadian Militia's first Director General of Medical Services.* His final rank was Colonel.

The Voyageurs' Achievement

Just how useful were the Canadian Voyageurs on the Nile? Some people did not scruple to say in print that

**The appointment was at first called Director General of Medical Staff.*

they were quite useless.* It is a fair assumption that most of these stories had their origin in contacts with that minority of incompetents which as we have seen existed in the ranks of the Contingent. Lord Lansdowne was sufficiently troubled by these reports to ask the Colonial Office for information. The reply was categorical. "Secretary of State for War received generally very favourable reports on voyageurs. About seven per cent were described as useless, twenty-five per cent first-rate, remainder good boatmen, conduct good."

Lord Wolseley himself went out of his way to express his gratitude for the Voyageurs' performance. On 13 April 1885, a few days after he had spoken to them at Korti, he wrote a long letter to Lansdowne referring to "certain unfounded statements" in the press and begging the Governor General to convey his views both to the Canadian authorities and to the Voyageurs themselves. He wrote:

> I desire to place on record, not only my own opinion, but that of every officer connected with the direction and management of the boat columns, that the services of these voyageurs has been of the greatest possible value, and further, that their conduct throughout has been excellent. They have earned for themselves a high reputation among the troops up the Nile.
>
> It was moreover a source of much satisfaction to these troops to find the Canadians represented on this Expedition, and sharing with them their privations and risks.
>
> At a time when English, Irish, and Scotch soldiers are employed, the presence with them of Canadians, shews in a marked manner the bonds which unite all parts of our great Empire.*
>
> In the advance up the Nile next autumn, I propose to employ a considerably larger number of voyageurs than that employed in the past winter. . .

Lt.-Col. W. N. Kennedy

The most extreme version of the story was that the men were not Canadian boatmen at all but "young Englishmen" who had emigrated to Canada and enlisted for the sake of adventure. There were probably one or two individuals in the Contingent who fitted this description.

**Lord Wolseley might have mentioned the participation of Australians in the operations at Suakin.*

Even more impressive, perhaps, because it is the evidence of one who had been in close personal contact with the Voyageurs, is the report of Lt.-Col. C. Grove, one of the staff officers who organized the movement up the Nile. The concluding passage of his account of the Voyageurs (which forms an appendix to the official history of the campaign) is more than worth quoting:

> Out of the 362 voyageurs* about 45 were unsuited for the work. The remainder varied — as might be expected — in their skill and capacity, but they were all able to take charge of a boat. They knew little about sailing, to which they were evidently not accustomed; but for rowing, tracking or poling a boat in bad water, and for its general management except under sail, they were experienced and capable. They were exceedingly well-behaved, hardy, and uncomplaining, and they never shirked work. Their manner was rough, and they were not disposed to take orders from anyone whose position they did not know. But when they understood that the officer — whoever he might be — had the right to give orders, they obeyed very willingly.
>
> Speaking generally, it may be said that the employment of the voyageurs was a most pronounced success. Without them it is to be doubted whether the boats would have got up at all, and it may be taken as certain that if they had, they would have been far longer in doing so, and the loss of life would have been far greater than has been the case. There was, I imagine, no one connected in any way with the working of the whalers up the river, who did not feel that had double the number of voyageurs been available, work could have been found for them all, and the progress of the expedition would have been materially benefited thereby.

* *Not counting the 18 foremen.*

These paragraphs may well serve as the epitaph and memorial of the Canadian Voyageur Contingent. Alongside them may be placed a sentence from Lord Wolseley's final despatch: "Men and Officers showed a high military and patriotic spirit, making light of difficulties, and working with that energy and determination which have always characterized Her Majesty's Canadian forces". We have seen that most of the men, as distinct from the officers, were in fact not members of the forces; but, overlooking, as Wolseley did, the technical status of the majority of the Contingent, this, Canada's first participation in an overseas campaign, is an incident which the Army as well as the nation at large can recall with considerable satisfaction. This body of Canadian frontiersmen, commanded by a militia officer who was also a Toronto alderman, provided a unique and picturesque episode in our history and one that deserves to be better known than it is.

Sources of Information and Books For Further Reading

A great deal of information about the Canadian Voyageur Contingent, including transportation, casualties and general administration, is found in various volumes of series G. 19 and Governor-General's Numbered File No. 162 (in G. 21), Public Archives of Canada. There is little or no first-

LOYALTY

The more orthodox officers had been opposed to the formation of Commandos and there were certain episodes which did much to suggest that the strange goings-on of these special troops were undermining the type of discipline which had been the pride of the British Army. In *The Green Beret: The Story of the Commandos 1940–45*, Mr. Hilary St. George Saunders thus describes the planning stages for the first commando raid in North Africa, mounted by Lt.-Col. R. E. Laycock who later became Chief of Combined Operations himself:

> Those who believed in them had great, indeed implicit faith in their future, though there was at that time little concrete evidence of their merit. But there they were in the Desert and they would be used. In April Laycock was ordered to mount a raid on the enemy held port of Bardia, with the object of harassing the enemy's lines of communication and inflicting as much damage as possible on his supplies and materials of war. The plan for this operation was drawn up after a conference held in HMS *Warspite*. It was a solemn affair for, it must be repeated, the Commandos were still largely untried, and Laycock was anxious to prove his worth. The proceedings were momentarily enlivened by the unexpected arrival of his liaison officer, Capt. Evelyn Waugh (Royal Marines, subsequently Royal Horse Guards), the novelist, wearing 'a solar topee, shorts and a beard.' He had been ordered to accompany his commanding officer wherever he went. To the harassed Laycock's question 'What brings you here?' Waugh replied: 'Merely loyalty, sir.'—*Contributed by J. M. Hitsman, Historical Section, Army Headquarters, Ottawa.*

CANADIAN VOYAGEURS IN THE SUDAN

(*Continued from preceding page*)

hand Canadian information in these papers concerning the operations of the River Column, but the gap is filled to some extent by A. McLaren's letters in the Ottawa *Free Press*. The operations generally are dealt with in detail in Col. H. E. Colvile, *History of the Sudan Campaign . . . compiled in the Intelligence Division of the War Office* and Col. Sir W. F. Butler, *The Campaign of the Cataracts* (see Part II); also in Major-General Henry Brackenbury, *The River Column* (Edinburgh and London, 1885), a personal narrative by the officer who took command of the column when General Earle was killed. The political background, and General Ponsonby's letter written on behalf of the Queen, are in G. E. Buckle, ed., *The Letters of Queen Victoria, Second Series*, vol. III (London, 1928). Lord Wolseley's letter to Lord Lansdowne is in the United Kingdom Parliamentary Papers (Command Paper 207, 1885). See also Sir G. Arthur, ed., *The Letters of Lord and Lady Wolseley, 1870-1911* (London, 1922).

(*Concluded*)

UNDERWATER DEMOLITION TEAMS

LIEUTENANT COLONEL JOHN E. ROBB, ARTILLERY INSTRUCTOR,
COMMAND AND GENERAL STAFF COLLEGE,
FORT LEAVENWORTH, KANSAS*

In the article which follows, that part of the text in italics has been digested from "Demolition Demons", which appeared in the May 1950 issue of ALL HANDS, the Bureau of Naval Personnel Information Bulletin.—The Editor, Military Review.

* * *

An arctic wind whipped frothy whitecaps across the surface of the bay and sent rollers crashing against the milelong strip of sandy beach. Between broken masses of drifting clouds, the moon gleamed dully on the black water. On shore, enemy troops in lookout towers peered through the darkness out over the windswept bay. Except for the scattered patches of floating ice, the sea was empty.

That is, it appeared empty, but 60 feet below the surface of the bay, a United States submarine cruised slowly toward the shore. Its periscope broke the surface and scanned the scene. Slowly, the undersea craft nosed upward and its conning tower emerged. Its engines slowed until it lay almost motionless in the water.

On board, an officer was giving last minute instructions to a group of strangely clad men. He pointed to an aerial photo map. "Okay, you've got all the available dope on this area," he said. "We are now about one-half mile off-shore. That strip of beach out there is the only available landing area within 100 miles and it is probably crawling with enemy troops. I don't need to tell you how it would foul up the landing if any of you should be spotted while reconnoitering the area." He paused and grinned. "Just think of all the operation orders the yeomen would have to retype."

Underwater Demolition Swimmer, Bill Rigger, United States Navy, checked his equipment. Over his heavy woolen underwear was a one-piece rubber suit that left only his face exposed. Rubber swim fins were stretched over his feet. Around his waist were fastened a razor-sharp knife, a plexiglass slate, a coiled sounding line, and a pencil. A waterproof compass and watch were clamped on his wrists. Rigger picked up his heavy breathing

*This is a digest of an article which appeared in the Military Review, published by the Command and General Staff College, under the title "UDT Pays Off".—Editor.

Department of Defence Photograph

A "frogman" places a demolition charge on an underwater obstacle to clear the beach.

lung and strapped it on, adjusting the face mask. He followed seven other similarly dressed swimmers through the narrow hatch that led topside.

Crouching on the deck in the whistling wind, each swimmer made a last-minute check of his equipment. Rigger squinted through the darkness at the vague silhouette of the coast, calculating where the section of the beach he was to reconnoiter lay. Quietly he slid off the submarine's deck and beneath the icy water.

The group of powerful swimmers headed silently toward the shore. Using a paced breaststroke, Rigger glided smoothly through the water. Overhead, he could see the foam-flecked surface of the water, dotted with chunks of ice. He glanced at the luminous dial of his wrist compass and veered slightly to the right.

A few minutes later, after calculating the distance he had covered, Rigger dived downward until his hands encountered the bottom. He scooped up a handful of material and rubbed it between his rubber-covered fingers. Small pebbles were identifiable clearly among the gritty sand. Coming to the surface, he unrolled his sounding line and counted the knots as the lead weight sank to the bottom. Treading water, he rolled up the line and scribbled on the plexiglass slate:

ESTIMATED 500 YARDS FROM SHORE. DEPTH 5 FATHOMS, SAND AND GRAVEL BOTTOM

Moving into shallower water he hugged the bottom to keep from being sucked up by the breakers and flung onto the beach. The undertow tugged at him, making swimming more difficult. His groping hands encountered big rectangular log barriers—"cribs" in UDT language because of their resemblance to a baby crib.

Closer inland, the underwater obstacles became thicker, row after row of barriers cleverly planted to prevent boats from approaching the shore. Guided only by touch and the faint moonlight that occasionally seeped through, Rigger laboriously crept over the bottom. He did not allow his thoughts to dwell upon what would happen if inadvertently he tripped one of the anti-boat mines which were imbedded in the sand.

Now that he had stopped swimming, the cold began to creep over him. His underwear, damp with sweat, began to feel icy. Rigger glanced at the glowing hands of his watch. It was almost time to return. Somewhere, out in that black wall of water, lay the submarine, cruising idly while waiting for the swimmers to return. He finished scribbling information on his slate and started working his way to the flank to cover the space between himself and the next man. The rubber suit began to chafe his legs, and even the exertion of swimming no longer warded off the numbing cold. Sucking oxygen through the face mask became more difficult. He surged upward and poked his head above the surface. His eyes strained through the darkness in search of the submarine, a tiny pinpoint projecting from the vast expanse of sea. Nothing was in sight. He plunged back under the inky liquid, stroking ahead. Soon, a vast object loomed ahead. He bumped into the metallic surface of the submarine.

His teeth chattering, Rigger and his buddy clung to the hull of the submarine until all the swimmers returned. The conning tower nosed out of the water and the swimmers hustled down the hatch. The submarine sank below the surface and headed out to its rendezvous.

Back aboard the submarine, after a change of clothes and a hot drink, Rigger joined his comrades for interrogation by the intelligence officer accompanying the mission. From this interrogation and written reports of the swimmers, a master chart of the beach area was prepared showing soundings at various distances offshore, the nature of the bottom, the location and types of obstacles, and exact data on the surf, currents, and other pertinent information. Reproductions of this chart then were delivered into the hands of the amphibious task force planning staffs who determine when, where, and with what means the landing force would strike.

Let us assume a lapse of time while plans are prepared and the landing force is trained, loaded, and moved to the objective area. Let us again join Rigger and his teammates while they complete the second portion of their job, that of preparing demolitions to clear the landing beach of obstacles.

The team is aboard an APD (a destroyer converted for troop carrying), moving toward the shore line. By now, the area is dotted with ships, units of the pre-assault-bombardment force. The APD moves past the cruisers and battleships that are belching flames as they pound the beach with salvos from their big guns. At 6,000 yards offshore, the APD launches the four LCPRs (landing craft, personnel, ramp) in which the underwater demolition teams (UDTs) will be carried toward shore. Each boat crew lashes a LCR(S) [landing craft, rubber (small)] along its

port side. The swimmers again are dressed in their one-piece rubber exposure suits, but this time they do not wear breathing lungs. Only goggles or face masks are necessary for most of their work will be on or near the surface. At Roger hour (the time when swimmers first enter the water), the four LCPRs pass the line of DDs (destroyers) which are pumping shells into the beach, and close to approximately 500 yards. The bombardment ships increase the tempo of their salvos, and the gunboats unleash showers of rockets. The LCPRs turn left and race parallel to the coast line. Overhead, a squadron of dive bombers peels off, and strings of bombs crackle along the shore. The continuous roar of exploding bombs and shells is deafening.

