

the TANK

CANADA

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Leader of The Dieppe Raid

A courageous and resourceful officer who is a veteran of the last war and also took part in the Battle of France in June 1940, is Major-General John Hamilton Roberts, M.C., the 51-year-old Canadian officer from Kingston, Ontario, who commanded the Canadian troops in the raid on Dieppe on August 19.

A fighting man himself, he is also the father of three fighting sons. His 23-year-old twin sons are both overseas—Lieut. Richard Roberts, Royal Canadian Horse Artillery, and Capt. William Hamilton Roberts, Royal Canadian Artillery. His 19-year-old son, Sergt. John G. R. Roberts, is also with the Armed Forces.

Major-General Roberts was born at Pipestone, Man., and since his early youth has trained to become a soldier. He entered Royal Military College, Kingston, in 1913, and served meritoriously in the last war. He was awarded the Military Cross for bravery in action and was gazetted in January 1917. He was wounded in March 1918.

A specialist in the artillery branch of the service, Major-General Roberts has specialized in that during his entire army career. It has always been his conviction that if at all possible, not one bit of fighting equipment should be sacrificed. This principle possessed by him was well illustrated in June 1940, when as a Lieutenant-Colonel, he returned from France through Brest with the 1st Field Regiment, Royal Canadian Artillery. His was the only artillery group in the British Army to save all its guns.

Promoted to a Captain in the field during the last war, Major-General Roberts remained with the permanent force after the war. In 1920, he was a gunnery instructor, and in 1921 was a member of the annual training camp administration staff at Petawawa. Later in the same year, he took a gunnery staff course in England, and travelled extensively in France, Great Britain, and the United States.

In July 1941, he was promoted to the rank of Brigadier, and in April 1942, after assuming command of a Canadian division, was raised to his present rank of Major-General.

Major-General Roberts is a keen sportsman, his favourite games being polo, rugby, tennis, cricket and badminton, with hunting and fishing listed among other sports which he enjoys.

EDITORIAL

Owing to the exigencies of war, the editorship and management of "The Tank" has fallen on other shoulders.

Lieut. F. Helson, who acted as editor for so long has now gone to Ottawa. The thanks of us all are due to him for the able way in which he carried out his work and for the immense amount of trouble and time he spent in making the Corps Magazine such a success.

The new management hope that readers will continue to support it in the same way as hitherto.

We are fortunate, through the kind offices of the Infantry Journal of the United States Army to be able to reproduce an abridged edition of Major-General Fuller's new book "Machine Warfare," which has recently been published. This work is deserving of close reading. Major-General Fuller's books on the tank and armoured warfare in general, have a world-wide reputation. No military author since the last war foresaw so clearly "the shape of things to come," and it is remarkable to note how so many of his prophesies, alas for the United Nations, have come true. The abridged form of the book will be published in three parts.

Since our last number appeared the Raid on Dieppe has taken place and with it the first action fought by a Canadian Armoured Corps unit. We are proud of the magnificent spirit and determination displayed by all ranks of the Calgary Regiment. To the relatives of the gallant men who did not return we extend our sympathy in their great loss. So far a detailed story is not available but we have

published in this issue such accounts of the action as have come to our notice.

In this issue we welcome, for the first time, A28 C.A.C.(A)T.C. who announce themselves in detail.

If the humour department has been reduced it is chiefly because there was a great deal of good material that we wanted to use and space was limited. A few scatterings of "Stardust" will be found nestling in among the more serious articles.

Already there are several good articles in prospect for the next issue so we hope to keep the magazine coming out, as it always has, with something interesting for everybody. Unfortunately our English news has not arrived in time for this issue but will be included in the next edition.

Finally, may we ask our readers to send us any material of interest for publication.

* * * *

In large organizations there must be confidence of each part in others. The infantry and artillery, for instance. Green infantry used to protest when they got a shot or two from their own artillery, but sometimes as a result, the artillery, in order not to be blamed by the infantry, instead of putting the artillery barrage perhaps 175 or 200 yards in front of the infantry, would raise a couple of hundred more yards. They didn't shoot their own infantry, but they didn't shoot anybody else either and their own infantry lost by the fact that the artillery, for fear of infantry complaint, protected themselves by giving an increased elevation. In the best organizations there must be a feeling of confidence between the artillery, the infantry, and the air service, and the other components.—From Moulding Men for Battle, by MAJOR-GENERAL HANSON E. ELY.

SOME "MULTIPLES" OF VICTORY By Major-Gen. J. F. C. Fuller, D.S.O.

1. The war strength of a nation is not to be measured in miles or heads, but in terms of courage, resources and industry. Though it is not possible to beach a navy by bailing out the ocean, it is possible to beach a navy by depriving it of its oil.
2. In total war, a nation can only be fully organized when all freedom is exorcised. Its blue print is that of a factory under martial law. Logically it follows that all who are incapable of fighting or working should be liquidated.
3. The aim of total war is to transform man into a total beast. This is effected through revolution—the toxin of defeat—which so poisons an enemy nation that it sickens into an anarchic delirium, in which it tears itself to pieces.
4. Armies are rendered short-sighted by victory and long-sighted by defeat. He who wins the last war, as often as not loses the next, because success is like a school diploma and failure like a birch rod. Disaster is the most persuasive of all masters.
5. Between 1919 and 1939, the victorious English spent millions on experimental work in order to delay going into production, whereas the victorious French sought in "La Grand Muraille de la Chine," the contraceptive of defeat. Both had been emasculated by victory.

THE "Q's" INDENT

The other day we asked the Quartermaster why he used such long and archaic words like nomenclature, vocabulary and indent. "That's where you're not always right!" he answered. "Now take 'Indent' for instance," he came back. "Right, take 'Indent,' why what has that got to do with an order for Stores?" "Plenty —," and so here is his story.

The Army uses discipline and an orderly way of doing things in order to avoid making mistakes and to make the job easier for everyone. Now the first thing in describing an item in the stores is NOT to say, "Gimme a nice bright shiny dooda." First of all WRITE it down on paper so that your demand may serve as a record of accounting for the Stores. Next, use the proper name for the goods you need. Thus, if you want a tin wash basin, you should not describe it as a "tin wash basin." A busy clerk in the Stores may catch at the word "tin" and give you a block of tin—which is not what you want.

What you need is a basin, so you start with "basin." Now, since basins are made of many materials, for example—steel, wood, glass, enamel, canvas, tin, etc., you qualify the word "basin" with the word "tin." Now, the demand becomes "basin, tin." But such articles are made in many sizes and shapes for various purposes, cooking, mixing and washing, etc. So, now you describe your request as "Basin, tin, washing."

"Yes, that's sensible enough. But why call the order an Indent?" we hammered on. "Well, I'll tell you. Long ago, when Quartermasters were important fellows, they laid down a perfect system of making out an order—"

The order form was ruled horizontally and vertically into rectangles and on the first line of the left hand column was written the first word in the description of the Stores. In the next column and on the next lower line, came the second word of description. Then in the third column and on the third line down came the last word of description. Thus:—

BASIN		
	TIN	
		WASHING

In this way even busy Ordnance Clerks could not make errors.

This stepped system of writing an order for Stores became known as "Indentation" or the system of writing orders in steps or indents. Hence the word "Indent," which used to describe the system of making out an order for Stores, came to be used for the order itself.

Now, demands or orders for Stores are called "Indents," even though the system of indentation has passed away.

* * * *

EXTRACTS FROM LETTERS RECEIVED AT THE SEPARATION ALLOWANCE DEPARTMENT DURING 1914-1918

"I have not received no pay since my husband has gone nowhere."

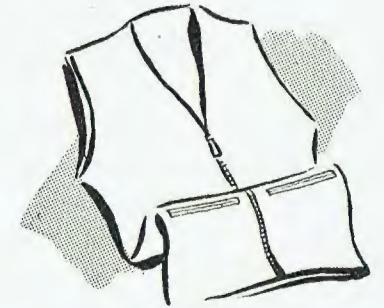
"We have received yours truly. I am his grandfather and grandmother. He was born and brought up in this house in answer to your truly."

"My Bill has been put in charge of a spittoon. Will I get more pay?"

"I have not received no pay since my husband was confined to a constipation camp in Germany."

"I am paying attention to a nice young man. How do I go on about money?"

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The Fifth Column - - - Hitler's Secret Weapon

From Notes and Information Compiled
by CAPT. SCOTT LINDBERG

All wars are won or lost by the morale of the people who wage them. The German Army was not completely beaten in the last war. It failed because the ultimate victory or people of Germany had ceased to believe in themselves. Their soldiers, infected by this disbelief, lost confidence in themselves and their leaders.

General Mihailovitch, holding staunchly to his Serbian hills, has plenty to discourage him. There is the bitter threat to his own family and the families of his followers. There is the knowledge that they are outnumbered and outgunned. But behind them is a people who have no will to surrender. That is morale.

We in Canada have faced very little. The military problems that have faced other parts of our Empire have been distant from us and we have watched them with critical eyes. In the light talk that we often hear about us there is not only criticism, there is more than a little defeatist thinking. It is careless thinking, but none the less destructive. We have spoken of necessary retirements as if some one had run away. We have considered the desperate mischances that have befallen us as though they reflected on the quality of the manhood of our race. We have heard it said that the old British Empire has had its day because defeat has overtaken us on some of our world-wide battle fields.

No one would want to curtail the priceless heritage of our freedom of speech. But such freedom is only of value when we set a value on our words. The right to speak their minds has kept men and nations free. The right of quisling speech has often, in these days, robbed men and nations of their freedom.

Commissioner S. T. Wood of the Royal Canadian Mounted Police has found it necessary to recently warn the public formally against heeding vicious rumours designed to injure Canada's War Effort. A whispering campaign, evidently of enemy origin, is on the increase, he states. In some instances identical stories are told in Canada and the United States similar to those which have been heard in Europe as part of Hitler's "Softening-up" process, to create distrust and dissatisfaction and weaken resistance.

The whispering business has become a science, and an easy one at that, for people will talk, and a whisper, once started, travels under its own momentum. It can be set afloat in a hundred ways at a hundred different places at once, and no one can pin it down.

Unless you are careful, you yourself may become the instrument of Fifth Column tactics. It should be realized by everybody that the repetition of any rumour coming from a third party may well be a serious offence.

The technique of the use of rumour in Fifth Column tactics offers a splendid example of Nazi thoroughness. Lord Haw Haw would give the impression that he knew a great deal more than was healthy about local conditions somewhere. The object is clear. It is to make us feel that it is useless to offer opposition to Hitler, because with diabolical cleverness the Nazis have prepared down to the last detail, and cannot be prevented from destroying us.

The Jitterbug argues thus: "Good gracious! If they really know that one clock is two minutes slow, they certainly know more important things, such as that there is an oil dump over there, and a power station just beyond, and 10,000 troops in the barracks over the hill. I must get my children away. I must warn Mrs. Brown up the road. How terrible this all is! Anything would be better than going on. Surely we can make peace somehow."

The Jitterbug becomes a Chatterbug by repeating the whole thing to Mrs. Jones, and all the other neighbours, and the demoralizing effect of Lord Haw Haw saying that the clock was two minutes slow spreads in all directions.

The way to treat this Fifth Column manoeuvre, these misguided sympathizers with Nazism, of whom we certainly have a number in this country, is to find out from the speaker the source of his information, and convince the speaker that it is his duty to trace the rumour back to its original source, and if you constantly find that their source is the same individual, it is your duty, without telling your neighbours of your suspicions, to report the matter to your unit Security Officer or the police. They may know something more about this individual already, or they may be able by their knowledge, to clear him of any suspicion.

By studying how men think and feel the Nazi science of destruction is seeking to root out free thinking and humane feeling from the race of man. This most scientific, this most ruthless of all wars is being waged. Many think of it in the terms of machines. Above our heads fly mechanical birds of prey. Along our roads thunder the steel pachyderms let loose from the Zoo of Hell. Clothed in armour, a mere five-foot-ten of human flesh and blood magnifies its destructive will by means of the internal combustion engine, and a welter of automatic gadgets.

It was General Mola, in the service of General Franco and his totalitarian foreign allies, who invented the phrase "Fifth Column." Four columns, he said, were advancing to the capture of Madrid, but there was a Fifth Column hidden within the city itself, which would achieve more than any of these, a Fifth Column consisting of the rebellious General's own supporters.

General Mola's Fifth Column was carefully organized under the tuition of Nazi psychologists. Long before General Franco took up the orthodox weapons of war, there was a deliberate and detailed cam-

paign to create chaos, a chaos which would submerge the weak Republican Government and make it easy for its opponents to overthrow it, with the full sympathy of well-meaning but misguided people elsewhere in the world. Hitler watched the whole thing from Berchtesgaden. "Our Strategy" he had said, "is to destroy the enemy from within, to conquer him through himself."

The Italo-German army manoeuvres, usually called the Spanish Civil War, must have confirmed Hitler's belief in the efficiency of his favourite weapon, the psychological destruction of the enemy through an organized attack on his mind.

Of course, Fifth Column tactics did not begin in Spain. All recorded wars give us examples of invaders who have taken care to sound out the possibilities of getting help from the enemy within the gate. There was Joshua, who sent Agents in advance to Jericho to the house of Rahab, the harlot.

Rahab was in a good position to know what was going on in the men's minds in Jericho. It is not altogether surprising that the wall fell down—the mines did not explode in Oslo Sound.

The Fifth Column was active all through Greek history. In every one of the Greek City States there were two parties, the oligarchical and the democratic. It was the usual policy of Athens to undermine resistance by inciting a popular rising of the democratic party in any state with which she was at war.

Genghis Khan, "Conqueror of the World," who conceived and perpetrated "total war" 700 years ago, won half his wars by propaganda before he put an army in the field. In the use of words as weapons no commander has surpassed this barbarian who couldn't read or write. His Fifth Column was the caravan merchants. Through them he hired agents in each country that he planned to attack. He studied the foe's geography, people; politics; he sought out disaffected elements and set one against another.

