The CROUNDEL

Vol. 4, No. 2
FEBRUARY, 1952

ROYAL CANADIAN AIR FORCE

The Roundel

Issued on the authority of
THE CHIEF OF THE AIR STAFF
Royal Canadian Air Force

VOL. 4 No. 2

FEBRUARY 1952

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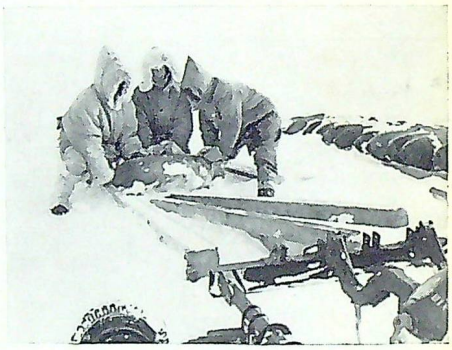


Loading 500-lb. H.E. bombs on bomb-trolley (See page 1)

EDITORIAL OFFICES:
R.C.A.F., Victoria Island, Ottawa, Ont.

The Arctic Armourer

By Sqn. Ldr. E. N. Henderson

(This article originally appeared as a report by the R.C.A.F. Winter Experimental Establishment, Edmonton. Based on six winters' experience under the severest possible conditions at Fort Churchill, Man., and Watson Lake, Y.T., its official title was "Armament Problems in Loading and Arming Aircraft in Cold Weather." Sqn. Ldr. Henderson, who wrote it, enlisted in the R.C.A.F. in 1940 and was posted to England in July 1941. He served with No. 400 Squadron until August 1943, when he was posted as Operations Officer to No. 39 Wing H.Q. Released from the Service in July 1945, he rejoined in January 1946, served for nearly two years at A.F.H.Q., and, after taking the Pre-Specialist Course at Camp Borden, was sent to the Winter Experimental Establishment in October 1949. Since the end of 1951, he has been employed on technical armament staff duties at R.C.A.F. Station St. Hubert.—EDITOR)

INTRODUCTION

HELLO! — So you're the new armourer — I mean, the new munitions and weapons technician — all set to begin work up here in the frozen north? Good. And it sure *is* frozen this morning. Thirty-eight below outside.

Since this is your first day, we'll just take you around and show you what sort of work you'll be doing. As we go, you'll pick up quite a few of the "do's" and "don'ts" about servicing aircraft armament at sub-zero temperatures . . .

I expect you've heard that cold-weather operations present quite a few problems to armament personnel. And you've heard rightly. All the same, you'll find that some of the difficulties are really only routine and aren't necessarily peculiar to cold weather conditions. But, of course, any difficulty is easier to overcome under normal working conditions than when you're working in the open at thirty-eight below, encumbered by heavy winter clothing. The sharp edge of a fellow's keenness is apt to become a bit blunted under such conditions, and the prime object is to get the job over with and go back inside where it's warm.

We've been tackling the cold-weather problem for several seasons now, and many of the difficulties have been overcome — usually the hard way. Some still remain, though; and new problems will certainly rear their ugly heads with the arrival of new and different equipment. Nevertheless, if you watch how the chaps here go about their work, and take the same precautions that they do, you'll find it a lot easier to carry out your duties efficiently.

First of all, let's take a look at what the well-dressed arctic armourer is wearing.

CLOTHING

Working outside at a temperature like to-day's, a man needs to be dressed for the occasion. You've been issued with your B-25 kit? Fine. You'll need it! — So take care of it and use it properly.

I hope you're wearing some sort of long underwear. Most of the boys around here find that the bottoms of flannelette pajamas meet the purpose. And I see that you've got on your wool turtle-neck sweater. Okay: now put on the type-C overall trousers and the parka jacket. You'll find that ski-cap affair is just the thing underneath your parka. And now the sheepskin-lined boots and the mitts — inner and outer. By the way, you'd better get yourself a pair of light wool or cotton anti-contact gloves to wear under those mitts. You'll see why when you start working.

Fuzing 500 lb. H.E. bombs.

You may think you're a pretty bulky object to climb around an aeroplane and load guns and rockets and bombs. I agree; you are. But you can do it all right, and, as the song says, "you'll get used to it."

Well, now that you're dressed, let's go outside to the arming point and get the fighters ready for air firing.

ARMING FIGHTER AIRCRAFT

Let's start off with an easy one — a 50 calibre Browning installation in the wing. The gun and ammunition tanks are pretty accessible in a wing gun installation. So here's a screwdriver. Get up on the wing and remove the panel.

Having trouble already? Quite a job climbing on an aeroplane in full winter kit, isn't it? You'd better let someone help you or you'll be all morning trying to get started.

Just a minute — don't try to walk on that wing. Oops! There you go! Try it on all fours. It's the only safe way to move about on the wing when you're wearing snow-boots.

Now that you've got the panels up, let's take a look at the guns.— Hold it! Don't take your gloves off. If you touch those metal parts with your bare hands you'll get a bad frost-burn — or, if your hands are damp, you'll leave a layer of skin on the gun. Yes, I know it's awkward trying to open the breech-cover with mitts on, but, as I said before, you'll get used to it! This is one of the times you need those anti-contact gloves I was telling you about. If you're wearing them, you can take off the heavy mitts for a few moments to work with small parts that need a fine Italian touch.

All right, just cock the gun once or twice. The breech block moves quite normally, doesn't it? You'll find that the gun functions properly, too. It's been lubricated for this temperature with a light film of mineral oil — hydraulic buffer R.C.A.F. 34A/150 mixed with a 50% volume of kerosene. We use it on all moving parts — and when I say a light film, I mean a light film. The best way to apply the stuff is to soak a piece of clean four-by-two in the oil, wring it out, and then rub it lightly over the bearing surfaces. At sub-zero temperatures, 34A/150 becomes extremely viscous. To-day, for example, it would be stiffer than heavy syrup — and you can imagine how that would gum up the working parts! There's no better way of guaranteeing stoppages than by over-lubrication at low temperatures.

Speaking of lubricants, we've found that a mixture of 75% oil — that is, 34A/150 — and 25% kerosene is satisfactory for temperatures down to —40°F, but below that it's necessary to use 50% kerosene. To-day, since it's only 2° off forty below we're using the 50/50 mixture. We also use this mixture in the oil buffers of the 50-calibre guns.

Here's the ammunition coming. As soon as you've finished your D.I. we'll load the aeroplane for firing. It'll probably take you about ten minutes to load this morning, but once you're familiar with the installation and used to working in that get-up, you'll probably be able to do the job in five minutes or even less. Incidentally, when you charge the gun, be careful that the ejected rounds are picked up before they get lost in the snow.

Everything accounted for? Good. Now we'll go over to one of the jet fighters with 20 mm. guns in the fuselage.

This won't be quite as easy to work on — or rather, work under. The only way to get at the gun installation is to lie down on your back underneath the fuselage. Not that that should be

too much of a hardship: the horizontal position comes naturally to most of us.

The riggers have already taken off the gun bay panels, so let's get started.

In this type of installation, the ideal arming team is a Mutt and Jeff combination — provided the big fellow loads the tanks and the little one gets underneath to work on the guns. The combination doesn't work quite so well in reverse. Since you're about average size, you'll be able to do either job. By the way, look out for any kerosene that may have been spilled under the aircraft. It'll soak into your parka and stay there. It's bad stuff. Quite apart from the smell of it, kerosene doesn't evaporate like gasoline, and your clothes lose their insulating properties. So put that tarpaulin underneath the fuselage before you get down on your back. Try to keep the kerosene off your mitts as well.

Servicing a Vampire's 20 mm. guns.

Arming a Sea Fury's 20 mm. guns.

Those 20 mm. guns, like the 50-calibre Brownings, are fully operative despite the temperature. We use the same lubricants here as we do for the Brownings. A point to remember about 20 mm. guns is that if you find it necessary to wash the links before belting the ammunition, be very careful when you lubricate them again. See that you apply only the lightest film of oil. Excessive lubrication of the links at low temperatures will result in stoppages caused by adhesion of the links to the rounds, which will naturally slow the action of the B.F.M.

Now that the guns are ready, suppose we start loading the tanks. You might notice first that we use 50-round belts instead of the usual 25-round. Why? The reason's simple. When it's below zero, the fewer belts to join the better. Remember, you can't take your gloves off, and the ammunition is just as cold as everything else here.

The ammunition hatches aren't very big, are they? You have to be careful when you're wearing those great big mitts. If the belt slips as you're lowering it down the chute, the chap underneath will get the whole load on his head. Yes, I know the mitts feel like boxing gloves — but just wait until you try putting the securing-pins in the ammunition chute after you've connected the belt up with the rounds leading into the B.F.M.'s! See what they feel like *then*.

Not too easy, was it? Let's go inside and get warm while the rigger puts the panels back. The coffee ought to be ready now, and we can talk in comfort.

* * *

That last job took just over half an hour. Not bad, considering it's your first attempt under these conditions. You'll find that most 20 mm. installations of that sort require about twenty minutes for loading and arming even when you're pretty good at it. That's one of the reasons we recommended making up 50-round belts in the cold weather — despite the fact that you've got to be pretty careful when handling them.

There's a bombing operation coming up after lunch, so we may as well spend the rest of the morning at the bomb dump, seeing how the boys are getting on with the fuzing.

Here's the truck. Let's go.

PREPARATION FOR BOMBING

We had a pretty heavy snowfall here yesterday, and it's taken half the morning for the snow-plough to clear the bomb dump road so that the trucks can get in with the trolleys to pick up the bombs. That's one of the reasons why a planned bomb dump layout is important for northern field storage. Stockpiles should be arranged so that snow-ploughs can get through the dump and clear the road up to the stacks without blocking other stacks. This isn't as easy as it sounds, when you take into consideration space limitations and explosive storage regulations. A fan-shaped or wide semicircular layout works pretty well, provided that available space and other local conditions permit. As you can see, we've been using a block pattern layout here, and snow clearance is certainly a problem. Sometimes the boys get out early in the morning and spend two hours cleaning the snow off the stacks, then along comes the plough to clean the roads and covers them in again.

Here's the first trolley-load of bombs.

Take this key-wrench and start removing the plugs ready for fuzing.— What's the trouble? Tight, eh? Well, that's not surprising. Those bombs are recent arrivals from the X Depot and the exploder pockets and threads are protected with heavy grease or luting. It's pretty well solid now.

Watch out there! — You're unscrewing the entire base plate. Try again.— Now you've got the complete exploder pocket out. You'll have to separate the plug from the exploder housing with a strap wrench.

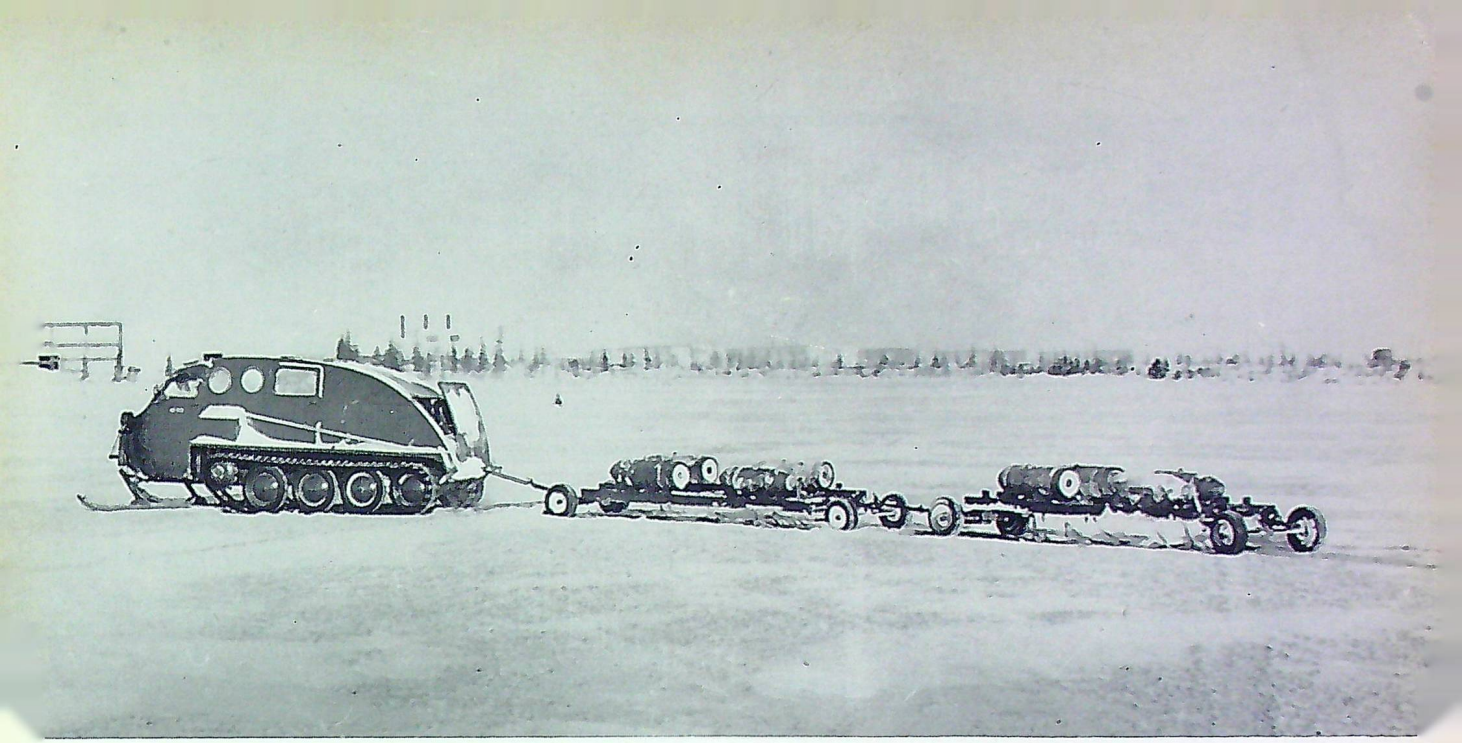
All of which just goes to show that extra preparation is necessary during the warmer weather. The heavy grease and luting should be removed from all explosive stores, especially from the threaded portion, and replaced with a thin film of a light anti-freezing grease.

Now let's take a crack at the components. You won't be able to do much with those mitts on when you start trying to open fuze-containers and so forth. Better let someone else do that until you get some anti-contact gloves. Meanwhile, you can help the chaps who are putting on the tail unit. You'll have to be careful, though. The rivets that hold those spring clips on the tail get to be as brittle as icicles at this temperature . . .

Well, that took quite a while. We find that it usually requires from ten to fifteen minutes to fuze a bomb at sub-zero temperatures — about twice as long as the same operation takes at normal temperatures. However, it's done now; so let's go to the aircraft and get the load aboard.

LOADING THE BOMBS

This is the loading area — and here comes the aircraft. We'll load the bombs on while the air-crew go back to the mess for an early lunch. The truck towing the energizer is following the aircraft, so we can start right away. The energizer is a mobile electric power plant which serves two purposes in this part of the world. First, it's a source of power to run the winch drive motors, and secondly, we use it to start the aircraft engine. As soon as the aircraft starts, the bomb aimer will fire all the carriers as a last minute check before they're dropped to be placed on the bombs. After that, those two fellows over there will go inside with the bomb winch and electric drive motor and the cable from the energizer. And a wicked job it



Bomb-hauling with snowmobile.

is — lugging that winch and a hundred feet of cable through a bomber fuselage.

Everything set? Careful you don't get your signals crossed with the boys inside when they drop the carriers! Now, let's get the trolley underneath into position. Come on, chaps! It takes more than three men to move this weight around in the snow.

Now on with the carriers. Don't take your mitts off. Let one of the lads with gloves position the fuzing unit and fit the fuzing wires.— Okay: hook the cable on and start hoisting.

Blast it! The winch drive motor has gone and seized up. Somebody made a mistake and brought one that wasn't winterized. Send the truck back and get the other — and make it snappy! It's too cold to stand around here doing nothing.

That's an example for you of what happens if your equipment isn't winterized. That winch motor won't budge with a load on at this temperature. For cold weather operations we lubricate these motors with ANG-25 grease — known to the R.C.A.F. as Grease, Low Temperature General, 34A/192.

— Ah, here we are! Let's get the job finished. I'm hungry as the devil — and I guess you are too. How's that other motor? Good. Another twenty minutes and we'll be through — just in time for the aircrew.

Then we can go and eat.

"WHITEOUT"

"Whiteout" is a common polar phenomenon. To a lesser degree it may occur in any snow-covered terrain. This deceptive "milkiness" has caused experienced pilots to think that they had plenty of altitude and inadvertently to make contact with the ground, with the usual results. Be on the lookout for this condition where the sky and land blend together. When it is even suspected, go on instruments.

(*"Flying Safety": U.S.A.F.*)

ROYAL CANADIAN AIR FORCE Association

(All Association material, including changes of address, etc., should be directed to: The Secretary, R.C.A.F. Association, 424 Metcalfe St., Ottawa, Ont. This does not, of course, apply to "Letters to the Editor".)

HONORARY PATRON

Her Royal Highness the Princess Elizabeth has signified her pleasure in accepting appointment as Honorary Patron of the Royal Canadian Air Force Association. His Excellency the Governor-General, Viscount Alexander of Tunis, is the Grand Patron, and Air Chief Marshal L. S. Breadner the Grand President.

NATIONAL COUNCIL MEETING

A proposal that the National Convention be suspended for 1952 in favour of regional Group Meetings was voted down at a National Executive Council meeting in December. Chief reason for the decision was that the Council felt this was a question for the Convention itself to decide.

The Third National Convention will take place in Ottawa on May 22nd and 23rd, provided that proper arrangements can be made. Group meetings were to be held before March 10th, to permit a committee to study resolutions.

As was to be expected, the main topic of discussion was Wing accommodation. A special committee on the subject was appointed, as well as a committee to consider broadening the basis of membership in the Association.

The Hon. Brooke Claxton, Minister of National Defence, conferred informally with delegates at the closing session. Air Marshal W. A. Curtis, Chief of the Air Staff, also gave an off-the-record address at a dinner at the end of the first day's session in the A.F.H.Q. Officers' Mess. A number of other high-ranking Air Force officers were guests.