Rigger crouches low in the LCPR, ready to go over the side into the rubber boat and then into the water. As the boats reach the designated spot, the crew throws a heavy pack of explosives, to which flotation bladders are attached, off the stern just as each swimmer goes over the side. As Rigger hits the water, he swims quickly to his floating pack of explosives, attaches his towing line, and strokes for the shore. Like all UDT swimmers, he uses a breast or side stroke to reduce splash and minimize the opportunity for the enemy to line in on him. As he proceeds, he dives from time to time and swims some distance underwater to confuse further any enemy marksmen ashore.

As he approaches the first of the obstacles, Rigger knows exactly what he is supposed to do. Each swimmer has been assigned an area of the beach for which he is responsible. As a result of their previous reconnaissance, the number and type of obstacles in each area are known, as well as how much explosive will be required.

As he begins tying in his charges, other swimmers are unreeling trunk line and cross connections to which the fuzes from individual charges will be attached. Working in perfect co-ordination, the "frogmen" begin "setting up" the beach. As he works, a splattering on the water warns him that he is under fire from somewhere along the beach. He intensifies his bobbing as he works, being careful not to come up in the same place. He glances seaward for a moment and there, spitting fire from their 20- and 40-mm guns, are the gunboats, taking under fire every section of the immediate beach area which shows any sign of activity.

As he connects his last charge, he turns and heads out to sea. Fifty yards apart, the swimmers move in an irregular line toward the pick-up line where they will be "snared" by the racing LCPR. In the towed rubber boat, a husky crewman leans out with the "snare", a flexible cable with a large loop in the end. As the boat approaches, Rigger grasps the cable loop and the momentum of the boat helps to swing him up and around

Department of Defence Photograph

UDT trainees accustom themselves to the cold weather suits as they study life-saving and water safety in an indoor pool.

where he is hauled aboard the rubber raft. He clambers quickly over the side into the LCPR as the next swimmer is similarly and unceremoniously hauled in. Meanwhile, back along the line of demolitions, a few men are left to pull the delayed-action fuzes and then race out to where the last boat will pick them up. As they pass beyond the line of gunboats, a solid sheet of water rises 100 feet in the air, and Rigger knows that part of their mission has been accomplished.

The destruction of the beach obstacles does not conclude the mission of these men. After their return to the APD, many of them will be sent to the troop transports to accompany the assault waves as guides and, after the assault is ashore, they will be used by the shore party to finish clearing the remnants of any obstructions still left to ensure uninterrupted continuation of the landing, particularly during the logistical build-up.

Actually, the operation described above never occurred and there is no UDT swimmer by the name of Bill Rigger. However, many similar type operations did take place during World War II, but the existence of these teams and their methods of operations was a carefully guarded secret.

The early planning for the invasion of "Festung Europa" brought to light the extensive system of obstacles which the Germans were building along the Channel coast. The British also, after Dunkirk, had erected a series of underwater obstacles along their own beaches, which further

Department of Defence Photograph

Pick-ups are accomplished at speeds up to 12 knots an hour by means of a snare. The UDT swimmer in the water hooks it with his arm and is literally flipped into the rubber boat.

emphasized the difficulties that would be encountered when the assault was made. What organization did the allied powers have within their forces which was equipped and trained for this type of work? Engineers? Yes, for conventional explosives and demolitions. Naval construction battalions? Yes, for the destruction of obstacles in water and along a shore, but only under conditions where time and facilities allowed deliberate work. There was no organization which could be counted on to undertake such specialized work without extensive training in a heretofore unknown field.

Accordingly, responsibility was assigned to the Navy Department for the clearance of all obstacles up to the high water mark, and to the War Department for their clearance above the high water mark.

Organization and Training

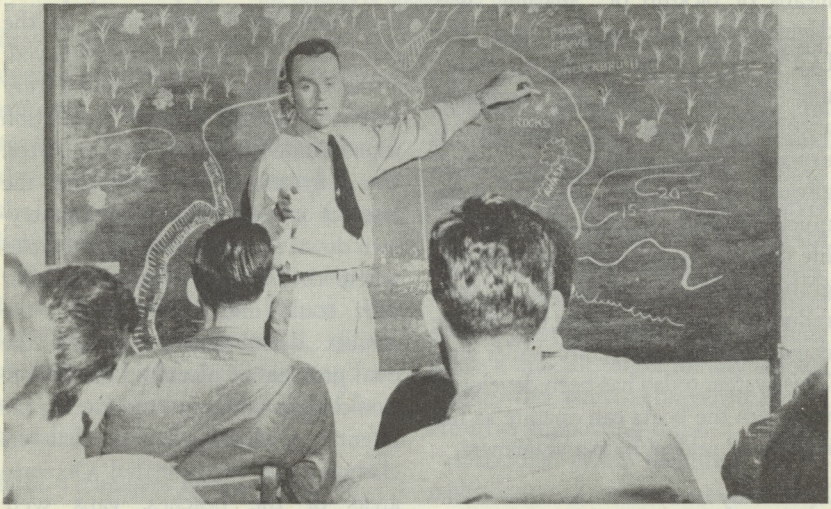
The Chief of Naval Operations, in May 1943, issued a directive for the development of a training school at Camp Perry, Virginia, where naval construction battalions (CBs) were being trained. The initial personnel were recruited from these units because of their basic familiarity with explosives. The first group trained was sent to the Mediterranean Theatre of Operations to participate in the Sicilian landings, but, because there were no obstacles of any kind offshore, their work was confined to assisting the Army engineers, and in removing sunken vehicles and craft.

About this same time, the training base was moved to Fort Pierce, Florida, to take advantage of better facilities for this training.

The initial teams were organized in size to be carried in an LCR(S) which has a capacity of five men, one officer, and several hundred pounds of equipment. This team was found to be too small for practicable use, particularly in reconnaissance, and, as techniques and doctrine were developed, the team was increased to approximately 100 men and officers.

The initial concept visualized, primarily, a demolition mission for these units, but one operation indicated the vital necessity of enlarging their scope to include reconnaissance.

The first operation in which the underwater demolition teams made a pre-D-day reconnaissance of a hostile beach was prior to the assault on the Marshall Islands, on 31 January 1944. Here, the techniques employed were elementary and no carefully timed system of close fire support was employed, although naval gunfire was used to protect the reconnaissance. No obstacles, natural or man-made, which would hinder the scheduled landing were discovered, and the naval bombardment . . . allowed the teams to work in water close offshore without sustaining any casualties.



Department of Defence Photograph

UDT members being briefed on a mission, a vital factor in operations of this type, for each swimmer must know the points that he has to check on his swim to shore.

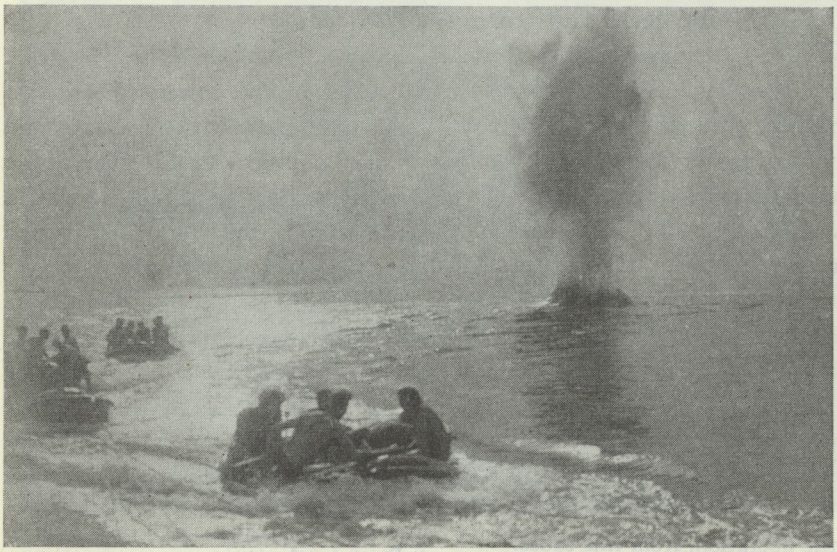
Techniques Tested

Lessons learned during this operation and the one which followed shortly afterward at Eniwetok were analyzed and new techniques tried out at the newly established training base on Maui, Territory af Hawaii. The next operation, the following June at Saipan, provided a further testing ground. Three teams were employed from APDs in pre-D-day reconnaissance, but the co-ordination between gunfire support ships and the teams was not well developed, and some casualties were sustained by personnel in the boats. All reconnaissance was carried out under heavy gunfire from the defenders ashore, and it was here that the present means of pick-up or "snaring" was developed. .Prior to this time, the LCPR would come alongside a swimmer and stop while he clambered aboard the towed LCR. Because this exposed, unnecessarily, the personnel already in the boat to fire, some quick-thinking individual rigged a life ring to a rope which the swimmer grabbed as the boat cruised by, thus reducing the opportunity for the enemy to take the craft under fire. This system today has been developed to where the boats can operate at full speed and seldom miss a swimmer.

Normandy Invasion

Meanwhile, the teams which had been sent to England, in early 1944, to participate in the Normandy invasion were having a difficult time. This small group of naval personnel, with a classified and unfamiliar mission, received little recognition. For several months, they were used for various odd jobs and not until the last weeks preceding the invasion were they brought together and given an opportunity to train for the operation. Complete surprise was so all-important that no breach of security could be risked by allowing any pre-D-day reconnaissance.

The plan of landing involved an assault at low tide when the extensive obstacles would be most completely exposed. It was planned to destroy obstacles *during* the initial assault so as to allow the supply and equipment craft and ships free access to the beach on a rising tide. As employed, a mixed group of UDTs and Army engineers (called combat demolition teams) landed at H plus three minutes. The hurricane of fire that swept the beaches pinned the assault infantrymen down in and among the obstacles where they sought whatever shelter they could find. As a result, the combat demolition teams had the dual problem of placing their demolition charges under fire and forcing the infantry to move away so that the charges could be detonated. On some areas of the beaches, gaps were accomplished in less than an hour, while on other sections where the



Department of Defence Photograph

A pre-dawn bombardment roars around UDT men waiting for the signal to swim ashore to clear the beaches of underwater obstacles.

fires were heavier, gaps were not opened until D plus 2. These teams suffered staggering casualties. Some teams had as much as 100 percent of their personnel killed or wounded, and the over-all casualty rate for Omaha beach was 52 percent.

Some two months later, during the landings in Southern France, the UDTs, employed properly, did a magnificent job of eliminating obstacles and escaped without fatal casualties.

Basic Techniques Firmed

This was the basic pattern to be used throughout the remainder of the war:

Fires from heavy naval ships working over known or suspected installations, co-ordinated bombing and strafing by carrier or land based planes, and close support by shallow-draft gunboats who could deliver intense direct fire on any sign of the enemy in the immediate beach area.

Swimmers dropping rapidly from speeding small boats, their bobbing heads a difficult target for any snipers ashore who dared to brave the hail of fire from supporting ships.

Carefully timed execution of demolitions.

Rapid pickup of swimmers to reduce, to a minimum, the time they would be exposed to enemy fires.

As a result, pre-D-day reconnaissance and demolition activities became standard practice during the remainder of the Pacific war. Successful operations were conducted at Tinian, where tactical surprise was achieved on a small island by virtue of a night reconnaissance of the beaches which the defender had judged to be too small for use by a force large enough to capture the island.

Pre-D-day reconnaissance at Okinawa disclosed some 3,000 obstacles which were destroyed before the landing, and no craft were lost, during the operation, from this cause.

Australian Experience

In May 1945, in the Dutch East Indies, the Australians attempted a similar type reconnaissance and demolition mission with their Army engineers. At Tarakan, veteran combat-experienced engineers attempted to clear the beaches of obstacles and suffered terrific casualties. Their failure, due to a lack of knowledge and training in these specialized techniques, became even more costly when, several hours later, the assault regiments of the 7th Australian Division were forced to jump from their landing craft into shoulder-deep water and clamber over the undestroyed barriers. They paid a high price for the failure to employ underwater demolition teams.

Plans for the Invasion of Japan

None of the operations, prior to this time, had been conducted in cold water, and the normal costume of the swimmers was a pair of swimming trunks plus the equipment needed for the particular job to be accomplished. Plans for the invasion of the Japanese homeland envisaged the necessity for protection from the cold, and the UDTs were on our West Coast training in the use of exposure suits, in cold water, when the war ended.

Post-war Activities

Since the end of the war, the Navy has not permitted the "know-how" of this valuable and unusual support of amphibious landings to be forgotten. All peacetime manoeuvres, such as *Portrex* and *Miki*, have utilized the UDTs, and extensive experimentation has been conducted in all types of hydrographic and geographical conditions ranging from the Arctic to the Antarctic. Currently, several teams are maintained, two on each coast, and constant training is providing a nucleus of swimmers for any eventuality should more be needed.

Underwater demolition team personnel, both officer and enlisted, are all volunteers. There are no special requirements for this duty, as regards height or weight, the principal require-

Popular Mechanics Magazine Photograph

UDT swimmers passing through a hole they have cut in an underwater submarine net on their way toward shore to complete a mission.

ment being that applicants must be in good physical condition.

Each year, approximately 150 volunteers are accepted, of which about 15 percent are screened out immediately for either physical or mental reasons. The remainder start on a 2-month course of the toughest training ever devised.

In UDT training, the most rugged part of it comes first—a nightmarish, gruelling, 6-day endurance test aptly called "Hell Week." During this period, the men subsist on K rations.