The Khan had his Quislings in many lands. He bribed dishonest politicians. His agents discovered that the Chinese War Minister had been embezzling funds. When the news was spread it caused a disruptive political crisis in China just as the Mongols were marching to the attack.

He also used propaganda as a weapon of terror. It was his regular practice to remind the country he planned to invade of the dreadful things that had happened to others who had resisted the Great Khan. Submit or be annihilated, he warned. If his foes submitted he marched in and annihilated them anyway.

We saw Fifth Column methods pursued to perfection in order to destroy Czecho-Slovakia. Fifth Column tactics played up an imaginary grievance—for, until Hitler, the Sudeten Germans were perfectly content—won over the minority of a minority, and quite soon the majority was left despoiled of every human right.

Whether or not the I.R.A. disturbances are spontaneous or encouraged by German propaganda it is obvious that they are highly valuable to the Nazi cause, for the probability that the spirit behind the I.R.A. has been used to prepare the same kind of Fifth Column tactics for use in an invasion of Ireland as were used in Norway. The subtlety of this psychological weapon is once more apparent.

In conclusion what are the main lessons for us

to learn about the "Fifth Column"? They are these: Fifth Column activities to be effective require careful planning and organization. They can only be started in peace time.

The greatest exponents of "Fifth Column" activities are undoubtedly the German and the Jap. They have one trait at least in common. Both make a practice in peace time of going to other countries for the ostensible purpose of earning a living. They enjoy the hospitality and standard of living of the peoples in whose countries they live, and yet all the time, like the vermin they are, there they organize and scheme for sabotage and other nefarious acts against the day of a future war. The German if questioned about such activities nearly always produces as an excuse the slogan "It is in the interest of Germany."

The failure to realize that such mentalities exist has been one of the biggest failures of so called democratic government. It is hardly necessary to look at some of the countries of Europe to realize the truth of this, but unfortunately for those peoples this mistaken attitude of toleration towards this type of conduct passed for true democratic ideas as regards freedom of speech and other equally fatuous ideals.

Every citizen has the right to expect a high degree of security from the Government of his country, both from within and without. Let us therefore make sure that in future we do not let the Fifth Columnist establish himself in our midst when peace comes again, but in the meantime let us deal with him ruthlessly.



"Cheer up, pal . . . things could be worse. You ain't been torpedoed yet."

CANADIANS LAND IN FRANCE

Nothing could stop the Canadian force as they headed for the French coast and Dieppe to land by assault methods (top photo.) Months and months of steady training had prepared them for any reception. The enemy attempted to stop them by coast gun barrages and dive bombing, but they went on and achieved their objective.

Assault landing craft (in centre photo) loaded with Canadian troops speed for the shores of France for an assault landing, and for a difficult task. The landing was completed and the Canadians destroyed artillery posts and radiolocation centres near Dieppe.

In bottom photo are the men! Tough, well-trained, hard-hitting and dogged fighters all. Strolling on the beach beside their invasion craft, as they go through the final exercise prior to the assault landing at DIEPPE. Canadians played the major part in this, the largest of all Commando Raids on occupied soil.



THEY NEVER FLINCHED A MINUTE AT DIEPPE

—Tribute to Calgary Regiment (Tank)

The 14th Army Tank Battalion (Calgary Regiment) played a prominent part in the raid on Dieppe on August 19. Herewith, W. Ross Munro, war correspondent of the Canadian Press, who was the first man to return to Canada from Dieppe, paid a high tribute to the Calgary Tank Regiment in a broadcast address delivered at Calgary, Alta., on September 8. THE TANK—CANADA is indebted to The Calgary Herald for a report of Mr. Munro's address.

Tall, slim Ross Munro, clad in the uniform of a war correspondent, told of the gallant fight of the Canadians and most particularly of the tanks; of how the men from Alberta fought their way ashore, surged through the seaport to the country beyond to a maximum distance of two miles, and continued fighting until their ammunition was gone.

"They never flinched a minute," Mr. Munro said. "I don't know how many came back. The boys of the Essex Scottish, the Royal Regiment, the Royal Hamilton Light Infantry, and the French-Canadians, paid high tribute to the men of the tanks."

The Germans, youths of 16 to 20, fought well behind concrete fortifications, he said.

"The tanks had to rout them out," he continued. "When they got out from behind two feet of concrete, they had to be chased a mile before the Canadians could catch them with bayonets."

"I will talk to you about the Calgary Tank Regiment," Mr. Munro declared. "First of all, the boys of the tank battalion want you to know they have crossed from Canada to England and on to France and fought the enemy. While there are some things we cannot talk about, there are a number of things that can be discussed.

"The Calgary Tank Regiment is probably the first sea-going tank unit in the British Isles, and Lieut.-Col. J. G. Andrews accomplished a great deal which will be carried forward to the second front.

"I was with them during special training. I met the officers and the men, and I rode with them in their tanks.

The tank carriers are long vessels something like lake freighters, with a ramp on which the tanks travel aboard and ashore. During their training, the men of the Calgary Tank Regiment became very expert in going up the ramp, and Lieut.-Col. Andrews once said to me, 'you'd think they were threading needles'.

"The story of the operation itself I would like to tell from the start," Mr. Munro said.

"The Canadians were loaded on the invasion craft. They did not expect a very pleasant trip, as the barges toss around violently in choppy seas.

"The sea was calm. The sky was much like tonight with a few stars showing. There was a slight haze over the Channel which hid the craft from 'E' boats, but we were attacked on two occasions."

The Royal Navy officers and ratings have received special training for the type of work in which they were engaged, Mr. Munro said, and this special training was of great importance.

He told of the flotilla putting to sea early in the evening. He was on one of the "mother" ships where,

he related, a "bang-up" dinner was served. For the men on the tank lighters, it was the "same old stuff"—bully beef.

"The Calgary Tanks were assigned to attack the main beach, the Royal Hamilton Light Infantry, the Essex Scottish, and Les Fusiliers Mont-Royal going in first, followed a minute or two later by the Tanks.

"The Royal Regiment of Canada was on the left flank, while on the right flank were the South Saskatchewan Regiment and the Cameron Highlanders."

Mr. Munro said that after the South Saskatchewan succeeded in a surprise attack, the Camerons landed amidst heavy machine gun and mortar fire.

"The Colonel was struck as he stepped ashore," he stated.

British Commandos were on the far flanks of the attacking force, their job being to take out heavy coastal guns.

Prior to the main assault, Mr. Munro related, squadrons of the R.A.F. and R.C.A.F. plastered Dieppe.

"It was like the fireworks display at the Canadian National Exhibition, but the CNE would look puny in comparison," he commented, in describing the heavy blanket of fire over the battle area.

"As the tanks and infantry moved in through the slight haze, the Navy moved into two hundred yards and the destroyers opened up with every gun in their turrets," he continued. "They also fired at the headlands with the naval bombardment shutting off when the Canadians landed."

Where the tanks went into action, the beach is a mile long and of gravel and shale, Mr. Munro stated. A seawall, seventy-five yards from the beach, is from two to ten feet high, on the other side is a promenade one hundred yards wide in front of the buildings of Dieppe.

The Essex Scottish were the first to land in this area from small assault craft, and were soon at work cutting through the barbed wire. The Tanks came right up to the beach in their landing craft, which are shallow craft and are quickly unloaded.

"It is truly miraculous how they got in," he said.

"It sounds as if the initial landing was very easy; it wasn't. The firing was terrific. The Germans had the beach fairly well covered and were using a number of French '75's' which obviously they had captured. A considerable number of tank landing craft beached and tanks started to pour out.

"They never flinched a minute," Mr. Munro declared in speaking of the Calgary Regiment. "Some of the boys told me they were firing their guns as they were going down the ramps."

As the tanks landed, they crowded along the

seawall where the Engineers went to work making an opening at the west end of the wall where it was but several feet high. At this time, the treads were shot from several tanks, which remained stationary on the beach and kept firing, knocking out several pill-boxes.

"At about 9 a.m.," he related, "we could see big, powerful tanks rolling up and down the promenade and blasting everything they could get their sights on."

Mr. Munro said that following the raid, a wing commander related that at eleven o'clock in the morning, while leading a number of Spitfires south of Dieppe, he swooped down to 25 to 30 feet to attack tanks, only to find that they were Canadians, three or four miles from the main part of the port.

"The Calgary Tank Regiment fought all morning right up to re-embarkation," Mr. Munro related. "They stayed and fired their guns until all their ammunition was gone.

"I don't know how many came back," he said. "The boys of the Essex Scottish, the Royal Regiment, the Royal Hamilton Light Infantry, and the French-Canadians, paid high tribute to the men of the Tanks."

"When we think of Dieppe, we think of the Canadians who fought ashore," Mr. Munro said, "but the greatest spectacle was provided by the RAF and RCAF, and there were plenty of Canadians in the bombers, fighters and reconnaissance planes.

"The air fighting over Dieppe was said to have been the greatest air operation since the Battle of Britain. I think it could be said to have been the greatest in history—certainly it was greater than any operation we ever saw in the Battle of Britain.

"We saw so many squadrons in the air over Dieppe it looked as if Beaverbrook was back on production," the speaker said with a laugh.

"They came in low and came in high. They came in from every direction. From dawn until noon the air and ground battle raged. On shore the Cameron Highlanders (of Winnipeg) got three miles inland, while the Calgary Tanks got a couple of miles in from shore.

"The town of Dieppe was burning in many places. It looked like a tremendous smokescreen—like something H. G. Wells might have written about.

"I went in with the Royal Regiment. I was behind the fellows who were doing the fighting, and I could see brave men from Alberta—from all over the Dominion—in action."

Mr. Munro said few of the German planes which attacked the fleet "ever got out."

Mr. Munro had warm praise for the work accomplished by the medical services at Dieppe in the heat of action.

"Captain L. G. Alexander, medical officer of the Calgary Tanks, had a tough time looking after the wounded and he had a good crew with him," the speaker said. There was a field ambulance unit from Guelph, Ontario, which did good work, and the stretcher-bearers worked right on the beaches and inside the town of Dieppe.

"I think that if I had any right to go to a hospital I would want to go to a Canadian base hospital for they are the finest in the world, and the men receive the best of care," said Mr. Munro.

"We all know the cost at Dieppe was heavy and

wherever I go people all ask one question: 'what did we gain?' Well an officer highly placed who should know, has sized up the raid as being well worth while. I believe it is the general opinion in military circles that it was, first, a great air battle, and second, a great Canadian thrust on the ground.

"The German air force was driven from the air by the RAF and the RCAF, and the generals in Berlin must have been frantic that morning. They even brought out their new big heavy night bombers which had probably never been used before in daylight. They were painted black with a big white swastika on them and looked strange in the bright sunlight.

"At the end of the attack at least one-third of the entire German air force in western Europe was destroyed or badly damaged and estimates of the damage are now climbing higher than the one-third.

"Stuka dive bombers were used in an attempt to bomb the fleet off-shore, and also the Dornier bombers. Then the RAF and the RCAF came down out of the sun and picked them off one after another. There must have been fifty or sixty German planes in that low-flying blitz and they lost plenty for only a few got out again. One Dornier attempted to attack a destroyer close by the ship on which I stood. It was too close, for there's a saying that right at the target you are safe but are in greatest danger about 150 yards away.

"As the Dornier came down close we saw them open the trap door in the bottom of the plane from which the bombs are dropped. I saw a ship's officer on the destroyer, who must have been an experienced shot, pick up a Lewis gun and let go with it. He hit the bombs before they were released. One second there was a German bomber overhead, the next second there was a terrific explosion—and nothing.

"The RAF and the RCAF gave the Germans a bad licking that day. And there was another great achievement I should like to mention, one by the Flying Fortresses from the United States which are now showing their mettle. At Abbeville on the Somme there were several planes concentrated prepared to take off for a further attack on the fleet. Then the Flying Fortresses got over the target from 20,000 to 25,000 feet. They knocked Abbeville airdrome galley west at a very crucial moment.

"The whole operation was one never attempted in the war before. It was a difficult operation and one which the Germans and Japs had not even attempted."

Mr. Munro paid a tribute to the brave spirit of the widow of Lieut.-Col. J. G. Andrews, Barrie, commanding the Calgary Tank Regiment, who was reported missing at Dieppe.

"I spoke to Mrs. 'Johnnie' Andrews over the telephone before leaving Toronto," Mr. Munro said.

"As I was about to say good-bye, she asked me if I would take a message to the boys of the 2nd Battalion of the Calgary Tanks," Mr. Munro related. She said she was intensely proud of the men of the Calgary Tank Regiment who fought at Dieppe. She wanted them to know how proud she was of the men who fought with such bravery on the French coast.

"I'm afraid the story of the Tanks is inadequate but it is as much as anybody knows," Mr. Munro said, speaking on the part played by the Calgary Regiment as seen by war correspondents.

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**CALGARYS' C. O. MISSING AT DIEPPE
AN "ORIGINAL" OF THE ARMOURD CORPS**

Lieut.-Col. John Gilby Andrews, 33-year-old Of-
ficer Commanding the 14th Army Tank Battalion
(Calgary Regiment), who is officially reported miss-
ing, played his part nobly as he led the Tanks into
action in the assault on Dieppe on August 19.

Despite fierce opposition from the Germans,
which one veteran of Gallipoli said was worse than
anything encountered there, Lieut.-Col. Andrews
tried to move battalion headquarters ashore, and he
himself still kept going forward even after a direct
hit on his tank, Major Begg, his second-in-command,
stated in an interview after returning to England.

The shell blew off his waterproofing material
and the tank sank in six feet of water. The heavy
vehicle could go no farther and Lieut.-Col. Andrews
radioed: "I'm getting out of my tank—toodle-oo,"
Major Begg said.