All Groups were represented, and many gave encouraging reports of progress since the last national meeting.

"KOREA NIGHT" AT OTTAWA

Wing Commander J. K. F. MacDonald, D.F.C., O.C. of No. 426 Squadron, which is carrying out the Korean airlift, spoke to the Ottawa Wing, and

Ottawa Wing executive at Beaver Barracks. Seated (l. to r.): J. G. Holley, president; P. Frame, 1st vice-president. Standing (l. to r.): Miss L. Smith, secretary; Miss I. McNally, ass't sec'y; Miss V. Barrow, 2nd vice-president.

Wing Cdr. J. K. F. MacDonald giving his address at Beaver Barracks.

his factual presentation of the outstanding accomplishments of his Squadron received considerable public attention. The evening was completed by the showing of two films on Korea, one dealing with Canadian Army's and the other with The Canadian Navy's part of the campaign. A delegation from the Montgomery Branch of the Canadian Legion was present in the first of what are planned to be inter-Legion-and-R.C.A.F. exchange visits.

ONE FOR THE BOOK

Lethbridge Wing surprised even its members in their initial attempt to obtain public support for "Operation Library." A Saturday morning matinée was put on in two Lethbridge theatres, to which admission was one pocket-book publication. Prizes were to be given to the child bringing the largest number of books. Over 15,000 were collected. One child brought more than 800, and two others more than 400 each. The R.C.A.F. is making arrangements to have the books taken to the U.K., where they are destined for No. 1 Fighter Wing.

PUBLIC RELATIONS AWARD

The second Public Relations Award has been won by John A. Hill, a member-at-large, of Welland, Ontario. The award goes for his letter which appeared in the December issue of "The Roundel," headed "A WORD OF CRITICISM." Mr. Hill's letter suggested, among other things, that the Association section be dropped from this magazine and that "Wing At Home" be sent to every member. The answer is, however, that it would neither be good timing nor is it possible to do this just at present. To justify this broad reply would require detailed examination of certain pertinent facts about the publication situation as it now stands. Mr. Hill's letter raises other very interesting points, on some of which we agree with him and on others of which we don't. It deserves a more detailed reply, but whether we shall give such a reply by devoting a complete Association Section of "The Roundel" to it, or by writing a letter to the Editor, remains to be determined. Meanwhile, we thank Mr. Hill for his criticism, and will at all times welcome similar criticism from other members.

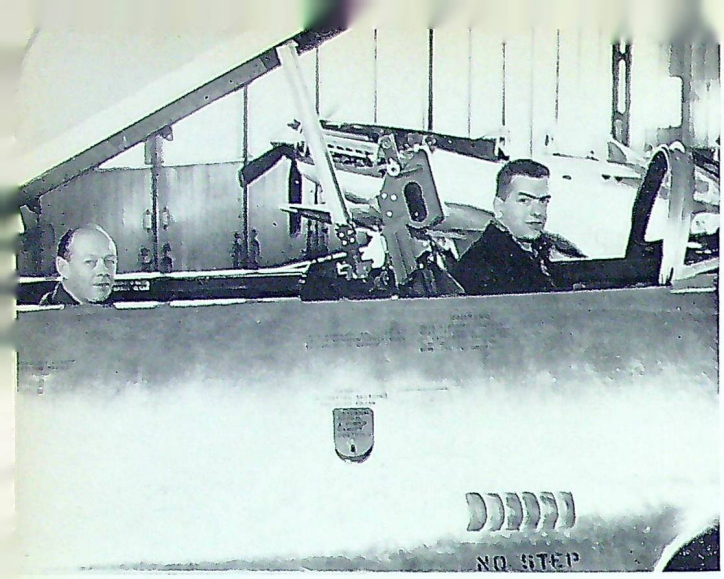
ON THE UP-AND-UP

Like everyone else, we are suffering from the rise in prices. When our new stock of tartan ties came in, we were charged an additional 15 cents per tie. Our only recourse is (and how familiar that sounds!) to toss it back to the consumer. So in future the price of tartan ties will be $1.25.

"REFRESHER COURSE"

Early in December, Cornwall and Brockville Wings paid a visit to the R.C.A.F. Stations at Uplands and Rockcliffe as sort of a "refresher" course in the R.C.A.F.

No. 439 Squadron was trying out its Sabre jets for the first time, and the O.C., Squadron Leader D. Bricker, D.F.C., dipped twice over the Uplands Mess in honour of the visitors. The Station guests had a fine time climbing over and into jets and other aircraft. They also had it explained to them how a modern post-war Station operates.



Carl Donihee (left) and Laurie Welch, of No. 424 (Cornwall) Wing, in T-33 jet trainer during the Wing's visit to R.C.A.F. Station Uplands.

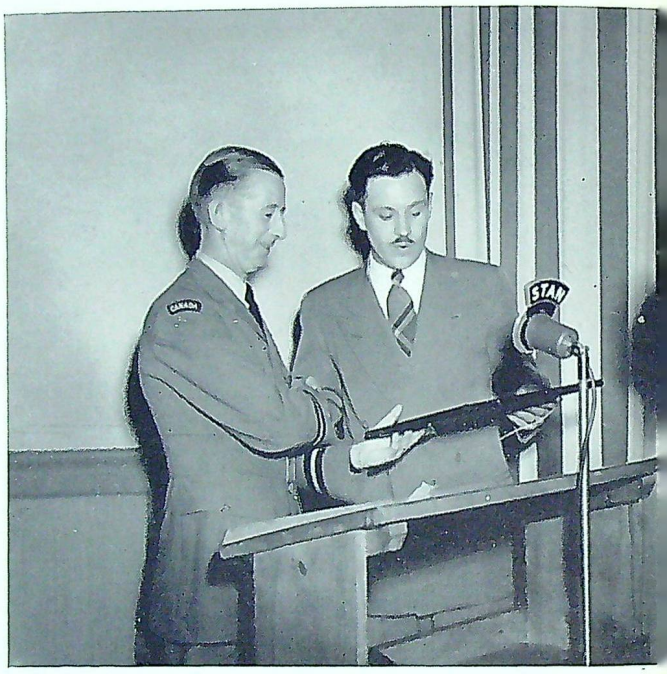
At Rockcliffe, they were conducted to all parts of the Station. They saw the Experimental Establishment, the Photographic Establishment, as well as the famous "Ice-Wagon."

After a full day, which was made the pleasanter by almost perfect weather, the two Wings sat down to a chicken supper. During the meal, music was provided by an orchestral section of the R.C.A.F. Central Band.

Led by President John Shotter, thirty-five members of the Brockville Wing came by bus. Headed by President V. M. Webster, members of the Cornwall Wing, many of whom were accompanied by their wives, came in private vehicles. The general consensus at the end of the visit was: "Let's do it again — and soon."

FIRST "NEWFIE" CHAPTER

Air Vice-Marshal A. L. Morfee, C.B., C.B.E., the National President, visited Newfoundland to present the charter to No. 150 (Atlantic) Wing in



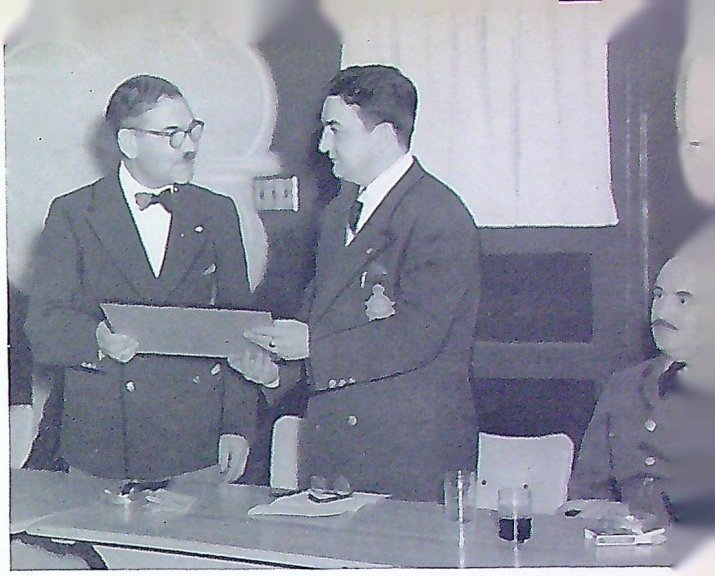
Air Vice-Marshal F. G. Wait, C.B.E., presents Charter to No. 252 Wing's President Paul Burden.

No. 252 (Fredericton) Wing lays a wreath at Cenotaph on Armistice Day.

St. John's. He made the presentation to Robert J. Grouchy, president. Atlantic is the first Wing to receive a charter in Newfoundland.

OPERATION RECRUITING

Arrangements were made with the R.C.A.F. to have Wing "Information Centres" for recruiting listed in R.C.A.F. local daily newspaper advertising. A.F.H.Q. has also approved the wearing of uniforms by members of Recruiting Counsellor Committees while they are engaged on recruiting duties. National Headquarters obtained copies of "It's Your Air Force," with the intention of sending a copy to all members as a handy pocket reference. The detailed return previously asked from Wings was discontinued in favour of a much simpler form.



Air Vice-Marshal A. L. Morfee presents Charter to President R. J. Grouchy, of No. 150 Wing. Seated at right: Air Cdre. A. D. Ross, G.C., C.B.E.

PADRE'S RETURN

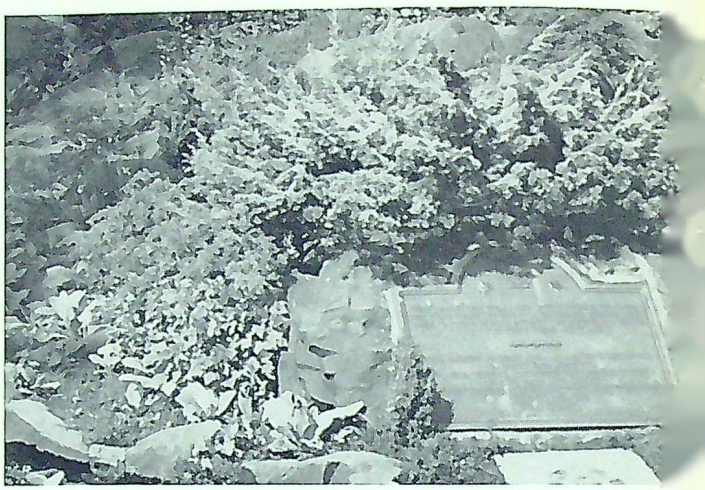
Flt. Lt. Donald Carlson is invested by Group Capt. R. M. Frayne, Director of Religious Administration (Prot.), with the R.C.A.F. Chaplain's Scarf at the Induction Service held at R.C.A.F. Station Winnipeg. Assisting in the ceremonies are Wing Cdr. F. W. MacLean, Command Chaplain (Prot.) of Training Command, and (on extreme right) Sqn. Ldr. L. C. Scott, Group Chaplain, No. 14 Training Group. Flt. Lt. Carlson, who has been the Minister of the Tabernacle Baptist Church in Winnipeg for the past six years, served in Canada and overseas as an R.C.A.F. padre from 1941 to 1945.

The Air Forces Garden of Remembrance

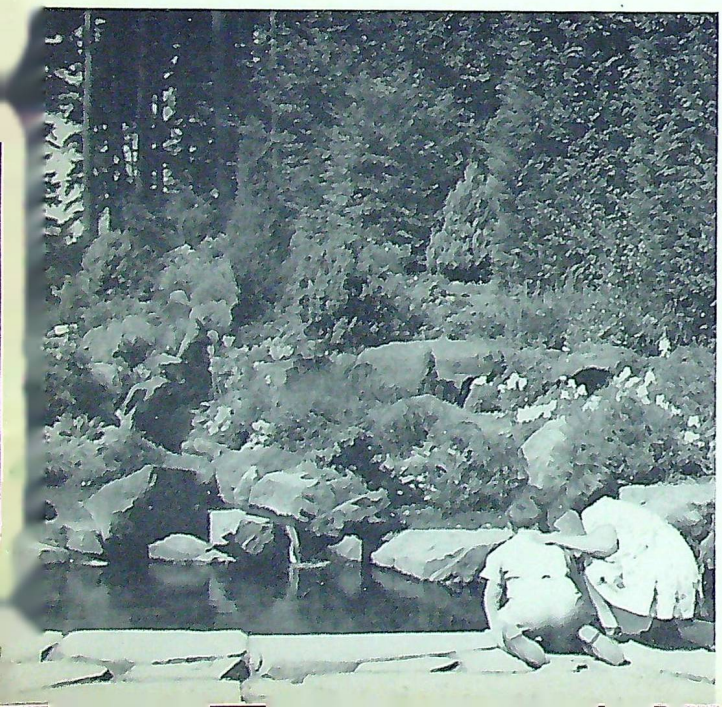
By Sgt. D. J. Blain, Canadian Joint Air Training Centre

THROUGH THE GOLDEN BEAUTY of an August morning in Vancouver's Stanley Park I came to a scene of exquisite loveliness. A massive log of native B.C. fir, dressed and polished smooth on one face, bore the simply-carven legend, "GARDEN OF REMEMBRANCE".

In a small natural basin backed by towering pines, a rock-garden has been built with skill and care to blend perfectly with its beautiful setting. The garden itself surrounds a small pool of clear water fed by a little stream which chatters musically down from among the pines. Tall and graceful cedars flank each side of the pool. The air here is heavy with the scent of lilies and the fragrance of many sweet-smelling garden flowers, and shot through with the aromatic tang of pine and cedar.



Set into a bank above the little pool are three plaques in remembrance of members of the Air Forces of Canada, Australia, and New Zealand, who died in the Second World War. The Canadian plaque is of bronze, bearing a simple text of commemoration to the fallen members of the R.C.A.F., and beneath the text is a brief inscription to the effect that it and the garden in which it is placed are the work of the Women's Auxiliary of the Air Force of Vancouver. The Australian plaque is of some soft, weathered, grey stone, bearing the crest of the R.A.A.F. The New Zealand plaque is of highly polished silver grey granite, and on it is the R.N.Z.A.F. crest.



As I stood among the flowers and shrubs and listened to the whisper of the wind in the tall trees and the music of the little brook, I saw two children come up and play beside the pool.

Seeing them, I knew with utter certainty that those for whom this place was made would be more than happy with the manner of their remembrance. Each had fought for what was, in his own heart, his conception of freedom; and none, seeing the freedom of children to enjoy in safety the beauty of trees, flowers, and running water on a summer morning, would count himself defeated.

General Vandenberg on the Far East

*(On 21 November 1951, General Hoyt S. Vandenberg, Chief of Staff of the U.S.A.F., held a press conference at which he acquainted representatives of the American press "with certain ideas and observations growing out of his recent trip to the Far East." The excerpts published below cover those parts of his talk which we believe are most likely to interest our readers.—*EDITOR)

INTRODUCTION

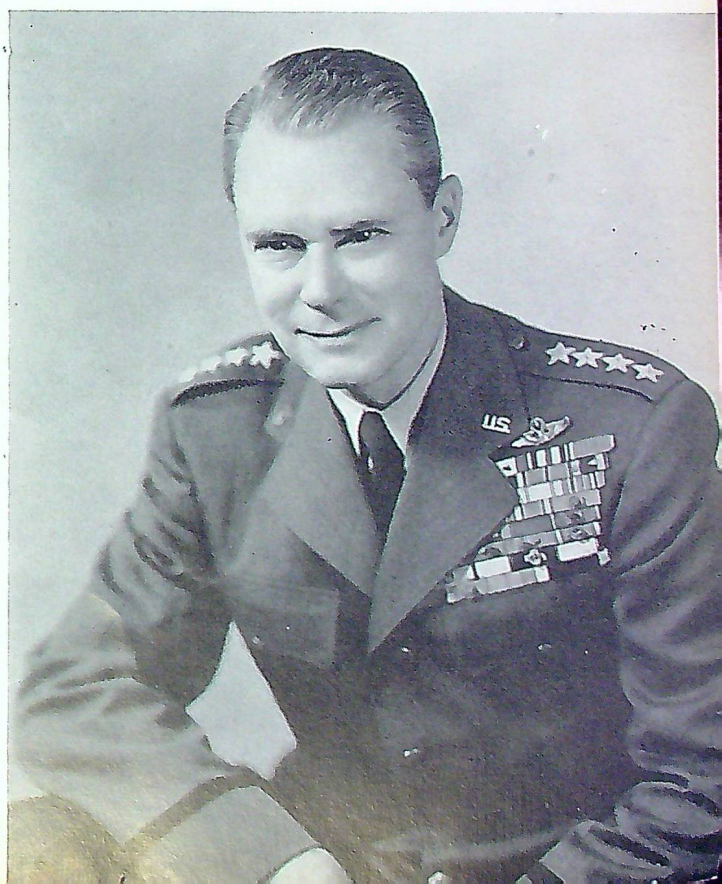
WHAT I HAVE TO SAY is in no way related to to the truce negotiations now continuing in Korea. All that I am concerned with are certain developments arising out of the air situation in Korea that relate to the question of air power generally, and the lessons and warnings that these developments hold for us in the future.

In recent months . . . the air power available to the Chinese forces operating in Korea has been rapidly expanded. The Soviet-built MIG jet fighter, which until last summer had intervened in the battle only sporadically along the Yalu River approaches, has lately been striking deeper and more boldly into the air battle-zone. The significance of this development should not be underestimated. Almost overnight China has become one of the major air powers of the world.

Now the first fact to note is that as regards the air situation in Korea, a significant and, by some standards, even sinister change has occurred. For example, on my last visit to Korea in the spring, it was possible for me to fly almost to the Yalu in an unarmed C-47 transport, without once sighting an enemy aircraft. But I would not want to repeat that flight today. The Chinese Communist Air Force is now operating in greater numbers and with more aggressiveness below the Yalu. Our control of the air in North-West Korea, although by no means lost, is not as firm as it was.

The second point that I would like to discuss, again by way of preface, is the unusual and indeed unique limitation governing the scope of the air war. Many people, I am told, are puzzled by newspaper accounts of the air battles now going on. They read of almost daily engagements, involving scores of jet aircraft on both sides, in which only a few aircraft are shot down. These relatively small losses have caused some to question the decisiveness of air battles.