For the 6 days and nights of "Hell Week," the trainees are subjected to every trial of stamina and nerves their resourceful instructors can devise. Long marches are made through varying terrain, preceded and ended by anywhere from a 1- to 3-mile run. All during each day, explosive charges are detonated without warning around them. Early morning swims, each progressively longer, are made in overcoat weather. As late as early December, trainees take daily swims in the Atlantic wearing only swim trunks. Trainees on the Pacific coast work all year around without exposure suits. By the end of "Hell Week," up to 40 percent of the trainees have been dropped.

By subjecting these men to such training, the instructors are able to determine those who have the mental stability and moral courage to go on

when it would appear that the breaking point had been reached. This same system, used in airborne training, ensures that only the men able to meet the required rigorous standards eventually will take their place on the teams, where the failure of one man can jeopardize the safety of the others.

By the end of the training, each man must be able to swim at least one mile in a choppy sea without any type of special equipment. He must be familiar with and able to handle any of the explosives used, be able to determine the speed and direction of the current, surf height, the types of surf, the characteristics of a beach, and make an accurate estimate of boat and amphibious vehicle trafficability from the soil below the water as well as by observation of that above the highwater mark. He must be able to dive and swim under water with or without an artificial lung. He must be familiar with common types of underwater obstacles and their point of stress so as to determine the best location for explosives, and he must be able to remember what he observed. At the end of this period of training, about 65 remain out of the original 150 candidates, and graduation is celebrated by a man "earning his swim fins".

The UDT swimmer has much less to fear from the sniper's bullet than he does from mortar shells or heavier explosives. A man's head, bobbing in the surf, is a difficult target for riflemen, but the crushing shock of underwater explosion is not a pleasant experience.

The former inequality which existed as to pay recently has been corrected by listing these men as eligible for hazardous duty pay on the same basis as paratroops. Even without this added inducement, these units had an intense pride in their organization and an *esprit de corps* equal to that of any organization in the three services.

This, then, is the story of the men who fought the war in swimming trunks, who measured depths over fire-swept reefs or towed packs of high explosives to within 50 yards of dug-in riflemen and machine gunners so as to blast a path through natural and man-made obstacles for the troops who would have enough to do when they met the enemy on the ground.

Truly, UDTs have paid off.

Underground Bastion

Vladivostok, the Soviet's Far East bastion, is a city whose real might lies underground in the surrounding hills. Aircraft hangars, ammunition depots, supply dumps, and troop quarters are buried in huge man-made caves.—*National Geographic Society (U.S.).*

DID YOU SAY TOP SECRET?

By
Major C. P. Haynes*
Directorate of Military Intelligence, Army Headquarters,
Ottawa

The object of this article is to examine one aspect of Security, namely, the classification of military information.

While the article's scope will be confined mainly to the dangers of over- and under-classification of the military document, it is the writer's intention to point up the general problems in maintaining security of classified military information. Additionally, the paper will provide an *aide-memoire* on classification for originators and users of military information.

Canadian Attitude

One might say that the average citizen's attitude towards security measures ranges from hostile to indifferent. Canadians as a people are considered to be direct, outspoken, co-operative and zealous of their civil rights. Freedom of thought and action is a part of their democratic heritage. It is not unnatural that they should expect to find similar characteristics in others.

The imposition of any type of security safeguard is bound to have its irksome aspects. To some people such safeguards will appear plain unnecessary. One sometimes hears the comment that "in normal times security measures are nonsense." If today's state of international tension is "normal" it is the writer's opinion that not less, but more attention must be paid to the subject of security. The wide differences existing between our democratic way of life and that of certain foreign ideologies necessitates a realistic approach to the every-day problem of security of information. It follows that despite our natural aversion to security measures we must exercise a good deal of discretion in our daily duties of handling military documents.

To Whom It May Concern

While some officers are not at present required to deal with highly-classified documents, it is evident

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that practically every officer will at some stage of his career be handling, if not originating, such classified material. A general knowledge of the regulations concerning security classifications is therefore essential, even to those whose present duties are not directly concerned with such matters.

What is a Classified Document?

When we speak of classified matter, the reference is to any information or material in any form or of any nature which in the public interest must be safeguarded in the manner and to the extent required by its importance.

The protection of classified information is achieved by security of:

(a) Preparation, reproduction and dissemination.

(b) Handling, possession and storage.

It is beyond the scope of this article to deal in detail with the security aspects of handling classified documents. The major purpose at this time is to review the method of assigning proper security classifications and draw attention to the pitfalls often encountered in dealing with the subject. The system of assigning security classifications is only as good as those whose duty it is to apply it, make it! No regulations, regardless of content, can possibly ensure adequate classification of the military document unless reasonably interpreted and applied using commonsense principles.

Grading Military Documents

The first problem that the army officer must answer is whether the document requires classification or not. There is no excuse for the fuzzy thinker who always applies a security classification "just to be sure", or on the "I-better-protect-myself" basis. This method only results in security classifications having no significance and eventually a breakdown in the whole system of classification.

The tendency today is to over-classify documents, and this not only causes much unnecessary work and delay in transmissions, but results in weakening the whole system of security. In peacetime, the amount of information of a type warranting inclusion in "Top Secret" or "Secret" classifications is relatively small, though it is far from the writer's intention to deprecate the need, where required, for applying these categories.

Because it is human nature to take the line of least resistance, and as most of us, perhaps unconsciously, tend to personally resent security restrictions of any nature, we are inclined to be somewhat lax in seriously considering the real requirement in arriving at a security classification. In reclassification, particularly, there is a tendency to *laissez faire*, as it is easiest to let the originator take all responsibility for his documents.

Know the Regulations

The regulations governing the security of information are contained in considerable detail in *Canadian Army Order 255-1* and this is an order which requires study by all officers, users or originators. For those officers specifically concerned with originating or making extracts from military documents, it is a necessity to make detailed study of the regulations in order to fully understand the provisions contained therein.

The Security Gradings

In general terms, the following can be used as a guide in deciding upon the proper security grading:

Top Secret: The security aspect of this information is paramount. Unauthorized disclosure would cause *exceptionally grave damage to the nation.*

EXAMPLES

(a) Plans or details of future or impending major or special operations.

(b) Military documents with possible political implications.

(c) Critical information on technical developments.

Secret: Unauthorized disclosure of such information would endanger national security and affect the interests or prestige of the nation and/or be highly valuable information in a foreign nation's hands.

EXAMPLES

(a) Plans or particulars of operations in progress which are not included under TOP SECRET.

(b) Instructions regarding employment of important new munitions of war.

(c) Order of battle, locations and moves affecting the order of battle.

Confidential: Unauthorized disclosure of such informations would be prejudicial to the interests or prestige of the nation, and though it would not endanger national security, would be advantageous to a foreign nation.

EXAMPLES

(a) Routine operational, battle and intelligence reports containing no vitally interesting information to the enemy.

(b) Non-operational moves within or adjacent to operational theatres.

(c) General tactical lessons learned from operations.

(In considering the security classification of "Confidential", separate it in your mind from the grading "Confidential" which is commonly used to protect the individual's personal documents from the eyes of Peeping Toms).

Restricted: Unauthorized disclosure of such information would assist a foreign nation, but would NOT be prejudicial to the nation's or any individual's interests. The in-

formation contained in this type of document is NOT to *be* communicated, either directly or indirectly, to the Press or to any person NOT authorized to receive it.

EXAMPLES

(a) Non-operational moves remote from theatres of war.

(b) Training and technical documents for official use only.

(c) Certain routine documents relating to supply and procurement.

Material in the above four categories is regarded as "classified". Classification is designed to provide additional protection. Much official material does not require the same degree of security protection and therefore does not belong in any of the above categories, and is regarded as "unclassified" from the security aspect.

An important point to bear in mind regarding unclassified documents is that lack of classification does not automatically permit the release of such information. *The release of information is still based on a "need-to-know" basis.*

Review of Classified Material

It is often a forgotten fact that all classified material requires constant review with a view to downgrading, as soon as such action is warranted.

The proper downgrading of a document or file is every bit as important as the setting of the original classification, and officers should take the initiative in ensuring prompt reclassification. The evils of overclassification produce a reduction in the degree of importance rightfully attached to the particular classification, thus risking compromise of more sensitive information which has been placed in that category and filed accordingly. It follows that the overloading of files, in filing systems not designed to take such a burden, leads to the risk of compromising more important matter due to the increased number of personnel required to handle files, and the lack of sufficient secure storage facilities.

Extracts from or Amendments to Classified Documents

When taking extracts or making references or amendments to classified documents, it is not always necessary to classify the reference or extract as the original document is classified. Military documents which contain extracts or quotations from classified documents should be classified purely on the basis of the information they contain. However, where a certain subject is classified and the extract specifically refers to that subject, it is clear the extract must retain the original security classification.

Summary

It will be obvious to the reader that no amount of classification will safe

NAVY TESTS NEW AIRSHIP

Three years after it first announced plans to strengthen its lighter-than-air programme, the [U.S.] Navy revealed recently that it is now conducting test flights on a new ZPN-type airship.

"This airship is the largest non-rigid type yet constructed," according to the Semi-annual Report of the Secretary of the Navy. The report states that the ship "provides space for carrying all of the latest mechanical and electrical equipment for anti-submarine warfare, without the disadvantage of reduced range, endurance or crew discomfort."

Capable of long-range patrol over open ocean areas, the ZPN will be refuelled while in flight from various types of service vessels. The Navy also pointed out that the ship's two 800-horsepower Cyclone air-cooled engines can be maintained and repaired while the ship is in flight, thereby adding to its "endurance capabilities."

The new blimp is nearly twice the size of the Navy blimps used for anti-submarine patrol during World War II. It has an envelope 324 feet long, 71 feet wide, and 92 feet high at the tallest point. A double-deck 87-foot car under the blimp houses the crew, controls, and engines.

According to original plans for the ship, it is staffed by 14 officers and men, and has relief crew living quarters on the lower deck, away from the engines and controls. A galley and mess complete with electric range and refrigerator are included in the equipment.—*Army-Navy-Air Force Journal* (U.S.).

DID YOU SAY TOP SECRET?

(Continued from preceding page)

guard military documents if they are not accorded the security coverage they are entitled to by their classification. As *CAO 255-1* states, "every person is individually responsible for the application of these regulations when handling official information, documents or material which may come into his permanent or temporary possession". That makes it clear that the responsibility is yours. A study of *CAO 255-1* and a common-sense application of those rules will ensure that you are handling, classifying and downgrading classified documents in the proper manner. Correct security classification for military documents is a matter of vital importance; over-classification of material "just to be sure" is as harmful as a grading which is too low. Let's be realistic in setting security classifications.

Know the Regulations
Classify it Right
Review for Downgrading

AVIATION IN THE SOVIET UNION

F. G. Swanborough in "The Aeroplane" (Great Britain)*

In World War II, the Soviet Air Force put considerable emphasis on the construction of fighters and light and medium bombers for tactical troop support, to the almost complete exclusion of heavy bombers suitable for operation in a strategic role. The fighters produced up to the end of 1945 were characterized by their light construction and their consequent low wing loading and good manœuvrability.

They were not as fast as contemporary Western types. The advent of the jet engine appears to have enabled Soviet designers to rectify this failing, however, and the quest now seems to be for high speed.

A study of one of the latest Soviet jet fighters, the *MiG-15*, suggests that speeds of up to 640 miles an hour might be achieved. This performance, which has been obtained by the use of swept-back wing and tail surfaces, is combined with a high rate of climb and good manœuvrability, achieved by keeping the weight and wing-loading down to a minimum.

Bomber Development

Tactical support bombers still receive much attention in the Soviet Air Force. In addition to an up-to-date version of the *Stormovick*, at least one type of twin-jet bomber has been developed for use in this role, and is coming into service.

In any future war, however, the Soviet Union would be handicapped severely without a strategic bomber force, and such a force apparently is now being built up. As standard equipment, the "pirated" version of the Boeing *Superfortress* is said to be in large-scale production, and seems likely to remain so at present.

The performance of this type can safely be assumed to be similar to that of the *B-29*, and, as a result, its operational radius is not likely to exceed 2,000 miles. Having regard to the distance between Soviet bases and key targets in the West, this range is insufficient, and it is more than likely that a long-range, heavy piston-engine bomber is under development in the USSR at the present time.

Soviet Transport Aircraft

Transport aircraft always have

This digest is reprinted from the Military Review *(U.S.).—Editor.*

figured prominently in Soviet Air Force equipment, and there is certainly a close integration of the military and civil transport authorities. One reason for the importance of transport aircraft is the priority given to paratroops in the Soviet Union. The vast distances involved in moving about the country also call for large numbers of aircraft. Thus, it is all the more surprising to find that the first adequate transport aircraft to go into service was the Douglas *Dakota*, which was built under licence in the Soviet Union and also was supplied under lend-lease arrangements. Although the Soviet-designed *Il-12* is coming increasingly into service for both civil and military use, the *Dakota* also remains in large-scale use.

At least two types of four-engine transport planes have been built by the Soviets since the end of the war, but there is no real evidence that they are being used in any numbers. It may well be that the majority of airfields in the USSR do not have runways suitable for such aircraft, and this factor may be impeding the development of aircraft in a category which otherwise would be of considerable importance.

Training Planes

Training aircraft have, until recently, tended to be somewhat ancient in appearance, but the latest types of primary and advanced trainers appear to be in the same class as their Western counterparts. Two-seat conversions of piston-engine and jet fighters also are in service.

The Soviet Union has a considerable background of rotary-wing aircraft experience, but this does not appear to have been exploited to the full in the past 10 years. Prototypes of a twin-engine, multiseat helicopter have been flown, and there also is a single-seat light helicopter, which might be useful for operation from submarines. However, there is no evidence that helicopters are being used in military service.