That was the last message received from him.

It was reported unofficially that the gallant
young Commanding Officer and his tank crew were
picked up by a motor launch which subsequently was
the victim of a direct hit.

Major Begg gave unstinted praise to Lieut.-Col.
Andrews, who deserved, he said, "the whole credit"
for preparing the regiment for the part it played so
well.

"He worked his men hard but he worked himself
harder," Major Begg said. "And then he went in
with his men."

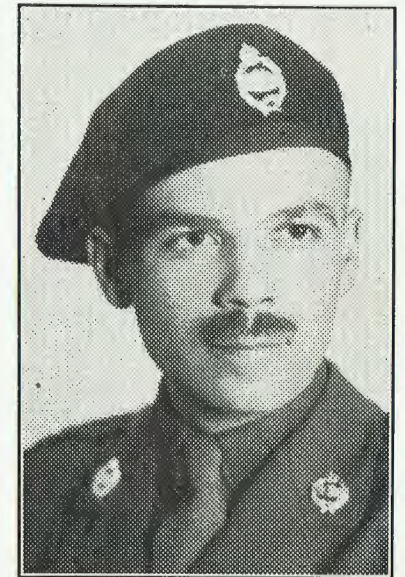
Lieut.-Col. Andrews was one of the best informed
tank men in the Canadian Army, and was one of the
"originals" of the Canadian Armoured Corps. A Per-
manent Force officer, he had been in the service
fourteen years.

Born in February 1909, Lieut.-Col. Andrews spent
his early life in St. Thomas, Ontario, and at the age
of nineteen years, joined the Elgin Regiment, NPAM,
remaining with that unit as a Lieutenant from 1928-
31. He comes from a family with a strong military
tradition, his father, Lieut.-Col. Warren A. Andrews,
St. Thomas, being a former Officer Commanding the
Elgin Regiment, and his grandfather, Foster An-
drews, St. Thomas, now 91, also being a veteran of
the British Army.

Lieut.-Col. Andrews took a course at Royal Mil-
itary College, Kingston, Ontario, before joining Prin-
cess Patricia's Canadian Light Infantry in June 1931
at Winnipeg, Man. Subsequently, he spent a year in
England on small arms courses and at Armoured
Fighting Vehicles School. From April 1934 to Feb-
ruary 1936, he was General Staff Officer, grade 3,
at Military District No. 10 Headquarters, Winnipeg.

When the Canadian Tank School was organized
at London, Ontario, in December 1936, he was an or-
iginal member as technical officer and instructor.
He continued in the same capacity when the School
was moved to Camp Borden, Ontario, on May 1, 1938,
and renamed Canadian Armoured Fighting Vehicles
School.

The "originals" at Camp Borden included seven
officers and twenty-three other ranks, with Major
F. F. Worthington, M.C. with bar, M.M. with bar, now



LIEUT.-COL. J. G. ANDREWS

Major-General in command of Fourth Canadian Di-
vision overseas, as Commandant and Chief Instruc-
tor. The other five officers were Capt. G. C. Smith,
second-in-command, Capt. J. Woods, adjutant, and
Lieuts. J. A. G. Roberge, Graham Gibson and J. How-
ard LaRoque.

Despite lack of equipment for training and with
obsolete Carden-Loyd armoured carriers the only
vehicles resembling tanks, the CAFVS gradually de-
veloped into the CAFV Training Centre and later in-
to the Canadian Armoured Corps Training Centres,
as at present.

Meanwhile, the efficient and popular young of-
ficer with an aptitude for imparting to others, a
portion of his extensive knowledge of tanks, became
more and more one of Major-General Worthington's
righthand men.

Lieut.-Col. Andrews was in the training branch
of the general staff at National Defence Headquar-
ters, Ottawa, from August 1940 to February 1941,
when he was appointed Brigade Major of the newly
organized First Canadian Army Tank Brigade under
Brigadier Worthington. He went overseas in that
capacity in June 1941.

In January 1942, the then Major Andrews was
appointed Officer Commanding the 14th Army Tank
Battalion (Calgarys) and promoted to the rank of
Lieutenant-Colonel, succeeding Brigadier G. R. Brad-
brooke when the latter was appointed Officer Com-
manding the Second Canadian Army Tank Brigade,
organized at Camp Borden.

A keen fisherman and skiing enthusiast, Lieut.-
Col. Andrews was also fond of animals. He was a
member of the Church of England. During his stay
at Camp Borden and since going overseas, his home
has been in Barrie, Ontario, where his wife, formerly
Miss Eleanor Catherine Allan, Winnipeg, Man., and
his two-year-old daughter, Susan, reside.

★ A STAR IS BORN

(A TRANSPARENT ALLEGORY)

First Budget of
News from A-28

Early this summer another cooing war-babe, caressed by the balmy breezes of Borden, wiggled pink toes and messed up its—surroundings. Poor darling! It had been abandoned on the doorstep of C.A.C. H.Q. (pronounced "quick-hug"). As no wet nurses could be found to cope with the needs of the little prodigy, it was placed in the arms of J.A.M.—often referred to as Lt.-Col. J. A. Macdonald. Then for a name: something mystic and sweet—"Delphinium"?—"No-o-o", "Leucorrhoea"?—"W-e-ll"—"A-28"? Ah, perfect! A-28 C.A.C.(A)T.C.

Early childhood of a Star! A period of flitting light and shadow. Its first tottering steps, in Rams and Valentines, were taken under the proud eyes of Grandma C.A.C., phenomenally, it never learned to talk: it began its soulful expression through the media of Indents and Army Forums. Then again, the mark of the infant prodigy, this child was never weaned—(it still clings to the bottle!).

Even a Star must have instruction, and A-28's were only of the best. Some of its mentors had recently been subjected to the school of (hard) Knox, others came from abroad—keen to strike lusty blows in shaping the destiny of the Star.

Then for that final stage in broader education—travel. Europe? No!—boring and banal. Far better to rub shoulders with aborigines, gophers and prairie-chickens. So be it! No mercy for the susceptibilities of the doomed area to the exotic charms of the rampant starlet. Dundurn, Saskatoon, Regina, Calgary were swept off their feet. There will be touching passages in the Secret Memoirs (referred to as "war diarrhoea") of Miss A-28.

Ah, sweet and lovely! But she must be glamorized. Local experts were called in. Major Sid Waterman, Lieut. Percy Wade, M. O. Hicks and a host of C.W.A.C.'s laboured lovingly. Music sprang up to do her pleasure—No. 12 District Depot Band—and flowers thronged her path—supplied from Provincial Nurseries.

Now A-28 felt impelled to the stage. But what part to play? J.A.M. counselled her to become a Commando, since she had no children and no parents. He could be the C O, Major Black could be the M A N, and Major Gilmore the D O. But professional jealousy blighted a promising prospect.

Then temp rises and tempo quickens—a swirl of social obligations set off by Miss A-twenty-eight's "coming out" party. What a night! Guests travelled hundreds of miles through foul weather to pay homage (or get refreshed?). There were full colonels and some not-so-full-yet. In fact before long the scene, bathed in the rheumatic glow of fluorescent lighting, was a kaleidoscopic maelstrom of "What'll you have?" Byron might dim the picture with his: "There was a sound of revelry by night,

..... and bright

The lamps shone o'er brave women and fair men". But in our Star's memoirs . . . !

That "coming-out" party, proved a farewell party, too. Shortly afterward, dazed and nearly swoon-

ing, lovely A-28 waded through floods of tears of lovers and merchants, and entrained to the wailing of messed bands—brass, bugle and human. Back to gritty reality and Camp Boredom! There Lt.-Col. Macdonald gave her into the care of Lt.-Col. N. H. Macaulay, who nursed her back to a semblance of sanity. And now, fairly launched in the tide of life, A-too-ate, or Tootsie for short, shrinks from the glare of publicity. But she is mercilessly hounded into an interview which went like this:

"Ahh—Miss—er —er?"

"Tootsie to you!" (cooingly).

"Who do you think will win —er, the war?"

"I'll try!"

"What are your views on religion?"

"No more church parades!"

"Are you fond of horses?"

"I prefer Rams, and I lo-v-e Valentines!"

"What is your favourite literature?"

"I never read it, but I prefer the Tank, especially the risqué excerpts."

"What is your greatest ambition?"

"I want babies—thousands of them!!"

"—er —g —g —er —um!"

"— and travel in Europe."

"Have you ever had your fortune told?"

"Ye-e-s (weeping) by a crystal gazer. It showed a raw, mangled corpse with a badly dented heart engraved DUN-DURN."

"What does that mean?"

"I'm doomed to d-d-die, underdone, of disillusionment. Dundurn speaks for itself, but it might also mean 'Dun Durt.'"

Our Star, now a stirring young matron, waits for her next batch of babies. The first lot were a good sample, but why waste potentialities!

Querulous Queries From the 'Q'

WHY IS IT?—When a Quartermaster says "no", nobody believes him; and when he says "yes," they all tell all their friends.

A very sad rumor,—it was said that the stores have the new Drab Uniform. What a rush to be first! Everybody is "going on furlough" when they want something new to wear.

Then the next thing that happens is someone wanting a 520, the next, the Q.M. is wanted on the phone, did you make those indents yet? And what about the Ration Returns? And have you re-counted the F—fire B—buckets yet? And—? And—?

We want more sugar; our metabolism isn't what she should be. And all this after a good turkey dinner!

So why is it when thé R.Q. goes away on furlough that all the Inspectors from Ordnance have to call? But nevertheless we have something pleasant to look forward to: Lieut. Irvine is the new Quartermaster. Congratulations Mr. Irvine and welcome back R.Q.M.S. Caswell.

Odd Reports from the Orderly Room

Since our former administrative staff are stoutly holding the Dundurn front, a new staff has taken over here. Our Commandant, Lt.-Col. N. H. Macaulay, D.S.O., comes to us from A-9. Our Administrative Officer is Major R. S. Black "home on loan" from

M A S T E R C R A F T S M E N



Matthew Boulton

Matthew Boulton was born in Birmingham in Sept. 1728 and became the most prominent citizen of Birmingham during the eighteenth century.

He not only achieved fame as an engineer in steam, but also is regarded as a worthy craftsman in silver, a fact not generally remembered.

As a friend and business partner of James Watt he did much, because of his enthusiasm and enterprise, to bring Watt's improved steam engine before the world. For a time he was associated with the great potter Josiah Wedgwood.

After improving in his Soho works in Birmingham the production of laminated metal known as Sheffield Plate, he turned his attention to Silver Plate, with conspicuous success, and today the mark of Matthew Boulton on an article of silver or of Sheffield Plate denotes the high quality of the piece.

But he showed a worthy pride in his craftsmanship by refusing to take up seriously the fashioning of silverware until he had forced the authorities to set up an assay office in Birmingham. Sending to Chester for stamping was too humiliating. "I had one parcel of candlesticks quite broke by their careless packing."

The skill of craftsmanship is now being utilised in the service of the country in its hour of need. In those happy days to come, when the nations are able to organise for "total peace" instead of for "total war", the gold and silver worker will again take his proper place in the social life of the country and will devote his skill to working his beautiful metals into objects which are a definite contribution to the joy of living.

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<p>Try BURMA SAUCE Every drop is of full flavour Ask for White—Cottell's Worcester Sauce</p>	<p>CAMWAL MINERAL WATERS LEMON SQUASH, &c. SOLD BY N.A.A.F.I. CANTEENS</p>	<p>—it's the flavour that counts H.P. sauce</p>
<p>LAVA SOAP SHIFTS GREASE AND GRIME IN HALF THE TIME!</p>	<p>BROWN & KNIGHT, LTD. Ham Specialists 9a Lower Marsh LAMBETH, S.E.1</p>	<p>"HALLMARK" AUTOMATIC REFRIGERATORS For the storage of foodstuffs of all kinds, for cooling and storing the drinks, cooling beer and wines, making ice-cream and other purposes in canteens and messes. J. & E. HALL LIMITED DARTFORD, KENT</p>
<p>KEEP FIT Eat SHREDDED WHEAT daily</p>	<p>RED, WHITE & BLUE COFFEE FRESHLY ROASTED & GROUND</p>	<p>ANZORA (FIXATIVE) MASTERS THE HAIR MASTERS THE HAIR NUZORA (DRESSING) MASTERS THE HAIR MASTERS THE HAIR</p>
<p>IT'S O.K. WITH O.K. SAUCE</p>	<p>Cadbury means Quality</p>	<p>For a healthy skin use WRIGHT'S COAL TAR SOAP</p>
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5th Arm'd Div. Our Chief Instructor is Major T. W. Rutherford, recently returned from courses in England. The harried (?) Adjutant, Capt. C. E. Nettleton comes to us from the Grey and Simcoe Foresters. 2nd Lieut. T. Calder, from the 17th Hussies, claims to be A to the A.P.P. (assistant to the assistant pen pusher)! 2nd Lieut. J. Irvine is acting (savagely) as Quartermaster. We'll have to hold out our tongues to Capt. J. A. Percival, our new M.O., and our hands to Capt. W. E. Attwood, our new paymaster. Our Tech. Stores Officer is Lieut. E. P. M. Long, also "on loan" from Overseas.

Seen the bright new stripes in the Orderly Room? Also the new R.S.M.? Keep stepping boys! Talking about our new R.S.M., we are expecting Big Things from that gentleman: several of us served with him in A-8 and we realize what he can do. A-8's loss is A-28's gain. So hats on straight, boys, pull yourselves together. Turn on the heat, Mr. Lystar.

We sincerely hope that our comrades on furlough, officers and men alike, get plenty of spinach! When they come back we will have to put A-28 right out in front where she belongs. Vegetating at present are: 2/Lieut Irvine, S/Sgt Adams who is bringing his wife back with him, and Tpr. Hillman who is having harvest leave along with his furlough.