General Hoyt. S. Vandenberg.




MANCHURIA
JAPAN SEA
YELLOW SEA
KOREA
Yalu River
Manpojin
Changjin
Kanggye
Chosin Reservoir
Kilchu
Songjin
Koto
Sasuri
Pyorhari
Hamhung
ANTUNG
Sinuiju
Masan-ni
Chongchon River
Tokchon
HUNGNAM
YONPO
Sonchon
Anju
Sinanju
Sukchon
WONSAN
PYONGYANG
Taedong River
Chinnampo
Pyonggang
Sariwon
Chorwon
Imjin River
Sinmak
Hwachon
Chunchon
Kangnung
Kaesong
Munsan
SEOUL
Han River
Yangpyong
Wonju
INCHON
Suwon
Chungju
Pyongtaek
Chipyong
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Nam River
Somjin River
PUSAN

Now it is an axiom of air warfare that air combat — that is, battles between airplanes — is one of the least effective applications of air power. The surest and most economical way of establishing air supremacy is to shatter an enemy air force on the ground — to destroy systematically the bases from which his aircraft operate, together with the ground facilities that make it possible for them to operate, and the factories that provide a flow of replacements for his air force in being.

Under the ground rules established at the outset of the Korean war, it is impossible for us to gain air supremacy over the Chinese Communist Air Force under the classical definition. We, on our side, for reasons that we all understand, have followed a policy of not attacking the strongholds of enemy air power directly across the Yalu. And the enemy, for his part, for reasons best known to himself, has so far refrained from attacking our air bases. Given these circumstances, anything like a final decision in the air in the form of true supremacy has been manifestly impossible. The air war over Korea so far has been . . . a war in which the blows that might lead to a decision have been withheld. But . . . without detracting in any way from the accomplishments of our ground forces, it can be said that had it not been for our dominant position in the air we would almost certainly have been driven out of Korea long ago.

Equally important, the Chinese Communist enemy seems at last to have been aroused to the terrible disadvantage accruing to him as a result of his tardy development of air power. The rapid build-up of his air force represents, I am convinced, a massive effort on his part to overcome our present air superiority, and . . . so break the stalemate on the ground.

During the first months of the war the enemy was able to move supplies to the front at night in comparative freedom. But in recent months we have developed a system of radar-controlled attacks that has severely disrupted his logistics — his railways, his truck movements. Moreover, our fighter-bombers, ranging far behind his lines, have carried on this attack relentlessly through the daylight hours.

Partly in consequence of this air campaign of interdiction . . . a condition of balance or equilibrium was finally established during the summer between U.S. fire power plus air power, and numerically superior Chinese manpower. For the past few months the ground battle-line has changed only slightly, while our air attacks have pounded the Communist armies steadily. The Communist force has been . . . obliged to absorb heavy punishment from the air and could not retaliate. This was a losing proposition for the Communists. They could only (a) negotiate for an armistice, or (b) strike back at our air power with air power of their own. As is now plain, they undertook to do both at once.

There is only one valid conclusion, it seems to me, to be drawn from this development. The Communist leaders, whether of China or the Soviet Union, have shown themselves to be cold-blooded realists in the conduct of warfare. They are not inclined to display much concern over the spilling of the blood of their troops, but their concern for military equipment is another matter. They can be extremely frugal with that.

As I will show in a moment, our air attacks have destroyed and are continuing to destroy really large quantities of their equipment, particularly rolling stock, both rail and truck. It is quite possible that these losses are taxing the entire communist system more than is generally realized. And therefore, while it may serve overall Communist strategy to keep us engaged on the Korean peninsula, the continuing loss of valuable Soviet and Chinese equipment may make a continuation of the war less than attractive to them. Hence, much depends upon our ability to meet this new challenge in the air.

THE INTERDICTION EFFORT

I should like to discuss briefly the activities that provoked the challenge — namely "Operation Strangle".

"Operation Strangle" is the name we gave to an air interdiction campaign that we began in August. Interdiction is an application of air power that was developed during the last war. It is simply

the means by which, through air action, we prevent or delay the movement of enemy reinforcements and supplies. However, there is an important difference between the purpose of interdiction as developed during World War II and the job we are now doing in Korea.

In Europe the interdiction campaign was related to the forward motion of the Allied ground armies. Air attacks behind the German armies in combination with the forward surge of our own ground forces caught German armies in a deadly trap.

In Korea, on the other hand, since the front has been stabilized, the function of interdiction is to prevent a major offensive by enemy ground forces. We are able by air actions to delay the movement of enemy materiel and personnel to the front. But our ground forces in the present stalemate on the ground are not just at this moment (for good reason) attempting to capitalize on these delays. It is scarcely possible to bring about a complete collapse of the Chinese army by such a process of delay.

It is possible, however, to do two very important things: first, to reduce the flow of enemy supplies and reinforcements below the quantity that would be required for a sustained offensive; second, to continue to inflict heavy losses on the enemy's rail and highway transport equipment and also destroy a significant quantity of the material he is transporting to the front.

We have made it very expensive to the enemy merely to maintain his army in position. At present our B-29's, which are usually called strategic bombers, are used entirely on interdiction targets. Their principal task is to knock out the main bridges and keep them out. In addition to attacks with weapons, they drop tons of propaganda leaflets over enemy territory each month.

Our F-84 fighter-bombers are employed principally during daylight on sections of the key railroad lines. U.N. aircraft have averaged well over 50 rail-cuts daily — that is, the track cratered, ties and rails torn up, and traffic compelled to wait for repairs or to reload every few miles.

This operation has forced the Communists to resort to desperate repair efforts and to work their crews in some cases even while under attack. The destruction of steel rails has forced him to cannibalize his less important track in an attempt to maintain his main supply routes. The B-26's fly at night over the highways, attacking the truck traffic that the Communists have developed into a huge enterprise to compensate for the loss of the railroads.

Our night attacks have been increasing steadily.

Operation strangle . . . was carefully planned and executed to exploit the dependance of the Chinese upon supplies from China and Russia brought to the front by road and rail. Last August . . . the Chinese had more than 50 divisions in the front lines, requiring the daily movement of more than 5000 vehicles and more than 100 box cars. In view of the great amount of rolling stock employed by the enemy, it is not surprising that our sustained round-the-clock attacks were able to destroy scores of locomotives and hundreds of railroad cars during the months of September and October. And of the thousands of trucks which the enemy was forced to operate, we were able to average better than 180 destroyed every 24 hours.

We have not been able to inflict such destruction upon the enemy without some cost to ourselves. During the three months of Operation Strangle, August through October, we have lost a total of 146 aircraft, while 178 airmen were listed as killed, wounded, or missing during that period. Our air losses . . . so far have been suprisingly small in comparison with the results achieved.

Let us now examine the geography of Operation Strangle. You will observe on the map that the most direct and economical route through North Korea runs from the Yalu down toward Seoul. Down the western corridor the enemy has two and in some places three railroads at his disposal. It is along these routes that most of his supply effort has been concentrated. Here, our attacking planes have found the greatest number of targets.

There is another rail line down the east coast through Hungnam to Wonsan. Most of this line is within range of naval gun-fire, and an effective

combination of naval, air, and surface forces has greatly restricted its use by the enemy.

Most of the rail lines in Korea are paralleled by roads. The enemy has developed also a system of secondary roads for his truck traffic. As the attacks on the enemy rail system became more constant, the Communists turned to road transportation, which is slower and more costly. The scale of his trucking effort may be judged from the fact that our aircraft sighted a total of more than 75,000 vehicles in October. The nightly count has sometimes been as high as 5000. For the last hundred miles of his supply system, the enemy is dependent entirely on movement by truck rather than by rail, as a result of the destruction of rail facilities south of Pyongyang.

I should mention also that there has been a tremendous concentration of anti-aircraft installations along the main supply routes. In short, the enemy has been obliged to commit more and more of his military strength and equipment of all types in order to move a minimum of supplies to his armies at the front.

An important feature of Operation Strangle is its carefully planned regularity and the continuous pressure which it maintains. As you know, air attacks have been compared to the cavalry raids of the Civil War, which often disrupted supply lines but only for brief periods. It was learned then that wars cannot be won merely by occasional hit-and-run strikes behind enemy lines, and this was all that cavalry forces could accomplish. Air power, however, because of its speed and flexibility, is capable of returning to the attack day after day and hour after hour.

MIG BUILD-UP

The enemy's answer to Operation Strangle . . . is as obvious as it was inevitable. He has accelerated the build-up of the Chinese Air Force and has committed that Air Force on an ever-increasing scale deeper and deeper into North Korea.

To be sure, our Air Force was in action against the MIG's since as early as November 1950, about the time of the direct intervention of the Chinese Communists. These first jet-to-jet engagements were fought almost entirely over the valley of the Yalu, which became known as MIG Alley. At this stage, with the object of slowing up the inflow of Chinese troops into Korea, we were pressing our interdiction attack all the way to the Yalu. Several of our prime targets were near Sinuiju on the Korean side of the river across from the MIG base at Antung. In this area the MIG's obviously held a considerable tactical advantage, for they could rise in full strength to meet our airplanes as we approached, often with half our fuel already consumed.

Now, these early MIG engagements developed a curious and interesting pattern. The MIG's seldom ventured far away from their Manchurian bases. It appeared that this pattern of MIG activity might continue indefinitely and that our airplanes over North Korea would be subject to attack only in that small area where the MIG's held this tactical advantage. It was obvious that these attacks, rather than being an early challenge to our air supremacy, were aimed at testing and perfecting tactics and perhaps training new pilots. The systematic build-up of the Chinese Air Force during this period was well known to us. But the force was not committed in strength until September of this year after Operation Strangle began to take its toll.

Now a word about the size of the Chinese Communist Air Force. We know that they have deployed in North China and Manchuria more than 1400 planes of which about one-half are MIG-15's. It is also known that about one-half the MIG-15's are positioned just beyond the Yalu and that there is a rotation of units in and out of this area. The number of sightings of MIG's during the summer was running between 300 and 400 a month. Then, in September, the number leaped to 1400, and then in October to 3000, an 800 per cent increase over the summer average. The November sightings are running ahead of the October rate.

Obviously this new and heavy concentration of MIG's in a small section of North Korea interfered to some extent with our interdiction campaign in that area. On several occasions F-84's attacking the railroad between Sinuiju and

Sinanju were forced to jettison their bombs in order to defend themselves against MIG attacks. It became necessary for us to devote a higher percentage of our total air effort to counter these MIG attacks. Correspondingly, our logical answer to this was to decrease our interdiction effort in the extreme north-west, while increasing our counter-MIG operations in that area, and concentrating the weight of the interdiction in the area south of the Changchon river. While this change reduced the effectiveness of our interdiction campaign somewhat by narrowing our choice of targets, its principal result was to intensify the air attack in the middle section. The punishment of Communist transportation vehicles continued unabated.

Now I want to mention again the great advantage to be derived from fighting almost within sight of your own bases against attackers who must approach from some distance. At the present time it is possible for the Communist 'planes to rise in full strength to meet our formation approaching the Yalu from the south. But when our missions do not extend beyond the Changchon river, the enemy must depend for his defense on MIG's that happen already to be in the air. If he can establish new bases near the Changchon, he will be able to advance nearly a hundred miles some of the tactical advantage he now enjoys at the Yalu. This is precisely what he has been attempting to do during the past two months.

There are close to 100 potentially useful airfields in North Korea available to the Chinese Communist Air Force. For months we have had these under constant observation and some of them under attack. Despite our attacks the communists have tried to keep some of these airfields in repair. In September of this year it was discovered that three particularly large airfields—Taechon, Namsi, and Saamchan— were being expanded and improved with amazing speed.

It was obvious from their dimensions that they were intended for jet use. And since they were all located within a twenty-mile radius it was apparent that a concentrated defense of these fields by the enemy would be possible. Moreover, during the course of the construction the enemy moved in strong anti-aircraft defenses, providing further evidence of his determination to make a heavy investment in that area. The speed with which these airfields were developed during the month of September indicated the urgency which was attached to the project. During the third week of October our bombers attacked two of these airfields in quick succession. Although anti-aircraft fire was intense and we lost one bomber, we did not encounter fighters in great numbers.

Then on the 23rd of October we struck at the last, Namsi, and here we met with violent and desperate action on the part of the enemy. The MIG attacks were pressed home more determinedly than ever before. Some enemy 'planes passed directly through our bomber formations. Nearly 150 MIG's were thrown into the fight, which lasted approximately half an hour. Although we destroyed 3 MIG's, probably destroyed one more, and damaged an additional 8, we ourselves suffered our heaviest loss of any single action of the Korean War. Because this was a small bomber formation and because our escorting fighters were heavily outnumbered, 3 bombers were shot down while the remaining 5 sustained some damage. Despite the unprecedented strength and severity of the MIG attack, the mission was completed.

This fight marked the beginning of a week of violent air battles. For 7 straight days our formations in North Korea encountered flights of 100 MIG's or more. By the end of the week we had counted 12 MIG's destroyed, 4 more MIG's probably destroyed, and 28 additional MIG's damaged. In addition to those lost in the first day's battle, we lost during the week 2 medium bombers and suffered damage to 3 more. We also lost 4 fighters and had two others damaged.

Shortly after the B-29 attack already discussed, a B-29 formation returned to the same area and succeeded in destroying an important bridge target. On this occasion, we had many more 'planes in the area and no bombers were lost. In view of extremely heavy defense of the area between the Yalu and the Changchon, and because there were no targets in North Korea of sufficient size to justify medium bomber formations of an optimum size for defense, it was decided to

shift our medium bomber effort to individual attacks, principally at night. Those single attacks have proved effective, and so far the enemy has been unable to repair and use the three critical airfields.

The real significance of the present struggle for air supremacy in Northern Korea . . . is not to be measured in terms of aircraft shot down; it will be determined by whether we or the enemy dominate the air space over this critical area. In other words, the air space roughly between the Changchon and Pyongyang in which we had previously been able to operate unhindered is now a "no man's air" and has become the area of decision in the Korean air war. Unmistakably the enemy is intensifying his efforts in the air despite his forced acceptance of a stalemate on the ground. And we must expect that, if he wins in the air, the stalemate on the ground is not likely to continue. Not only are more and more MIG s being thrown into the battle, but the MIG airplane itself has been improved in recent months and there is an obvious intention on the part of the enemy to train a large number of pilots by rotating new units into air combat.

The MIG airplane, upon the design and production of which the Russians concentrated ever since World War II, is a superior fighter. In some respects it can out-perform our own F-86 — the only airplane in production to-day capable of challenging the MIG on approximately even terms. The MIG is a lighter and faster airplane of somewhat shorter range. It has outclimbed the best airplanes that have been tested against it. It has performed in combat at extremely high altitudes — altitudes approaching 50,000 feet.

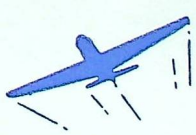
What is momentarily discouraging about the performance of the MIG is its demonstrated ability to operate at speeds in excess of the speed of sound. The high quality of the MIG alone should prove a timely warning to all of us that Soviet technicians have mastered the design and production problems of extremely high-speed aircraft to a degree which equals all that we are able to demonstrate in warfare at the present time. They too have broken into the super-sonic speed range and they already have large numbers of military aircraft capable of supersonic flight. Fortunately for us at this moment, there is more to war than mere technical achievements. The training and skill of our pilots and crews are definitely superior to that of the enemy. Their aggressive fighting spirit and their unfailing skill in performance have outweighed the numerical odds against them.

The question arises: For what must we now prepare?

One fact is reasonably certain: if the war goes on, and if the enemy is able to continue to increase his air effort at the present rate or even to maintain it at the present level, we are clearly in for a hard and bitter fight in the air. Of the final outcome I have no doubt. We too are continuing to increase our air investment in this war and I know that if still more is needed, a way will be found to supply it. In the meantime we must continue to depend upon the superior ability and determination of the fighting airmen of the Far East Air Force.

Russian propaganda has boasted loudly of Soviet achievements in air power. Public celebrations and displays within Russia have demonstrated the overriding importance which the Soviet government and the Soviet people attach to emphasis upon the building of Russian air power. Now in Korea there have been disclosed to us the fruits of this concentrated and intense effort. It holds a sobering lesson for all of us. That lesson is a simple one.

It is that not even the most powerful industrial nation on earth nor the people with the highest technical gifts can expect to maintain, without continued strenuous exertions, their advantages against the powerful drive of a supposedly backward nation determined to overcome these handicaps regardless of cost and sacrifice.



The ROYAL CANADIAN AIR CADETS

By Arthur Macdonald, Air Cadet League of Canada

Once or twice a year we turn for material for this column to our press-clipping service at League Headquarters. This service covers every daily newspaper in Canada, some of the weekly papers, and a large number of miscellaneous publications as well.

Newspaper clippings play a very important rôle in the operation of League Headquarters. They help to keep us up-to-date on what is happening in more than 200 Air Cadet squadrons throughout Canada, they give us an accurate reading on the effectiveness of our various promotional campaigns, and very often they are the source of new and interesting ideas which can be more widely disseminated for the benefit of all squadrons.

The items used in this column have all appeared in Canadian newspapers during the past few months. We print them here because they are interesting and because they give a picture of the Air Cadet League working at its most important level — that of the local squadron.

* * *

The first item is from the "Thorold News" and concerns the award of flying scholarships:

"B. G. Grosse, Air Cadet Chairman of the Linwell High School Board, announced three new Air Cadet Flying Training Scholarships at Commencement Exercise last week. One was presented by James Kernahan, to be known as the 'William Patrick Flying Training Scholarship'; another by John Allen, to be known as the 'William John Allen Flying Training Scholarship'; and a third by B. J. Grosse, to be known as the 'B. J. Grosse Flying Training Scholarship'. This brings the number of these scholarships to four, as the Air Cadet League presents one annually.

"With more than fifty Cadets looking for a means to further their flying training, the Air Cadet Committee will more than appreciate any public-spirited citizen's contribution of one of these scholarships. They are each for $100."