Gliders, on the other hand, continue to receive much attention for use with airborne troops. At least two types of large troop-carrying gliders in the *Hamilcar* class are in service at the present time.

Most of the aircraft of which details are known outside the Soviet Union can be attributed to one or other of a small group of leading airframe designers. The aircraft designed by these engineers now carry designations which include an indication of the designer's name—a system which may seem strange in a state where individuality is frowned upon.

Engine Development

The development of engines in the Soviet Union, up to the coming of jet propulsion, probably lagged behind

airframe design—and well-designed airframes almost certainly suffered from lack of adequate power plants. This situation now has largely been overcome.

Initially, the Soviets lagged seriously in jet development, and by the end of the war had made no real progress, with the possible exception of rocket motors, which always have received some attention in the USSR. After the war, the Soviets, therefore, were only too ready to take over all the German jet work—including aircraft, engines, designs, and technicians—they could lay their hands upon.

Present Soviet jet engine development, therefore, mostly rests upon this foundation of German work.

Rocket engines have received considerable attention, and again German work must have proved useful. Lavochkin piston-engine fighters have been seen with rocket units under the wings or in the rear fuselage, and persistent reports indicate the Soviet development of an all-rocket fighter derived from the *Junkers 8-263*—itself a development of the *Me-163*.

Aircraft Production

Construction of all aircraft and aircraft engines is, of course, under state control and is undertaken at the various state factories. Most of these are located in Western or European Russia—a fact which nearly proved disastrous for the USSR when invaded by Germany in 1942. Aircraft production then was saved only by the wholesale uprooting of the factories and their transfer—lock, stock, and barrel—to the East.

Although this gave immunity from air attack, it introduced labor and supply problems, and consequently most of the factories moved back when the German threat abated. They are now again within reach of air attack from Western Europe; but the fact that these factories can be moved with comparatively little effect on output is significant.

Research facilities in the USSR appear to be good but limited; again, they have undoubtedly benefited from captured German equipment and engineers.

There is little evidence to suggest that the Soviet Union has matched the West in the past few years in the extensive development of equipment to meet the specialized needs of high-speed, high-altitude flight.

Armament

In the field of armament, we have more information. The Soviet Union always has shown herself to be particularly able in the design and production of guns of all types, and aircraft cannon have proved no exception.

Recently, emphasis has been placed on the development of larger calibre

guns, and 30-mm and 53-mm cannon are in service as standard equipment. This policy of using heavy-calibre guns for fighter armament is in marked contrast to British and American practice, where the 20-mm and .5-inch guns, respectively, are standard on all fighters up to the present day.

Rocket armament received early attention in the Soviet Union, and was in use for air-to-ground work before being developed by the allies during the war.

Radar and Radio

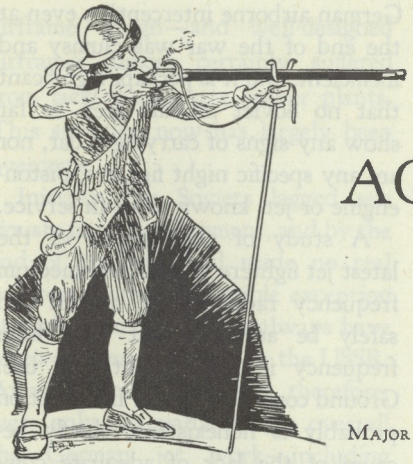
Up to the end of the war, the Soviets had made little advance with the development of radar. Despite the German work and equipment now available, there is little evidence that a chain of early warning radar stations has been established. The Soviet Union's "buffer" of satellite states across Eastern Europe would be a tangible asset in this respect, but such early warning radar stations as are known to exist are widely separated, with no overlap, and are not located in the satellites. The "chain" runs from the Baltic to the Black Sea through the Ukraine.

Her late start in the field of radar almost certainly leaves the Soviet Union behind Britain and the United States, and this is likely to be true of radar bomb sights and airborne interception radar for night fighters. German airborne interception even at the end of the war was clumsy and inefficient, and it is perhaps significant that no Soviet aircraft seen so far show any signs of carrying radar, nor are any specific night fighters, piston-engine or jet, known to be in service.

A study of photographs of the latest jet fighters reveals only medium frequency radio aerials, and it can safely be assumed that very high frequency is not currently in use. Ground control of fighter interception probably is nonexistent, chiefly because of the lack of adequate communications facilities.

Of the Soviet Union's ability to reach a high standard of production little can be said. No expense is likely to be spared in an attempt to achieve high quality; but, on the other hand, the larger the industry—and the Soviet Union's probably is the largest in the world—the lower must be the average standard of skill of the workers therein. Such inspection of recent Soviet aircraft as has been possible tends to confirm the impression that the standard of workmanship is not high.

Although there is ample evidence that the Soviet Union ranks among the first three great powers in the matter of aircraft design, this question of production ability — judged qualitatively, not quantitatively — seems likely to remain problematical for some time to come.



ACCURACY IN RIFLED FIREARMS

By
MAJOR J. W. HOULDEN, WINNIPEG LIGHT INFANTRY*

Accuracy, according to our dictionary, means "careful, precise, conform with a standard." When these words are applied to a shooter we say he is a good shot. Here again we accept the accuracy of modern arms as a matter of fact. The modern shooter has no more skill than his predecessor of a thousand years ago, but his weapons are extremely more accurate. We all know the stories of David and Goliath with the sling shot, William Tell and his son with crossbow and countless other stories concerning ACCURACY down through the last 2,000 years.

The Turks, around 1800, were the long distance bow-and-arrow champions of the world. They retained this title in spite of all the legends of the English archer with his deadly longbow. Records are in existence of arrows shot up to, and exceeding, ranges of 800 yards. In fact, outside Constantinople are marble slabs on the old archery range on which the records are inscribed for all to see.

With early weapons such as the spear, slingshot, javelin and other hand-thrown missiles, accuracy was acquired only after long and diligent practice. In most cases training was life-long, starting at early boyhood, to help provide animal food for the family. Handslingers could reach ranges of somewhere around 50 yards at the maximum, but only 10 to 15 yards with any degree of accuracy. Early bows were, as can be imagined,

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very crude to say the least. Their range was somewhere around 100 yards and the accuracy sufficient to be deadly at that range.

The bow in various forms and types was the most deadly long-range weapon and held this place from the 5th Century B.C. to the 19th Century A.D.—in other words, over 2000 years. Even today we have archery clubs all over the world.

While the bow itself underwent a series of changes, it was basically the same. Many devices were invented to get a uniform push on the arrow as well as guides to hold the arrow true to its mark. History also tells us that even in the earliest times it was common knowledge that spinning the missile on its long axis gave better accuracy.

Lieutenant H. Ommundson, in his excellent text, *Rifles and Ammunition* (1915), conducted a great deal of practical research into the subject of accuracy. We believe a few quotations from his book will supply some historical background to rifled arms and the era of modern accuracy.

"Some degree of knowledge of the peculiar attributes of spin, when applied to missiles, has belonged to mankind since very early times. The Zulu of today (1915), when throwing his assegai, imparts to it a sharp rotary motion by spinning it between the thumb and fingers of his throwing hand. Some savage tribes twist around the end of their spears, or throwing sticks, a long thong of leather, which is used to impart this necessary spinning motion. There can be no reason for supposing that barbaric people of earlier times had not similarly discovered the virtues of spin as an aid to straightness. Feathers set at an angle to the long axis of an arrow have been used for centuries to impart a spinning motion about the long axis whilst the arrow is in flight.

"It is one of the curiosities of human thought and the development of ideas that though archers, javelin throwers, and spearman went to considerable trouble to spin their weapons, and therefore must have had an inkling of what they were effecting, it was not until some hundreds of years after projectiles had first been thrown from guns that the idea of spinning those projectiles was evolved. It is probable that the reason for this delay lay chiefly in the fact that nearly all the early projectiles were roughly spherical."

As a result of this oversight in the basic principle of the accurate flight of firearm projectiles it was five centuries before the gun became a real rival of the bow and arrow. In Major Wilhelm's excellent article in the September 1925 issue of the *American Rifleman* he quotes a record of a contest between the bow and British musket shortly after the

the Revolutionary War: "... a contest in England at a range of 100 yards between the bow and the 'Brown Bess,' in which the bow placed 16 arrows out of 20 into the target and the musket 12 out of 20."

Accuracy of early unrifled firearms can only be described as pitiful. We again quote from Major Wilhelm's article: "The muskets borne by the British soldiers in the Napoleonic wars and at Waterloo were not greatly different than the ones their ancestors used under Marlborough at Blenheim over 100 years earlier. Little was expected of the 'Brown Bess' and she did that very well. The common soldier looked on her as a good handle for a bayonet. However, when it came to accuracy and range, the 'Brown Bess' was sadly lacking. The average marksman of that day was considered lucky, by some authorities, if he hit a single man at thirty yards, a hay stack at fifty, and an entire battalion of troops in column at two hundred yards."

A *Century of Guns* reports: "Napoleon withdrew the rifle from the Imperial troops, to whom it had been partially issued during the wars of the Republic; nor was it restored to the French armies till after the invasion of Algeria, in 1830, when it was adopted for the equipment of the Chasseurs d'Orleans."

An early English text by Hans Busk, 1859, states: "We deduce from the foregoing firing rules that a musket ball falls six inches in the first 100 yards, and six inches for each of the succeeding distances (100 to 150 yards, 150 to 190 yards, and 190 to 215 yards) until at a range of 215 yards the fall becomes twenty-four inches."

Benjamin Robins of Great Britain (1707-1751) was one of the first men to make a scientific investigation into rifling and its relation to accuracy. He made the following prophecy as a result of his research: "Whatever state shall thoroughly comprehend the nature and advantages of rifled barrel pieces, and having facilitated and completed their construction, shall introduce into their armies their general use, with a dexterity in the management of them, will by this means acquire a superiority which will almost equal anything that has been done at any time by the particular excellence of any one kind of arms."

From 1750 to 1800 there was a more or less half-hearted attempt to get rifled arms into the army but no concerted effort was made to accomplish a complete change-over. Sportsmen both in Europe and particularly in America were well aware of the excellence of rifled arms and used them with great success. In America the "Kentucky Rifle" had already established itself as one of the best weapons of its day. Then the skir-

mishes and disastrous battles of the American Revolutionary wars made the contrast between mobile troops with accurate rifles in wooded country absolutely superior to the brightly-uniformed parade square troops of Europe with muskets. We all know the results, which are backed by many stories and quotations from our history books.

Now the world at large had a very practical example of the truth of Benjamin Robins' prophecy. It did not take long after these wars for governments to change their thinking regarding rifled arms. Rifles whose names are well known, such as the British Enfield, Snider and Lee-Enfield; the U.S. .45 Springfield and 30/40 Krag; the German Mauser and others were adopted both for military and sporting use throughout Europe and America.

Black powder was an additional stumbling block to good accuracy even after rifling was well established. It was corrosive, dirty, left a heavy residue in the barrel, had limited velocity levels and created great clouds of choking smoke when any large number of guns were fired. However, with the upsurge of guns with rifled barrels came the discovery of guncotton in 1845. The combination of a clean smokeless powder, elongated bullets and rifled barrels really got accuracy started down the right track. Rifle clubs at the start of the 20th century were as common as golf clubs are today. There were also a great many clubs known as "bench-rest" rifle clubs. These shooting members worked at perfecting their equipment for the sole purpose of shooting five- and ten-shot groups from a muzzle and elbow rest to win contests for the smallest groups at ranges of 100 and 200 yards.

One such target in particular still holds the world record. This was shot by a Mr. C. W. Roland of Colorado in 1901 with a special 32/40 Ballard rifle at 200 yards. The target has been saved to this day and measures .725" in diameter. The gun was held in a mechanical rest and the trigger pulled by hand. A 5-cent piece is thirteen-sixteenths inches in diameter and would cover this group completely. So by the year 1900 we had arrived at a point where our rifles could almost put every bullet through the same hole.

A table showing the various weapons and their effectiveness was prepared by Major Wilhelm and is of special interest at this point. (See page 52).

And so we come to our present day .303 Lee-Enfield and No. 4 rifles which are quoted as 2000 to 3600 yards maximum; also the U.S. .30 Springfield of even greater range.

There is today a growing group of enthusiasts known as "Wildcatters" who spend a great deal of thought,

Type of Weapon	*Approx. Century*	*Yards Effective Range*	*Yards Maximum Range*
Sling	10th BC to 16th AD	40	200
Short Bow	5th BC to 19th AD	125	250
Cross Bow	12th to 19th AD	200	350
Long Bow (Eng.)	12th to 16th AD	250	400
Turkish Bow	15th to 18th AD	300	800
Hand Gun	14th Century	25	300
Match Lock	15th Century	50	500
Wheel Lock	16th Century	60	800
Flint Lock	17th to 18th Century	75	1100
Percussion Musket	1840	100	1200
Kentucky Rifle	18th Century	300	1400
Prussian Needle Gun	Franco-Pruss. War	800	2000

This table lists various weapons and their effectiveness.

time and money on the development of high-speed, small-calibre, light-weight bullets, which, in some cases, are super-accurate. "Wildcats" are cartridges like 30/06, 7mm, .303 British, 30/30 and others, necked down to take .22- and .25-calibre bullets. The velocity is increased. The guns used are equipped with extra heavy barrels for strenght and accuracy. Some of these so-called "Wildcats" have attracted public attention and are being loaded as commercial cartridges. Some of the more popular are the .218 Bee, .219 Zipper, .22 Hornet, .220 Swift and .257 Roberts. Their velocities range from 2650 to over 4000 feet per second.