Lieut. Long was making arrangements for his Travel Warrant for his forthcoming leave. He inquired where it could be made out to:

Cpl. Baird:—Only to the address of your next-of-kin, sir.

Lieut. Long:—Can't I go where I want to?

Cpl. Baird:—No, sir.

Lieut. Long:—O.K., then make out my Warrant to Johannesburg, South Africa (Technically correct).

Sympathy is extended by all Ranks to 2-Lieut. and Mrs. Hodgkins on their recent bereavement: the tragic loss of a little son.

Sympathy also to those of A-28 who are in Hospital. At present the list reads: M.Q.M.S. Bolan, Cpl. Gavin, Cpl. Collie, Cpl. Reys, Tpr. Feriancek, Tpr. Hamerson, and Tpr. Zelinski.

Sports Section

Congratulations are in order to Tpr. Leboutiller. This man (out of consideration for overworked referees) fights under the name of Tpr. Butler. Since coming to A-28 he has had four fights, and won all of them, although disqualified in one. On the 15th Sept. he fights in Timmins, Ontario. Our best wishes go with him. We hope he will win, but win or lose he will give a good account of himself. It isn't winning that counts here, it's how!

H.25, Tpr. Christie gave a very creditable exhibition in the last Ping Pong tournament held by the K. of C. He reached the finals in a sing-song, ding-dong, ping-pong battle before he was finally nosed out by Sgt. Levy of the Medical Corps. This is the second time Tpr. Christie has come close to being top man in a tournament of this kind. Keep it up, Chris, some day you will make it.

A-28 should have a top-notch Hockey team this year; there is lots of good material here. Judging by the frigid breezes at reveille, the hockey season isn't so very far away boys; so let's start thinking about the team we will have this year.

For indoor sports we have had the opening of the Sergeants' Mess on Sept. 10. Col. Macaulay did the honours, ably assisted by our hard-working

R.S.M. Needless to say, the whole affair was a success from the first gurgle, to when S/Sgt Ernie Jarvis—the last to leave—was helped out. (He got kinks in the legs from walking up to the bar so many times.)

Our eagle-eyed Sgt. Jones was behind the bar (made of 16' of 2" x 4" and some sacking that he swiped).

There were a number of curiosities present; members who speak all varieties of English, Irish, French, Ukrainian, Icelandic and Norwegian. I may mention that our ebony-coloured boy was there in full force. Besides the above, a couple of Scotsmen made up the party, and spent nothing but their time there.

This was our first experience of being able to "park our—" and feel at home, and every member intends to dig in and make A-28 Sgts' Mess the finest in Camp Borden.

More news will be forthcoming as our mess swings into action—which will probably be around "Waterloo Day".

Tech. Nicalities

This, our first venture in contributing a splash to The Tank, may be on the weak side*; but give us a chance and we will warm up to the job—or are threats out of place here?

*Editor's Note: An obvious overstatement.

Meanwhile S.M. Bottle is working away on a new variety of parachute—an inflated landing boat for M.Q.M.S.'s on operations. The need? Take a look at M.Q.M.S. ("Peg-leg") Bolan, and try digging M.Q.M.S. Andy Kirby in the ribs—right side. They were on convoy!

Morale reports should note daily fat letters to Murphy, and Intelligence should work on the writer—Murphy seems reticent. And while we're pawing the mail, something should be done about Gouin, re Creemore. His correspondence is wearing out more transportation than the Mess Supplies. Have you heard him singing his Indian Lullaby:

I wanna bee more
In lovely Cree-more
So that I'll see more
Of you—who?

(Security information) Kreppi's father (a brewery technician) is working on a brew that is to put life and pep into a certain Orderly Room staff. Said staff, please note. Don't force us to use it. Co-operation is our forte with any sex. And we do want to get along—don't you?

Drive slow, Dunbar; drive slow! With the tech we mean. Never heard of a monster known as Rationing? Three meals at one sitting has even Eveleigh beaten.

Now the Wing is grovelling in gravel to such good effect that we feel that all future gravel-hauling contracts should be ours by right. Sorry D. & M.; we do hate to take it away from you!

Was it one of our officers who was boasting about making an impression on the "Belle of Barrie" but got excited and started to call her the "Bear of ———". Wonder why he couldn't finish the spoon-erism?

So long, now. See you next month—we hope.

Drivel & Mutterings From D & M (of course)

Warning: We're back in dirty old Borden again!

—Please see page 13



23rd Canadian Army Tank Regiment

Anniversary

The 26th August, 1942, was the third anniversary of the Halifax Rifles being called up for Active Service, the occasion was celebrated in both the Officers' and Sergeants' Messes. The Rifles took their stand against Hitler on 26th Aug., 1939. Major J. W. MacMahon, acting O.C., and the Rifles Officers considered this a just occasion for a celebration.

A real bang up dinner was achieved under the supervision of our Mess President, Capt. T. A. Wier, who instructed the cooks in how to cook the chickens, where to stuff the dressing therein, and other minor but necessary details.

Lt.-Col. W. A. Cripps, O.C. 16-22 Saskatchewan Horse, was invited over to present certificates of qualifications to a number of officers. Liquids and refreshments were "on the Mess" and altogether and notwithstanding a very enjoyable evening was spent on this, our third anniversary.

This event was also celebrated in the Sergeants' Mess. R.S.M. Wood, F. E., gave an enlightening speech and toast to the Mess. The occasion was made unique in the respect that every member of the mess had to perform in some shape or other—and what shapes! Which W.O. gave a demonstration of advancing on the enemy through the rungs of a chair?

The music was furnished by Sergt. Power at the piano and L/Cpls Megeney and Nelepa with their violins. A trio consisting of Sergts. Smith, W. G., Banks, O. G., and Frizzle, J. D., also furnished something—it may have been music. Sergt. Young, G. G., was Master of Ceremonies for the evening.

Qualifications

The following Other Ranks have qualified as Class III Despatch Riders, effective 27th August, 1942.

Sergt. Fougere, J. L., Tprs. George, H. L., Bates, L. J., Boudreau, V. J., Harding, J. F., Hogan J. P., and Mancini, J. N.

Appointments and Promotions

(a) The undermentioned Other Ranks of "B" Sqn. to be Acting Lance Sergeants, on organization of establishment, effective 15 Sept., 1942: F29666 A/Cpl Clarke, A. E.; F29902 A/Cpl Huston, L. R.; F29731 A/Cpl Smeltzer, C. R.

(b) The undermentioned Other Ranks of "B" Sqn. to be Acting Corporals, on organization of establishment, effective 15 Sept., 1942: F30462 A/L/Cpl Chase, I. F.; F29778 A/L/Cpl McKay, M.B.

(c) The undermentioned Other Ranks of "B" Sqn. to be Acting Lance Corporals, on organization of establishment, effective 15th Sept., 1942: F30239 Tpr. Hirtle, A.D.; F30011 Tpr. Boudreau, V. W.; F30533

Tpr. Smith, F. T.; F29745 Tpr. Myers, O. L.; F29574 Tpr. Hardy, C. A.; F30470 Tpr. Kennickell, M. L.; F79893 Tpr. Longard, R. C.

S.S.M. White, J. M., "B" Sqn. qualified in the advanced swimming course at Camp Borden, 21 August, 1942.

Congratulations

Congratulations are extended to Lieut. G. M. Wright, "B" Sqn., on the birth of a son, David Gordon, at Toronto, 22 Aug., 1942.

Also to Lieut. P. V. B. Grieve, "B" Sqn., on his marriage to Miss Muriel Elizabeth Veitch at Toronto on the 5th Sept., 1942.

Inspection

The Rifles along with their sister Regts. of the 2nd Canadian Army Tank Brigade turned out in force for inspection by Brigadier G. H. Weeks, D.M.T., this week. Lieuts. B. M. Blackadar and W. W. Sinclair, "A" and "B" Squadrons respectively furnished the demonstration troops from this Regt. The demonstration troops went into action right after the Brigadier's inspection. The troops put on a fine show in the demonstration of camouflage, harboring and moving out of harbor in squadron formation.

* * * * *

Kung Ling Chieh, twenty-year-old son of Dr. H. H. Kung, Chinese Minister of Finance and Deputy Prime Minister of China, and a nephew of General Chiang Kai-Shek, has been commissioned as a second lieutenant in the Scots Guards. He is now undergoing a course in tank warfare in the South of England.

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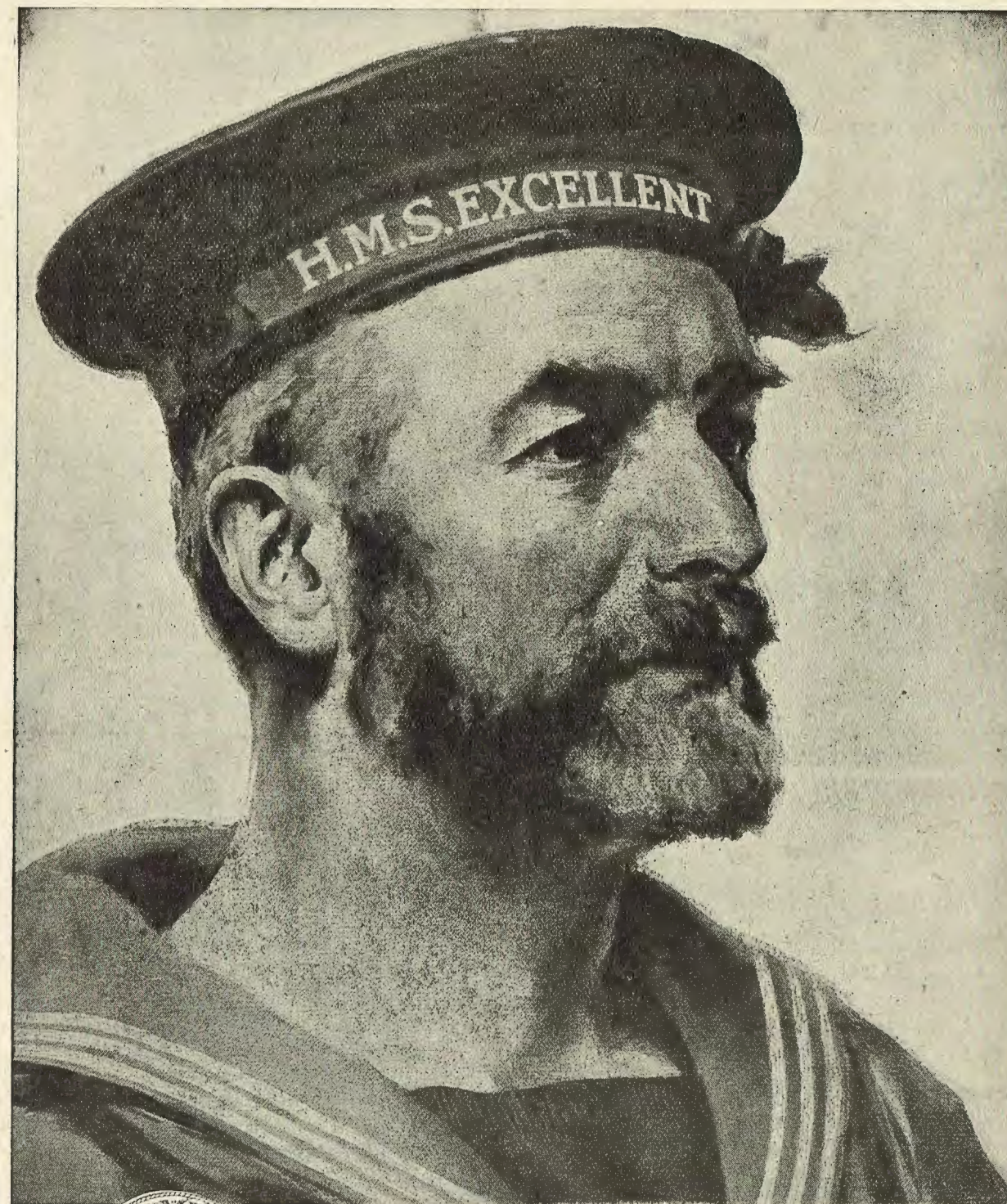
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(Owing to metal shortage)

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Multiplies itself 250 times in lather. Softens the beard in 1 minute. Maintains its creamy fulness for at least 10 minutes. Its strong bubbles hold bristles erect for shaving. Its olive oil content braces and tones the skin.

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Your "regular" Toothpaste

Phillips' Dental Magnesia is sold by all N.A.A.F.I. canteens. Same size, same quality as you got at home. Keeps teeth white, the breath sweet and the mouth fresh and clean. —Get a tube today.



The old army excuse won't wash to-day. There may be only half the previous supply of razor blades for sale, but if you can buy a KLEEN Blade, you can make it last for days and days and days. KLEEN Blades are the thinnest, most highly tempered, longest lasting Sheffield steel. Always strop the blade on the palm of the hand before and after using it. Dry it well after use and unscrew razor slightly as blade gets older.

Made from Sheffield's finest razor steel in a 40-hour-week factory.

DOUBLE EDGE 8 for 8d (plus 1 1/2d. tax)
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26th Canadian Army Tank Regiment

By "Pullthrough"

From right behind the eight ball comes this ramble about the "Foresters". "Scotty" Carmichael, not having anything ready for this issue and with only five hours left before the deadline gave up the ghost and departed for CBMH. He claimed it was lumbago and we believe him. His usual run of patter often gives it to us.

With the entire regiment outfitted in Canada's best looking clothes, the new Army Walking Out Uniforms, every other rank in the Foresters is now looking for new worlds to conquer, including blondes and brunettes. The uniforms have given a big boost to morale, not only do the boys look better dressed but they walk with a new found zip.

Another new addition to the regiment, in the person of H/Capt J. H. Cavers, Auxiliary Services Officer, arrived this week. He has already made his presence most welcome by taking over all sports equipment. He is currently on the look-out for football material. We don't mean equipment either; it's the stuff that gets banged around inside the uniform that he wants.

