The ROUNDEL

VOL. 2, No. 9
JULY-AUGUST 1950

ROYAL CANADIAN AIR FORCE

The Roundel

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

VOL. 2, No. 9 JULY-AUGUST 1950

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This Month's Cover

Air Chief Marshal L. S. Breadner, The Honourable Brooke Claxton, and Air Chief Marshal W. A. Curtis are shown chatting informally, during a break between sessions of the R.C.A.F. Association's First National Convention.

EDITORIAL OFFICES:
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Ottawa, Ont.

A Message from the C.A.S.

TO THE R.C.A.F. ASSOCIATION

The recent convention of the Royal Canadian Air Force Association was an eminently successful one and bodes well for the future of the Organization. It was a grand sight to see delegates from all across the Dominion working together towards a common goal.

Full credit should be given to Air Chief Marshal Breadner for his tireless efforts in putting the Association on a working basis. To-day's membership of more than 9,000 is a good indication that the R.C.A.F.A. will do much to further the cause of aviation in Canada.

Already at least one Wing has shown what it can do in the field of good citizenship. During the recent flood in Manitoba, No. 500 Wing in Winnipeg had 200 members building and maintaining one of the most vital of the city's dykes. I saw them literally working like beavers and I was extremely proud of them.

Keep up the good work.

W. A. Curtis

Air Marshal
Chief of the Air Staff

Sgt. Shatterproof Stands Watch

EDITOR, "ROUNDEL," A.F.H.Q. 8 JUNE

INTELLECTUAL FIRES BURN LOW ON MESS DIET. CONSTRUCTIVE THINKING IMPOSSIBLE TILL END OF SPRING MAKES IT SAFE TO LEAVE STATION AND REVITALIZE TISSUES AT FETLOCK TABLE. MATRIMONIAL CASUALTIES HERE INCLUDE FLYING OFFICER BACKFLIP WHO FINDS TOO LATE THAT C.O.'S DAUGHTER KNEW CRAWL ALL THE TIME. CONGRATULATE AIR VICE-MARSHAL MORFEE. AND REMEMBER, SIR — THOUGH ENFEEBLED BY FAMINE, SHATTERPROOF STILL STANDS WATCH.

SHATTERPROOF

SGT. SHATTERPROOF 9 JUNE

YOUR CONTEXT OBSCURE. AM I TO CONGRATULATE AIR VICE-MARSHAL ON SURVIVING SPRING UNSCATHED OR ON ELECTION TO R.C.A.F.A. PRESIDENCY? GROUP CAPTAINS AND UP ARE IMMUNE TO MATING-SEASON, GAMBOLLING ON GREENSWARD WITH VILLAGE MAIDENS TOO UNGRACEFUL IN BRASS-BOUND HATS. CONGRATULATE ME TOO. I GO ON MONTH'S LEAVE TO-DAY. DORVAL TO-NIGHT, CHATHAM TO-MORROW, SAINT JOHN N.B. ON 11TH.

EDITOR

EDITOR, "ROUNDEL," C/O 426 SQDN., DORVAL

9 JUNE

IN FAIRNESS TO BOYS IN FIELD, SUGGEST ORDER OF DRESS BE WEDGE CAPS FOR ALL RANKS BETWEEN MARCH 21ST. AND JUNE 20TH., THUS EXPOSING BRASS TO EQUAL RISK. CANNOT CONGRATULATE YOU, SIR. WITH SHATTERPROOF AT DEATH'S DOOR, THIS IS NO TIME TO TAKE OUR PLEASURE. WHAT OF "ROUNDEL"? AND WHY SAINT JOHN?

SHATTERPROOF

SGT. SHATTERPROOF 10 JUNE

PLAN TO PUBLISH COMBINED JULY AND AUGUST SPECIAL R.C.A.F.A. DOUBLE-SIZE ISSUE OF "ROUNDEL." LEAVE ESSENTIAL TO EDITORIAL WELL-BEING — MORE SO THAN EVER AFTER LAST NIGHT AT DORVAL. AIR FORCE DAY HERE IN CHATHAM SPLENDID SHOW. WHOLE STATION BEHIND IT. BIG PARTY PLANNED FOR TO-NIGHT. SAINT JOHN BECAUSE I PROPOSE TO GO SAILING. ANY MORE QUESTIONS?