* * *

News of another award comes from the "Calgary Albertan" and its concerns the prize-winning No. 187 Squadron at High River:

"At a Rotarian banquet in High River attended by 200 guests, A/V/M Ken Guthrie of Edmonton presented the High River Air Cadets' 187 Squadron with the 'Guthrie Air Cadet Efficiency Trophy and Shield' as the best Air Cadet Squadron in western Canada.

"Art Moore, president of the Rotarians, was chairman of the meeting. Air Cadets who received their wings from A/V/M Guthrie were Bruce Anderson, Jim Heywood, Glen Johnson, Bruce Miles, Murray Morrison, and Kenneth Taylor.

"Mayor Ross Ellis, in congratulating the cadets, said, 'I have a threefold honour. To congratulate the cadets, to felicitate the parents, and to emphasize the honour you have brought upon yourselves, your town, and your future.'

"A/V/M Guthrie, having presented the coveted award and shield to Gordon Harper, stated, 'The High River Air Cadets are the top squadron in western Canada and were in tough competition with units extending from the Lakehead to the Pacific Coast'. He paid compliment to Rotarians, pointing out the responsibilities of citizenship to the cadets and stressed the fact we are living in the richest part of the whole world."

* * *

This might seem like a rather strange time to be writing about football, but the following story from the "Montreal Star" has just come to our attention:

"A. Ross Grafton, Chairman of the Quebec Provincial Committee, the Air Cadet League of Canada, writes regarding Saturday's football game at Molson Stadium between Royal Military College of Kingston and McGill Intermediates:

" 'We have been asked by Wing Commander Stuart, the Officer in charge of sports at the Royal Military College, Kingston, to provide a rooting or cheering section for their team here Saturday afternoon. There will be several hundred Montreal Air Cadets present.

" 'They have been coached in the R.M.C. yells by one of the McGill cheer-leaders and should provide at least vocal colour.

Cadets of No. 21 (Mount Royal) Squadron arrive at Rockcliffe to spend a day in Ottawa as guests of No. 51 (Optimist) Squadron.

In addition, the Air Cadet Band from the Chômedy de Maisonneuve Squadron will be in attendance to liven up the half-time period.

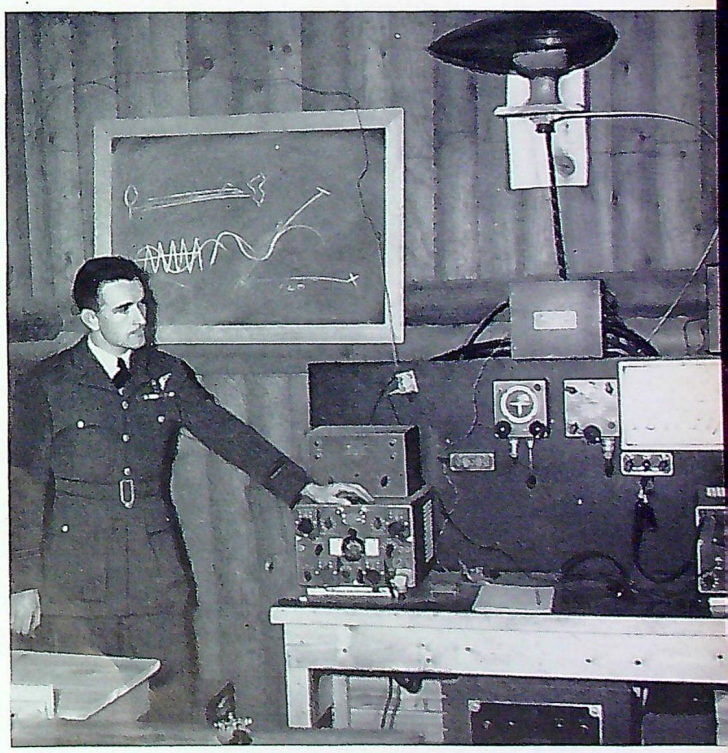
" 'It is rather unusual that one college should be coaching the rooting section for their opponent but McGill has very generously volunteered to do this for us.' "

* * *

The Air Cadet exchange visits programme, which has been thoroughly covered by this department, also seems to work well at local level. Here's what the Saint John "Evening Times Globe" has to say about a visit made by No. 161 Squadron to Moncton:

"The Moncton trip will be held on Saturday, December 3rd, when members of the local squadron will be guests of the Moncton Air Cadets. During the visit an inter-squadron competition will be held, including a basketball game and a marksmanship competition. Following the competitions, the Moncton cadets have arranged a dance and refreshments for the visitors. In addition to the competitions and entertainment programme, the Saint John cadets will visit the quarters of the Moncton cadets and inspect their training facilities and some will make a tour of the city before returning to Saint John in the evening.

"Squadron Leader J. A. Bardsley, officer commanding the Saint John Air Cadet Squadron, in making the announcement last night stated that plans were already under way to entertain the Moncton cadets, who would be invited to Saint John.



Flt. Lt. E. M. Baker, C.O. of No. 243 Sqn., Kelowna, B.C., and the "ham" radio station operated by his cadets. (Photo taken by No. 243's photographic section.)

The Air Cadet band, composed of cadets from Nos. 84 and 85 Squadrons, which played in the Port Arthur Arena Rink during the visit of Princess Elizabeth and the Duke of Edinburgh.

No date for the return visit has been decided upon as yet, but he thought it would take place sometime in January."

* * *

From the "Chilliwack Progress" we have picked up a brief report of a special meeting held to interest parents in the work of Air Cadets. It goes like this:

"Flight Lieutenant Spruston, New Westminster, spoke to the Parents' Auxiliary of the Air Force Cadets Tuesday at the drill hall. He explained the system of marks and benefits the cadets received from their training.

"The Auxiliary decided to hold a party and social evening for the parents and children to interest more people in the importance of a better understanding of cadet activities."

* * *

A heart-warming little story from the "Calgary Herald" tells of the part played by Air Cadets in the Kinsmen Club's annual Christmas seals campaign:

"About 60 Air Cadets from No. 538 Buffalo Squadron turned out Monday evening in the Al Azhar Temple to take part in the Kinsmen Club's annual 'stuffing bee' to prepare T.B. Christmas seals for mailing to homes in Calgary and district. A group of boys is pictured above at one of the long tables, busily inserting Christmas Seals and enclosures into envelopes. The seals will be mailed Saturday to over 58,000 homes in and around Calgary so that they will be received Monday."

Somewhat in the same vein is the following yarn which appeared in the "Welland Tribune:"

"Seventy Air Cadets of the Lynton Davies Squadron were on parade at Tuesday's meeting in the Cadet building on Fielden avenue. Lectures were given in airmanship, armament, photography and first aid.

"The cadets were unanimous in their decision to give Christmas gifts to the youngsters in the Children's Shelter in Welland. It was announced that a tri-Service Cadet dance under the auspices of the Sea Cadets would be held December 17th.

"Canadian Legion Branch No. 56, Port Colborne, tendered thanks to the Air Cadets for their assistance on Poppy Day and for their good representation in the Armistice Day parade."

* * *

It would hardly be fair to publish a report of this type without mentioning a squadron which has consistently rated among the top two or three in Canada. We refer to No. 22 Powell River Squadron, and here is what the "Powell River News" had to say about this fine unit recently:

"Two-tenths of one per cent doesn't sound like very much, but this week it looked to Powell River Air Cadets as big as a house. It was by this slim margin they were beaten out by High River (Alta.) Squadron for the coveted Guthrie Trophy — emblematic of cadet supremacy in the five Western provinces.

"The local cadets are the present holders of the trophy, and the result of this year's inspection, which gave them 97 per cent, raised hopes the silverware might remain here another year. The High River Squadron received 97.2 per cent.

"The mark of the local youths put them well out in front of other B.C. squadrons to keep the Guthrie Shield as "Best in B.C." here for the third straight year.

"News of the Alberta results has started the Cadets — and their winsome counterparts, the Cadettes — to work with renewed vigour for the coming year. For this season's work there will be a new trophy at stake — one for the best squadron in all of Canada. If they can help it, they don't intend to be nosed out in the semi-finals for that award."

* * *

And here are a few capsule comments which turned up in some of the more recent clippings:

"For the second time in its two-year history, No. 517 Squadron of Middleton Rural School has won the Strathcona Award for the greatest improvement in all-round efficiency."

"The Middleton Outlook"

"Members of Windsor and Sarnia Air Cadet Squadrons journeyed to R.C.A.F. Station Centralia, Saturday, where they made a complete tour of the big training station, were given familiarization flights in R.C.A.F. aircraft, and participated in various phases of basic training for aircrew."

"Windsor Daily Star"

"Regina Air Cadets defeated 135 Weyburn Squadron, 4-2, in a game of floor-hockey at the Armoury Monday night. Langheldt, Mears, Dobrowlki and Hullme, scored for Regina, while MacKenzie and Boyd tallied for Weyburn. Regina also won their first game away from home when they dumped Moose Jaw Cadets, 9-7."

"Regina Leader Post"

"In the second inter-Cadet Corps Rifle Shoot of the week, a team from the Royal Canadian Sea Cadet Corps Courageous met a team of six from No. 27 Air Cadet Squadron. The Air Cadet team in charge of W.O.2 Don Barnes was the victor, defeating the Sea Cadets, 77-48."

"London Free Press"

"Approximately 100 North Bay youngsters flocked to the Canadian Legion Hall Tuesday to apply for a place in the Air Cadet Squadron being sponsored by 406 Wing of the R.C.A.F. Association. Members of the Wing Air Cadet Committee were on hand to supply application forms, which were taken home by the boys."

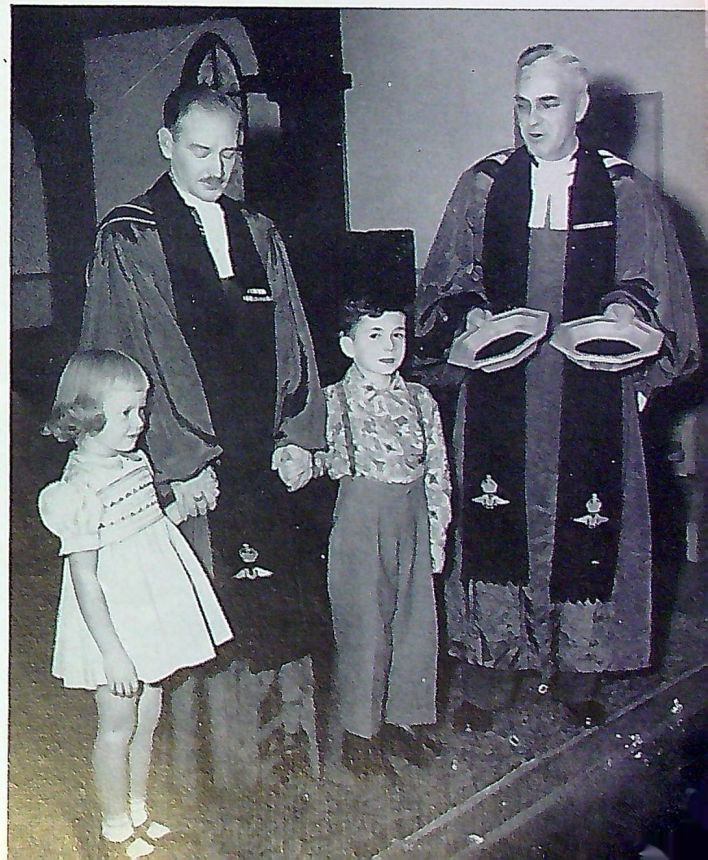
"North Bay Nugget"

"Fourteen Air Cadets received their Wings Thursday night to become full-fledged pilots. The largest parade of its kind in the history of Winnipeg's No. 3 Air Cadet Wing, the ceremonies saw proud mothers pin the insignias on their sons' tunics. Five squadrons, numbering 300 boys, took part in the parade held in a hangar of the Winnipeg Flying Club.

"The inspecting officer, G/C MacGregor, handed the wings to the mothers taking part in the ceremony, while the presentation of pilot licenses was made by F. W. Brown, District Inspector of Civil Aviation."

"Winnipeg Tribune"

GOOSE BAY DEDICATION



Jane Battison, daughter of Flt. Lt. and Mrs. Battison, and Gerry McNabb, son of Cpl. and Mrs. McNabb, present offering-plates purchased by the Sunday School for the Protestant Chapel at R.C.A.F. Station Goose Bay. The occasion is the dedication of the Chapel's new furnishings.

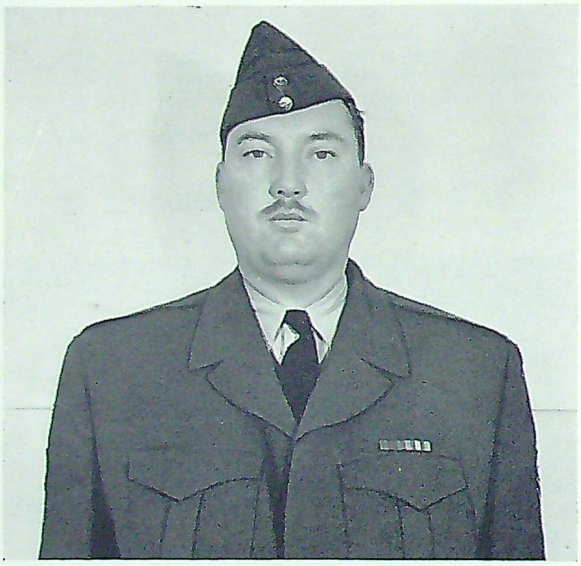
The Suggestion Box

The Chief of the Air Staff has written to the undermentioned personnel, thanking them for original suggestions that have been officially adopted by the R.C.A.F.

Flt. Sgt. L. P. Fry, of R.C.A.F. Station Centralia, devised a modification to existing equipment for the purpose of checking that the orifices are clear in primer line fittings in cylinder heads of aircraft engines.

Flt. Sgt. A. J. A. Pridham, of R.C.A.F. Station Centralia, designed and supervised the construction of a new type of control tender which has proved far superior to the standard R.C.A.F. control tender previously in use on the Station.

Flt. Sgt. L. P. Fry.



Flt. Sgt. A. J. A. Pridham.

UNDER-WING ICE

Climbs or let-downs through icing conditions should be made as fast as possible to minimize the formation of ice on the aircraft. It has been found that a heavy load of ice can be accumulated on the underside of the wings with only minor ice formation appearing on the leading edge.

(*"Flying Safety": U.S.A.F.*)

Personnel Movements

OFFICERS: NOVEMBER

A/C W. E. Bennett — T.A.G.H.Q., Edmonton, to C.J.S. Washington.

W/C R. B. Hoodspith, M.B.E.— A.D.C.H.Q., St. Hubert, to S.H.A.P.E., Paris.

G/C J. G. Stephenson, O.B.E., A.F.C.— A.F.H.Q. to C.J.S. London.

S/L A. B. C. Weatherwax — A.F.H.Q. to T.A.G.H.Q. Edmonton.

W/C V. C. H. Stuart — A.F.H.Q. to M.G.H.Q., Halifax.

S/L W. S. Quint — R.C.A.F. Stn. Chatham to 2 A.C.W.U., Chatham.

S/L W. S. Johnson — R.C.A.F. Stn. Trenton to A.F.H.Q.

G/C G. G. Diamond, A.F.C.— A.M.C.H.Q., Ottawa, to A.F.H.Q.

W/C M. B. MacKinnon — A.M.C.H.Q., Ottawa, to S.H.A.P.E., Paris.

S/L R. G. Middlemiss, D.F.C.— 441 (F.) Sqn., St. Hubert, to 421 (F.) Sqn., St. Hubert.

S/L G. Sutherland — T.C.H.Q., Trenton, to P.R.T.S., Calgary.

W/C R. T. P. Davidson, D.F.C.— 421 (F.) Sqn., St. Hubert, to 1 F.W.H.Q., U.K.

S/L T. C. Kaye, D.F.C., A.F.C.— 408 (P.)Sqn., Rockcliffe, to A.F.H.Q.

S/L A. M. Ogilvie, D.F.C.— 1 A.N.S., Summerside, to 2 A.N.S., Winnipeg.

S/L G. M. Ewan, D.F.C.— 1 A.N.S., Summerside, to C.N.S., Summerside.

W/C W. H. Lewis, M.B.E.— C.J.S. Washington to A.T.C.H.Q., Lachine.

S/L W. J. Taylor — R.C.A.F. Stn. Lachine to T.C.H.Q., Trenton.

S/L E. K. Fallis — A.F.H.Q. to R.C.A.F. Stn. Winnipeg.

S/L D. O. Coons — R.C.A.F. Stn. Camp Borden to R.C.A.F. Stn. St. Johns, P.Q.

OFFICERS: DECEMBER

S/L J. R. Low — T.A.G.H.Q., Edmonton, to C.J.S. Washington.

W/C C. F. Fincham — C.J.S. Washington to A.M.C.H.Q., Ottawa.

S/L J. E. Creeper, D.F.C.— 2 (M.) O.T.U., Greenwood, to 405 (M.R.) Sqn., Greenwood.

G/C R. C. Stovel, A.F.C.— T.C.H.Q., Trenton, to C.J.S. London.

W/C D. L. Ramsay — C.J.S. Washington to A.D.C.H.Q., St. Hubert.

S/L E. N. Henderson — C.E. & P.E., Rockcliffe, to A.D.C.H.Q., St. Hubert.

S/L P. J. Grant — C.J.A.T.C., Rivers, to R.C.A.F. Stn. Rockcliffe.

W/C D. J. G. Jackson — C.J.S. Washington to A.D.C.H.Q., St. Hubert.

S/L C. E. Harris, D.F.C.— A.D.C.H.Q., St. Hubert, to R.C.A.F. Stn. North Bay.

W/C A. F. Avant, D.S.O., D.F.C.— A.F.H.Q. to C.J.S. London.

WARRANT OFFICERS: OCTOBER

WO2 G. E. Engel — 2 C.M.U., Calgary, to 25 A.M.B., Calgary.

WO2 A. A. Darlington — R.C.A.F. Stn. Aylmer to 25 A.M.B., Calgary.

WARRANT OFFICERS: NOVEMBER

WO2 J. P. Johnstone — M.E.R.U., Calgary, to 10 T.S.U., Calgary.