There is also a revival of the old "Bench-rest" shooting clubs where competitions are held, not to make bullseyes but the smallest groups, at 100 and 200 yards. Match rifles of the old masters such as Ballard, Pope, Johnson, Kentucky rifles and others are being dug out of the attics. The barrels on these old guns are still tops even by today's standards. At a match of this type in West Virginia in 1950 a Mr. Jack Snyder, shooting an old Pope 32/40, made a 10-shot group of .766" at 200 yards. This closely rivals the world's record Rowland group of 1901 (.725").

The common garden variety .22 rimfire cartridge has also had much midnight oil burned over its problems and accuracy. The old 100-yard .22 target with the 2" bullseye ring became too large nearly 20 years ago and a 1" diameter dotted ring is now printed in the centre of the target, called an X-ring. When you see a score shown as 400 out of 400 with 38X, you know the competitor has hit the one-inch X-ring in the centre 38 times in 40 shots. In other words,

an expert shooter with good equipment can be reasonably sure of hitting a 50-cent piece with every shot at 100 yards.

This year (1951) at the National .303 Matches at Ottawa, the Department of National Defence issued .303 MK VII ammunition made in 1950. This ammunition, we understand, embodied all the postwar improvements. These improvements were directly reflected in scores at a higher level than ever known heretofore. In the Grand Aggregate, the winner only dropped one point in each fifty. Members of the 1952 Bisley team all averaged 48 out of 50 and better to earn a place on the team. Previously an average of 46.5 was satisfactory. American guests at these matches, such as the well-known shooter, Lt. Col. J. Crossman, were generous in their praise of the extreme accuracy of this latest type of Canadian ammunition. So we see that Canada is now in the forefront as far as accuracy is concerned in her military ammunition.

Shooting has a fascination that draws men of all ages. To put 10 shots in the exact centre of a bullseye gives one a very satisfied feeling. It gives one a feeling of accomplishment.

Time marches on and the quest for precision goes on apace. We are slowly but surely approaching the point where all shots will go through very close to the same hole, or at least touching each other, at the shorter ranges. We have come a long way from the days when the instructions were "Don't shoot till you see the whites of their eyes!"

Robot Pilot for Carrier

The [U.S.] Navy has accepted its first automatic steering system for aircraft carriers, it is announced by the Sperry Gyroscope Co. at Great Neck, N.Y.

The device is a tubeless version of the Sperry electronic automatic pilot developed to steer destroyer escorts controlled by radio from aircraft in a special project during the war.

A magnetic "brain" which anticipates steering motions replaces conventional electron tubes used to control earlier automatic pilots. The magnetic "brain" was developed especially for heavy duty naval use.

Without human aid, the robot will steer prescribed zigzags and follow course schedules computed by special navigation devices. It will also hold the ship precisely to straight gyro courses, despite disturbing forces of wind and sea. It is capable of turning the ship to a new course in the least possible time without overshooting the course. — *Army-Navy-Air Force Journal* (U.S.).

ARMOURED PERSONNEL CARRIER

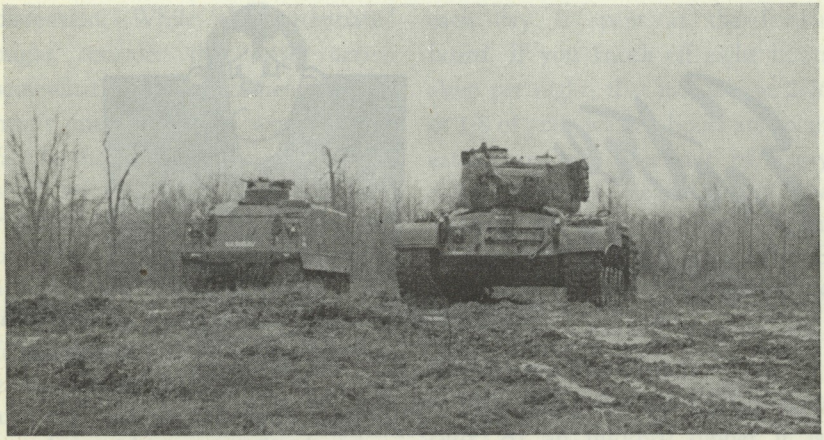
DIGESTED FROM THE MAGAZINE "ARMOUR" (U.S.)

The accompanying photographs show the T18E2 Armoured Personnel Carrier developed by the United States Army.

A squad-size carrier with a crew of one, the driver, the T18E2 provides all-over protection for its occupants against small arms and shrapnel and carries them over the same terrain on which the tanks it accompanies can operate, thus putting the fresh men onto the objective when moment arrives for dismounted action.

U.S. Army Photograph

Fresh armoured infantry deploy into dismounted action following an approach in which the losses from small arms and artillery have been reduced by mobility and armour protection.



U.S. Army Photograph

A full track vehicle, the personnel carrier traverses the same terrain as the tanks, putting infantry with the spearheads and thus creating the team to meet enemy opposition.

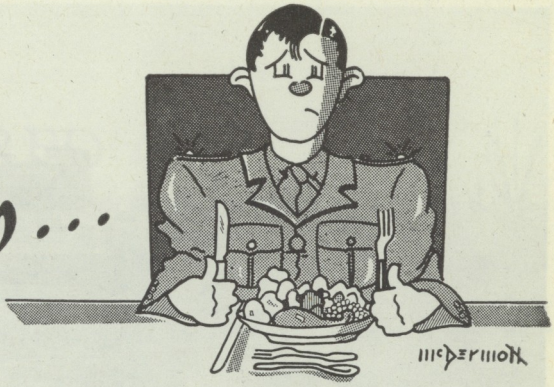
The new vehicle is powered by a six-cylinder Continental engine and has the Allison cross drive transmission. On improved roads it travels at a sustained speed in excess of 35 miles per hour. It mounts one .50 calibre machine gun.

Mines and Booby Traps

The Communist lays mines in roads and by-passes, and in open fields that lead to his defensive positions. On roads he usually lays his mines in cuts and fills—wherever a by-pass is impossible. The usual pattern places mines at about three-pace intervals across the road indiscriminately but with at least one mine in the track or rut most frequently used. Sometimes a Chinese will sneak back and place a mine in a hole from which our forces recently removed one. Some mines, buried from 18 to 28 inches deep, have exploded after considerable traffic has passed over them.

Mine-sweeping details must examine carefully the surfaces of roads and shoulders at defiles and bridge approaches. Some anti-tank mines have been booby trapped. There is no pattern to Communist booby trap practices. The most innocent-looking houses, equipment, souvenirs are often booby trapped. There are three common types of igniters on booby traps: pressure, pull and release. A nail can be used to disarm pressure and release type igniters.—*U.S. Army Combat Forces Journal.*

Entre nous...



By
"SENIOR SUBALTERN"

In our capacity, we are perhaps more aware than most people, of the "veritas nuda" of that old and well worn adage "There are always two ways of skinning a cat." It is for this reason that we were much interested in the article which appears below. The responsibilities of the "Senior Subaltern" are many, and are apt to vary with the customs and traditions of his Regiment. One duty, however, remains constant. The Senior Subaltern must ensure that the junior officers of his Regiment "get the form". There are no rules and no manuals to guide. "Entre Nous" was given as a lecture by a Senior Subaltern and, as such, indicates to us that we have not, although it comes as a shock, learned all there is to know about techniques of instruction.

* * *

La Vie en Rose (Life with Rosie)

Living, as we do, at least at the moment, in a more or less civilized world, it is necessary for all of us who are a part of any one society to conform to a certain code of behaviour for the common weal. This code is, as far as I know, for the most part, an unwritten one but is nonetheless law. Hundreds of examples could be given, but suffice it to say that you do not sit in a drawing room with one leg over the arm of your chair or leave your hat on while indoors or, having joined your hostess after dinner, stretch out in an easy chair and with a sigh undo your vest to allow your midriff a more comfortable

The accompanying cartoons were drawn for the Journal *by Capt. G. G. McDermott, Directorate of Military Intelligence, Army Headquarters, Ottawa.*—Editor.

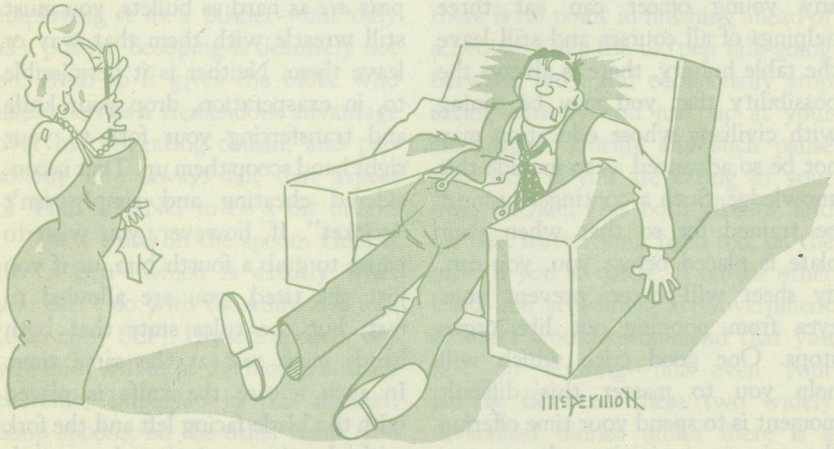
distention. While the uninitiated might consider this latter action somewhat of a compliment to the host's fine foods, such would not in fact be the interpretation put on it in, shall we say, the better drawing rooms. My point is that while none of these actions does anyone any actual harm, they are simply "not done", and, consequently if some fellow inadvertently does do them, embarrassment is caused all round and the business of living happily together within our civilized society is made more complicated. This is undesirable.

Come and Get It!

Now it is an interesting (I hope) fact that a considerable portion of the time we spend in the company of others, we spend eating. Unless you are a "gulper", nearly two hours of each day is spent at the festive board. If you knock off eight hours sleep per night, that means that 2/16 or 1/8 of your waking hours are spent eating, or one year out of every eight! Horrors! Regardless of the accuracy of this arithmetic I am sure you can see that THE THING is terribly important and should be studied.

The Approach to Contact

This phase can be rattling to a tyro. At an informal dinner it is, of course, quite simple, for you will normally be confronted with nothing more ominous than, on your right (ignoring your dinner partner), a soup spoon, dinner knife and bread knife in that order; on your left a dinner fork, and across the top a desert fork and spoon with handles heading to left and right, respectively.



. . . having joined your hostess after dinner, stretch out in an easy chair . . .

At a formal dinner the array of eating utensils is, to say the least, formidable. They are, however, fortunately so arranged that you work solemnly in from the outer edges towards the centre. In any event you should always wait for your host or hostess to fire the starting gun, in which case he or she will give the final clue. If on the other hand one of them says, "Please *do* start or it will get cold", that must be taken as an order regardless of rank or seniority. In such a case you clutch at what you piously hope are the right tools and nine times out of ten all will be well. If by chance you get it wrong, cheer up—it doesn't really matter anyway.

At this point a brief word of warning to every young subaltern may be in order. While it is an accepted fact in Army circles that any young officer can eat three helpings of all courses and still leave the table hungry, there is always the possibility that you may be dining with civilians whose education may not be so advanced as to include this knowledge. Such a contingency must be trained for so that when your plate is placed before you, you can, by sheer will-power, prevent your eyes from popping out like organ stops. One good trick which will help you to master this difficult moment is to spend your time offering those in your vicinity salt, pepper, bread, butter, water—anything until you get the "go" sign.

The Break-in

Under this heading I will discuss Standard Eating Practice (SEP) insofar as it concerns the weapons at hand i.e., the knife, fork and spoon. All weapons, while subject to certain idiosyncrasies of the user, nevertheless have definite Tests of Elementary Training (TsOET). Based on SEP, they are as follows:

The knife and fork are held identically, that is with the base of the handle in the palm of the hand, forefingers extended and braced against the weapon, the knife with the sharp edge of the blade down (unless, of course, you propose to cut you own or somebody else's throat), and the fork with the tines pointing downward. No, sir, I don't care if the peas *are* as hard as bullets, you must still wrestle with them that way or leave them. Neither is it permissible to, in exasperation, drop your knife and transferring your fork to your right hand scoop them up. That is considered cheating and simply isn't "cricket". If, however, you wish to pause to grab a fourth bun, or if you just get tired, you are allowed to rest, but the rules state that both hands must rest at the same time. In such a case the knife is placed with the blade facing left and the fork with the tines pointing downward.

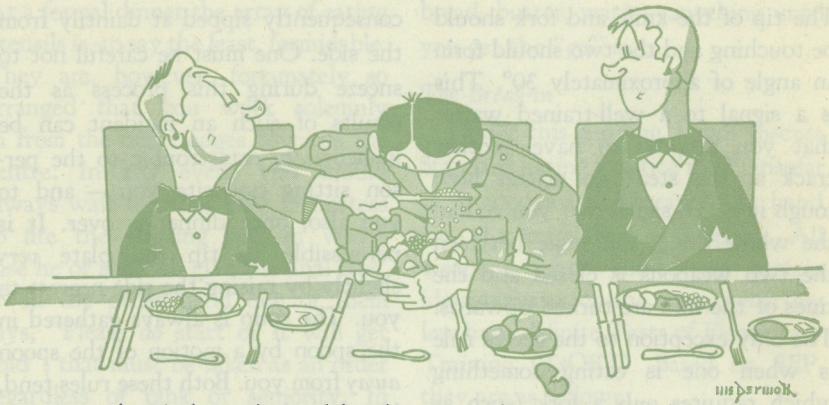
The tip of the knife and fork should be touching and the two should form an angle of approximately 30°. This is a signal to a well-trained waiter that you propose to have another crack at the steak no matter how tough it is. To signal that you've had the whole thing, the angle between the two weapons is closed and the tines of the fork are turned upwards. The only exception to the above rule is when one is eating something which requires *only* a fork (such as some types of savoury or a piece of pie). In such cases the fork is, of course, held in the right hand and used with the tines pointing upwards.