EDITOR

EDITOR, "ROUNDEL," C/O R.C.A.F. STN., CHATHAM

10 JUNE

YES. CAN YOU SAIL? LET US FACE IT, SIR — WE ARE NO DASHING JET PILOT. SUGGEST WE RETURN TO OTTAWA AND SETTLE FOR NICE STEADY ROWBOAT ON CANAL. DOUBLE-SIZE ISSUE OF "ROUNDEL" UNNECESSARY. SIMPLY SKIP ISSUE. DOUBTFUL IF READERS WILL NOTICE NOW THAT NO FURNACES TO LIGHT. GRAPEVINE ADVISES CHATHAM ONE OF HAPPIEST STATIONS IN SERVICE. PLEASE CONFIRM OR DENY FOR MY FILES.

SHATTERPROOF

SGT. SHATTERPROOF 11 JUNE

GRAPEVINE MORE THAN CONFIRMED. AGREE WE WE ARE NO DASHING JET PILOT. DASHING JET PILOTS UP SINCE SEVEN AFTER PARTY SCREAMING ROUND AIRDROME IN VAMPIRES WHILE EDITORIAL ARTERIES POUND LIKE AGED PISTON-ENGINE. LEAVING FOR SAINT JOHN AND HIGH SEAS BY HARVARD THIS AFTERNOON. YO HO HO.

EDITOR

EDITOR, "ROUNDEL," C/O R.C.A.F.A., SAINT JOHN, N.B. 11 JUNE

WHAT DO YOU MEAN, SIR — YO HO HO? LET US CONTROL OURSELF. WHILE IN SAINT JOHN, USE MY NAME IF IN TROUBLE. SHATTERPROOF IS NAME TO CONJURE WITH IN MARITIMES. ASK OLDTIMERS IF THEY REMEMBER GREAT-UNCLE RUMKEG AND HIS SCHOONER "REDNOSE."

SGT. SHATTERPROOF 12 JUNE

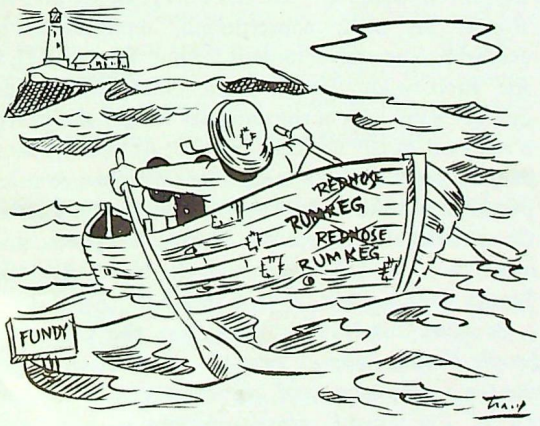
CONJURING POOR. RUMKEG SHATTERPROOF AND SCHOONER "REDNOSE" UNKNOWN TO OLDTIMERS, ARCHIVISTS, OR POLICE.

EDITOR

EDITOR, "ROUNDEL," C/O R.C.A.F.A., SAINT JOHN, N.B. 12 JUNE

SORRY. IT WAS GREAT-UNCLE REDNOSE AND SCHOONER "RUMKEG." WHEN DO WE SAIL?

SHATTERPROOF



SGT. SHATTERPROOF 12 JUNE

REDNOSE SHATTERPROOF AND SCHOONER "RUMKEG" ALSO UNKNOWN IN MARITIME HISTORY. AM STILL BERTHED IN ADMIRAL BEATTY HOTEL. INVITED TO SPLICE A FEW MAINBRACES IN CLUB-ROOM OF SAINT JOHN R.C.A.F.A.WING TO-NIGHT.

EDITOR

EDITOR, "ROUNDEL," C/O R.C.A.F.A., SAINT JOHN, N.B. 13 JUNE

TRY RUMNOSE AND "REDKEG." WHEN DO WE SAIL?