WO1 G. E. Grenke — M.E.R.U., Calgary, to 10 T.S.U., Calgary.

WO2 J. H. Oldham — 402 C.W.F.B. Sqn. (Aux.), Winnipeg, to 1 F.W.H.Q., U.K.

WO2 G. K. Bradley — R.C.A.F. Stn. Trenton to 6 R.D., Trenton.

WO2 J. M. Thomas — M.G.H.Q., Halifax, to 122 M.S., Patricia Bay.

WO2 D. L. Woods — R.C.A.F. Stn. Whitehorse to A.D.C.H.Q., St. Hubert.

WO1 E. Edey — R.C.A.F. Stn. Lachine to 1 F.W.H.Q., U.K.

WO2 F. G. Chartier — 408 (P.) Sqn., Rockcliffe, to A.M.C.H.Q., Ottawa.

WO2 R. A. Davidson — R.C.A.F. Stn. Edmonton to J.S.E.S., Fort Churchill.

WO1 E. M. Rossell — 12 T.S.U., Weston, to R.C.A.F. Stn. North Bay.

WO2 R. A. Spall — R.C.A.F. Stn. St. Hubert to A.D.C.H.Q., St. Hubert.

WO2 E. L. McDonald — 2 T.T.S. Camp Borden, to 12 T.S.U., Weston.

WARRANT OFFICERS: DECEMBER

WO1 F. R. L. Jarrett — R.C.A.F. Stn. Edmonton to 102 Sqn. (Aux.), Winnipeg.

WO2 K. D. Bateman — 426 (T.) Sqn., Dorval, to A.T.C.H.Q., Lachine.

KEY TO ABBREVIATIONS

A.C.W.U.	— Aircraft Control & Warning Unit.
A.D.C.H.Q.	— Air Defence Command H.Q.
A.M.B.	— Air Materiel Base.
A.M.C.H.Q.	— Air Materiel Command H.Q.
A.N.S.	— Air Navigation School.
A.T.C.H.Q.	— Air Transport Command H.Q.
C.E. & P.E.	— Central Experimental & Proving Establishment.
C.J.S.	— Canadian Joint Staff.
C.M.U.	— Construction & Maintenance Unit.
C.N.S.	— Central Navigation School.
(F.)	— Fighter.
F.W.H.Q.	— Fighter Wing H.Q.
J.S.E.S.	— Joint Services Experimental Station.
(M.)	— Maritime.
M.E.R.U.	— Mobile Equipment Repair Unit.
M.G.H.Q.	— Maritime Grp. H.Q.
(M.R.)	— Martime Reconnaissance.
M.S.	— Marine Sqn.
O.T.U.	— Operational Training Unit.
(P.)	— Photographic.
P.R.T.S.	— Pilot Refresher Training School.
R.D.	— Repair Depot.
S.H.A.P.E.	— Supreme Headquarters Allied Powers Europe.
(T.)	— Transport.
T.A.G.H.Q.	— Tactical Air Group H.Q.
T.C.H.Q.	— Training Command H.Q.
T.S.U.	— Technical Services Unit.
T.T.S.	— Technical Training School.

What's the Score?

In his Annual Report on the R.C.A.F. as he sees it (which, we might say, should only be read by the stout of heart), Sgt. Shatterproof remarks that "in a prospect of unrelieved blackness, it is hard to pick out the darkest spot. If, however, there is one depth of the abyss into which light seems less likely to penetrate than into any other, it is the depth into which Service Knowledge has sunk. I need only point to the average scores of the Editorial Committee for the past three years . . . "

We referred to them. Shaken by what we found, we proceeded to canvass various Service pundits for questions relating their own work, with the intention of running a series of purely Service questionnaires. In this, the first of them, the members of the Editorial Committee averaged 15. Correct answers will be found on page 48.

1. The R.C.A.F. official writing, the last world conflict should be referred to as:
   (*a*) The Big War.
   (*b*) World War II.
   (*c*) The Second German War.
   (*d*) The Second World War.

2. Anoxia is:
   (*a*) A goddess in Greek mythology.
   (*b*) The effect of lack of oxygen.
   (*c*) A town in S. America.
   (*d*) A disease of the os coccyx.

3. Air Intelligence is:
   (*a*) What Sgt. Shatterproof deplores the lack of in his Annual Report.
   (*b*) Evaluated and interpreted air information concerning a possible or actual enemy or theatre of operations.
   (*c*) Information (especially classified air information) secured during peace for government use during war.
   (*d*) Information on current aviation matters generally.

4. R.C.A.F. Message Centres may refuse to accept a message for transmission if the message:
   (*a*) Is not assigned a precedence.
   (*b*) Is not signed by an authorized originator.
   (*c*) Lacks a date-time group.
   (*d*) Exceeds 300 words in length.

5. Flying with a head-cold is dangerous because it may cause:
   (*a*) Headache.
   (*b*) Accidents due to slowed reflexes.
   (*c*) Injury to the ear drums and sinuses.
   (*d*) Conjunctivitis.

6. The R.C.A.F. has four auxiliary Intelligence Units located in:
   (*a*) Montreal, Toronto, Halifax, Winnipeg.
   (*b*) Montreal, Toronto, Winnipeg, Vancouver.
   (*c*) Dawson, Toronto, Saint John (N.B.), Vancouver.
   (*d*) Moose Jaw, Halifax, Toronto, Prince Rupert.

7. *Not* a type of system used in aircraft is that known as:
   (*a*) Pneumatic.
   (*b*) Hydraulic.
   (*c*) Pneudraulic.
   (*d*) Aeromatic.

8. R.C.A.F. Trade Specifications are contained in:
   (*a*) A.P. 417.
   (*b*) C.A.P. 7.
   (*c*) A.F.A.O. 741.
   (*b*) C.A.P. 471.

9. The rate of pay for a Flight Cadet is equivalent to that for a:
   (*a*) Pilot Officer.
   (*b*) W.O.2.
   (*c*) W.O.1.
   (*b*) Flight Sergeant.

10. In R.C.A.F. Trade Specifications, "A.F.C.F." means:
    (*a*) Air Force Communications Flight.
    (*b*) Air Force Career Field.
    (*c*) Any Fool Can Fly.
    (*b*) Auxiliary Fire Control Formation.

11. In order to qualify for enrolment as aircrew, a candidate must:
    (*a*) Be a university graduate.
    (*b*) Have passed his Junior Matriculation examinations.
    (*c*) Have passed his Senior Matriculation examinations.
    (*d*) Have been born in Canada.

12. The publication containing the instructions for the reporting of flying accidents is:
    (*a*) K.R. (Air).
    (*b*) National Defence Act.
    (*c*) A.F.R.O.'s
    (*d*) A.F.A.O.'s.

13. In the R.C.A.F. the accepted order of writing calendar dates is:
    (*a*) The day, the month, the year.
    (*b*) The day, the year, the month.
    (*c*) The month, the day, the year.
    (*d*) The month, the year, the day.

14. The compulsory release-age for a flight sergeant and below is:
    (*a*) 47.
    (*b*) 50.
    (*c*) 55.
    (*d*) 60.

15. The terminal velocity attained by a man falling freely from 5,000 feet is:
    (*a*) 183 knots.
    (*b*) 143 knots.
    (*c*) 103 knots.
    (*d*) 91 knots.

16. Tri-met photography means:
    (*a*) Air photography of metropolitan areas to facilitate tax assessment in three directions.
    (*b*) Air photography using three cameras with lenses of very long focal length in order to increase lateral coverage.
    (*c*) Air photography using cameras with exposure-intervals controlled by three metronomes.
    (*d*) Air photography using three cameras with metrogon lenses, for charting purposes.

17. The greatest users of Intelligence (that is, Service Intelligence) in peace-time are:
    (*a*) National Leaders.
    (*b*) Field Formation Commanders.
    (*c*) Civil Defence Formations.
    (*d*) The R.C.M.P.

18. *Not* the capital of one of the countries in which the R.C.A.F. has air attachés is:
    (*a*) Stockholm.
    (*b*) Belgrade.
    (*c*) Copenhagen.
    (*d*) Prague.

19. The most accurate combat intelligence in the Second World War was obtained from:
    (*a*) P.O.W. interrogation units.
    (*b*) Captured documents.
    (*c*) Combat crews.
    (*d*) Photo. reconnaissance units.

20. "Negative G" is associated with:
    (*a*) A strip-tease without the usual garment.
    (*b*) A black-out (in flying).
    (*c*) A red-out (in flying).
    (*d*) The old grey mare.

A LETTER FROM COMMISSIONER L. H. NICHOLSON

December 7, 1951.

My dear Air Marshal Curtis:

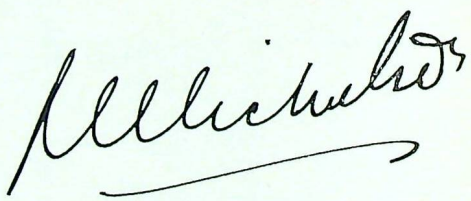
I have received various reports from our personnel relative to the recent visit of Their Royal Highnesses The Princess Elizabeth and The Duke of Edinburgh. All make reference to the excellent co-operation received from the Royal Canadian Air Force, and they particularly stress the very efficient manner in which your Service transported our motor-cycle escort — both personnel and machines — from point to point in Canada. The itinerary of the Royal Couple was such as to preclude the movement of the escort by rail.

It is most interesting to note that, in spite of occasional bad flying conditions, the pilots of the aircraft were able to transport our men and machines so that they arrived at their destinations in ample time to permit them to carry out their duties. I think that considerable credit is due to the pilots of the Dakotas for maintaining their schedule.

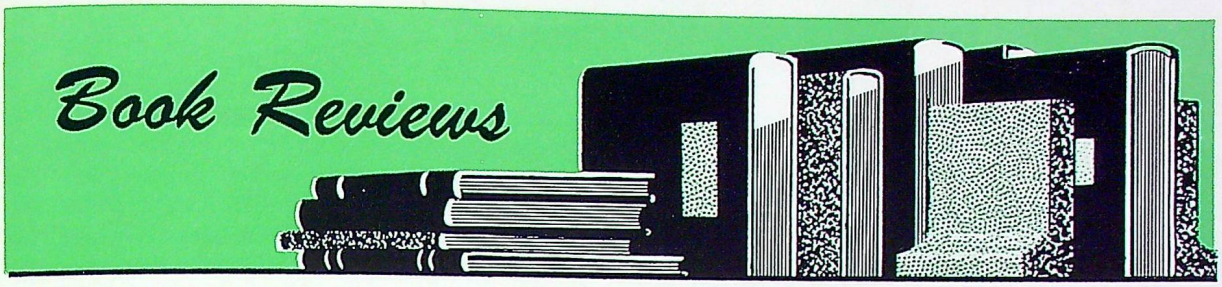
Assistant Commissioner Anthony, who was in charge of security and other police arrangements pertaining to the Royal Visit, commented most favourably on the very great assistance given to him and to other members of the R.C.M.P. on the Royal Train by Group Captain E. A. McNab, who, I understand, represented the Department of National Defence throughout the Visit.

I would greatly appreciate it if you would accept the thanks of this Force for the co-operation rendered and, if it is possible for you to do so, I would ask that my official and personal appreciation be extended to all those members of your Service who directly assisted in connection with this matter.

Yours sincerely,



Commissioner,
Royal Canadian Mounted Police



"THE BIG SHOW"

Reviewed by Wing Commander F. H. Hitchins, Air Historian, R.C.A.F.

PIERRE CLOSTERMANN has written one of the most vivid and gripping narratives* of air combat that has yet appeared in the literature of the Second World War. To those readers who flew with him as fighter-pilots in north-western Europe his book will recall many memories of similar experiences over France and Germany. To those whose acquaintance with dog-fights, dive-bombing and ground-strafing is limited to the printed page, "The Big Show" will give as graphic a picture of the life of a fighter-pilot as is possible through the medium of words. They too will have the vicarious thrill of flying with the author in the narrow cockpit of a Spitfire or a Tempest, sharing with him his moments of anxiety, anguish, excitement, and triumph.

Pierre Clostermann was the top-ranking French fighter ("le premier chasseur de France") of the Second World War — the successor to René Fonck and Georges Guynemer of an earlier generation — credited with 33 enemy aircraft destroyed and another dozen probably destroyed or damaged in air combat, in addition to 20 or more aircraft, 72 locomotives, 100 trains, 225 vehicles, 5 tanks, 2 motor torpedo-boats, and a submarine, destroyed or damaged in ground attacks. At the end of the war his logbooks showed a total of 2000 hours' flying and 432 operational sorties, 390 of which were on fighter sweeps, armed reconnaissance or dive-bombing, and the remainder on defensive patrols.

Originally published in France in 1948, under the title "Le Grand Cirque", Clostermann's book enjoyed an immediate and well-deserved success and was awarded the Grand Prix Littéraire de l'Aéro-Club de France. Now it has been translated into English with a foreword by Sir John Slessor, the R.A.F. Chief of the Air Staff. A word of credit is due to the translator, Oliver Berthoud, who has done a skilful job, retaining much of the flavour and tang of the fighter-pilot's jargon.

There are several differences between the English and French editions. Some minor errors (e.g. incorrect identification of units) have been corrected in translation, although a few have escaped notice. Several brief sections have been omitted from the English version and — to even the count — one short chapter has been added. The appendices which were a feature of the French book, explaining the organization of the R.A.F., describing various types of German aircraft, and giving copies of the author's combat reports and citations, have not been included in the English volume.

"Le Grand Cirque" was richly illustrated with photographs, most of which have been retained in "The Big Show"— with one rather striking alteration. In the English edition a portrait of the author in plain R.A.F. battle dress has been substituted for the French portrait which shows him in the dark blue uniform of the Armée de l'Air with his breast covered with a dazzling array of French

*"The Big Show — Some Experiences of a French Fighter Pilot in the R.A.F.", by Pierre Clostermann, D.F.C. Translated by Oliver Berthoud. with a forward by Marshal of the Royal Air Force Sir John Slessor, G.C.B., D.S.O., M.C. Published in Canada by Clarke, Irwin & Company Limited. $3.00.

Pierre Clostermann.

and Allied decorations. In addition to the Légion d'Honneur and the Croix de Guerre with its long ribbon bearing 27 palms, one can distinguish the British D.S.O., D.F.C. and Bar, and the American D.S.C., as well as half a dozen other medals. Modestly, the title-page of the English book shows only the D.F.C. against his name (the French shows none); and by the same token the jacket of "The Big Show" credits the author with 23 enemy 'planes destroyed and many more "probables", in lieu of the 33 "victories homologuées" claimed for him in the French volume.

* * *

An Alsatian by origin, Pierre Clostermann was born in 1921 and had gained his pilot's license before he was eighteen. In June 1940 he made his way to England and there joined the Free French forces as a pilot in the R.A.F. At the same time his father, a French diplomat, was serving with the F.F.L. at Brazzaville in French Equatorial Africa. Separated from his parents by thousands of miles and able to communicate with them only by occasional air letters, from which all military information was strictly censored, young Pierre began keeping a diary in which, every evening, he recorded the day's events so that, come what might, his father and mother would be able, in time, to share the strange new life he was leading in England. By V-E Day his diary had filled three Air Ministry notebooks; and excerpts from their pages, printed just as they were written, constitute "The Big Show."

The story opens in the winter of 1942-43 when Sergeant-Pilot Clostermann, after completing a course at Cranwell followed by service flying training, was on his way to No. 61 O.T.U. at Rednal, in Shropshire, on the Welsh border. Here he flew a Spitfire for the first time —"how proud I felt!" Then, his operational training finished, he was posted to Turnhouse, Scotland, early in 1943, to join No. 341 (Alsace) Squadron, the second Free French fighter unit in the R.A.F., which was being formed under Commandant René Mouchotte. "The British were amazed at how fast the unit got into shape, and generously admitted that it certainly was an exceptional one."

In proof of which No. 341, when it was presently posted south to join "the big time" with 11 Group, was equipped with Spit. IX's and assigned to Biggin Hill, one of Fighter Command's "crack" stations. Teamed with Mouchotte's unit in the Biggin Hill wing at this time were Nos. 611 and 485 (R.N.Z.A.F.) Squadrons — a cosmopolitan group. One of the flight commanders (and later commanding officer) of No. 611 was an outstanding Canadian fighter pilot, Jack Charles (Wing Cdr. E. F. J. Charles, D.S.O., D.F.C. and Bar). In the original French, Clostermann correctly assigns Charles to the right unit, but in the English version he has been translated to command of the New Zealand squadron.

The next few months were a round of "circuses" and sweeps over France. Clostermann took part in his first "big show" on 18 April 1943 as part of the Spitfire escort for Fortresses bombing a Luftwaffe airfield. His account of this initial sortie is typical of the author's frankness. "I felt very nervous . . . lost in the mêlée . . . The sky . . . seemed suddenly empty . . . I began to panic . . .

I could feel the disordered thumping of my heart right down in my stomach, in my clammy temples, in my knees . . . That evening, in the mess, I felt on top of the world."

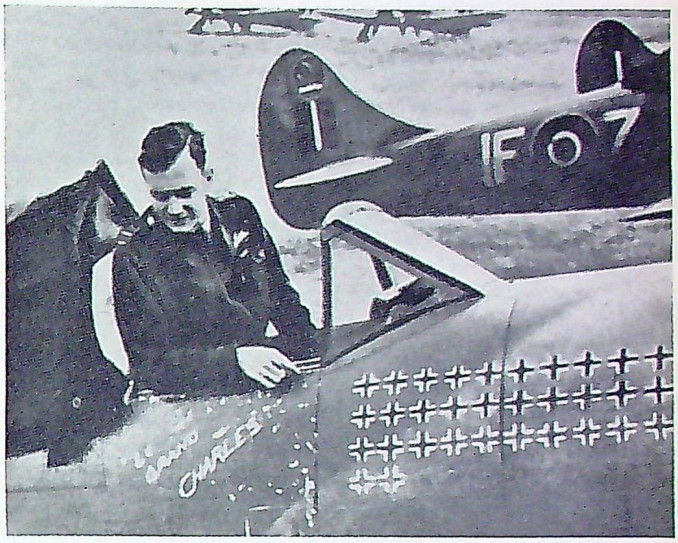
Clostermann scored his first success in another circus over the French coast on 27 July 1943, when he shot down two F.W.190's, one of them in flames. "I bellowed my joy into the radio, just like a kid." In this action two squadrons of the wing, Nos. 341 and 485, destroyed nine enemy fighters and won a congratulatory message from Prime Minister Churchill.