We don't know how far back this story belongs, but our Padre (we have to make some remark about him since Scotty always has) was recently ordered to report for compulsory military service. He has only been in the Army Chaplain Services for two years!

Add to unpopular spots "Brecken". 'Nuff said.

Also attached to the "Foresters" in the last few days was our L.A.D. from the Bde. Ordnance Coy. Its members are currently enjoying mattresses, spring beds and hot (?) water in HQ. Squadron lines. They camped out for the summer opposite the hospital.

Congratulations are in order for at least one officer and one Sergeant, who have recently departed the land of single bliss for that greater and better life. Lt. G. J. Currie bravely said "I do" on September 19, following Sergt. R. M. Ferguson's example, who took the leap on Labor Day.

Shortly after returning to Borden in June every man in the regiment discarded his "best friend" the Lee Enfield No. 1 MK III, with a shout of glee but after a few attempts on the pistol range many were glad to note that the Army Tank Regt. War Establishment included a goodly number of rifles. Some of these same lads are now giving more than loving care to the new No. 4 MK I and are very anxious to try them out on the range "to see just how she does."

A STAR IS BORN

(Continued from page 10)

Don't blame us; we feel savage. Even after intensive amateur gardening it still looks crude to a D & M'er. We feel like an unwanted baby—but that's all even, we didn't want, either.

Trying to squeeze into a corner of The Tank is a new one for us. We're more at home squeezing into Rams and Valentines—or incidental squeezing.

Lieut. White and Staff Eveleigh are working into the wee sma' hours nightly, harnessing and hamstringing a Cyclone for instructional purposes. They claim it's a weighty matter. Their technique is worth studying.

Our tracked section has been burning up "C" area day by day, and our wheeled section has done some real roughing on three day convoys. The main hardship on the convoys is officially known as "mess-tin cookery". No hospital cases so far; but they come back looking gaunt, and speak more respectfully of the cooks.

Nobody would know it, but our O.C. Major Gilmore, had a peach of a judo session with a motorcycle. Although the M.C. bit him twice, he came out on top, with no time off for sympathy.

Hush—hush!—Did Mr. Long take a load of vices back to Ordnance? And did he explain to Col. Macaulay that D & M already had enough, if not too many (and varied) vices?

But watch our smoke—we're goin' places!

Stray Shots from Gunnery

The Wing still carries on, under Capt. Richmond with the connivance of Mr. Chandler and Mr. Neeve supported by P.0001 Sgt. Napper Tandy.

But we're still haunted by the Dundurn Dirge. It still seems incredible that we have lost our Tank Gunner's paradise; with ideal rolling country right at our doorstep, with tank range and eye-training areas specially prepared by Nature's engineers. Lost, too, six weeks of intensive work when all of us took turns as tinkers, tailors, carpenters, plumbers, and labourers. Most of our preparation is lost, too:—charts of the area; realistic "ants" and "maggies"; hull-down, turret-down and head-on "hornets", strategically planted over the area. We've lost, too, the whole hearted support of those Dundurn engineers who turned out realistic profiles of German Tanks, P2 KW III's and IV's, practically rebuilt lecture buildings and had to be restrained from starting on the construction of a running hornet, dugouts and control tower on the range. Lost, among other things are the resources of material at our disposal. Do you wonder we weep? Have you seen the range at Ha-ha-Hawkestone? Yes, this is my neck, and I know it's sticking out, but I still feel that the cause is worth a few necks.

But back to the dreary present. We're training two groups—A.D.P.'s and Reinforcements. How? By using the facilities of A-8 and A-9, generously provided by those centres. Hands up those who are glad they left England to do "an urgent job of instructing".—No hands?—!

In our Society Notes, we observe that Capt. Richmond is spending the season in Kentucky. He is expected to visit Fort Knox en route.

Another traveller is Mr. Chandler, gyrating re—
—Please see page 24

Machine Warfare

By MAJ.-GEN. J. F. C. FULLER, D.S.O.

Reprinted from INFANTRY JOURNAL

Major-General J. F. C. Fuller, D.S.O., was G.S.O.1 of the Tank Corps during 1916-18. He is an author whose works have a world-wide reputation. In Germany before the outbreak of this war, he was regarded as the greatest living authority on mechanized warfare. Many of his works were translated into German and became the official text books of the Panzer Corps. An abridged version of his latest book (Machine Warfare) commences here and will be continued in succeeding issues of The Tank-Canada.

THE ELEMENTS OF WAR

The object of all military organization is to enable the primary tactical functions, according to the circumstances of the moment, to express themselves in the most effective way; and though the organization of a present-day army is exceedingly complex, these functions remain simple and invariable.

To understand what they are, all that is necessary is to reduce the battle—the central act in war—to its simplest possible form, and then to observe what happens. When two men fight, whatever the stake may be, they have got to guard, to hit and to move. Whether they are armed or unarmed, whether they are fighting on foot, on horseback or from within a machine, these three functions remain constant. Multiply the two men to any number and the result is exactly the same. Therefore it follows that all organization to be tactically efficient, must express these three functions and the more readily, rapidly and effectively it does express them, the more perfect it is in itself. The things which enable the soldier to give effect to these functions of guarding, hitting, and moving—namely, means of protection, weapons and means of movement—I have generally called the physical elements of war, and out of their combined use tactics, or the art of fighting, is evolved. With reference to this, Marshal Foch once stated that all systems of tactics should be based on "resisting power" (guarding) and "striking power" (hitting). Moving he took for granted.

This is a universal idea. For instance, in Balzac's Contes Drolatiques we read of a certain Captain Cohegrue of whom it is related: "Dans les grosses batailles, il taschoyt de donner des horions sans en recevoir, ce qui est et sera toujours le seul probleme a resoudre, en guerre." ("In great battles, he endeavoured to give blows without receiving them, which is and always will be the sole problem to solve in war.") And why? Because the result is freedom of movement.

What has not been so universally accepted is the relationship between the tactical functions and the tactical means; for in most armies weapons have evolved on no rational plan. New arms, as frequently as not, have been invented and adopted without any definite tactical idea behind them. Old weapons have been maintained and the old and new mixed irrespective of their functional values. So much so has this been the case that I will first briefly examine some of the characteristics of movement, weapons and protection.

The three elements of war are so closely related that they cannot be separated one from the other. Thus, both weapons and protection depend upon movement, and in war movement must have some offensive purpose, and in turn it must be protected if force is to be economized.

There are three forms of movement—human, animal and mechanical. There are three vehicles of movement—earth, water and air. And there are three dimensions of movement—one-dimensional, such as movements along roads and railways; two-dimensional, such as movements over land and water surfaces, and three-dimensional, such as movement under water and through the air.

There are also three types of military movement—strategical, tactical and administrative. Tactical movements which are the ultimate aim of strategy and administration, may be divided into protective and offensive movements. The first I will call "approach movements," and the second "attack movements." During the former the one thought of the soldier is to prevent himself from being hit, and during the latter it is to hit his enemy. The more he can hit, the less he will be hit. Therefore, indirectly though it may be, not only is the whole action protective in character, but it becomes more and more secure as the offensive succeeds.

From this it will be seen that any idea of thinking of the offensive and the defensive phases of war, battle, or fight, as separate and distinct acts is wrong, because these two acts are, in fact, the positive and negative poles of the tactical magnet called "battle."

If we remember that the object of all attack movements is to develop weapon power against an enemy, and of all approach movements to prevent the enemy developing weapon power against ourselves, we shall at once understand that, when we are not attacking, we are approaching, even should we be sitting in a camp five hundred miles away from the battlefield. If the soldier remembers this, he will seldom be surprised, and surprise is far easier to effect today than in the past, because aircraft can almost as safely attack back areas as front lines. The correct appreciation of the approach and the attack carries with it the maximum of security and offensive power. These can never without danger be divorced.

Rising from battle tactics to campaign tactics, the same idea holds good. We are confronted first by strategical movements, and secondly by tactical. In brief, the whole of strategy consists in placing an army in such a position that tactical movements can be carried out with the greatest economy of force.

Offensive intent is expressed by means of weapons, and in organized warfare man can seldom protect himself without them. Weapons have three purposes: to kill, to injure and to terrorize. There are three kinds of weapons: weapons for thrusting, for hurling and for asphyxiating. The first I will



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call shock weapons—such as the lance, sword and bayonet; the second, missile—such as the arrow, bullet and shell; and the third, chemical weapons—such as gas, lethal or vesicant, and toxic smokes. Other weapons may be added, such as the club for stunning and germs for spreading disease; but generally speaking, we need only think in terms of two types—according to the means used in moving them—namely, those wielded by man and those discharged by mechanical or chemical force.

In primitive warfare hitting and hurling weapons were combined in a chipped stone, which, when held in the hand, could be used as a shock weapon, and as a missile weapon when thrown. To throw a stone is a protective act, which, should the projectile hit the man it is aimed at, will delay or prevent him approaching to shock distance. At this range brute force predominates and skill is reduced to a minimum; consequently the whole process of organized warfare has proceeded along the line of obviating the rough-and-tumble of body-to-body fighting. So much has this been the case that, today, we find, because of the invention of automatic weapons, the physical assault, as it was conceived a few years ago, is dead. Nevertheless, when infantry could assault their like, the infantryman's true offensive weapon was his bayonet, and his true protective weapon, the bullet, because it covered the bayonet advance. From this we can deduce that, whenever two weapons of unequal range of action are employed, the one of longer range is always the protective weapon and the one of shorter range the offensive weapon, and even should three or more weapons be used, this holds equally good. Thus, though field guns, when covering a rifle attack, are acting protectively to the rifles, they are acting offensively to the heavier guns in rear of them, in spite of the fact that these heavy guns are simultaneously acting protectively both to them and to the rifles.

It may be considered that this is a purely academic problem; yet it is not. Its full appreciation, in fact, forms the backbone of the attack, from which the whole battle organization, like ribs, radiate. From this appreciation may be deduced a tactical rule of high importance, namely:

In all circumstances the longer-range weapons must be employed to facilitate or ward off the employment of the shorter-range weapons.

The soldier must not only never forget this rule, but it must so completely dominate his thoughts that its application becomes instinctive, for it forms the foundation of fire supremacy—the shock by missiles—that crucial act of the attack, the paralyzing of an opponent's power to hurl, so that he may be hit and his strength destroyed.

Every missile which can effectively be thrown, must be thrown. The soldier must not only think, but live and act in terms of fire supremacy; for it is his sword and his shield upon which his tactical life depends.

I have called the above tactical act a rule, because it is open to exceptions. Soldiers may, on occasion, be equipped with offensive weapons of so low a power that for practical purposes they are worthless, or else in battle they may be faced by an opponent so indifferently organized and trained that

they can destroy him at long range without necessity of clinching with him.

Having now shown what an important part protection plays in movement and in the use of weapons, I will consider it in itself.

The first fact in life which strikes us is, that the instinct of self-preservation urges protection in one form or another, and the second is that protection demands activity or resistance, or, better still, the two combined.

When we examine Nature we at once see that, so far as things living are concerned, nine-tenths of their activities are in character protective. In the animal world we find every type of protection sought after and applied. Few studies are more profitable to the soldier than that of natural history, which is an unbroken record of wars. This fascinating study I cannot pursue here, so I will turn to the elements of protection.

The defensive has little to do with holding a position, for it is just as much part and parcel of every forward movement as of every halt. Static warfare is offensive warfare localized, because the aim of both sides remains quite as much to win as to avoid defeat. A purely defensive—secure—war means that the object is to return to the conditions existing before the war began; therefore, that the war has lost its meaning, for to wage war and return to the status quo is simply to squander human energy.

I have already pointed out that the bullet protects the bayonet and that the approach secures the attack. Both these forms of protection are indirect—that is to say, they do not ward off blows, but instead impede the enemy giving them, either by delivering blows or by rendering the target invisible or difficult to hit.

Besides the numerous indirect means employed to protect the soldier, a number of direct ones are made use of, such as armor, earthworks, fortifications and gas respirators. Again, all these means of economizing hitting power may be divided into static and mobile direct or indirect protection.

Of all these means, those endowed with the power of mobile direct protection are the more effective, because not only does direct protection nullify a blow at any given spot but, should it be endowed with mobility, it can be carried, like the carapace of a tortoise, from place to place. As we have seen, the tank falls within this category, which is not the least of the reasons why it has so radically revolutionized the art of fighting. Further still, the airplane, by raising war into the third dimension has, as I will show, in combination with the tank so furthered this revolution that nothing in any way comparable to it can be found throughout the whole course of military history.

From that brief examination of the elements of war, it will be seen that, though their powers change, the functions they express remain constant. These changes are due almost entirely to civil progress and inventions. When civilization largely depended on brigandage instead of commerce, and when the roads were few and generally unfit for wheeled traffic, military power was founded on mounted troops. When this epoch was succeeded by a more stable agricultural one, infantry became the predominant

arm; and today, because manufacture has become the staple industry of all great nations, and because it is based on science and inventions—coal, steam, chemicals, oil and electricity—the result is that the infantry cycle is rapidly being replaced by a “mechanical” or “mechanized” one.

From this law of military development, as it impinges on man's instinct of self-preservation, a guiding principle is born, which I will call “the constant tactical factor.” It is this: Every improvement in weapon power, means of movement and protection has aimed at lessening terror and danger on the one side by increasing them on the other. Therefore, every improvement in weapons, etc., has eventually been met by a counter improvement which has rendered the improvement obsolete; the evolutionary pendulum of weapon power, slowly or rapidly, swinging from the offensive to the protective and back again in harmony with the speed of civil progress, each swing in a measurable degree eliminating some form of danger. Thus, in the days of the stone age, when progress stood almost at a standstill, weapon development was proportionately slow, and may be said to have been always up-to-date. Today conditions are diametrically reversed, for civil progress is so intense that there is not only a likelihood, but rather a certainty that in peace-time no army can in the full sense be kept up-to-date. This means that, in wartime, weapon evolution will be rapid, and therefore that the army which is mentally the better prepared to meet tactical changes, will possess an enormous advantage over all others. Here we touch upon the secret of German tactical successes in the present war.