Desserts are a piece of cake (I beg your pardon!). If it is a tricky one, you may, in addition to a spoon, use your dessert fork in your left hand, holding it in the normal manner and employing it as a pusher—but only as a pusher. Scooping is definitely not on. Even so it gives the bloke who likes cherries a tremendous advantage over his pea-eating cousin, and personally I've always felt that aspect of THE THING to be a bit unfair.

Just a word on the spoon. Hold it like a pen—which is exactly what you don't do with the knife and fork (that is by SEP). Dessert spoons, you will find, will fit in the mouth and are therefore employed in this manner. Soup spoons, on the other hand, you will find (I hope) will not and are consequently sipped at daintily from the side. One must be careful not to sneeze during this process as the results of such an incident can be immediately catastrophic to the person sitting opposite you — and to you also, once dinner is over. It is permissible to tip the plate *very* slightly by raising the side nearest to you. The soup is always gathered in the spoon by a motion of the spoon *away* from you. Both these rules tend, like the side-sipping rule, to endanger your opposite number rather than you and are therefore good things.

The Dog Fight

Once committed to action the course of history is really pretty well set and the next step is to demolish the enemy. Just one word of warning here, and that is—don't rush it. You are working to a timed programme so there is no point in finishing ahead of schedule. Keep the old pep talk going between bites and occasionally stop eating entirely and just sip at your champagne. During any such pause you may, if you are eating in your own kitchen, rest both elbows, and for that matter your head too, on the table if you so desire. If on the other hand you are dining at Government House I would recommend that you rest on nothing—not even your laurels. Between these two widely diversified dinner tables there is a sort of sliding scale as to how com-



. . . there is always the possibility that you may be dining with civilians . . .

fortable you may make yourself. The head and elbows should, of course, be whipped off smartly as soon as you leave the kitchen but as you yourself know even this rule has been known to go by the boards—the conviviality of the company, the length of the dinner and the lateness of the hour all have a bearing on this point. As a general rule I would say that one forearm rested on the table could call forth no adverse comments.

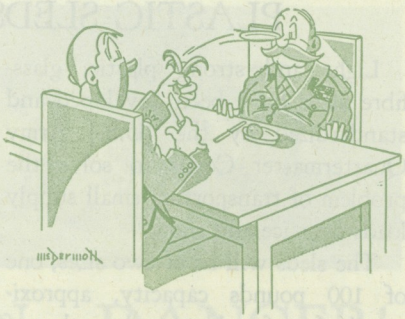
This is a signal to the well-trained waiter . . .

The Breakout

The trickiest opponents one is likely to be confronted with in this phase are the apple, the banana and the orange, and believe me, my friend, these seemingly benign characters have tripped up many a worthy opponent. The apple, for example, must never be eaten at dinner as if you were enjoying it. That is to say, you must not, grasping it firmly in one hand, sink your teeth into its juicy substance. Rather, must you cut it into segments so that each segment contracts a somewhat metallic taste from the knife. If you want to really stall for time, peel it. The banana is even trickier, because the correct "breakout" phase approach to the banana is to daintily peel back the skin and, holding it steady on the plate with a fruit fork, cut it into segments with a fruit knife (as one would an eel—except not with a

fruit knife) and eat it. (No—the banana not the eel! . . . Of course I mean with the fork—please try to follow the context!) As all these implements are seldom available, I personally always look upon the banana as being purely ornamental.

The orange, too, can be a stumper. It is not permissible to roll it between your hands and suck the juice out of one end nor is it permissible to cut the orange in half and scoop the juice out with a teaspoon. Both these methods have ruined too many mess jackets, and tradition dies hard. The only permitted method is to peel the orange, preferably using a fruit knife, and, dividing it into segments,

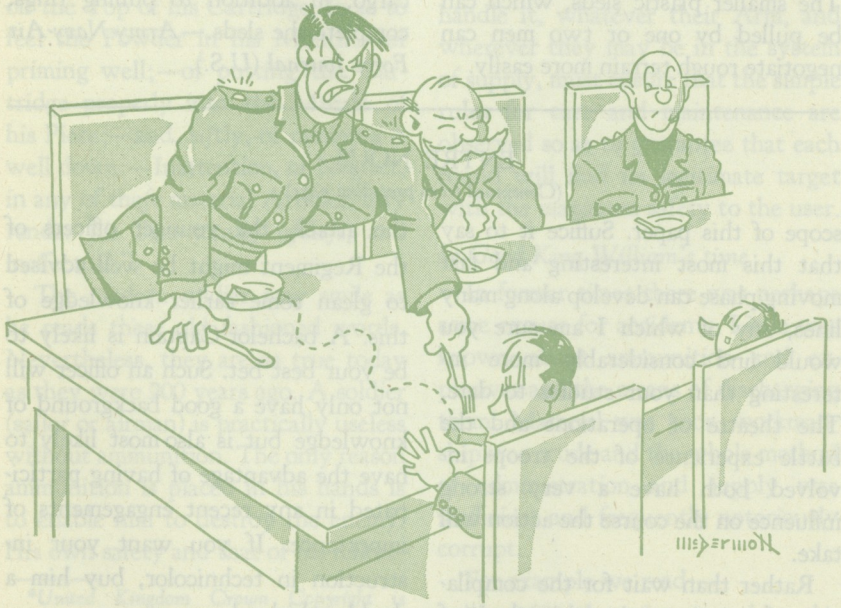


the . . . approach to the banana is to daintily peel back the skin . . .

plop them down the gullet. Personally I always take grapes.

The Pursuit

The pursuit takes place after dinner and is consequently not within the



. . . holding it in the normal manner and employing it as a pusher.

PLASTIC SLEDS FOR ARCTIC

Light and strong plastic, glass-fibre sleds have been developed and standardized by the [U.S.] Army Quartermaster Corps to solve the problem of transporting small supply loads over ice and snow.

The sleds will be of two sizes, one of 100 pounds capacity, approximately four feet long, and another of 200 pounds capacity and slightly over seven feet long. Each is two feet wide. The small sled weighs about 24 pounds and the larger, 36 pounds.

Formerly, the Army used a 400-pound capacity wooden sled which proved unwieldly in some instances. The smaller plastic sleds, which can be pulled by one or two men can negotiate rough terrain more easily.

In the northland, the sleds will serve to haul rations, supplies, small arms and ammunition. The longer sled is also especially adapted to carry wounded, and has a cotton duck cover to provide protection for an injured man.

The sleds are molded of a glass mat impregnated with a polyester resin. A permanent white surface aids camouflage and is especially compounded to reduce abrasion. Three phenolic impregnated cotton duck runners protect the bottom and give good tracking characteristics. Tie-down ropes and rings for securing cargo, in addition to pulling rings, complete the sleds.—*Army-Navy-Air Force Journal* (U.S.).

ENTRE NOUS

(Continued from preceding page)

scope of this paper. Suffice it to say that this most interesting and fast moving phase can develop along many lines, any of which I am sure you would find considerably more interesting than your studies to date. The theatre of operations and the battle experience of the troops involved both have a very strong influence on the course the action will take.

Rather than wait for the compilation of notes covering this phase of the attack, the younger officers of the Regiment might be well advised to glean some earlier knowledge of this. A bachelor Captain is likely to be your best bet. Such an officer will not only have a good background of knowledge but is also most likely to have the advantage of having participated in any recent engagements of importance. If you want your instruction in technicolor, buy him a double whiskey!

AMMUNITION—DANGER!

REPRODUCED FROM THE BRITISH ARMY JOURNAL BY PERMISSION OF HIS MAJESTY'S STATIONERY OFFICE*

"—But in order to bring Him to this neceſſary Degree of Skill and Dexterity, Care muſt firſt be taken, that He acquires the Habit of biting off the Top of his Cartridge, ſo as to feel the Powder in his Mouth:—of priming well;—of putting the Cartridge properly into the Muzzle of his Piece;—and, laſtly, of ramming it well down:—Inattention, or Neglect, in any of theſe material Articles, may render his Fire totally uſeleſs, and ineffectual."

The modern soldier may smile as he reads these old fashioned words. Nevertheless, they are as true today as they were 200 years ago. A soldier (sailor or airman) is practically useless without ammunition. The only reason ammunition is placed in his hands is to enable him to destroy the enemy. His own safety and that of his fellowmen are dependent on his efficient use of it. Ammunition, however, is delicate stuff and not nearly so robust as the effect it produces. All who handle it, whatever their Arm, and wherever they may be in the system of supply, must ensure that the simple rules for care and maintenance are observed so as to guarantee that each round will find its legitimate target with the maximum safety to the user.

In Good King William's time

In former times there was perhaps some excuse for accidents. Little was known about ammunition and explosives and the means of discharging them. Material was poor, workmanship was crude and the whole method of administration and supply was inefficient and frequently notoriously corrupt.

For example we read:—

"In 1689 the pikes issued to the

*United Kingdom Crown Copyright is reserved.—Editor.

troops on service in Ireland were actually rotten and the stocks of the fire-locks were equally so, and that the cannon burst with small use, 'being made of ill metal'."

"Sparks infrequently set fire to the charges in the man's bandolier and burnt him. He might accidentally fire his musket with damage to a comrade and there was danger of setting alight the budge-barrel when the bandolier was being re-filled. It was very unreliable with misfire as often as four times in ten in windy weather owing to the sparks blowing away and in the rain was useless."

"Of 1,090 shrapnel fired at Woolwich butts in 1819, 74 burst in the bore, 71 in the butts, and 111 were blind".

Modern Times

Today it is realized that ammunition is perhaps the most important material of war; the Nation's resources in raw material and industrial effort are harnessed together, regardless of expense, to ensure, as far as humanly possible, that ammunition is delivered to the Army as a highly efficient weapon of destruction yet perfectly safe to use provided it is sensibly handled and properly looked after.

Ammunition, however, is delicate and if it is not looked after it very rapidly loses its efficiency and becomes

The cannons were of little use.

dangerous. The Royal Army Ordnance Corps maintains a large staff of technical officers and men whose job it is to inspect and maintain the vast stocks of ammunition held in Army depots at home and abroad. They examine and remedy faults, remove and replace deteriorating components, scrape, paint and remark ammunition and ammunition boxes and so on. They do all they can to ensure that this ammunition will be delivered to the soldier in an efficient state. There are, however, not enough of these men to go round and the task cannot be completed without the assistance of the troops themselves. It is, therefore, incumbent on all troops to thoroughly familiarize themselves with the markings, packages, and nomenclatures of ammunition issued to them, the conditions under which it should be handled, and the safety precautions to be observed.

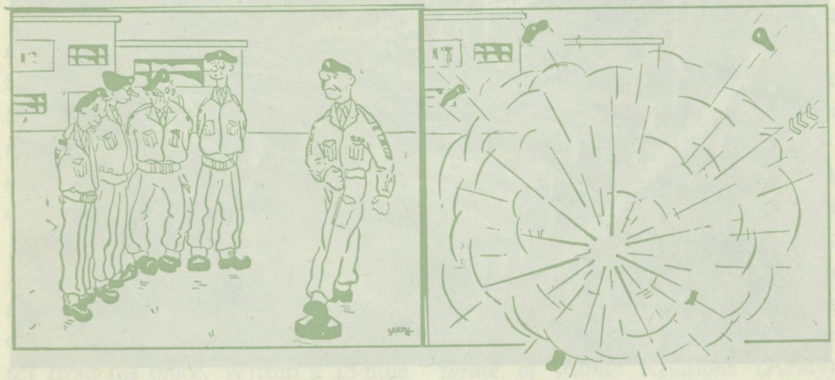
"*Familiarity Breeds Contempt*"

The rules for care of handling of ammunition are very simple and well known to all. So often, however, does familiarity cause carelessness that a few of the more important rules are summarized below:—

The object of an explosive is to explode:—Always bear this in mind during the handling and transportation of ammunition. With proper care the risk of accident is negligible. This fact should not be made the excuse for any but the most meticulous care. For example:—

"A student once asked an instructor whether an anti-tank mine would withstand the weight of a man. The instructor said it would and proceeded to prove it—eight men were killed."

Keep your ammunition dry: Damp is a menace which rusts packing cases, destroys paint and identification



"Will the mine stand the weight of a man, Sergeant?" "Of course it will . . ."

markings, pits and corrodes ammunition making it unfit to fire. It gets into the fuzes making them useless and renders explosives, such as gelignite highly dangerous.

Excessive heat: Do not allow your ammunition to lie uncovered in the sun or otherwise expose it to heat. Heat tends to break down the contents of the explosive making it either highly dangerous or useless as an explosive.

Handle carefully: Rough treatment may cause misfires, blinds, and also prematures in the hands of the user. Always carry ammunition. Do not drag it, drop it, or throw it. The cost of rough treatment of ammunition means one less round to be fired at the enemy, and possible damage to the gun; quite apart, of course, from the tremendous labour, transport and cost involved in getting it to the gun.