SHATTERPROOF

SGT. SHATTERPROOF 13 JUNE

YO HO HO

EDITOR

$31.50

*(This speech, delivered by the Hon. Brooke Claxton over the C.B.C. Network not long ago, shows with exceptional clarity and brevity why and how Canadians are now spending $31.50 per head on defence.—*EDITOR)

ALL OF US want prosperity, peace and security, and the prosperity, peace and security we seek is threatened only by one force, and that is the Soviet Union and its satellites. Their attitude makes it necessary for us to spend twenty times as much as before the war on our national defence.

We know that a nation of thirteen millions, occupying three and a half million square miles of territory, cannot defend itself alone. There is no nation which can provide for its own security entirely by its own efforts. We therefore took an active part in promoting the North Atlantic Treaty under which the United States, the United Kingdom and ten other countries have agreed to combine to deter aggression and, if necessary, to defeat an aggressor. "Deter, defend, or defeat" was the way it was put by Defense Secretary Johnson of the United States at The Hague meeting of the North Atlantic treaty nations.

The North Atlantic nations have made good progress with planning, and programmes are now moving to the next and more difficult stage of translating plans and programmes into action. Fortunately for us, that should not require any major changes in our plans because the rôle for us in joint plans corresponds closely with the one we had already plotted for ourselves.

Let me state again the broad objectives of our defence policy.

At sea we have to defend our coasts and provide anti-submarine and minesweeping forces to enable our ships to travel across the North Atlantic or wherever else they may be required.

At home we should have the force — a highly mobile, largely airborne brigade group, and the aircraft to deal with an attack on the scale and of the kind that might be made.

We must have the organization — trained officers and all-round capacity to produce much

bigger forces to be used where necessary to assist in defeating the enemy just as far away from Canada as possible.

This year we are asking Parliament to vote $425 million on defence — on the Navy, Army and Air Force; on men, construction, equipment; on research and development. That means $31.50 for each man, woman and child in Canada, nearly 18 per cent of the national budget and nearly 3 per cent of the national income. At current rates of exchange, Canada is spending on defence more per capita than any other nation in the British Commonwealth except the United Kingdom, and more than any other nation in the North Atlantic Treaty organization, except the U.K. and U.S.

Because this is a big operation, the Canadian people should have all possible information about what we are doing, and accordingly, both in and out of Parliament, more information has been

given on defence than ever before — and, I believe, more than is being given in most other countries. No one, however, can give *all* the information without giving it as well to a possible enemy.

To-night I propose to give as full a report as time permits on what we are doing.

In the Navy, Army and Air Force we have to-day over 48,000 full-time active officers and men, another 48,000 in the reserve forces, and about 23,000 civilians mostly working in dockyards, etc. — or a total of about 120,000 engaged full-time and part-time on our defence.

Recruiting for the active force has been entirely satisfactory. We have been getting men of the quality and at the rate we want. All three Services will soon be enlisting only to fill vacancies caused by ordinary retirements and discharges. So long as we have sufficient trained officers and tradesmen, there would be more delay caused by the time taken to provide equipment than by the time taken to train men.

But we do want more men for the reserve forces, particularly the Army. Young men who can do so should spare some time for Canada. What better thing can anyone do than serve his country?

As for officer training, we have nearly 6,000 training to-day to standards equivalent to a year's practical work and a university degree. In proportion to population we have more men training to such standards than, I believe, has any country.

In the field of equipment, we have developed an all-weather twin-engine jet fighter, the CF-100, and its tests show that it is probably the leading aircraft of its type in the world. We have placed an order for the production of this aircraft.

Good progress is being made on the manufacture of the F-86, under license from the United States. This is the fastest single-seater fighter in production.

For the Navy we have ordered eight new vessels, three of them anti-submarine escort vessels of a totally new type, designed and made entirely in Canada. This ship is, we believe, well in advance of any comparable vessel.

We also have on order large quantities of radar and wireless equipment.

Just consider some of the costs of defence equipment. One of our F-86's will cost more than $400,000, without armament; the new anti-submarine escort vessels about $8,000,000 each; the latest 5.25" anti-aircraft gun, equipped and installed, $600,000; a permanent radar station about $2,000,000; a modern airfield with buildings and equipment about $15,000,000; a tank $300,000 or $400,000; and so on. Each man taken on for the Navy, Army or Air Force costs at least $2,600 a year.