Commandant Mouchotte was lost a month later during another operation, on which Clostermann bagged his third Focke-Wulf. (When Mouchotte's body was washed ashore on the Belgian coast some days later, it was found to be bearing R.C.A.F. identification tags, and he was buried as a Canadian flier; only after the war was his true identity ascertained.)

At the end of September 1943 Flight Sergeant Clostermann was posted to No. 602 (City of Glasgow) Squadron, which with two other squadrons comprised 125 Airfield. He remained with this unit until the summer of 1944, taking part in many varied operations, anti-shipping strikes, circuses, attacks on "Noball" (V.1) sites, long-range escorts for American bombers, and defensive patrols — in the course of which he ran up his score to about 18 destroyed, probables, and damaged.

In January 1944, No. 602 was moved from southern England to Skeabrae in the Orkneys for two monotonous months of guarding Scapa Flow naval base from enemy bombers or recce aircraft. (At least one Canadian fighter squadron had a taste of duty at this far northern post.) Two incidents lightened the monotony for Clostermann — and provided bits of graphic description for his book. One day in February the young Frenchman and another pilot shot down an Me. 109G after a chase that began at 43,000 feet over the naval base. A few days later Clostermann had "a lucky escape" in landing his Spitfire at night with wheels up when the hydraulic system failed.

Leaving Skeabrae in March, No. 602 went to Llanbedr in Wales, where it joined No. 132



Clostermann says goodbye to "Grand Charles".

Squadron as "the guinea-pigs" in the experiment of dive-bombing with Spit. IX's. V.I.P.'s came to watch the pilots carry out their trials. The training finished, Clostermann's squadron returned to the battle-front early in April and a week later began practising the new art against V.1 sites. Operations, on most of which the Spitfires had to dive through "walls of flak", continued at a tempo that quickly reduced the pilots (as well as aircraft) to wrecks. Clostermann had a brief respite for a fortnight when he accompanied a senior officer to A.E.A.F. Headquarters at Uxbridge, where he had a preview of the plans for the invasion of Normandy. He rejoined his squadron shortly before D-Day, sworn to secrecy about all that he had seen and heard at G.H.Q.

When the invasion did not produce the "expected swarms of German fighters", Clostermann went hunting for them. Accompanied by his friend, Jacques Remlinger, he visited a Luftwaffe airfield where he crashed an ME.109 while his companion destroyed some Heinkels on the ground. (In his account of this "shoot-up" the author makes a reference to Wing Cdr. Johnson's Wing "126"; the correct number of this R.C.A.F. Wing was 144).

Mouchotte, twenty minutes before his death.

On 17 June 1944, 125 Wing moved across the Channel to B. 11 at Longues, near Arromanches. Clostermann added a few more victories, including an F.W.190 which he shot down in a fight in the fog, and five (two destroyed, three damaged) accounted for in another scrap on 2 July. By this time his nerves were in poor shape — "I had a nervous tic like a decrepit drug-addict"— and he was posted back to England, operational tour expired. Just before leaving France, Clostermann received the D.F.C. for his record of eight destroyed and ten probables and damaged. He left with regret. "It was all over. I felt in my bones that the liberation of France was now but the question of a few weeks and that, by the irony of fate, I would only watch the liberation of Paris from afar."

The next five months Clostermann spent in Britain, three of them at Headquarters; then, "after mature reflection", he requested a return to operations and, despite some objections from de Gaulle's Ministère de l'Air, received his wish. " . . . I plunged happily back into the clean, frank, open atmosphere of the R.A.F. . . . " There were some second thoughts, however, when he was sent for a brief conversion course on Typhoons and Tempests. His first flight in a Typhoon is described with characteristic frankness. "My nerves were very much on edge and I didn't feel at all easy in my mind. What on earth had ever induced me to return to ops.! . . . Really it had been very pleasant behind that office desk . . ." But all went well and Clostermann was soon on his way to Holland to join 122 Wing, which was flying Tempest V's, "the most modern fighter . . . of all the Allied air forces."

He arrived just after 1 January 1945, the day that was marked by "the Luftwaffe's last effort." The author's description of that eventful New Year's Day will recall many memories to R.C.A.F. readers, but some will be inclined to question his statement that "at Eindhoven a Canadian Typhoon Wing" (it was 143, not 124 as the book has it) " . . . was nearly destroyed." In the original French the statement is even stronger — "complètement détruite." In passing it may be noted that the translator has toned down the number of Allied aircraft put out of action from 800 to just 300.

On arrival at Volkel, 122 Wing's base, Clostermann was assigned to No. 274 Squadron as flight commander. His commanding officer was Sqn. Ldr. D. C. Fairbanks, D.F.C. and two Bars, an American in the R.C.A.F., who shot down at least 15 enemy aircraft before he was taken prisoner on 28 February 1945. Losses were high at this period ("Bags of promotion in 122 Wing"), and Clostermann's description of the last four months of the war, as the Tempest pilots saw it, will no doubt come as a surprise to many readers who have thought of the enemy as being all but impotent in the air during these months. Flak is the dominant theme of the last chapters in the book. "It had been tough enough in Normandy. (Now it was) simply appalling." Train-busting, combats with Focke-Wulfs and Messerschmitts, hunting the new Me.262 jets ("rat-catching"), all to the accompaniment of more and more flak and casualty after casualty. Thirty-one pilots were killed or reported missing in the Wing within a month. "The pilots' nerves seemed all in pieces . . . "

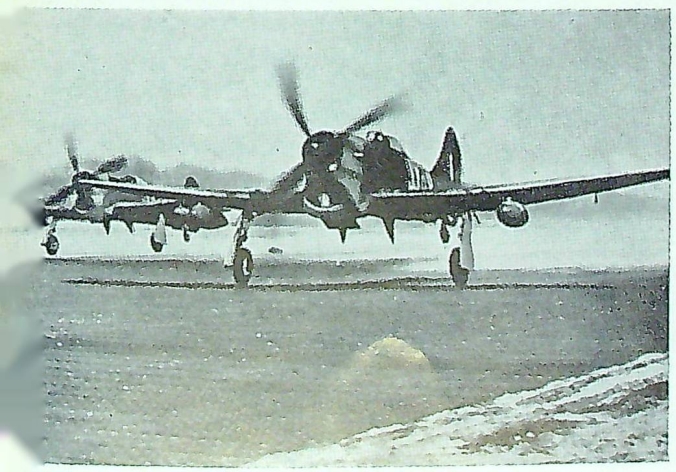
Twice flak nearly put an end to Clostermann's career. On the evening of 24 March 1945, the day the Rhine was crossed at Wesel, he had just destroyed a Ju.88 night fighter when a burst of flak wounded him in the right leg. Unable to bale out, he had to make a belly-landing in the dark. Eight days later he was back on operations as a flight commander in No. 3 Squadron, another unit in the Tempest Wing. Then history repeated itself on 20 April. Clostermann had destroyed two F.W.190's in the dusk near Bremen when flak

again winged his Tempest and flames began to lick intermittently into the cockpit. With difficulty the pilot got his aircraft back to base at Rheine and made another successful wheels-up landing down the flarepath.

Shoot-ups of enemy airfields were a major feature of the last days of the campaign as the Allied air forces harried the Luftwaffe from one base to another. The R.C.A.F. fighter-recce wing (39, not 49 as the author erroneously numbers it) had an important part in his work by informing the Tempest wing immediately an airfield was seen to be occupied. Clostermann gives a very vivid picture of one of these attacks on the airfield at Schwerin in which he led his eight Tempests through an "inferno of flak" to strafe a collection of Messerschmitts and Arados. At least seven were destroyed — but only two of the Tempest pilots returned. "The game really wasn't worth the candle . . . The flak held too many trumps."

The author pays tribute to a Canadian recce pilot who went to get photographic confirmation of the results of the strafe. Coming down very low to get his oblique camera shots, the Canadian pilot was seriously wounded as he ran the gauntlet of "some very trigger-happy flak. By sheer grit and will-power he succeeded in bringing back his damaged Spitfire XIV and his photos." Unfortunately, from the details given it has not been possible to identify this gallant airman.

Tempests take off at Volkel.



Despite the odds, Clostermann, who was now in temporary command of 122 Wing as its Wing Commander flying, led a formation of 24 Tempests in an attack, on the evening of 3 May, on the air and naval base at Grossenbrode where 100 transport 'planes had been seen. The weather was abominable with heavy rain and zero visibility along the route. Over the target, 100 enemy fighters were patrolling in three or four groups. Leaving five sections above as cover, Clostermann took his quartet of Tempests down in a strafing run across the field and anchorage. "All hell was let loose as we arrived." In his first pass the French pilot destroyed a BV.138 on its cradle, sent a Ju.252 blazing into the sea, and then, although his three companions had disappeared, turned back for a second run through the inferno. This time he shot down two Do. 24 flying-boats over the sea and beat up a row of Ar.232 transports. Meanwhile the other sections had been engaged in a furious dogfight with the defending fighters. Clostermann rejoined them in time to help destroy an Me.109 in flames and shoot an F.W.190 to pieces in the air. "The sun had now slid down, over there, behind the Danish islands. My patrol reformed in the luminous twilight. I counted the 'planes; two, four, eight, ten, eleven — and then two others, lower down, laboriously catching up, probably damaged" — 13 out of the 24 Tempests that had gone out.

It was the end of "the big show." Clostermann remained with the wing for some weeks after V-E Day, taking part in a big fly-past over Bremerhaven in which he had another very narrow escape when his section got tangled up at less than 1000 feet and he had to take to his parachute. This was followed by another accident due to a "stupid error of judgment." Once again he emerged "unscathed, stunned, dimly comprehending that this was the last miracle, fate's final fling." He applied for immediate demobilization, and on 27 August 1945 said good-bye to the wing and his faithful "Grand Charles. . . . In that narrow cockpit I wept, as I shall never weep again, when I felt the concrete brush against his wheels.

. . . Pride welled up within me when I thought of you, my 'planes, and above all of you, my R.A.F. friends, whom I had had the privilege of knowing and living amongst."

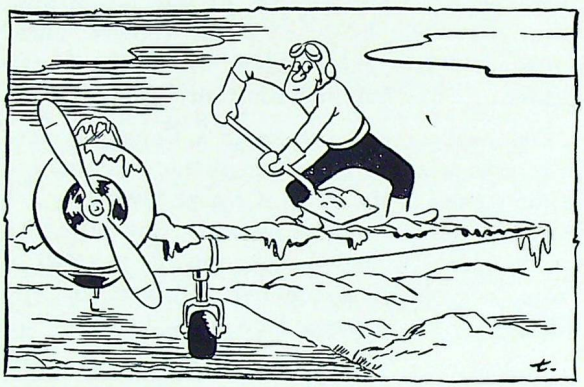
* * *

In the preface to his book the author modestly writes: "Change the dates and a few minor details, and it is a record of the daily life of every fighter-pilot. Any of my comrades could produce similar episodes by looking through his log-books." The principle may be correct . . . but unfortunately all fighter-pilots did not have the power of simple, graphic expression that Pierre Clostermann has shown in the pages of "The Big Show."

TAKE IT OFF!

There is often a thin coat of ice under the fluffy blanket of snow which has accumulated on the wings of your plane. Don't depend on the snow blowing off during take-off, even the light kind, and check for ice. Falling snow sticks at temperatures above 10°F. It also forms a coat of ice between 32 and —10°F.

(*"Flying Safety": U.S.A.F.*)



SNOW-DEPTH CAN'T BE GUESSED

There is no way accurately to estimate the number of inches of snow on a runway. If an airport is not being used, stay away from it, unless you have an emergency. One pilot "estimated" that there were two inches and landed on his back. There was an airport with cleared runways not far away.

(*"Flying Safety": U.S.A.F.*)

The Lion in the Flarepath

By Wallace G. Phillips (R.C.A.F.A.)

(The Author of this little story, who was serving with the R.C.N.V.R. in England in 1941, transferred to the R.C.A.F. on his return to Canada. Back in England as a pilot in late 1942, he did a tour of operations in Lancasters over Germany in 1943 and 1944, and was awarded the D.F.C. After a period of instructing at O.T.U.'s in England he returned to Canada and was released in 1945.—EDITOR)

FAR BELOW US THE monotonous swamp and green jungle of Central Africa was giving way to drier and more broken terrain. Ahead we could see little patches of cumulus cloud forming above the distant hills. A silver ribbon of river flashed in the sun, and we knew at last that we were nearing our destination.

My navigator, balancing a map on his knee, touched my arm and pointed off to starboard. What had been for days a mere pencil mark on a topographical map now became a 'drome about twenty miles in from the coast. We made a quick let-down on our approach, got a green from the Airfield Controller, and landed. The long run from England was over and we felt we had left the war behind us.

Taxiing around to the Control Tower, we caught a quick glimpse of what was to be our Station for the next six months. The buildings were dispersed with an efficiency which can be admired only in retrospect. Here and there a few tired-looking aircraft were marshalled on the perimeter of the hard dry field. Any evidence of activity was at a bare minimum.

It was almost noon when we checked in to the Adjutant's office in Station Headquarters. He was a heavy-set man, and the sun-darkened skin on his face made his eyes seem even larger and bluer than they actually were.

"Hastings and Norton, Sir," I said; then, since we'd obviously caught him off guard, I added "— pilot and navigator instructors."

"Oh, yes. We haven't had a signal on you chaps yet, but we can most certainly use you here. I'll make out your arrival forms and Cpl. Smedley can drive you to the mess."

Somehow under the pile of papers on his desk he found what he wanted. As he was about to begin writing, his eyes fell on his wrist-watch.

"Hm! We'll continue this after lunch. Let's go over to the mess now."

We stepped out of the door into the sun. There was no sign of Cpl. Smedley or the Transport.

"Damn Smedley!" muttered the Adj. "Looks as though we'll have to walk."

As we began the long treck, I said:

"I heard at Gib. on the way down that Bunny Stykeman is on the Station. I'd like to meet him."

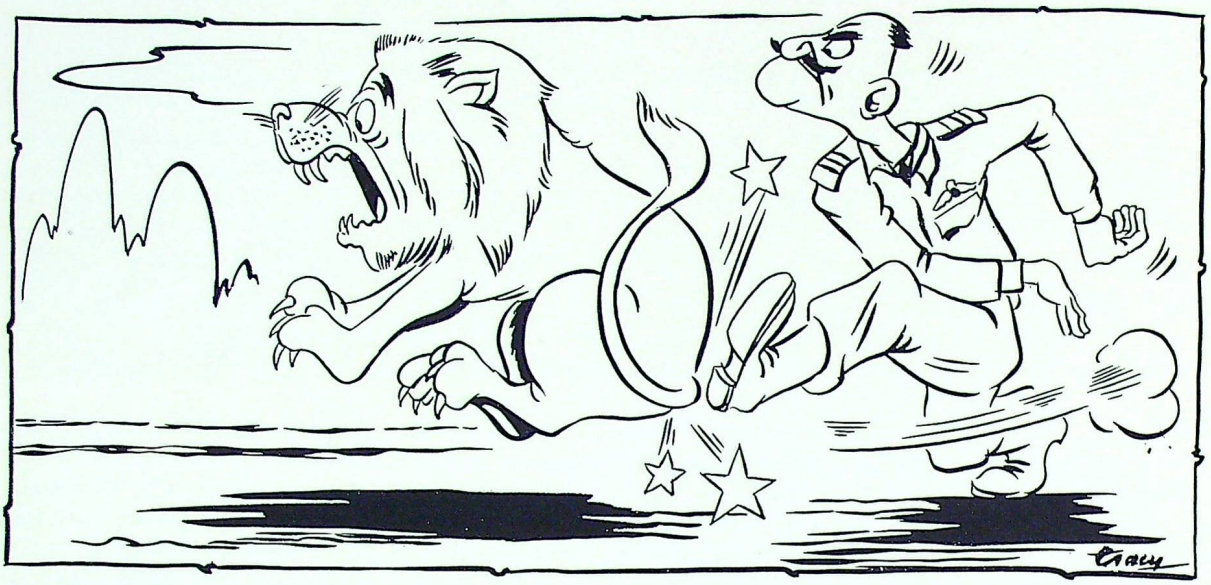
Bunny Stykeman, I should explain, had once been a magic name in the world of athletics. I'd been one of his most fervent admirers in my school-days.

"He's C.O.," said the Adj. An amused smile tilted one corner of his mouth. "He left for the mess just before you arrived. Left in quite a hurry, too."

We cut behind a group of squat buildings which stood shimmering in the sun, and the Adj. glanced hopefully towards the Motor Transport section; but it, like the rest of the Station, seemed deserted.

"Good God!" said Norton suddenly, showing signs of life for the first time since arrival. "What's that?"

We turned in the direction in which he was pointing. A huge cage had been built against the back of one of the garages, and in the shade cast by its roof a lion was stretched out enjoying its siesta.



"That's Scruffy," said the Adj. "Smedley won him in a village raffle some months ago. Or so he says. He's old and toothless — Scruffy, that is — and about as terrifying as a kitten. He very quickly became a great pet on the Station, and also a damned nuisance. Seemed to get in everybody's way at the wrong time."

He chuckled, then went on:

"Several weeks ago the C.O. had Smedley in his accustomed spot on the mat about it, and it was decided that Scruffy would have to be caged from six o'clock every evening until six in the morning, at which time he would be released for the day. Everything was going well until last night."

The Adj. paused to wipe away the sweat that had accumulated in the creases of his forehead.

"Last night," he proceeded, "the C.O. went out to check with the Airfield Controller during night flying. In the dim light of the flarepath he could see a dark form moving about on the runway. 'What's that, Sergeant?' he asked the Airfield Controller. 'Dunno, Sir', replied the Sergeant. Together they peered into the dimness.