Beware of damaged ammunition: Put it on one side to be examined by an Ordnance officer.

Do not be careless: Do not take ammunition to pieces to ascertain how it works. Remember it is a dangerous explosive.

Do not take it home as a souvenir: It is not a very pleasant or useful

Keep your ammunition dry.

souvenir anyhow and in any case it will only cause an accident if it falls into ignorant hands.

The above list summarizes a few of the more common safety precautions which should be observed. There are many others with which you are doubtless acquainted. If you do not remember them look them up and run over them with your men to ensure that they understand. It is said that during the war some six or seven fatal accidents occurred in England each day. The whole of these accidents were due to sheer carelessness or ignorance of the regulations.

One other point—watch your blinds. Far too many accidents are caused by live ammunition being left lying about at the end of training. In England during 1946 many children were killed or injured on the old war-time battle training areas which had not then been cleared. We must not run the risk of this happening again. It is sheer carelessness and bad discipline to leave live ammunition lying about at the end of training.

Look After It!

To summarize then, whilst every effort is made during manufacture to ensure that every round of ammunition produced is an efficient destructive agent and yet safe to handle, it does rapidly deteriorate if roughly handled or not looked after. Look after it, then, so that when it is required for killing the enemy it will do so and that during training it may be quite safe to handle!

Radio-Equipped Staff Cars

The 85-foot tower rising above the garage and dispatch office of the Army Service Corps in Ottawa doesn't mean that television has arrived at the military level, but, simply, that an efficient wireless net has been set up control to the staff car situation.

Six of the staff-car fleet in use at National Defence Headquarters are now equipped with wireless sets and controlled by the dispatcher's master set from his office. Within a 15-mile range radiating from the centre of Ottawa, the cars now receive their orders en route, eliminating the old practice of constant and costly return trips to the dispatcher's office for further instructions.

The entire operation is handled by Royal Canadian Army Service Corps personnel. A short course is given to the drivers on the handling of the mobile sets and the dispatcher on the handling of the master unit.—*Directorate of Public Relations (Army), Army Headquarters, Ottawa.*

A Book Review

CHRONICLING SIDESHOWS

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

The late Christopher Buckley's *Norway, The Commandos, Dieppe** is the third of an eight-volume series to be published for the British Government so that a popular military history of the Second World War may be available for the general reader pending the compilation of the Official Histories. The earlier general survey of the British Army by Ian Hay, entitled *Arms and the Men*, and *The Campaign in Italy* by Eric Linklater were straightforward stories but a more difficult task faced the author of this volume.

Mr. Buckley, who died in Korea while serving as war correspondent for *The Daily Telegraph*, was a very able journalist and managed to produce a very readable amount of certain side-shows for those people who have neither the time or interest to consult the Official Histories as they appear or delve into the many personal stories and narrative accounts of special forces which have become a feature of this post-war period. It had been as correspondent for this same London newspaper that Christopher Buckley made his reputation during the Italian campaign, further enhanced by publication of *The Road to Rome* (London, 1945). This set a high standard for reporting but, as must be evident to the reader of the present volume, Mr. Buckley's practice of colouring his narrative by quoting from personal accounts is dangerous for an historian. Even a first sifting of the documentary evidence will create doubt.

Until British Official History appears to justify, modify or contradict Mr. Buckley's opinions, however, the only criticisms which can be levelled and sustained are those based on a knowledge of documents and narratives in the possession of other members of the Commonwealth. And here a Canadian reviewer reaches firm ground. Probably we are too sensitive but it is easy to pick such a volume apart and discover not only inaccuracies but also omis-

*Norway, The Commandos, Dieppe. *By Christopher Buckley, London, 1952, United Kingdom Information Office, 275 Albert St., Ottawa, $2.40.*

sions and suspected remarks of aspersion. And this is hardly fair to the late Mr. Buckley who was writing as an Englishman about what he really considered to be British exploits.

Although, as Mr. Buckley has correctly pointed out, the raid on Dieppe was an integrated operation involving sea, land and air forces, the military aspect was primarily Canadian. Mr. Churchill wisely avoided giving a detailed account of this Operation in the fourth volume of his memoirs (*The Hinge of Fate*) and referred his readers to that given in Colonel C. P. Stacey's *The Canadian Army 1939-1945* and other official publications, but Mr. Buckley had to face the subject squarely.

The Canadians remained in the United Kingdom for almost a year following the raid on Dieppe and during that time the Historical Officer at CMHQ was able to lay the ground work for an elaborate study which he still pursues as Director of the Historical Section at Army Headquarters. Originally based on the operation orders, interviews with those who returned and others who participated in the planning and execution, the evidence piled up as British and then German documents became available. This reviewer remembers repatriated prisoners, particularly Major Page who was the senior officer of the Calgary Tank Regiment to get ashore, appearing to clear up particular points. Certain of these accounts conflicted, as is only natural however when men are faced with the choice of kill or be killed, and it would appear from Mr. Buckley's narrative that he leaned on some of the more colourful but less accurate of these. Therefore, despite colourful writing it is less reliable.

Although only two Canadian soldiers actually served in Norway in 1940, attached to the 1st King's Own Yorkshire Light Infantry as interpreters, some 1,300 troops of the 2nd Canadian Infantry Brigade had got as far as Dunfermline before Operation "HAMMER" was called off. In other respects Mr. Buckley seems to have covered this plan for assaulting Trondhjem, including references to the accidents which befell the successive officers designated to take command. He outlines the other changing plans which fluttered around the War Office from where Lt.-Gen. Massy, who never did get to Norway, was endeavouring to control his scattered force.

Trained with an eye on operations on the Western Front, the British Army was not capable of defeating mountain troops whose training and equipment permitted them to move at will. Not only were the British troops roadbound, they possessed neither the transport or artillery to

make adequate use of the same roads. They fought bravely but inevitably had to retire, moving only at night because of overwhelming German air superiority. The Germans also used their artillery to good advantage and the few tanks supporting their infantry attacks were able to tip the scale on several occasions since the British were without adequate anti-tank weapons. The author considers that the Germans did not make the best use of their resources and were overly cautious. They were bound to win in the long run, however, for the fate of the campaign was settled when the British had to withdraw from distant Dunkirk and frantically erect defences at home.

Admiral of the Fleet the Earl of Cork and Orrery and Maj.-Gen. Mackesy had been provided with somewhat conflicting instructions by the Admiralty and War Office, respectively, and this was responsible, in part at least, for the fact that Narvik was not actually captured until a decision had been taken to evacuate Norway altogether. Whereas the Admiral wished to land the troops under the protection of his fleet, after the German flotilla had been destroyed, the General was dubious and insisted upon a very indirect approach. Mr. Churchill has written that General Mackesy "was resolved to wait until the snow had melted."

As Mr. Buckley visualized it, and in order to string separate episodes into one story, the only hopeful sign had been the formation of Independent Companies to carry on guerrilla warfare. Due to the general debacle it had not been possible to employ these volunteers as planned but they were the forerunners of the Commandos. Otherwise the latter were the brain child of Lt.-Col. Dudley Clarke at the War Office and a summary of their development as described in the last of his *Seven Assignments* (London, 1948) is given by Mr. Buckley. Taken up enthusiastically by Prime Minister Churchill the first raid was launched within three weeks.

Before discussing Commando exploits, Mr. Buckley has some interesting, though not original, criticisms to make of the idea:

> . . . The historian examining the records of Commando operations is repeatedly struck by the extreme and remarkable contrast between the intensity of the training and preparation and the comparative insignificance of the objective.

This did not apply to the larger operations, such as the St. Nazaire expedition, but to the "numerous undertakings, many of them unreported in the press, in which a landing was made by a dozen men, a sentry or two killed, a prisoner or two brought back. On these occasions the damage done and the loss of life inflicted were as negligible as the information obtained." Pinpricks were the only answer possible in

1940 but eventually a continuation of such raids merely resulted in beach defences being increased and the coastal garrisons being kept on the alert. Moreover, in view of the danger that reprisals might be taken against the local inhabitants, these sometimes returned a cold welcome to visiting Commandos.

The author thought more highly of the raids whose objectives were primarily economic and where, as far as possible, contact with the enemy was avoided. Such was the first important overseas raid during March 1941, directed against the Lofoten Islands where 50 per cent of Norway's fish oil was produced: the glycerine thus produced was being used for the production of munitions and vitamin A and B capsules for German troops. The factories were destroyed without a single casualty.

The expedition to Spitsbergen in the ensuing summer falls into the same category. No Germans were present to oppose the landing and the Canadians were able to destroy the piles of coal and render the mines unusable, later transporting the Russian settlers to Archangel and the Norwegians to the United Kingdom. Actually coal had been going to the inhabitants of Northern Norway, with the consent of the Germans, and three Norwegian colliers were seized and sailed back to the United Kingdom. At the time the German High Command probably had more important things on its mind, as Mr. Buckley suggests, but this was not always to be.

Although short, the accounts of the raids to obtain specimens of German radar equipment at Bruneval and to block the entrance to the large drydock at St. Nazaire are good descriptive pieces. The sketch maps provided for this and the other episodes are adequate for the general reader. The photographs are excellent.

Wire Cutters Caught

A wire "trouble" team usually fixes bad telephone lines. This crew fixed some Communists.

When a recent trouble call was answered, wiremen from the [U.S.] Infantry Division in Korea found a break in the line and repaired it. Calling back to the switchboard was fine, but a call forward indicated another broken line.

As the men moved up the line and were about to advance over a ridge, they discovered the cause of their broken lines—18 Communists busily cutting the wire.

A quick call to the rear for reinforcements resulted in the capture of the wire spoilers and trouble-free circuits.—*U.S. Army Combat Forces Journal.*

THE CHARACTER OF KITCHENER

Capt. W. P. Ahern in The Irish Defence Journal

There are four good reasons at least for a study of the character of Kitchener.

(1) He was, by accident of birth, an Irishman, inheriting, perhaps, much of his inexorable dourness from the Kerry mountains.

(2) Of that great galaxy of generals who attended at the peak of British Imperial Power he was, possibly, the only one, with the exception of Wolseley, who had in him the potential to straddle, with even modest hope of success, the transition from the Gentlemen's Wars to those of Attrition. (In this connection it is almost incredible to recall that within the memory of the life-span—not even Biblical—of one man, major engagements were often decided, and could be decided, by single combat between the principals.)

(3) His chief attributes—those of thoroughness and vision, with due belief in his own destiny—are not only those of the successful business factor in any age, but are pre-eminently those of great leaders of the past, and especially, of those in our time, who are set to command forces so vast that personal contact and the power of personality are almost a lost art—at least, a profitless and wasted art!

(4) The farther he recedes into History the greater is the profile of the man.

In 1849 Ireland was in the throes of the greatest cataclysm in her history. Encumbered estates everywhere, under the Act of the same name, were coming on the market to be bought and sold by speculators and adventurers, with that unseemly activity that is the hallmark of their kind. One of these, a Lt.-Col. Kitchener, retired, used his gratuities to purchase Gunsboro House, Listowel, where he settled down. In 1850 his son, Henry Horatio, was born there. He was one of four sons and a daughter and there was nothing to indicate that a new star was in the ascendant. On the contrary, the young boy had behind him generations of Kitcheners who had lived respectably but without distinction in Hampshire and East Anglia. Perhaps, then, it was from his mother—a Chevalier—that he inherited the strange individual talents that were soon to mark him aside from his

brothers. It is certain, however, that at the age of five he was beginning to display obstinacy and moral courage. It is related that one day while playing with a niece of Florence Nightingale, Kitchener stole jam tarts and other confectionery. When he had eaten well, he went in leading his "accomplice" by the hand to confess the deed. This was the embryonic attribute that would later oppose Sir Garnet Wolseley in Cyprus while the boy was still a Lieutenant, and eventually earn for him the description "He who must be obeyed." Whatever its merit or demerit, it is an original account of a trait unnoticed by the biographers, and a most unusual one in small boys!

He was not very old when he had his first taste of conflict. When his home was beset by a host of irate Irishmen wreaking vengence on the landlord for the sins of his class, Kitchener, in the absence of his father, commanded the defences. Leaving a light shining from one window, he fired fusillades from those he had darkened. The stratagem took the attackers by surprise and they soon withdrew. This was Kitchener's first military engagement.

We are told that when he was 13 his family moved to France for health reasons and the biographers are careful to point out physical frailty in the mother. But it is far more likely that Gunsboro House was becoming unhealthy for his father! Thereafter he lived at Villeneuve on the shores of Lake Geneva. In 1868 he passed into Woolwich without honours, 28th of 56 entrants. In 1870, while on leave in France, he witnessed Bismarck's attack on France and at once offered himself to the Fleur-de-Lys. His only contribution was to go ballooning with a French officer, on which expedition he caught pleurisy and was not in time to see the end of the war. For his pains he was taken to task by the Duke of Cambridge, who commanded the British Army for the Queen, but he was commissioned, nonetheless, by a C-in-C, who, whatever his faults, appreciated this demonstration of youthful adventuring.

From 1871–74 he led the prosaic life of a subaltern of Engineers at Chatham and Aldershot, and although there is no mention of it in any biography, he may even have served at the Curragh (which at that time ranked with Tidworth and Aldershot as a military centre). But that is extremely doubtful . . . Until 1925 the name Kitchener was affixed to the door in the Secretary's Lodge, where the Cadet School now does battle training. In spite of these indications —and there is a persistent rumour to support the former — it is the writer's belief that Kitchener never served there, though his Chief of Staff, Ian Hamilton, did.