National security, like social security, has to be paid for by all of us. With a budget of $2,300,000,000, about $1,200,000,000 must be used to meet debt charges, social security payments and other amounts fixed by statute and not within the control of any government. Of this about 40 per cent goes to defence, leaving 60 per cent to cover all the other items.

It is being brought home to us day by day that to preserve our freedom we peoples of the democratic free nations must be prepared to devote to defence some of the resources we would rather use to promote human welfare and provide greater social security.

In international as in national affairs we do not get something for nothing. We must work and pay for what we get; we must work and pay the price for our security. The Russians' attitude leaves us without a choice. In the present state of the world, defence expenditures are the necessary premiums for national security.

Sometimes it is refreshing to have a glimpse of our country through the eyes of others. In recent months I have had to make two visits to Europe for the North Atlantic meetings. They gave me opportunities to see how Canada is regarded by the other nations. In the eyes of others no country stands higher than does Canada.

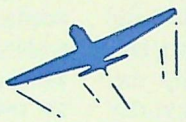
Why is this so? Canada stands high because of the service of our armed forces, because of the assistance we gave other nations during and since the war, because of the objective and helpful

attitude we have taken, because of the reputation and character of our people, our representatives, and our young sailors, soldiers and airmen.

Just think for a moment what a large proportion of the people of Europe would give anything to be able to be in Canada, just where we are. We are already here, and while we should count our blessings, we must be prepared to defend them as well.

I have just returned from a highly interesting two days spent with the President of the United States, members of his Cabinet, the American Chiefs of Staff and other high-ranking officers at Fort Benning, Georgia, and Eglin Field, Florida. This visit confirmed what I just said about the respect in which our country is held by other nations. It also showed that progress is being made in our collective defence. The United States exercises gave an impressive demonstration of the immense power of our great neighbour.

If these collective efforts do result in our obtaining more security, there will inevitably be a temptation for all countries to relax their efforts. Let us, however, not forget the lesson we have learned. Two wars have shown that eternal vigilance and sustained endurance are the price of freedom and security.



DISCIPLINE

The leader must be ready, not only to accept a higher degree of responsibility, but a severer standard of self-discipline than those he leads.

* * *

Neither in war nor in peace can all orders be explained beforehand. That's all the more reason to explain them when it is possible. You won't have to give orders twice, if, the first time, people understand why they are given.

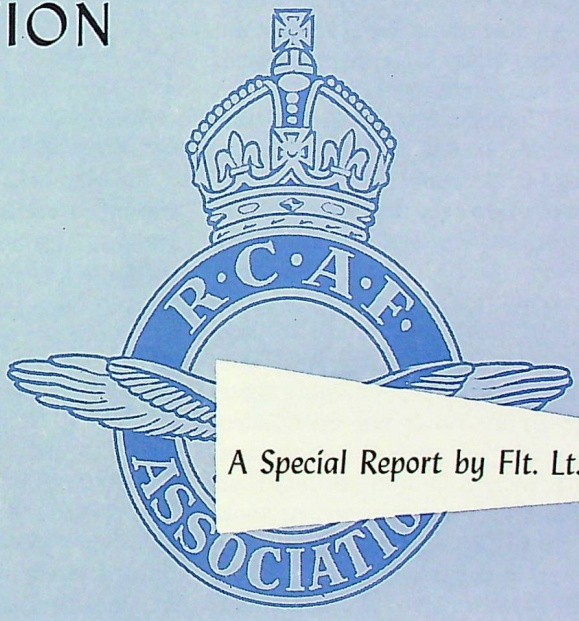
* * *

It is only discipline that enables men to live in a community and yet retain individual liberty. Sweep away or undermine discipline, and the only law left is "that they should take who have the power; and they should keep who can!" Security for the weak and the poor vanishes. That is why, far from it being derogatory for any man or woman voluntarily to accept discipline, it is ennobling. The self-discipline of the strong is the safeguard of the weak.