"Suddenly the C.O. shouted: 'It's that blasted Scruffy! Smedley's forgotten to lock him up. He's right in the way of that aircraft coming in to land!' And with that, he raced down the outside of the flarepath, dashed on to the runway, and gave the rear of the lion the full benefit of one of his famous kicks. The lion let out a roar and disappeared into the darkness just as the C.O. flattened himself on the runway barely in time to avoid being chopped down by the landing aircraft."

We were now walking up the path to the mess, an old house surrounded by bright dazzling flowers and dry brown grass. As we reached the steps, the Adj. continued:

"This morning, only a few minutes before you chaps came in, Smedley was once again standing on the receiving side of the C.O.'s desk. From my office across the hall I could hear him being blasted. When eventually the C.O. ran out of breath, I heard Smedley say, rather gently: 'But Sir, Scruffy was in his cage all night. I let him out this morning.' "

By now we were entering the anteroom. The Adj. nodded towards a large and moustached officer seated behind two double gins and wearing a rather peculiar expression on his face.

"There he is", he said. "That's the C.O."

Paramedics in Training

By Pilot Officer J. E. Ruch,

Reserve University Squadron, University of Toronto

(Pilot Officer Ruch, whose article on the Reserve University Squadrons appeared in our issue of last November, spent the last few days of his R.C.A.F. summer employment in observing the work of the Pararescue School. Although we have had no opportunity to publish the results of his observations until now, we believe that they will still be of interest to a large proportion of our readers.—EDITOR)

"THE THIRD PARARESCUE COURSE is starting up in a few days," the Editor of "The Roundel" told me. "How about whipping out to Edmonton on the Sked Run and giving us a short write-up on it?" Then he added thoughtfully: "This time there are four nursing-sisters on the course . . . "

A few days later I was at Dorval, breakfasting in the august company of a group captain while we waited for the 'plane to leave. On our return to the tarmac, however, we saw the aircraft already taxiing out to the runway. The group captain — a man of great presence of mind — instantly ordered me to "STOP THAT 'PLANE WHILE I GET MY ORDERS!" Stopping North Stars was a little outside the range of my experience. Should I hurtle forward on to the runway and plant myself resolutely in its take-off path? Or should I simply stand and scream "STOP!"? While I was debating the point, I noticed a doughty-looking sergeant close by. In a weak voice I explained my dilemma. Giving me a fatherly smile of reassurance, he walked calmly to the nearest 'phone—and the thing was done. When, presently, I climbed aboard the North Star, it was with the firm conviction that one should never stop for a last-minute coffee unless one happens to be with a senior officer who is going the same way.

At 1730 hours we reached Edmonton. I disembarked and stood for a moment contemplating the gleaming aircraft that had brought me there. A magnificent creature! It had a right to make a bit of noise if it wanted to. Deafened — though I hoped not for life — I wandered off in search of a restorative pint.

* * *

From the Public Relations Officer at Tactical Group Headquarters I obtained an outline of R.C.A.F. search and rescue activities in general,

". . . there are four nursing-sisters on the course." Left to right: Pilot Officers I. Thomson, M. Neily, M. MacDonald, and Flying Officer A. Peden.

Flt. Lt. C. W. Weir.

as well as an introduction to the officer commanding the Pararescue School, Flight Lieutenant C. W. ("Bounce") Weir. Having worked in the past as a miner, a police officer, and a bush pilot, he has a true appreciation of the North and its problems. Briefly he outlined for me the history and functions of the School.

It had been established, and two courses had been given, before the end of the war. With demobilization, however, the R.C.A.F. lost most of the men who had been trained in pararescue work, so that activity in this field was discontinued until the reopening of the School in 1947. Twenty-three graduates emerged from the first post-war course — a number that filled R.C.A.F. requirements until 1950, when a further thirteen jumpers were trained on Course No. 2. The third course (which had already begun) was made up entirely of medical personnel: two M.O.'s four nursing-sisters, and ten medical assistants. After graduation they were to be posted to the various Search and Rescue Centres across Canada, where they would be instantly available for the performance of emergency operations, etc., at the scenes of crashes. In view of the fact that they did not require any training in medical matters or first aid, their course was being cut from the usual twenty weeks to eleven. It consisted of 361 hours of ground instruction, and 40 hours in the air.

From Sergeant K. Clark, Chief Pararescue Instructor, I received details of the training programme for the third course. Since most of the trainees had come directly from hospitals, where the work does little to build up the physique, they were being "hardened" as rapidly as possible. The remainder of their training in Edmonton con-consisted of lectures on parachutes, jumping technique, signals, search and rescue procedure, bush lore, and mountain climbing — lectures that would bear fruit during the second (and practical) part of their training, which would take place at Jasper.

From the very beginning of the course, jump techniques are practiced religiously, for they must become almost reflex actions on the part of the student. Starting with exits from a mock-up aircraft, the student is given controlled-drop exercises

A student completes his first jump.

in which the opening shock of the parachute and the landing are accurately simulated. The procedure entails familiarization with the aircraft's cabin facilities, the actual exit from it, and the proper method of falling to avoid hitting tail surfaces and fouling the shroud lines. Since the regulation parachute is opened automatically by a static line, the student's full time is devoted to concentration on his own technique. Sergeant Clark, who is also the jump-master, presides over the hooking-up instruction inside the aircraft, prepares the student as he sits in the doorway, and then gives him the jump-signal (a tap on the shoulder).

Preparation for landing is a matter to which a great deal of time is devoted, particularly when nursing-sisters are on the course. Flying Officer Roy ("Knobby") Clark, one of the R.A.F.'s most experienced jump-instructors, was lent to the R.C.A.F. to take care of this side of the training. A former P.T. instructor, Flying Officer Clark has completed more than 250 jumps since he was trained in 1944. Now 5 ft. 8 ins. in height, he solemnly affirms that he was 6 ft. 2 ins. when he first started "jumping like mad from 'planes."

The average jump is made at 1200 feet. This gives the jumper about sixty seconds in which to prepare for the jolt of landing. A swinging motion, known as oscillation, must be controlled and kept to a minimum; then the feet are placed together and the jumper turns so that he will meet the ground at an angle almost perpendicular to the line of drift. His body is relaxed, and, as he contacts the ground, he tumbles sideways in the line of drift so that the ground meets the side of his knee; then he rolls over on his hip and diagonally across his back. If the procedure is followed correctly, the surface over which the shock is distributed is large enough to make any injury almost impossible.

The approach and tumble are practiced constantly upon a device known as the "swingeroo", in which the student is suspended a few feet off the ground. Under the direction of the jump-instructor, he is swung back and forth, and finally drops to the ground. The instructor can vary the angle of drift and tumble at will.

Armed with the foregoing information, I was invited to accompany the course on the next day when it moved to Jasper National Park.

In view of the exhaustive article on parachutes that appeared in last October's issue of "The Roundel", there is no need for me to enter into a lengthy disquisition about them. Suffice it to say that each student is issued with two 'chutes — a twenty-eight foot slotted back-pack and a twenty-four foot reserve chest-pack — and that he is required to air and pack his own 'chute after each jump. Packing may take him anything from half an hour to an hour and a half, according to his

Student coming down.

The "Swingeroo".

experience. Also used both in training and in regular operations are the twelve-foot orange-coloured cotton 'chute which is dropped from the aircraft to ascertain the drift, and the supply 'chute (of alternate orange and white panels) for the dropping of such equipment as the jumpers may need.

Apart from its prime purposes, the parachute is capable, in inventive hands, of serving several others. Its natural shape is admirably adapted to use as a tent — or, as it is usually known, a "paratepee". Again, the nylon material may be cut up for use as clothing, bandages, etc. The shroud-lines, too, can be used in ways too numerous to mention.

Each jumper is issued with a specially-designed jumping-suit of white canvas padded with felt. Made in two pieces, the suit has a jacket, which is put on first, and trousers which are wrapped around the legs and snapped into position. The collar of the jacket is extremely wide, protecting the head and neck on three sides. A regulation rugby helmet is worn and the face is guarded with a steel-wire-mesh face-basket. The trouser legs have large pockets in which items of personal equipment, such as let-down ropes, parachute bags and first-aid kits, are carried. Leather jump-boots, with eleven-inch tops and fitted with rubber combination soles, are standard for all students.

When the students are in good physical condition and when they have become thoroughly familiar with jumping procedure, they are permitted to make their first jump. The three preliminary jumps are made at Namao, several miles away from the busy Edmonton airfield, and the final seven are carried out in Jasper. The jump-master rides with the students, drops the drift 'chute to check the wind, and then assists each jumper as his turn comes. The students are dropped so that only one is descending at any given time. This enables the parachute instructor on the ground to observe each individual and check for proper technique. As the jumper falls within earshot, the instructor is able to shout up to him and so correct any faults of stance, etc., that might occasion a needlessly rough landing.

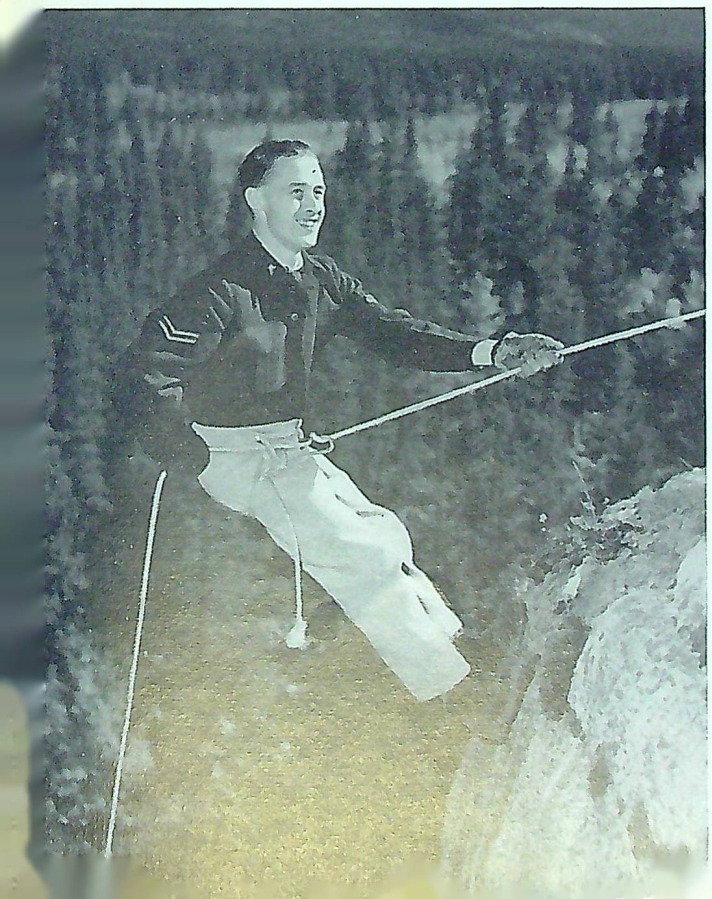
In the Rockies, at Henry House Airfield, instruction in survival tactics begins in earnest. The students start their mountain-climbing, and (at the Columbia Icefields) they are initiated into the rigours of arctic travel. After they have become accustomed to making their way amid the mountains and on the ice, they venture forth on a week-long bush-hike, which takes them many miles north of the training camp. All the while they are accumulating bits and pieces of knowledge about the care of their equipment, the erection of shelters, and the procurement of food by hunting, fishing, or trapping. All these subjects contribute to the achievement of their main purpose: the rescue and evacuation of the injured.

The value of good instructors is very apparent at this stage of the training. As I realized when I accompanied the climbing party, faulty instruction could easily lead to serious injury in that wild and rugged country. Corporal George Bartlett, the instructor in bush lore, is an ideal type of guide. A woodsman from his boyhood, Cpl. Bartlett has a vast store of knowledge in his head. From him I

learned, for example, that there is a right and a wrong way to carry out even so apparently simple a task as walking up-hill. By merely locking the knee as you take a stride, you not only reduce fatigue in certain of your leg muscles, but you also lengthen your step by a matter of inches. Such small details may be of vital importance in situations where every motion counts.

Considerable time is spent upon air-ground communications. Although a 'plane may be circling directly over a rescue party, it will be of little assistance unless those on the ground can convey their wishes to the pilot. Thirty-five hours' lectures are devoted to the operation of Morse keys, Handi-talki radios, Aldis lamps, and mirrors, and to the procedure for rectifying minor faults. In the absence of any of these devices, improvised signals must be used, and the various types are considered at length, as well as the standard method of signalling by coloured panels.

Cpl. Lorne Foster repelling.



Cliff evacuation at Maligne Canyon.

Cliff evacuation entails the lowering of stretcher-patients (as well as the rescuers themselves) over cliffs, and also the crossing of streams, gulleys, and so forth. A rope is strung across the obstacle to the opposite side, and each end is firmly attached to a tree. Every person who is to cross by way of the rope ties about himself a short length of rope (in the "Swiss seat" fashion) and pulls himself across while suspended beneath the rope by a snap-link attached to his Swiss seat. He carries with him a rope that is fastened to the stretcher on which the patient lies. The litter is then attached to the rope (again with snap-links) and is pulled along to the far side. As a preparation for this type of operation, the students are required to cross a rope tied between two trees at the camp.

"Repelling" is a swift and safe method of descending the face of a sheer cliff by the use of the Swiss seat. A nylon climbing rope is secured firmly at the top of the cliff and lowered over the edge. The climber attaches his snap-link through a simple turn in the rope and, grasping the rope behind his back, and with the other hand holding the rope in front of him, spreads his feet wide and retreats over the edge. Leaning well back, he "bounces" by repelling the cliff with his feet, at the same time allowing himself to slide down the rope a few feet. In this type of descent, most of the rope's friction is taken by the snap-link, and the gloved hands of the climber are in no danger unless a very rapid descent is attempted. An

Mr. Joe Weiss talks to students on their first trek to the Athabaska Glacier.

experienced repeller can drop from ten to twenty feet at a bounce.

Trainees are taught that they must maintain three points of contact at all times while climbing. The same type of metal-impregnated rubber sole used on the jump-boots is also attached to the climbing-boot. These soles afford remarkable traction on smooth rock surfaces at even very oblique angles. Instruction in tree climbing with the aid of leg-irons is also given, in order to enable the jumper to retrieve his parachute from trees.

The seven jumps required to complete the obligatory ten are made into the bush. While at first thought this may appear somewhat hazardous, most experienced jumpers prefer it to jumping in the open. The branches of the trees catch and hold the canopy of the parachute before the jumper hits the ground, and he is thus usually spared the landing-jolt. The fact that he is suspended above the ground troubles him not at all. In the lower leg-pocket of his jump-suit is a length of rope. By attaching this rope through rings on his harness and the "D" rings of the parachute risers, passing it around and tying it to his leg whilst he releases the risers of the parachute from the shoulder rings of his harness, he can lower himself to the ground quite easily.

Removing the parachute from the tree requires very little time, but a certain amount of planning is necessary. Supported in an upright position by ropes, the tree is cut through with an axe. The ropes are then slackened off to lower the tree carefully in the desired direction until the parachute can be removed. In chopping, care must be used to hew horizontally in the direction the tree is to fall and to cut on the opposite side at an angle of about forty-five degrees. This prevents the butt end, as the lowering proceeds, from slipping off the stump and occasioning damage to the parachute.

The instructor in mountain climbing and snow and ice travel is Joe Weiss, who has lived for years in the mountains of Switzerland and is an alpinist with intimate knowledge of life above the snow-line. From him the trainees learn how to avoid the dangers of hidden crevasses by prodding the ground ahead of them with their ice-axes. The ice-axe itself is an instrument with many uses. It may be used as an alpenstock, as a belaying pin, or simply as an axe to chop footholds in the ice. Special aids for travel over ice, such as crampons (or detachable foot-irons), are standard equipment on all pararescue missions in winter conditions. Jumpers are also taught how to avoid snow-blindness, sunburn, frostbite, and chapping.

Survival training on the Pararescue Course is not as exhaustive and intensive as that given on the regular courses. Pararescue operations are carried out with the close support of aircraft, which can be relied upon to drop provisions and the necessary equipment. Only in an emergency would pararescue crews be called upon to rely upon the countryside for their existence. Thus, although the rudiments of survival are taught and demonstrated, it is unnecessary to give the students the same training which is required by a pilot who may be forced to live in an isolated area for months on end.

* * *

The publicity that has been given to Course No. 3 is evidence of the general interest aroused by the R.C.A.F.'s inclusion of nursing-sisters in pararescue training. The nurse's vital rôle in rescue operations has been recognized, as well as her irreplaceable value in maintaining the morale of the injured. The determination of these girls in voluntarily equipping themselves for such work cannot be too highly commended.

Solly of Solomon

By John A. Hill (R.C.A.F.A.)

(In the letter that accompanied his manuscript, Mr. Hill writes: "I, like all other readers of "The Roundel" was much impressed by the articulacy of Miss Mary Mark's A.C.2 Jones. My amazement was slightly tempered, however, by a typed letter which I recently received from British Columbia, and of which I enclose a copy herewith. The original was signed with a paw-print that covered half a page of letter-sized paper — from which I can only deduce that its writer has grown in more than mere intellect since his Air Force days."— EDITOR)

I WAS BORN LATE IN THE YEAR 1942, in a small village some five hundred miles south of the Arctic Circle, known as Solomon, Alaska. My mother and father were sled-dogs, and I had many sisters and brothers. As a pup, I would have been very happy to live out my life among my own kind, but Fate — in the form of poor navigation — decreed it otherwise.

Late one cool afternoon, we heard a mighty humming overhead. We watched the open patches of sky and presently saw a huge bird circling and circling, as though it was looking for something. Gradually it came lower, and at last alighted on the sandy beach of the Bering Sea.

Out of it came four rather shaky fur-clad men. They made their way over the brush and water-filled bog to my master's house. Being an intelligent pup, I listened in to the ensuing conversation and learned that they had become lost on their way to Nome. My master, who was one of the only two men in the village that could speak English — and who also had the only telephone — took them in and allowed them to sit around the stove in his General Store. With their furs removed, they were revealed to my young eyes as MEN IN BLUE.

Six days later I found myself jolting along in the cab of a truck, bound for the air base at Nome. My master had bartered me (as I learned later) for a drum of 100-octane gasoline . . .