In 1874 Kitchener was employed by the Palestine Exploration Fund, a scientific body examining the archæology, geology, topography, physical geography and resources of the Holy Land. This gave him his extraordinary knowledge of the East and built his reputation as a figure who could be trusted to carry through onerous tasks requiring courage and determination. He found time later to publish a book (price one guinea) of pictures of the Holy Land, which demonstrated his acumen and eye to business.

At the age of 27 he undertook a further survey, this time of Cyprus, and beat the Commissioner, Sir Garnet Wolseley, on a question of policy. This would later hinder his promotion, but it was characteristic of this genius for figures, this implacable performer of the prosaic, the ordinary or the extraordinary — it mattered not which.

By this time, it can be argued, the character of Kitchener was formed because it had shown all the evidence of forthrightness and ability that helps to pick it out in retrospect from the mass of contumely and insult with which his contemporaries have striven to demolish it for the reason that he had become a dangerously powerful figure, and a stern doer of his duty. (This too, was the fate of Caesar, Lincoln, and many others.)

The popular concept remaining in Ireland, where he is not beloved for general reasons, is of necessity second-hand. But it is of a man who was moody and silent; self-contained and strong of will; cautious and shrewd to a point bordering on the stubborn and obdurate; no lover of Ireland, or of women, and therefore without imagination, but an enemy to be treated with respect if he were in the field. To this aggregate it must be conceded that, though he derived his iron determination from the essence in his mother's blood and from the hard core of those Kerry hills, with their immense melancholia, it would be impossible to imagine him, even if one were an incorrigible optimist, holding a barricade on an Easter morning with other heroes that we have known! But he was a good servant to his employer, and under him military preparations were made that led to victory inevitably in every field in which they were undertaken. It is not required of him even now that he be well-disposed towards the Gael—who got on without him very well in any case—but a complete study of the man contributes something to military scholarship, nevertheless. The single-minded warrior, whose popularity with his enemies the Boers, whom he had defeated, is unique and without parallel, displays few qualities that mark him as kin to us. Such attributes of human frailty as he does possess

must be fastened on. Some of them do him little credit, but for the most part they are insignificant. For instance, his difference of opinion with Lord Curzon, who was Viceroy when he was C-in-C India, did Kitchener little service, but unquestionably they did Lord Curzon a good deal less. Whatever else is clear, it is patently obvious that there will always be dissension and comparison between people in high places, rendering the lot of the poor pawns they play with a good deal more difficult. It may never be possible or desirable to eliminate personality from the top floor with the same drill that these many-headed Hydras seek to divorce it from the basement! Yet for all that, the spectacle of the celibate C-in-C winning prizes for his orchids at Calcutta Flower Show is significant. His observations, and his policy with regard to Mess bills of junior officers on Inspection Day mark him out as one who had in him small qualities of consideration that serve more to illustrate the whole than copy-book expeditions into the realm of Mars!

His contribution to military history is doubtful, not because it is not a reality, but because it has been clouded over and distorted like a picture in a damp and mildewed frame. Those who were close to him and in a way famous like him, though not necessarily because of him, are oddly disloyal to the strange, almost disembodied figure that hovers over the changing military scene of 50 and more years ago. The reason is not far to seek. He was implacable; as unchanging as Time is a measure of Change; as constant as the stars in their allotted places; as inevitable as Death! He had the distasteful ability to estimate, contemplate and decide. He committed the "error" of thinking before he spoke; of assessing before he gave his opinion. Hence he was always right when matters arising from cause and effect, supply and demand of war were concerned. His "hazard" of three years and 70 divisions as a contribution to the war were unromantic, inconsistent with England's greatness, but they were based on logistics, not on fancy. Kitchener alone had bridged the tansition. His doctrine of Defence was unromantic too—catastrophic to morale. But it was right! For this and other sound judgements Kitchener probably died. His descendants, that posterity to which he did not contribute, think that he did, anyhow. They speak, not *sotto voce*, but with lines about their mouth, of a telegram with initial word-letters encoding S-H-E-T-L-A-N-D.

They speak of his premonitions, evidenced in many ways, of his impending death. The biographers have played up this prescience skilfully but not conclusively. They do

not say that Kitchener of Khartoum had measured his enemies, which, it is my belief, he did. Is it not incredible to find Ian Hamilton whilom Chief of Staff, who also commanded three armies round London with Kitchener as overlord, receiving news of his death with remarks that Kitchener always hated cold water. Ian Hamilton is an otherwise reputable general, caught napping by the onward rush of events and suffering a somewhat tarnished reputation because of that, but his attitude to the sensational news indicates to the observer that self-seeking well thrives in the atomic blast and is a factor in military operations in all ages. There is no national tragedy unless there is personal loss to principals. And it must always be of the material kind. Unromantic, but true!

To the consequences of his own demise and to the aggregate of his own achievement, Kitchener has left little that serves either to explain, or that may be explained away. It was typical of him that he wrote no memoirs, and if he had lived to be one hundred he would never have rectified this. It is my experience that this literary phenomenon has added little to the sum total of knowledge on military subjects. Memoirs, with one or two exceptions, are written by officers and are rarely the resort of the rank and file. They are at best half-baked, and are noteworthy only by analogy and for social history. Their smug complacency is their outstanding characteristic and their air of righteous omniscience a typical appurtenance. Kitchener had no need for this justification. "Most people are other people. Their thoughts are someone else's opinions, their lives a mimicry, their passions a quotation" (Oscar Wilde). Judged against the background of this criterion, Kitchener comes out in bold relief. He was the veritable Simon Pure!

Bibliography: "Life of Lord Kitchener," Arthur, "Lord Kitchener," Hodges; "Listening for the Drums," Hamilton.

More Helicopters Needed

The [U.S.] Air Force needs more liaison planes and helicopter aircraft for medical evacuation of casualties; also, existing aircraft must undergo continuous modification for aeromedical purposes, Secretary of the Air Force Thomas K. Finletter reported recently.

As part of its plan to improve air evacuation procedures, the Air Force is issuing multiple-litter ambulances to aerial ports and is developing a 36-bed air transportable dispensary.—*Army-Navy-Air Force Journal* (U.S.).

EDUCATION IN THE ARMY

By
DR. A. E. CHATWIN, SUPERINTENDENT OF INSTITUTIONAL TRAINING,
DEPARTMENT OF VETERANS AFFAIRS, OTTAWA

The Canadian Legion took justifiable pride in its educational courses provided for servicemen in the Second World War. It was a further satisfaction to Legionnaires to have the Department of Veterans Affairs continue these in operation in the interests of hospitalized veterans, members of the Armed Forces, RCMP, Civil Servants, Merchant Seamen, patients in TB sanitaria, and in penitentiaries. Today a Canada-wide correspondence school, with some 6,000 active students, stands as a tribute to Legion leadership, to the vision of a group of Canadian educationists and particularly to the wisdom of the various provincial Deputy Ministers of Education who recognized this effort as a contribution of unique value.

Circumstances again require Canadian youth to serve our country abroad. With the background of our own experience, we read with pleasure of some 700 servicemen in Korea and Japan registered for one or other of the many Legion courses provided to them now through Veterans Affairs—99 men of the famous 22nd Regiment taking Conversation Anglaise and as many in other regiments studying French—men studying agriculture, poultry raising, mathematics and history—a former Legion service is still carrying on.

The departure of the 27th Brigade for Germany brings further demands and we are, indeed, happy to know that these courses are to be available in Europe exactly as in the last war. A qualified Education Officer is going to Hanover—not just an officer but an individual carefully selected for his educational qualifications and his appreciation of the service which may be rendered. He will have all needed supplies. All ranks will be fully advised of what is available. Exercises and examinations will be corrected in Battersea Polytechnic, London, England, where teachers employed during the last war will again carry on. Certificates issued will again be recognized by the Provincial Departments of Education under arrangements between officials at National Defence and each of the Departments concerned.

From my experience in this work in the last war and knowledge of the

A Letter To The Editor

REGIMENTAL MARCHES

Editor,
Canadian Army Journal.

The interesting article on "Regimental Marches" by Major J. T. Edwards, reproduced in the September 1951 issue of the Canadian Army Journal, is not entirely accurate in its reference to the Engineers' march "Wings".

The article states "The British Grenadiers" was the official march of the RE until that eminent "Sapper", Field-Marshal Lord Kitchener, obtained permission in 1902 to have "Wings" instead.

In fact, the Royal Engineers Band Committee under the chairmanship of Lieutenant-General Sir T. Gallway (then Commandant of the SME at Chatham) adopted "Wings" as a distinctive march past for the Engineers in 1870. This was done because "The British Grenadiers" was already shared with The Grenadier Guards, The Royal Military College, and all Fusilier regiments, and the additional tune was needed as a quickstep.

Some years later, Field-Marshal HRH the Duke of Cambridge, who was Commander-in-Chief at that time, arbitrarily decided that the Sappers were only entitled to one march past, and that one was "The British Grenadiers". The Corps continued with only the one march past until after the death of the Duke of Cambridge when, as Major Edwards says, at the behest of Lord Kitchener, "Wings" was restored.

EDUCATION IN THE ARMY

(Continued from preceding page)

well prepared plans and interest of officials at National Defence Headquarters, I am quite confident that up to 1,000 young Canadians will take advantage in Europe of Legion correspondence courses within a year.

As the Commander of the Brigade sees education taking its place as a factor in morale, he will undoubtedly explore those other cultural fields available to a group situated in the centre of a continent, to the history of which we owe so much. Knowing him, our membership in the Canadian Legion may be completely confident that no opportunity will be missed which offers our young men facilities normally available to them at home. Service abroad may actually bring many men back with enriched experiences and broader knowledge of our friends abroad.

"Wings" was composed by Mrs. C. C. Barnard, a popular songwriter of the mid-nineteenth century, to a tune composed by another woman who wrote under the pen name of "Claribel". Combined with the air of a traditional tune called "The Path Across the Hills", and with its English lyric (which no sapper can ever remember) derived from the German "Liebesfruhling" (Dawn of Love) by Friedrich Ruckert, the march was adapted by William Newstead, Bandmaster of the Royal Engineers Band, and it is considered to be one of the most beautiful as well as one of the most popular of all our marches. The RAF have tried for several years to adopt it, not unreasonably, seeing that the Junior Service was derived from the Royal Engineers and might well consider that it was entitled to a share of its parent corps' usages, but so far as I can learn the sappers have successfully resisted the RAF application until now.

One additional point about Major Edwards' article: all members of the Corps of Royal Engineers and Royal Canadian Engineers rejoice in the title of Sapper, without regard to rank or appointment; it was not necessary, therefore, for Major Edwards to put quotation marks around the word when referring to Kitchener who in his own opinion and in those of the Corps which he had adorned, was a sapper until his untimely death.—*Major N. Sadlier-Brown, RCE, Directorate of Engineering Development, Army Headquarters, Ottawa.*

RUBBER FLIGHT DECK

Reprinted from the Army-Navy-Air Force Journal (U.S.)

Use of a new, flexible rubber flight deck for aircraft carriers is now under study by the [U.S.] Navy. Although details are secret, it is known that the main object of the research is to provide a landing base on carriers which would permit aircraft to be stripped of much of their weight by removal of the undercarriage. Planes would be catapulted from the deck, and landed back aboard the carrier by some undisclosed method.

In reply to a query, the Navy said only, "As concerns the Navy's interest in a flexible rubber flight deck, the subject is classified."

A British Naval officer, Rear Adm. G. P. Thomson, C.B., C.B.E., states that the flexible rubber flight deck, if it proves successful, "will very greatly increase the effectiveness of the naval air arm", and that it will reduce "the performance requirements of escort carriers."

Need for a flight deck of this type—especially on the smaller carriers—resulted from the increased weight of anti-submarine devices. Large numbers of escort type carriers were used successfully by the Navy during World War II, but their usefulness has been rapidly diminished since the War's end because of the increase in weight of aircraft.

Heavy Equipment

Heavier and larger detecting devices and anti-submarine weapons which are now being installed in Navy planes have increased their weight well beyond that of the World War II planes which were flown from escort carriers. Observers point out that if these ships are to be used effectively in any future war, they must be converted to handle the heavier planes.

Admiral Thomson also discusses carrier development in the December 1951 issue of the Navy, official publication of Great Britain's Navy League.

Of the rubber flight deck, he says, "Fortunately the prospect of being able to fit carriers with a flexible rubber flight deck should improve matters considerably, since landing on a rubber deck dispenses with the need for the undercarriage." He points out that the percentage of the total weight of a plane which is taken up by the undercarriage is "out of all proportion to its value."

Planes operating without undercarriages "will, of course, have to be catapulted to become airborne," he states "but this has little disadvantage since catapulting is now becoming the standard method of launching all our latest aircraft." He adds that even though catapulting increases the launching interval to some extent, it "gives a carrier the immense asset of greater tactical freedom, because she no longer has to alter course into the wind prior to flying off."

At present, all U.S. Navy carriers are constructed with either wooden or steel decks.

New Flexible Plastic

Battle suits now being made for the [U.S.] Navy contain a vest and watertight face seal constructed of a new flexible plastic.

This material, honeycombed with air cells to give it buoyancy, has excellent shock-absorbing qualities. For that reason, it also may be utilized as a protective wrapping for air-dropped instruments, as eyepiece padding for gunners, and headrests for aerial photographers.

It is available in densities ranging from 4 to 15 pounds a cubic foot, and is made in flat sheets or molded into contoured shapes. — *Armed Forces (U.S.).*

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