FIELD MARSHAL SIR WILLIAM SLIM,
K.C.B., C.B., G.B.E., C.B.E., D.S.O., M.C.,
(as quoted in "Air Clues")

R.C.A.F. ASSOCIATION

THE FIRST NATIONAL CONVENTION



A Special Report by Flt. Lt. W. McLee

THE CONVENTION

THE CHAIRMAN'S GAVEL banged shortly after 9.30 a.m. on Friday, May 12th, and the first national convention of the R.C.A.F. Association was under way.

For the previous twenty-four hours more than one hundred delegates had been making their way into the nation's capital by car, train, and air. They came from Halifax and Vancouver, and from dozens of places in between. They also came from downtown Ottawa. Every province except Newfoundland sent representatives. Among the delegates were former officers and airmen, ex-W.D.'s, and an ex-member of the Royal Australian Air Force. But the man whose presence dominated the scene was the grand old man of the R.C.A.F., former Air Officer Commanding-in-Chief of the R.C.A.F. overseas and Chief of the Air Staff, Air Chief Marshal Lloyd S. Breadner.

When, about three years ago, the clamour for a truly Air Force veterans' association became so great that it could no longer be ignored, the powers that be looked around for a man to get the movement on its feet. They didn't have to look far. About sixteen miles from Ottawa is a little resort village called Kirk's Ferry, and living there in retirement after his Air Force had established Canada for ever as an "air power" nation, was Air Chief Marshal Breadner. Despite the fact that he was happy in his peaceful hide-away, he took on the job; and, on 16 September 1948, an announcement appeared in the newspapers that Air Chief Marshal L. S. Breadner had been appointed provisional president of a newly-formed organization to be known as "The R.C.A.F. Association."

The first national convention was not only a gathering of delegates from across Canada. It was also a testimonial to the organizational ability and hard work of Air Chief Marshal Breadner, his provisional committee, and the employees in the Association's central office.

To-day, outside the Dominion, Association members can be found in Bermuda, the United States, South America, Switzerland and the United Kingdom. The Association now has more than 9,000 members and commands the respect of the Canadian Legion, other veterans' groups, the Air Force itself, the Department of National Defence, and the Canadian people.

* * *

After Bishop Renison had delivered the invocation, the delegates bowed their heads in a minute's silence in memory of their comrades who lost their lives in the Service.

Then the chairman introduced the provisional executive committee, the Group representatives, and the Association padres. The round of introductions ended with the R.C.A.F. official observers (Air Cdre. R. C. Ripley, Group Capt. R. S. Turnbull, and Sqn. Ldr. G. W. Kusiar) and the Associations' hard-working pair, Sqn. Ldr. J. H. Giguère and Flt. Lt. R. S. McCartney.

Air Marshal W. A. Curtis, Chief of the Air Staff, welcomed the delegates warmly on behalf of the R.C.A.F. He said that he was very pleased with the growth of the Association to date and expected a lot of support and help from his friends in the organization. He predicted that the Association, with its first year now safely behind it, would go ahead by leaps and bounds.

The formalities over, the convention swung into high gear. Committees were appointed to bring in a slate of officers for the executive elections and to investigate clothing and insignia for the Association. The chairman then called upon Air Chief Marshal Breadner to read the presidential report.

Air Chief Marshal Breadner delivers the Presidential Report

The Provisional President's Report

In his report, Air Chief Marshal Breadner outlined some of the accomplishments of the Association to date. He mentioned that at the end of last April the organization boasted 58 Wings, with 5,068 members and 3,391 members-at-large—a total of 8,481.

Before delving further into the report, he read a wire from the Winnipeg delegation, a facsimile of which appears on this page. "Also in this connection," he added, "I think you will be interested to hear that forty of our W.D.'s in Winnipeg are, as we would use the term, slinging hash for the refugees at Stevenson Field, feeding about five hundred. A stout effort."

The Provisional President lauded the work of Robert McCartney, The Association's "underpaid" secretary, Sqn. Ldr. J. H. Giguère, executive assistant on loan from the Air Force, and the handful of office workers in the central office.