So long ago as January, 1919, when writing on this subject I said:

Tools, or weapons, if only the right ones can be discovered, form ninety-nine per cent. of victory . . . Strategy, command, leadership, courage, discipline, supply, organization and all the moral and physical paraphernalia of war are as nothing to a high superiority of weapons—at most they go to form the one per cent. which makes the whole possible.

In war, more especially in modern wars, wars in which weapons change rapidly, one thing is certain, and this is that no army of fifty years before any date selected would stand “a dog's chance” against the army existing at this date, not even were it composed entirely of Winkelrieds and Marshal Neys. Consider the following examples:

(1) Napoleon was an infinitely greater general than Lord Raglan; yet Lord Raglan would, in 1855, have beaten any army Napoleon could have led against him, because Lord Raglan's men were armed with the Minie rifle.

(2) Eleven years after Inkermann, Moltke would have beaten Lord Raglan's army hollow, not because he was a greater soldier than Lord Raglan, but because his men were armed with the needle gun.

Thus we might continue our comparison. Lord Roberts, in 1900, would have defeated, almost with impunity, any Prussian army of 1870; and today any army of 1919 would defeat an army of equal numbers equipped as armies were in 1914. Only five years separate these two dates, yet the whole craft of war has changed. Not because rifles, bayonets, sabers and lances are used differently, but because machine guns have multiplied, automatic rifles have been added, tanks have been invented and airplanes have been improved. In fact, the war as waged in August, 1918, is in many respects as different from that of 1914 as the war of 1914 is different from that of 1814.

During the present war we have had a series of vivid pictures thrust under our noses in such rapid succession and so close to our eyes that it is extremely doubtful whether many of us have read aright what they portend—namely, that it is machine-power and not manpower which wins a war . . . In other words, that war is primarily a matter of weapons, and that the side which can improve its weapons the more rapidly is the side which is going to win . . .

With these preliminary remarks on the physical elements of war, all of which arise from out of the fighting functions of man, I will turn to the revolution in the theory of war which has been brought about so largely by the airplane and the tank.

THE TACTICAL REVOLUTION

Though from the earliest records of war right up to the outcrop of the Industrial Revolution, development in the powers of the physical elements of war was so slow as only to become measurable over long periods of time, from the opening of the twentieth century, as I have shown, it became bewilderingly rapid. This was mainly due to the vast enhancement of movement rendered possible by the internal combustion engine, which—

(1) Introduced a new dimension of fighting—air warfare; and

(2) By enabling the soldier to fight from a self-moving platform, extended the theory of sea warfare to land operations.

Nothing comparable to such revolutionary changes had followed either the invention of fire-arms or the steam engine, for they but added to existing powers, whereas the gasoline engine introduced a new dispensation. Something so original, so all-embracing, so all-penetrating that, in the theoretical realms of war, whole epochs were smitten from their hinges. Nevertheless, the functions of the fighting man remained what they always had been—namely to move, to hit and to guard; consequently, in theory, the problem remained simplicity itself; how, in the changed conditions which now surrounded the soldier, to translate these functions into actions with the greatest economy of force. It was a problem of common sense—nothing more.

In order to simplify the problem, to begin with let us ask ourselves this question: What is an airplane? It is a ladder which, like a fire escape, enables the soldier to climb into the third dimension and within it rapidly move from place to place. It can be “erected” not only over the battlefield, but also hundreds of miles around it in all directions—up, down, forwards, backwards, to right and to left. The up and down are its fundamental novelties, because, in common with the soldier on the ground and the sailor on the sea, it shares the remaining four directions. Nevertheless, these two directions—up and down—were by no means novel in idea, but only in extension of idea. Hitherto the soldier had fought in lines and columns—stationary or in movement—upon what is called a “battlefield”—that is, a surface of earth. Hence his tactics and hence his organization have been in bulk planary and in detail linear. But, because these surfaces are seldom as level as a billiard table, in the past what do we see? The soldier instinctively attempting to gain control of the plane he is fighting on by taking up what is called “a commanding position”—that is, by moving into the third dimension. He occupies a ridge or a hill top,

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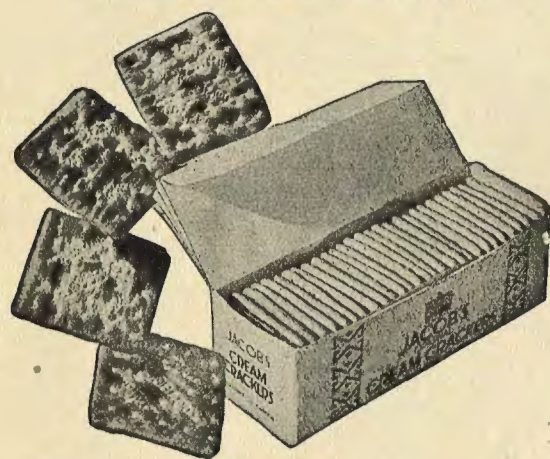
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B. V. 1

he climbs a tree, he builds a tower and even rolling ones. In short, he has always sought to get above his enemy, so that he may look down on him, shoot down on him, move down on him or impede his enemy moving against him. Thus we find that in the past, as today, power to move in the third dimension of space, has added to his powers of moving, hitting and guarding, both directly and indirectly.

It was the mechanization of this urge to raise himself above his adversary which constitutes the supreme tactical triumph of the airplane. So startling were the possibilities of this revolution that in every country a school of military thought arose which saw in the flying machine the downfall of armies and navies—in fact their eventual extinction. The leading exponent of this school and its tactics was the Italian General Giulio Douhet.

In my opinion these enthusiasts were so carried away by the revolution that they overlooked the fact that every machine is possessed of limitations as well as powers. The most prominent of these was inherent in the very idea of the airplane itself. It was built to fight gravity by velocity, and in consequence can only function when in motion. Armies can both move and rest on the earth, and navies can move or rest on the sea, but as a fighting machine an airplane must fly, for when at rest its tactical powers vanish. It is pre-eminently and fundamentally a moving weapon. Herein is to be discovered the Achilles' heel of airpower—the master limitation of the airplane. Gravity is its most formidable enemy, because, sooner or later, it forces it to earth. Like a bird, it cannot fly forever; therefore its resting ground must be protected. Thus we return to warfare on the surface of the earth, where, as I have said, the airplane ceases to be a weapon of war.

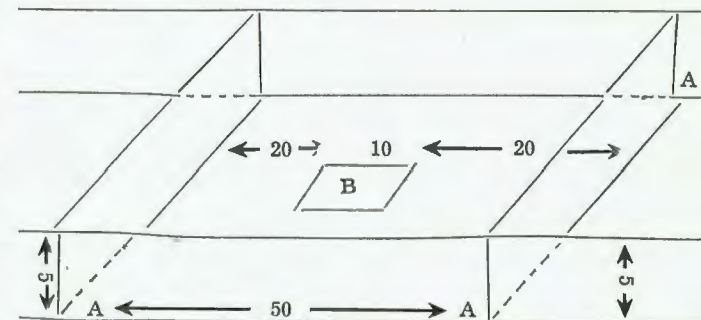
As this is an uncontradictable fact, the next question which arises is the tactical relationship between ground and air—that is between planary and spacial fighting. Here the first point which strikes us is, that to lines and columns as fighting formations have been added a third—the cube. Not a comparatively rigid formation like the other two, but an expanding and contracting formation, a formation which can ploy and deploy in space. Further, when not in flight, the airplane demands an area, its airfield, to settle upon; in turn the protection of these plane surfaces demands area and not linear formations. This introduces the tank—its complement.

Under protection of its armor the tank can move in any direction over normally level ground, and as it can also fire when in movement it is the ideal area weapon. When it cooperates with the airplane, what do we see? That it is its ground shield, whereas the airplane is the sword which thrusts outwards from that shield. These two weapons are as complementary as once were castle and sally party, bowmen and men-at-arms, infantry and cavalry, and later artillery and infantry. Consequently, how to combine and control cubic and planary formations is one of the crucial problems in machine warfare.

Examine Diagram 1, for the answer is given there in theory. What do we see? A cube "A" standing on the earth, and in the centre of its ground surface a plane "B". The figures represent miles and are inserted purely for purposes of illustration.

Suppose that the length of the frontage to be attacked is 500 miles, then ten of the above cubes will be required to cover it, and granted a flying speed of 200 miles an hour, any one cube can reinforce a neighboring cube in from fifteen to thirty minutes. As for reasons of cost, supply, organization and command, it is not generally possible or desirable to cover the whole frontage with tanks, therefore following the diagram, I will imagine that to each cube is allotted one armored division or group of machines—the "B's"—the centre of each of which is fifty miles from the centre of those on its right and left, and granted that tanks can move at an average speed of ten miles an hour, then a five-hour march from them.

The point to note is, that though, theoretically, the whole front is covered by aircraft, only one-fifth is covered by tanks. Therefore, four-fifths of the front consists of unrestricted maneuvering ground for the tanks. Therefore, when two mechanized forces meet, frontages at once disappear, or otherwise put—spring up anywhere. As of old, the armored charge of our modern knights is followed by the mellay. This was correctly understood by the German tank general, Heinz Guderian, when he said: "Where tanks are is the front."



In this problem of the protection of air bases, the second great limitation of airpower becomes apparent. Whereas, in the case of an army, both its base and its battlefield are located on the same plane—the surface of the ground—in the case of an air force they each occupy a different dimension, and not even, like a fleet, a different type of surface. Though soldiers can operate on land for an indefinite period and ships can remain at sea for weeks and even months on end, aircraft can only remain in the air for a few hours, after which they have to return to earth in order to replenish their fuel. Though the velocity of an airplane is comparably greater than that of either a ship or a tank, and though, in consequence, its circuit of action is equally disproportionate in terms of time, its supply radius is the most restricted of all three. So much so that this weapon of war closely resembles a humanly regulated and directed projectile, a kind of animated rocket, fired not from a trough or a gun, but instead from an airfield, a "weapon" far more static than the heaviest piece of siege artillery, and one which, in existing circumstances, cannot be moved from place to place, for it is as immobile as a fortress. Whether airpower will ever be able to replace land and sea power largely depends on overcoming this limitation, which means that in the long run tactical power is in importance secondary to facilities of landing and

supply. If it were practical to devise a portable landing ground the size of a tennis lawn, and roll it up and unroll it on any normal ground surface, a greater step towards the abolition of armies and fleets would be taken than can possibly be gained by increasing the speed and fighting power of the machine itself. In brief, the future of airpower is to be sought on the ground rather than in the air, because the ground is both the bed and the belly of the airplane.

Turning back to the problem of area fighting, which is so intimately related to the protection of air bases, this is how I pictured the battle of the future in the Encyclopedia Britannica of 1929:

"The decisive point of attack will again become the rear of the enemy's army. Not only will shock weapons disappear but also the small missile—throwing weapons. The approach will be made rapidly not only by road but also across country, consequently the nature of strategy will be changed. Area warfare will replace linear warfare, and fronts may be anywhere. The attack will be divided into the act of demoralization which is more likely to be waged against the command of the enemy, the brains of his army, than against the nerves of his men. The act of decision will aim more at restricting the mobility of the enemy's main force than in physical destruction of his organization. Once the enemy is held, that is, mobility is denied to him, the act of annihilation will take place."

Such was the aspect of the machine attack as I saw it some dozen years ago, and, as I will later reveal, it was not far out of the perpendicular, because I had long before then arrived at the following conclusions:

- (1) It would become increasingly difficult, in spite of the introduction of antitank weapons, for mass formations—infantry and artillery—to halt or repulse the machine attack.
- (2) The cost of the machines needed to carry out such an attack on the grand scale would, during peacetime, drastically limit the number built.
- (3) Therefore, though in the next war continuous fronts would in all probability once again appear, they would not be impervious to penetration.
- (4) Because, as both the tank and the airplane do not require large numbers of men to man them, and as cost loses its meaning in war, vast numbers of these weapons would be built directly war was declared.
- (5) That as velocity of movement means attack and when coupled with armor protected attack, therefore the next war would witness the realization of the offensive a outrance as dreamt of between 1900 and 1914.

With reference to this probability, in 1936 I wrote in my book, "The First of the League Wars: "If the enemy's land forces cannot be stopped, then, even under existing conditions, it is possible for mechanized arms to overrun a country such as France, Germany or Poland in a fortnight. This would mean the complete occupation of all vital points in those countries, and the consequent collapse of their governments."

Discussing this point with an acquaintance, I once said: "Given 50,000 tanks and 10,000 airplanes and Europe can be conquered in six months." His reply was: "Where are you going to get the steel,

men and money to build such a force?" In answer on the back of an envelope I scribbled the following:

50,000 tanks at an average of 20 tons a tank = 1,000,000 tons of steel. At an average of 20 men a tank for all purposes 50,000 tanks = 1,000,000 men. And at an average of £20,000 a machine = £1,000,000,000.

Today the price seems truly insignificant.

Later, I intend to examine the theory of tank tactics, but in the rest of this present article I will deal solely with the revolutionary changes effected by the airplane.

I have called that weapon a "universal" machine, because its tactical cube includes all fighting surfaces—land and sea—within the limits of its expansion. Hence we obtain a vast number of different machines which functionally, may be divided into four main categories:

TYPE	FUNCTION	MACHINES
Reconnoiterer	Finding	The artillery spotter or air OP
		The infantry spotter or air scout.
Fighter	Guarding	The ground spotter or air photographer.
		The counter-fighter.
		The counter-bomber.
Bomber	Hitting	The low attacker or air MG.
		The bomber or air heavy and medium artillery.
		The dive-bomber or air field gun.
Carrier	Supplying	The torpedo-bomber or air destroyer.
		The troop-carrier or air bus.
		The supply-carrier or air truck.
		The staff-carrier or air motorcar.