In a very short space of time I had become wise in Air Force ways. There were, I discovered, two

sorts of men in blue — groundcrew and aircrew. I lived with the more important sort, the groundcrew, who fed me and patted me with great liberality. They christened me "Solomon"— or "Solly", for short; and I was allowed to spend all my time romping around the camp and helping them to service the aeroplanes. At night, I slept with them in a quonset hut; but when winter came, they built me a little hut of my own, since a restless snowball makes a rather trying sleeping-partner for a human being.

When the weather became unsuitable for patrol, I was loaded with my squadron on to a huge passenger aircraft, and we left Nome for a place called Anchorage. Here I found many more men in blue — of both sorts — and I soon became friends with them all. Here, too, there were many more types of aircraft, and I was continually being reprimanded for going too close to the revolving paddles on the front of them.

We spent Christmas and New Year at the Anchorage air base, which was known as Elmendorf Field. But soon people began packing things, and I felt in my bones that I was in for another change of address. In February 1943, all my squadron's aircraft departed, leaving me behind with some 200-odd ground crew. Then early one morning I was put into a special crate that had been made for me, and placed among a lot of other luggage in a thing called "a train".

Never will I forget the jostling I took on that journey — and it seemed like a year before, five hours later, I was taken out and put on board a huge ship.

My life on this ship for the next seven days was not of the best. My meals were very irregular, and my friends did not visit me very often, as I was in the "steerage", which seems to be a rather unpopular part of a ship. The thing that worried me most, though, was that I was not included in the "emergency drills" that I heard people talking about. Had an emergency arisen, I would probably have been left with the ship. Occasionally in the dead of night, the ship would shake and shudder as the navy crew, fed-up (like myself) with inactivity, would blast away at some imaginary submarine — or perhaps a real whale. Everybody would then grab their life-jackets and scramble upstairs to see what the commotion was about. It was a sleepless and a depressing trip, and we were all glad when we reached Seattle. There I was put on to another train, bound this time for Vancouver.

At Sea Island I once more had loads of space to roam around in, plenty of trees to — er — admire, and lots of propellers to bite at. It was this last weakness of mine, however, that brought about my downfall. One day I was brought into a room where a group of my friends were sitting, and I was solemnly court-martialled. The sentence was protective banishment — in my own best interest. And that ended forever my association with the men in blue. Within a few days my world had completely changed for the second time in my short life; and I was whisked away to a comfortable ranch near a place called Kamloops. Although I missed my friends quite a bit at first, I was at least able to catch up on my sleep.

Although I now lead the normal life of any well-fed Canadian dog, I have more than once heard my master's friends comment on the thoughtful expression in my eyes. My master usually tells them that I am thinking of a certain rather attractive setter at a neighbouring farm. Sometimes, of course, he is right — but quite often he isn't. For after all, a dog who has travelled some 2,500 miles by land, sea, and air — before he was even old enough to tear the seat out of a stranger's trousers — has other things to think about besides women . . .

B.F.'s and M.E.-

3. Diddling

(No. 2 of this series, "Dash Bored", appeared in our Dec. 1951 issue.— EDITOR)

WHILE THE TITLE of this story may sound quite harmless, the phobia, complex or disease known as "diddling" can (and often does) result in quite serious after-effects — both to the diddler and to the diddlee.

Let's say you're a B.F. (remember, this is just a story) and that you are sitting in the cab of a parked military-pattern vehicle, just waiting while Bill runs into the garage with the Sergeant's wet-wash.

Then and there is created the set of circumstances so peculiarly conducive to diddling. You are alone with all the knobs, buttons, switches and levers. You twitch. For a moment more you just twiddle. Then, since you're a B.F., it's no time at all before you're diddling.

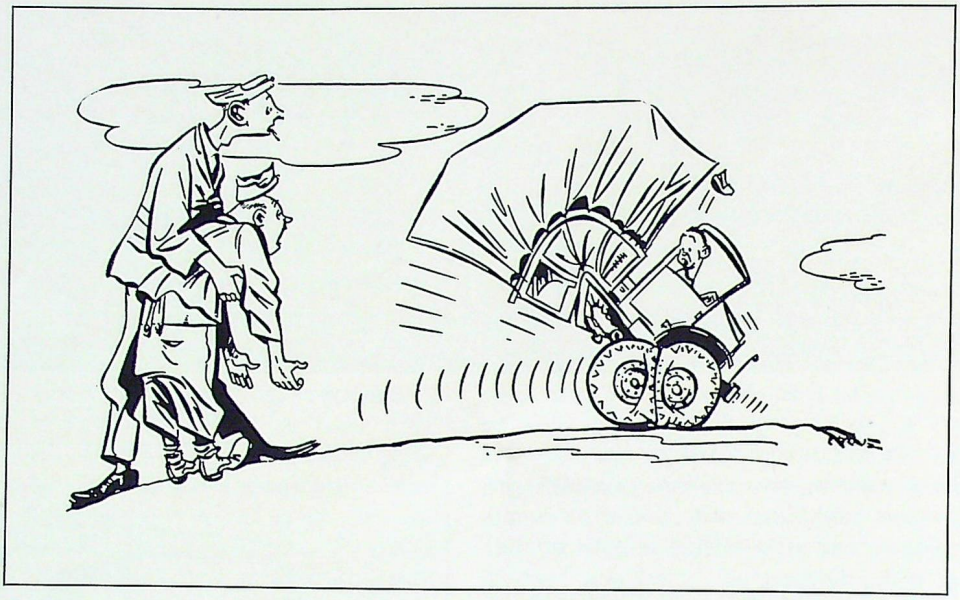
Let's start by taking your right foot. Perhaps we should have said, let's take it right away from that gas pedal which it is so busily pumping up and down — for that pedal is hooked up with a gadget in the carburettor known as an accelerator pump.

Normally, the accelerator pump's job is to squirt an extra shot of gasoline to the engine when it needs it for rapid acceleration. But pitter-patting on the pedal, when the car is parked with the engine not running, only pours raw gas into the manifold and combustion chambers, washes the oil off pistons, rings, and cylinder walls, dilutes the crankcase oil, and generally plays hob with the engine's innards the moment it's coaxed into starting.

Meanwhile, what's a B.F. to do with an unoccupied hand? Ah! Those gear shift and transfer case levers. Let's see, you say, here's low — here's front axle engaged — this must be high or something — or winch maybe . . . All very interesting, of course. You're happy! You're diddling!

" . . . alone with all the knobs, buttons, switches and levers."

But wait. Right up next to you is a big steering-wheel. Can you, as a self-respecting diddler, afford to pass up a steering wheel? No Sir! Not when a good hefty heave can turn it every which way, and who says you can't rise to the occasion with a good hefty heave! Unfortunately, the steering gear of the vehicle doesn't always follow suit. With no forward motion to roll the wheels, they have to twist against the tire's grip on the



". . . the epic picture of a vehicle winching itself."

ground. What this does to the steering linkage, shafts and rods is, to all intents and purposes, roughly the same as what the Sergeant threatens to do to you as he suddenly appears on this scene.

But his wrathy words can be classified as merely the calm before the storm — when he climbs into the cab, starts the motor, and tries to drive off.

Remember that transfer case shift lever? Tsk tsk! You left it in the winch power take-off position. You are now confronted with the epic picture of a vehicle winching itself.

Ponder this touching scene, while we add the sound effects of tearing metal, snapping cables, straining mounting-bolts, and uprooted anchor hooks.

There are, of course, other sounds too that might be added. The Sergeant will make them. We cannot, however, reproduce them here.

COOLING 'EM OFF

During any type of precipitation in winter weather, hangar doors can be opened and aircraft chilled to approximately outside temperature before being towed out on the ramp. This prevents snow from melting upon striking the aircraft, and then freezing.

(*"Flying Safety": U.S.A.F.*)

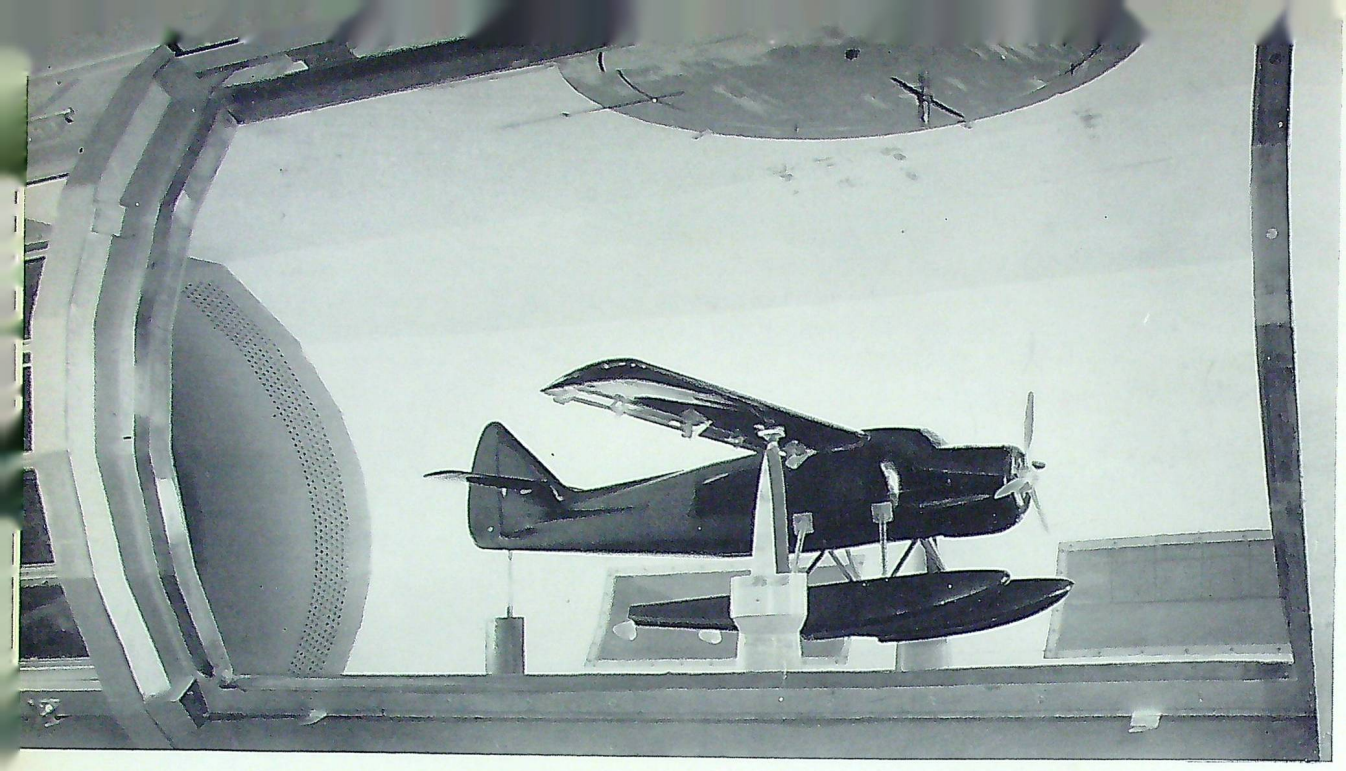
Service Writing!

(As a footnote to Wing Commander M. W. Gall's article on "Service Writing", which appeared in our December issue, a stunned reader has sent us the following extract from a recent D.R.O. He writes: "I suggest that it might be used as the basis for a competition of the 'how-many-mistakes-in this?' variety."— EDITOR)

1. The increase of personnel reporting to the Accounts Section and the Admin Unit Orderly Rm for advances of pay have reached a stage whereby full time staff will be required to handle same. Normal pay parades are held twice monthly and the only other time advances of pay are to made are on TD, leave or transfer allowances and these are to be made at special times as already promulgated in orders.

2. There is no authority whereby an officer or airman can receive an advance of unearned pay regardless of the case as this would mean advancing money which was not earned.

3. Advances of earned pay may be made at the Commanding Officer's discretion in compassionate cases only and the word compassionate is to be used literally. Prior to an officer or airman desiring an advance of earned pay, he should report to this superior officer who is to submit the facts and recommendations in writing to the Camp Commandant.



FLYING OTTER

This interesting photograph shows a model of the De Havilland "Otter" ready for testing in the National Aeronautical Establishment's horizontal wind tunnel at Ottawa.

TOP CAMERAMAN

Cpl. J. De Chamaillard, who recently achieved first place in a motion-picture course given by the U.S. Navy at Pensacola, Florida, and attended by American and Canadian Service photographers. Cpl. De Chamaillard is stationed at Rockcliffe in No. 1 Photographic Establishment.

The Spirit of N.A.T.O.

Never has Anglo-American technical rivalry been keener or co-operation closer than at the present time, though collaboration is not, as is often supposed, of recent growth. Over thirty years ago, during the Kaiser's war, the Handley Page 0/400, D.H.4 and S.E.5. were being built in American factories, and the American Liberty engine remained in continuous service with the R.A.F. from 1918 to the early 1930's. To America, also, we acknowledge some of the best of the R.N.A.S. flying-boats, in the development of which the Englishman John Porte was largely concerned.

In later years, the Curtis D-12 engine, anglicized as the Fairey Felix and installed in the Fox biplane, gave the R.A.F. the world's fastest bomber. This Felix-Fox, it may be remarked, was as outstanding a combination in its day as the Merlin-Mustang of 1943, or, to cite more recent instances, the Shooting Star with the Whittle jet, the Sapphire-Thunderjet, or the Avon-Sabre.

The most pleasing aspect of this traffic in equipment and ideas is that it has not been one-way; or at least it has never remained so for long. To-day we see the Armstrong Siddeley Sapphire-powered English Electric Canberra bomber in production at the Martin plant, while at Lockheed, R.A.F. crews prepare to deliver to Coastal Command the first of a batch of Neptune patrol bombers. We see the excellent Sabre airframe wedded to the highly promising Orenda jet, and the versatile Canadian Beaver adopted — with the greatest enthusiasm — by the American armed forces; and we see not only the Sapphire but the Rolls-Royce Tay on American production lines, and licences secured for other British gas turbines, both of the turbojet and turboprop variety, of Armstrong Siddeley and Bristol design.

Nor is there any sign that the limit of collaboration and interchange has been reached; in fact, having proclaimed the Hawker P.1067 and Vickers Valiant as the pre-eminent fighter and bomber in their respective classes, influential American journals are now openly discussing the possibility of one or both of these types being built in the U.S.A.

(From a "Flight" editorial: U.K.)

STRAIGHT IS THE WAY

Night take-off accidents involving loss of directional control and collision with snow-banks point up the necessity for being really on your toes under these conditions. A slight veering to the left would ordinarily not be noticed but when there is a snow-bank in that direction the veer winds up as an accident statistic.

("Flying Safety": U.S.A.F.)

Letters to the Editor

U.N.E.S.C.O.

Dear Sir:

Question No. 12 in "What's the Score?" in the December issue of "The Roundel" suggests that its author, Pilot Officer Ruch, (possibly as a result of "spending the past summer sacrificing his youth on the bleak altar of 'The Roundel' ") lost his sensitivity to that precision of expression which should characterise what I understand to be his academic background.

The proper extension of the abbreviation U.N.E.S.C.O. differs markedly, and quite significantly, from any of the answers which he suggests, and it might be desirable to offer the correct answer in a forthcoming issue. As an exercise in elementary staff-work, I leave it to Pilot Officer Ruch to check the proper designation, and at the same time to ponder on the pitfalls which await both the academic and the embryo staff officer to whom anything less than 100% accuracy of expression is acceptable.

Apart from this howler, Pilot Officer Ruch's contribution was both interesting and valuable, and I hope that he will be encouraged to submit further suggestions which will assist readers of "The Roundel" to sharpen up their thinking about the working of those international organizations of which Canada is an active member.

A. S. R. Tweedie (R.C.A.F.A.)

(Well may Mr. Tweedie call us to task! "The Roundel" hides its head in shame. We inserted one of Pilot Officer Ruch's decoys in place of the correct answer — which is, of course, "Educational, Scientific, and Cultural Organization." Pilot Officer Ruch's protest will certainly reach us before this apology appears. —EDITOR).

WINGED PLUMBER

Dear Sir:

For a month or two last summer I was a civilian employee at an R.C.A.F. Station in the Yukon. This was my first actual contact with the Air Force since my war-time experience, which ended in 1945.

After only a few days on the Station, I was startled to encounter a corporal wearing pilot's wings on his tunic and carrying a pipe-wrench and a toilet-plunger in his hands. Now, while I have tried to keep posted on late developments in military aircraft, I must admit that I had no idea that things had reached a stage which necessitated an aircrew plumber.

An ex-pilot myself, I sought information; and, upon meeting the same corporal again, I enquired casually if he were doing much flying. I was indeed surprised to learn that he had not been inside an aircraft since 1945. He was another of the group whose wings parade was followed almost immediately by discharge when the war ended in Europe. He subsequently re-enlisted, and is now by trade a plumber — and strictly groundcrew.

Is there no trade insignia for Air Force plumbers? One can readily imagine a badge worn on the sleeve, similar to the wireless operator's, but more appropriate.

The plumber whom I met happened to be carrying the badge of his trade in his hand. However, were it worn with the pilot's badge, the effect might be both ludicrous and confusing . . . unless, of course, there is foreseen the time of need for the pilot-plumber or even the paratroop-plumber, trained and alert for any emergency.

H. W. Pettman

PRAISE INDEED!

Dear Sir:

I am enclosing a picture of my ten-months-old son, Barrie George MacGregor Codd, who, in his search for vitamins,

decided that the cover of "The Roundel" magazine was expecially tasty. Assure Sgt. Shatterproof that his article is thoroughly digested in this household.

P. Codd (R.C.A.F.A.)

★

Answers to "What's the Score?"

1: (d)	2: (b)	3: (b)	4: (b)
5: (c)	6: (b)	7: (d)	8: (d)
9: (a)	10: (b)	11: (b)	12: (d)
13: (a)	14: (b)	15: (c)	16: (d)
17: (a)	18: (c)	19: (d)	20: (c)

The D.H.110

This photograph of the new British twin-jet day and night fighter was taken from a Dove after sunset, while the D.H.110 was making its second flight. The D.H.110 is powered by two Rolls-Royce Avons.


The
ROUNDEL