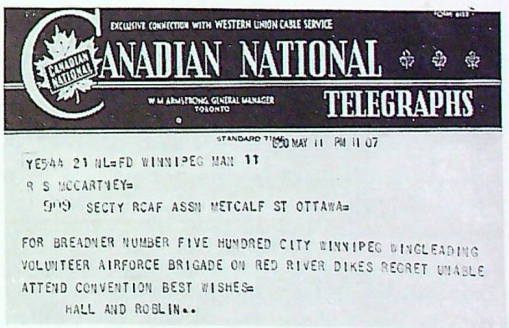
Changes in the provisional executive were reviewed: Air Cdre. Russell was forced to resign from the Ontario Group on account of ill-health and was replaced by Air Vice-Marshal G. E. Brookes; Air Vice-Marshal K. G. Nairn left his position of 2nd Vice-President to become Honorary Treasurer on the resignation of Flt. Lt. C. E. Winter; and Air Vice-Marshal A. L. Morfee joined the Association as 2nd Vice-President.

The report mentioned the establishment of a single Maritime Group embracing the provinces of Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland, under the presidency of Wing Cdr. H. W. Aslin of Nova Scotia.

Air Chief Marshal Breadner thanked the R.C.A.F. for its "wonderful contribution" to the Association and mentioned the firm co-operation received from the Canadian Legion; the Royal Canadian Flying Clubs Association; the Army, Navy and Air Force Veterans' Association; and many reserve Army and Navy units.

His outline of the achievements of the various Wings included the bringing of needy cases to the attention of the R.C.A.F. Benevolent Fund, sponsorship and entertainment of Air Cadet squadrons, provision of prominent speakers on aviation subjects, participation in Battle of Britain Sunday, Air Force Day and Remembrance Day ceremonies, establishment of hospital visiting committees, formation of model aircraft clubs, and (in the case of many Wings) the placing of their own organizations on a sound financial footing.

For the future, the retiring Provisional President asked the Association to do two things: double its membership, and "get behind everything that is air." The best method of doubling the membership, he said, was for each Wing to be a live-wire organization. A live Wing attracts interest and, before long, surrounding communities want one of their own. As regards getting behind everything that is air, the Chief reminded the delegates that in war-time many a flying club becomes a training school, many an air cadet becomes air or ground crew. In addition, by constantly selling the idea of



EXCLUSIVE CONNECTION WITH WESTERN UNION CABLE SERVICE

CANADIAN NATIONAL TELEGRAPHS

W M ARMSTRONG, GENERAL MANAGER TORONTO

STANDARD TIME

150 MAY 11 PM 11 07

YE544 21 NL=FD WINNIPEG MAN 11

R S MCCARTNEY=

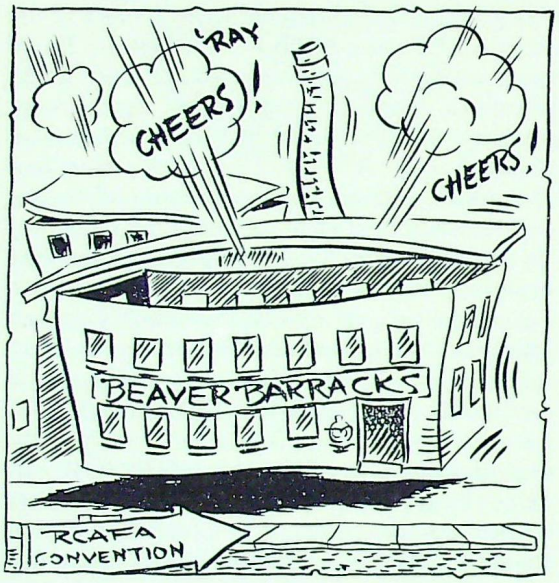
909 SECTY RCAF ASSN METCALF ST OTTAWA=

FOR BREADNER NUMBER FIVE HUNDRED CITY WINNIPEG WINGLEADING VOLUNTEER AIRFORCE BRIGADE ON RED RIVER DIKES REGRET UNABLE ATTEND CONVENTION BEST WISHES=

HALL AND ROBLIN..

air power to the public, the Association is also selling it to the voter, who in turn sells it to his representative in Parliament.

If Air Chief Marshal Breadner ever had any doubt about his standing with the delegates before the convention, they must certainly have been dispelled when he concluded his report. The hundred delegates rose as one man, and the rafters of Beaver Barracks rang with their cheers for the man who had led them in war and who had, in less than two years, again brought them together in this convention hall.