All these in varying degrees are influenced by the two great limiting forces, gravity and landing grounds, whereas the fighting types possess besides the following limitations:

- (1) Low volume fire.
- (2) Lack of direct protection in the air.
- (3) Inaccuracy of aimed fire.
- (4) Inability to occupy.
- (5) Excess wastage.

Volume Fire: The importance of this type of fire is too obvious to need explanation. On the ground it constitutes one of the determining factors in battle. But in the air ammunition supply is not only limited by the lifting power of the airplane, but varies in inverse proportion to the distance flown. For example, should the target be one hundred miles

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away from the starting point, more bombs can be carried than if a thousand miles away. In either case, once the bombs are dropped the machine has to return to its base to recharge itself.

Lack of Protection. Space being free from material objects, such as hills, ridges, etc., protection is indirect—clouds, height and speed. And though an airplane can be armored, the more it is the lesser is its lift in bombs and gasoline. Compared to land weapons its protective powers are severely circumscribed.

Inaccuracy of Fire. Whatever theory and peace practice may dictate and demonstrate, the fact remains that, at present, the crudest medieval cannon is a weapon of precision when compared to the most recent bomber fitted with the most perfect bomb-sights. Though aim has undoubtedly improved, from observations during the Spanish Civil War I came to the conclusion that a bomb dropped at a height of ten thousand feet or over, may fall anywhere within a radius of half a mile from the target—an error of twenty-five per cent!

Inability to Occupy. Though parachutists can be dropped, and by means of gliders, and from troop-carriers men can be landed, the general inability to occupy a position in strength—for the time being anyhow—rules out the airplane as a conquering machine. To terrify an enemy into submission is not enough: because, even if only for reasons of moral superiority, a war cannot be decisively, that is uncontradictably won, unless the enemy's country is occupied and he himself disarmed.

Excessive Wastage. This limitation prohibits an indefinite increase in the number of machines used. During the last eighteen months of the First World War the average wastage in airplanes was between fifty and eighty per cent per month. Of these casualties, but one-quarter were due to enemy action, the greater number resulting from crashes on landing. What the figures for the present war are I do not know. Yet, in my opinion, they are unlikely to be less than a complete turnover once every three months. If so, when the popular press clamors for 50,000 machines, then 200,000 will yearly have to be built to keep that number on the active list.

Bearing all these limiting factors in mind, many years ago now I came to the conclusion that, though the revolution effected by airpower was incalculable, the idea that air forces could replace armies and navies and conquer on their own was absurd, and

was likely to remain so until the flying machine can land anywhere and can overcome for weeks and months on end the force of gravity. It is, therefore, like every other weapon of war, a cooperative instrument. Nevertheless, its power of attack is formidable and all-embracing; for not only can aircraft fight their like, but also attack civil and military targets. These I will consider in turn.

Because present-day warfare sets no limits to barbarity, and therefore varies in character from medieval, the coming of the air assassin is so degrading an event that more probably than not in years to come it will be examined as a pathological incident. Nevertheless, as realists, we must accept things as they are.

Like a thief, the most profitable time for an airplane to launch its attack on a civil target is during hours of darkness, the aim of its pilot being to destroy things and lives. The first is accomplished by the bombing of military objectives, such as industrial areas, seaports, rail centres, capital cities, factories, cornfields, power stations, etc. In short—all the potentials of civilization; for the purpose of such attack is total destruction. The second is directed against the civil population itself, its aim being to terrorize men and women into rebelling against their government, and thus compel it to sue for peace. This particular form of brutality is called the attack on the civil will; yet in fact, both forms attack the civil body.

Though in these attacks the damage done is frequently considerable, the results arrived at in the First World War, the Japanese-China War, the Spanish Civil War, and in the present war have shown them to be anything but decisive. As regards the first form—the economic attack—the reason is inaccuracy of aim; and, as regards the second, that novelties (ghosts, etc.) terrify humankind more so than known dangers (road accidents, etc.). Therefore, when the novelty of the moral—or rather a moral attack—wears off, though the danger remains, its psychological effect is frequently reduced to the vanishing point.

Though instinctively I object to these barbarous forms of war and more particularly so to the second—which is nothing more or less than mass murder—I hold that the correct moment to attack the civil will is when conditions are such that bombardments can be maintained for prolonged periods. Further still, "the attack should be launched either immedi-



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ately after the enemy has suffered a disaster on land or sea, or when some great effect on his part has failed, or when an economic blockade of his ports or frontiers is beginning to be felt. It will be seen, therefore, that the correct time to launch the air attack is closely related to events on land and sea. In fact, once land and sea power have been able to restrict the movements of the enemy (tactical or economic) on land and sea, then airpower should take up the mobile operations of the war and direct its attack against the civil will." These words were written by me in 1927.

Turning to the military attack, we know that because aircraft are in no way restricted by terrestrial obstacles, as are a fleet at sea and an army on land, they can avoid fleets and armies, or attack them from above—that is from a direction which cannot be met by advanced, rear and flank guards. It is this ability to penetrate the normal system of defense, and strike directly at the centre of the surface forces, instead of breaking through their circumferences, which constitutes so great a part of the tactical revolution.

When attacked by aircraft, a fleet or an army, is always in a defile; yet one of a peculiar kind, because it is unscalable; yet it offers no direct protection to the attacker. Such a defile may be compared to a valley flanked by immaterial mountains which at times can close in on the attacked and so place him in a gorge. To scale these heights at once introduces the air battle.

In 1927, when examining the cooperation of aircraft in naval operations I wrote:

In one respect the submarine is the antithesis of the airplane, because she goes down whereas it goes up. Yet both are three-dimensional weapons, the one finding protection in height and the other in depth. It appears to me that cooperation between these two will prove far more effective than the single-handed air attack. In my opinion, aircraft should take the fullest advantage of altitude, not only to protect themselves, but so that they can maneuver rapidly above a hostile fleet. They should then not so much attempt to bomb their target as to disorganize its human element, by means of smoke, of a toxic nature preferred. Clouds should be placed on the surface of the sea so that they will either envelop the ship, or force her to tack in order to avoid them. They should be so placed that, if she does tack, she will do so to the advantage of the attacking submarine and destroyers. To compel a fleet constantly to change direction, and to obscure its signals, is to reduce its mobility and to disorganize its gun fire and command. If the air attack can accomplish this disorganization, it will have fulfilled its task, when it can hand over its victims to the light infantry of the sea.

Tactically, air battles are simpler than those on land and sea, and though this simplicity facilitates organization and training, it does not necessarily accelerate evolution, because, generally speaking, the complex permits of greater combinations. The fact that ground and sea do offer protection, direct and indirect, and the air practically none, must inevitably compel the human brain to seek in them a counter agent to the high offensive power of aircraft and by degrees diminish that power.

(To be continued)

A9 TURRET

The Achievements of A-9 Softball Team throughout the season have been a story of continued success. The Team lost one game to the 2nd Army Tanks by a score of 6-4 after a very tight game. For A-9 winning the inter-Camp series credit is due to S/Sgt Dyers, the Manager of the Team. He kept the boys in training and contacted for games with teams outside Camp in neighbouring towns. Our Team won all games up to the time of the press deadline for this article. We understand that the Team is playing Collingwood on Sunday, Sept. 13, and feel that after the roar of "battle" is over it will be another case of "We Won."

When the season closes, A-9 C.A.C.(A)T.C. will go down into the records as being outstanding in Softball, Army Week Sports and Tank Demonstrations throughout Ontario. Our Commanding Officer is proud of this achievement as he has expressed and has shown by frequent attendance at our games.

We now have an Acrobatic Team in our midst under the tuition of Sgt. Vernier. They have already put on their "Act" at several Fairs and Jamborees in the Towns and Villages about Camp Borden. At Bolton they were well received by the Townspeople, putting on a real variety of acts, assisted by Sgt. Munday from the Camp Gym. We hope to have an A-9 Concert Party this Winter, and this Gymnastic Team will fit in nicely with the plans being prepared. We are trying to arrange for costumes which should put "vim" into the show, so watch your Part 1 Orders for later announcements.

The Dieppe Raid

From bits of information received, several Officers and men trained in A-9 were in this raid. We are very proud that they showed such bravery, and that their training foundation was laid in A-9. Above all, this raid has shown the "Hun" that the Canadians still have the "stuff" that distinguished the Canadian soldier of 1914-1918. Our thoughts and best wishes go to all Canucks in whatever part of the world they may be.

7th Group Reserve Batteries R.C.A. (Toronto) Visit

All ranks of the visitors united in high praise of A-9 for the co-operation which made their two-day visit such a success. The realistic demonstrations gave a touch of advanced training in a short time. Our instructors say the visitors went through the manoeuvres very well while the Group R.S.M. especially stated that nowhere had the visitors received so much benefit in so little time. This shows that our staff were efficient and furnished a close resemblance of real war conditions. The "Gunners" showed great interest and zeal, and we feel that when they are active they will assume a proud place in the ranks of the R.C.A. Col. Arnoldi, O.C. of the 7th Group, sends his appreciation and thanks to all A-9 for their splendid co-operation on this visit.

Inter-Wing News

S/Sgt Quigley, ex-track automobile racer (stock Model T Ford) was relating to C.S.M. Nichols his "ex-

ploits" one particular time when he made his T Model Ford go to the excessive speed of 100 m.p.h. and that he still had an inch to spare on his gas pedal (and he doesn't drink "goof"). As we understand it, C.S.M. Young has offered to referee a race between C.S.M. Nichols and S/Sgt Quigley for "track honours", Camp Borden, the C.S.M. using a Baby Austin, "Quig" using a T Model Ford. C.S.M. Young will check the cars for any "gadgets" such as "superchargers" hidden under the engines. So A-9, do not be surprised if you see a T Model Ford going around with the rest of the airplanes around the camp area, with "Quig" at the wheel.

Social News

It has been noticed this past while, that most of the C.S.M.'s are on a Coca-Cola and milk diet on certain days. Why?

We expect to have more column next month, as being on furlough has kept the writer out of touch with a few activities this past month.

* * * * *

Two friends met in a country inn after the lapse of many years.

Explained one: "I've settled down in this part of the world, you know. Got married and taken up pig-rearing. Got a number of beauties coming on just now. Look in and see me some time."

A few days later the other took advantage of the invitation, and his ring was answered by a young woman.

"How do you do?" said the visitor, affably. "I've just come along to see the little swine."

"Oh," said the woman, in a distant tone. "I expect you'll find him hanging about the Bricklayer's Arms, as usual."

HAWKESTONE, SEPT. 18, 1942.

"OUR HOME ON THE RANGE" By R.Q.M.S. Borrowdale, W.

There is a certain amount of regret at having to leave our little home for something more elaborate. However, we are looking forward to the time when we get the word to move.

L/Cpl Cosgrove has already received the call and left us Sept. 15th. We haven't yet heard from him.

Sgt. Sandy, who has been a casualty for the past 10 weeks, reported back for duty only to remember that he forgot to take his furlough, so is now away enjoying himself (we hope) and will be back with us in a few days.

As I remember it we had a multitude of enemies in the vicinity of Hawkestone early in the year as might be expected. We were disturbing the peace, which they have enjoyed for so many years. Many people detested us and our friends who brought the noise making machinery from "Borden". This embitterment has now disappeared and I believe the "Village" folks will miss us when the time comes for our departure.

Tpr. Gilroy, R., has had a pleasant time. He had his wife in Hawkestone for the past week. The lady is all the way from Springhill, N.S.

We have one complaint to our friends who visit us from Camp. While we strive to make everyone comfortable, a lot of the boys forget that this is our "home" and that we like to keep the place clean. Do try and be a little more considerate when you have finished your practices and clean up your rubbish. Thank you.

* * * * *

HE'S IT!

Private Andrew Callahan, Fort McClellan, wore a long face as he accepted a knife and a 100-pounds sack of potatoes from Mess Sgt. Philip Danforth. Said Private Callahan: "I thought the Army had potato-peeling machines." The sergeant grinned: "It has, and you're the latest model!"



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From Behind The 8-Ball Doings At A-8 C.A.C. (A.) T.C.

The Canadian Armoured Corps have been in action! News that spread through the Training Centre like wildfire. News of action, in the near future, for those of us left behind. News that warmed our blood. Most important—news of those who took part. As we check, we find the names of friends who have paid the supreme sacrifice. Names of those missing. Names of those who have returned. It brings to us the reality of war. The necessity of our job here. To dig in and do a better job. To prepare others and ourselves for the day when we shall carry on for those who have gone ahead. Yes, it was invigorating news.

The Training Centre is "hummin'" with the news of the C.W.A.C. taking over our lines. We feel honoured that they should select this Training Centre. So now we are in the midst of reorganization and preparation of movement to our new lines. It will be strange after spending the last three years here, moving into new environments. But still a good soldier can quickly accustom himself to any conditions and from the stories emanating from the Camp Engineers, we feel it won't be difficult at all. Right now we are anxious to have all the moving over with and settle down in our new "home."

The entire Training Centre, including attached personnel, was on parade the other day in Drill Hall E.41. Yes, we have a fine body of men. Strong, healthy and "well built." The boys looked very proud and pleased with themselves as they marched smartly across the floor to pass through the clutches of a "Confirmation" Board.

Over the weekend of Sept. 18-19-20th, we were host to the 7th Coy., 30th Battery R.C.A.(R). We enjoyed having them with us and feel the visit was of great interest to them. They were given the "works" the minute they arrived. Schemes and demonstrations quickly revealed the mysteries of the Armoured Corps.