Group Reports

During the reading of the various Group reports, observers were struck by the note of optimism that ran through them all. The problems and accomplishments of the different regional Groups were, in many cases, as different as night from day. But no matter what part of Canada each report was from, it was permeated by the same theme of confidence.

Dues

Next on the agenda was the matter of resolutions, the meat of the convention. Group Capt. Graham Morrow, the Association's legal advisor, explained that the resolutions had been broadly classified as pertaining to:

(*a*) the Association itself,
(*b*) the R.C.A.F., and
(*c*) the Government.

After referring the matter of dress and insignia to the committee headed by Wing Cdr. Eric Webster, of Sherbrooke, the convention took up the thorny problem of dues. Following a lengthy discussion and the defeat of an amendment, approval was given to the resolution put forward by the Saskatchewan delegation that dues be payable annually on the basis of the fiscal year and that new members be assessed a proportion of the fee according to their date of entry.

Publicity and the C.A.S.'s Newsletter

The first real split in the thinking of the delegates came to light in the discussion of publicity for the Association. Although all were agreed that public attention to the existence of the Association was desirable, members were divided on the medium of attaining that goal. Sqn. Ldr. R. D. White, of Alberta, strongly recommended that an advertising campaign be initiated by the Dominion Executive. Wing Cdr. C. H. Link, Montreal, opposed the idea on the grounds that such a programme might create the impression that the Association was out to do some lobbying. Flt. Lt. T. D. Dailey, Brockville, suggested that press releases, issued by the Ottawa office and sent to Wings for distribution to local newspapers and radio stations, would overcome Quebec's objection. Flying Officer L. N. Baldock, Windsor, reported that his Wing had received complete co-operation in Windsor from the newspapers and radio: "if we had not, we would not be where we are to-day."

Before the discussion ended, Air Cdre. Ripley, the Assistant Chief of the Air Staff, answered the query of Ruth Vogler, Halifax, on the distribution of the Chief of the Air Staff's Newsletter.

"The Newsletter was started as an experiment . . . with a definite limitation on funds and manpower. It was decided that it should go to all ex-Service personnel who had been placed on Class

A, B, C, D, or E Reserve, excluding W.D.'s, with a circulation of around 150,000. The next letter will go out in French and English, but increase of its distribution to ex-W.D.'s and other ex-R.C.A.F. personnel will have to be taken under advisement . . . Many veterans cannot be reached because they have not advised us of change of address. But I do not think that we can send letters to people who are not members of the R.C.A.F. Reserve or ex-members of the R.C.A.F."

The convention then approved a motion, made by Wing Cdr. Link and seconded by Air Vice-Marshal K. M. Guthrie, to the effect that the Dominion Executive:

- ensure that all former members of the R.C.A.F. receive the C.A.S.'s Newsletter, and
- obtain news item coverage across the country, through the R.C.A.F. Public Relations Branch or any other available channel, concerning the activities of the Association from time to time.

"Call Me Mister"

After the delegates had enjoyed a well-earned lunch, Chairman John Sully opened the afternoon session on a humorous note by reading a telegram from Sqn. Ldr. Y. Swanton, of No. 250 Wing, Saint John, N.B. It read:

> BEST WISHES FOR A SUCCESSFUL CONVENTION. STORK AIRBORNE BUT E.T.A. INDEFINITE. VERY DISAPPOINTED UNABLE TO ATTEND.

It was disclosed that the R.C.A.F. observers had available for the delegates lists of ex-R.C.A.F. personnel and that ex-W.D.'s would now be included in the distribution of the C.A.S.'s Newsletter . . . that is, if the girls who had married would send in their new names and addresses.

A resolution expressing the sympathy of the Association for the victims of the Manitoba floods and the Quebec fires was unanimously approved by the delegates.

Flying Officer J. N. Park, of Yorkton, Sask., supported by Wing Cdr. Link and Flt. Lt. J. G. Rowand, spoke in favour of an Association magazine. A motion requesting the executive to look into the possibilities of this suggestion was passed by the convention.

The next item on the agenda proved to be the highlight of the convention. Perhaps other matters were more important to the Association itself, but to the press corps, waiting impatiently for something to get their teeth into, this was it.