The summer is slipping by and with it goes the activities of sports such as baseball, swimming, etc. We would like to mention our ball team which upheld the reputation of this Training Centre until the necessity of night courses forced its withdrawal from the league. Under the guiding hand of S/Sgt (Silver) Jackson, of "B" Squadron, the boys were playing a good brand of ball and were in a playoff spot when they were forced to retire. A tough break, we would have liked to have seen them finish the schedule. "Line up" was as follows: Catcher, Sgt. E. Delmage (now 4th Div.). Pitcher, Cpl. "Lefty" Payne, "C" Sqdn. Tpr. R. Thompson (now OTC Gordon Head), 1st base. Tpr. W. Hystead (now overseas), 2nd base. Cpl. H. E. Thompson, "D" Sqdn., 3rd base. Left field, Tpr. Gendron, T. A., "C" Sqdn. Right field, Cpl. Delmage (now 4th Div.) Centre field, Cpl. Marquette (now overseas). Substitutes, Pitcher, Sgt. R. Fraser, "C" Sqdn.; infield, S/Sgt Trevelyan, Hq. Sqdn. Manager and Coach, "Silver" Jackson. Good show fellows, we appreciate your effort.

APPOINTMENTS AND PROMOTIONS: Under this heading our sincere congratulations are extend-

ed to the undermentioned personnel. The very best success in your future endeavours. Especially to Capt. "Bob" Harris, of "B" Squadron. Special mention for S/Sgt "Sam" Cowdy of "D" Sqdn., who has attained the rank of C.S.M. Nice going "Sam" and the very best. Also we find S/Sgt L. G. Pinkerton, late of this Training Centre and now with the Experimental Wing C.A.C. Training Group, endowed with the "cabbage leaf". Congrats to S/Sgt W. R. Martin, now C.S.M. in the Technical Wing. Promoted to S/Sgt—Sgt. W. Howgate. To "Willie", or "Yorky", as he is better known, we say, "You deserve it." Sgt. J. C. Rollo has the Staff before his rank. New members of the Sergeants' Mess are Cpl. Burns, A.B., Cpl. Tyte, W., and Cpl. Lubach, W. Amongst the Junior N.C.O.'s we find L/Cpl Lemay, A. W., L/Cpl Day, H., L/Cpl Smith, D. B., and L/Cpl Kellar, R. O., sporting two. Graduating from the trooper rank to the N.C.O.'s class: Tpr. Gordon, D. J., Tpr. Watkins, S. J., Tpr. Irwin, R.E., and Tpr. Evans, L. H., jumping into full Cpls. ranks. Also Tpr. Granger, D. F., Tpr. Hastings, W. L., Tpr. Depratto, H. J., Tpr. Preschel, F. F., and Tpr. Widdis, R. K., deserving of the title Lance Corporal. To these troopers who now find themselves N.C.O.'s, we pass on our best to them on their climb up the ladder. Several members of this Training Centre now find themselves on their way to becoming "One-pip won-

SMOKES

SMOKERS' ACCESSORIES

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SODA BAR and GRILL

20 Dunlop St. -- BARRIE

ders." They are to be especially congratulated on achieving this goal. A job worth doing, is worth doing well. Amongst the names we find L/Cpl L. G. Queen of "B" Squadron; Tpr. Lackner, J. C., of "A" Squadron, and Tpr. Dobie, of "D" Squadron. The very best of luck, fellows. As we turn over the pages of Part Two orders we note those who have joined the ranks of the benedicts. Lieut. F. H. Newman of "B" Sqdn. Lieut. N. M. Krolman, reinforcement officer and 2/Lieut. J. E. Slinger, J. E., also a reinforcement. Our friend in "B" Sqdn., S/Sgt. Crowder, D. Amongst the "other rank" reinforcements in the same category are Tprs. Howard, B. C., Schmidt, J. A., Stiles, C. W., Newbury, W. A., and Rhodes, K. J.

To you fellows, the very best luck in the world (you will probably need it) to you and the "Mrs.", and may all your worries be little ones. Amongst our reinforcements we find Tpr. Dunbar, T. and Tpr. Parker, J. E. M., strutting around with their chests out and handing out big cigars to their friends. Both proud fathers.

The Sergeants' Mess right now is in the throes of a billiard tournament. The deathly stillness that shrouds the playing room is only broken by suppressed hand clapping. The boys certainly take their game seriously! Things we would like to know. What certain player is in the "groove" after visiting the bar? Could you answer this, Sgt. Becker? ? ? ? What player always reminds the boys when the game becomes heated that it is always "Nice to be nice, gentlemen"? After watching C.S.M. Watson play we fully understand his title. "Commando Shot." No one knows where they are going! We wonder who named QMS Bowden of the Pay Office, "Fearless". A worthy title. All joking aside, the members are developing into very good players and soon will be able to whip the best in the game.

Time has come to cease this raving and we only hope you have enjoyed our news as much as we have in passing it on to you.



Concert parties may come and concert parties may go, but memories of the one put on by members of the Saskatchewan Horse Regiment in the Knights of Columbus Hut on September 8 will linger forever.

After a few opening remarks by F. J. Hill, Y.M.C.A. Supervisor of the Regiment, the program was in charge of Lt. Winterton, who not only acted as Master of Ceremonies in a very capable fashion but also gave a very good rendition of "Shortnin' Bread."

The regimental orchestra, which was playing together for the first time in three months, was the backbone of the concert and proved its ability to be

classed as one of the best in the East, even though the musicians had only a short time for practice. Violins, guitars, and Western songs were important items on the program and numbers were enthusiastically received from the Beynon Bros., Cpl. Po-peck, Tpr. Monroe and others. Sergeant Hughes and Pte. Rappit added comedy with excellent imitations and dialogues, and Lt. Stantin brought back vivid recollections of Prime Minister Winston Churchill by imitations of parts of his speeches made to the Dominion.

Tprs. Tomblin and McCarthy were the song birds for the orchestra and added variety by singing popular songs. One of the most popular acts on the program was put on by Sergeant Munday and four others from the Camp Gymnasium, who demonstrated how tumbling should be done and the opportunity offered to everyone to have fun and get in shape at the camp gym.

Sports

Now that summer sports are being wound up, the 20th A.T. Regt. are getting themselves into shape for fall and winter activities. The weekly boxing tournaments held at the K. of C. Hut are being well participated in by members of the unit, and although not always in the winning brackets, they slug it out with the best of them and give the audience the type of bout they are longing for.

Entries are always available for ping pong, horseshoes, softball and volleyball tournaments, and with basketball getting under way in the near future, we'll soon have everyone in the regiment taking part in sports.

THE HORSES' FIGHTING SONG (Tune: Old Notre Dame)

We're the Saskatchewan Horse,
We'll fight the Hun and show no remorse.

We're not men to flag or fall,
We are the toughest of them all.

Hitler and Muss had better watch out,
We'll whip their arse without any doubt.

For we are the Horses and we're riding to Victory

Our daggers are pointed at old Berlin,
Give us a chance and we'll ram them in.

Shove them in right to the hilt,
And see the blinking Axis wilt.

We'll make our Ram Tanks all buck and rear,
And make old Adolf shiver with fear.

For we are the Horses and we're riding to Victory.

Bradbrooke's Brigade's the best in the Corps,
We are the men to finish the war.

Never was a fighting force
Like Bradbrooke's Rifles, Greys and Horse.

There are the other services, too,
Who will support us through and through.

The second Army Tank Brigade will roll on to Victory.

It was a controlled press which kept France ignorant of her danger until it was too late. One day, when victory comes, the Germans will realize how they have been misled and bamboozled by their Nazi-controlled newspapers. And the press in Britain and the United States will have done a very great deal, by their relentless questioning, their outspoken criticism, to achieve that victory.

FROM BLUE ORDERS

To be Majors:

Cpts. D. N. Cameron, (A/Maj) M. C. Finley, V. G. Stroud, Maj. J. O. Beesley, E. D., Maj. J. H. W. Day, Cpts. (A/Maj.) A. G. Cameron, J. H. Carson, T. H. Lane, R. A. Bradburn, A. F. Coffin.

To be Captains:

Lieuts. H. J. L. Dyer, G. S. Mahon, E. G. Vance, Cpts. H. D. Grant, I. G. Patrick, A. F. Shaw, H. S. Stevens, F. H. Wheeler, Lieuts. I. C. Morrison, F. J. Thibodeau, Capt. C. L. Wilson, Lieuts. J. E. Buchanan, H. deL. Harwood, G. D. Sherwood, R. A. Gordon, C. N. Gryde, Capt. C. E. Nettleton, Capt. (Qr.-Mr.) V. E. R. Bolton, Lieuts. L. L. Cantlon, J. Hassard, A. G. Pryce, R. S. Street, J. H. Crichon, G. L. Macdougall, H. E. McBain, T. B. Nash, S. R. Purdy, R. Robinson, L. J. Davies, D. M. McDonald, K. L. Graham, Cpts. G. LeChasseur, J. C. C. Taschereau, Lt. (A/Capt.) E. J. Baldwin, Capt. (Qr.-Mr.) S. E. Methot.

To be Lieutenants:

Lieuts. H. N. Curtis, W. A. Campbell, J. N. Yanover, E. J. Butler, J. P. Curley, G. A. L. Garstone, R. E. Gurry, L. E. McKenzie, J. G. Riehl, R. M. Simpson, G. Tomlinson, H. Van Camp, B. J. Winterton, H. W. MacDonald, P. V. Wade, L. R. Jensen, J. B. McMaster, H. J. Russell, C. W. P. Lunderville, G. S. Murray, D. E. Stewart, G. B. Bate, G. M. Elder, C. A. Smith, J. St. C. Cote, M. P. Devlin, G. Frechette, J. J. L. A. Gaumont, J. R. Gregoire, L. Jobin, B. Lafleur, P. Tessier, L. R. P. G. Turcotte, W. R. Graves, A. E. Biddlecombe, J. Nicol, J. L. MacIver, W. J. Martin, F. R. Zimmerman, E. G. King, K. Y. Dick, Prov. 2/Lt J. M. Tremblay, Lieuts. F. E. Barnard, R. Cloutier, J. J. Leclerc, P. P. H. St-Hilaire, J. M. Tremblay, M. J. N. St. Georges Vincent, J. Calcutt, J. J. Black, Lt. (Qr.-Mr.) H. R. Herbert.

To be 2/Lieutenants:

2/Lieut T. Calder, P.48590 Cadet Willie Leblanc, 2/Lt (Supy) M. F. Coughlin, 2/Lt (Supy) M. J. Gregory, 2/Lieut F. S. Beckley, Prov. 2/Lt R. F. Moore, 2/Lt (Supy) G. S. Venning, 2/Lt (Supy) R. M. Learmonth, P. F. Turchin, J. F. Short, P.3221 S.S.M. Melville Nelson Hodgkins, 2/Lt (Qr.-Mr.) A. J. Parker.

To be Lieuts (Sup'y):

Lieuts. H. A. McDiarmid, A. F. Tongs, N. G. P. Walker, W. A. Marlow.

BARRIE WOMEN'S AUXILIARY

OF THE CANADIAN ARMoured CORPS

The Auxiliary was very glad to welcome Mrs. Worthington back again and we wish to thank Mrs. Briggs, Mrs. Landriau and the executive for carrying on so well in her absence.

The Auxiliary voted \$100.00 a month for cigarettes to be sent to the pool, to be distributed among the boys overseas.

Plans are already under way for our Christmas party and we wish to make it an even greater success than it was last year.

We wish to extend our deepest sympathy to the wives and mothers in the Auxiliary whose sons and husbands were reported killed or missing in the Dieppe raid.

We are sorry to report we have had to vacate our room at 6 Owen St., and in the meantime if anyone wishes any information, would they kindly phone 3478.

A STAR IS BORN

(Continued from page 13)

cently in Springfield, Massachusetts, Staff Brown and Staff Findlay who accompanied him, speak "English" with a Yankee twang. Blame it on the Styro Gabilizer, or was it a Gyro Stabilizer, they have been studying or steadying.

Sgt. Dunbar, of course, still tears himself away from duties, periodically, for a trip home. Staff Reid, we hear is going to be staying in for a while. Welcome back Ordy. And finally, Sgt. Napper Tandy,—A-8's readers will be pleased to note—is still going strong. He is still characterized by muddy feet, clean friendship, and conservation of energy. But he still draws rations and enjoys sun-bathing—so what?

We extend sympathy to Tpr. E. J. Murphy on his bereavement through loss of his mother.

Training's Tattle

We call ourselves "the working wing". All right, all right,—can't we do some wishful thinking, too? So far just one batch of reinforcements has suffered under us, and they still survive.

In the absence of trained personnel on the staff, Camp Gymnasium has been working on Physical-Training-and-Fun for us. That includes such things as the Obstacle Course and Swimming. They have so inspired us, that you may expect to see all of A-28 enjoying their spasms in the early morning?

We are nearing the solution of the problem of how to do something with nothing—No, not just scrounging, this is a refinement of that art. Illustrative material for lectures, office furnishings, bulletin boards and sign boards, a lion cage for the librarian and the library, and storage room and racks, have evolved under the potent mesmerism of S.S.M. MacMillan and Staffs Coates, Lauder and Fudge.

S/Sgt Coates has been authorized to smoke his pipe on Tuesdays, when respirators will be worn. We feel that this will be a saving of gas, and that Gas Chamber periods can be given in the lecture room. Incidentally, with our growing stores of gas and explosives, we should be able to reach the headlines, somehow!

No doubt our Wing S.M. is becoming famous. That might explain why his wife has hurried across the continent to check up!

But enough of words!—Where's my battle-axe?

COMPLIMENTS OF

LAKEVIEW DAIRY

BARRIE-ALLANDALE DAIRY

CITIZENS' DAIRY

(Suppliers to the Armoured Corps)