It started innocently enough with Sgt. F. V. Shaw, of Halifax, stating that his Wing had noticed that on membership renewal cards the rank of commissioned officers was shown but

no reference was made to the rank of non-commissioned members. The Wing felt that, in order to promote co-operation, no discrimination be made as to rank on membership cards and correspondence, with the exception of those who retired from the Permanent Force due to length of service.

Flt. Lt. McCartney, the Association's general secretary, told the convention that the matter of ranks within the organization had been the subject of much discussion in the central office. The consensus of opinion had been that by dropping all rank the Association was lessening its opportunity of educating the public on Air Force ranks.

Air Vice Marshal A. L. Morfee

Air Cdre. A. J. Ashton then started the fireworks by moving an amendment that within the organization all rank be disregarded. He declared that rank was a detriment in getting "other ranks" into the Association and that the matter had reached a point where many of the boys were saying that the Association is just run by "a lot of brass hats." Questioned by the Chairman, he clarified his amendment so that the abolishment of rank would include correspondence. To the "Hear, hear!" of many delegates, Sqn. Ldr. White seconded the motion.

Sqn. Ldr. J. E. Comeau, of Truro, N.S., wondered if the public would begin to think that the Air Force had no senior officers if the amendment were adopted. Retired Army and Navy men, he pointed out, retained and used their rank in civilian life.

In the midst of the heated controversy, Sgt. H. W. R. Sayers, of Richmond Hill, Ont., came up with what was, in the opinion of many delegates, by far the most sensible comment on the entire question. He said: "My interpretation of the amendment is simply that it would amount to the abolition of rank within the Association. But when any commissioned officer represents this Association outside Wings, Groups, or conventions like this, he should certainly use his title. From my experience, you do not get much publicity through the rank of Sergeant, but if you have an Air Vice-Marshal with a few initials after his name, you are more likely to get the publicity we were talking about this morning."

But still the debate went on . . . and on . . . and on . . . until finally the Ashton-White amendment to abolish rank was carried by a close margin.

That evening and the next morning, newspapers across Canada emblazoned the "Call Me Mister" resolution.

Said an Ottawa paper: "L. S. Breadner, J. A. Sully, Adelard Raymond and other top Air Force brass were demoted to plain 'Mister' at a tense drama-packed meeting of the R.C.A.F. Association yesterday."

The Canadian Press dispatch on the meeting began: "Prominent Air Force officials were demoted to just plain "Mister" at the first national convention of the R.C.A.F. Association to-day.'

And so it went, right across Canada.

The R.C.A.F. Association had its publicity.

Other Resolutions

During the rest of the afternoon the delegates waded through a considerable amount of business.

They accepted a motion by Air Cdre. Duncan Bell-Irving to promote the co-ordinated effort of the three Services for furthering the efficiency of all matters connected with the defence of Canada. In discussing the motion, Air Cdre. Bell-Irving stated: "I am advised that he who is sold on the paramount importance of air power, treads on tender toes. I think those matters should no longer be taken in a jocular way and I believe this Association is a very fine medium for altering the thinking of the people in regard to defence matters."

Mr. H. W. R. Sayers speaking

Other resolutions included the following:

- that the Dominion Executive should devise a form of initiation into the Association,
- that the Maritime Group should be entitled to two members on the Dominion Executive,
- that there should be close liaison between the Dominion Executive, the Groups and Wings, and between the R.C.A.F. and the Wings,
- and that the appointment be recommended of one member of the Association to each regional committee of the R.C.A.F. Benevolent Fund.

Motions defeated included:

- that air cadets be permitted entry into the Association,
- that the R.C.A.F. be requested to make the Air Force bands available to Association Wings before any other groups,
- and that a change be recommended in the D.V.A. ruling on selection of physicians when in a D.V.A. hospital.

Training

One other resolution obtained the approval of the delegates before the end of the second session.

Seventeen separate motions relating to training and to the provision of accommodation for training and the Association were put forward. Group Capt. Morrow's resolution committee drafted them all into one motion that was enthusiastically passed by the convention.

This is the motion exactly as carried:

> "WHEREAS all Groups of the Association have submitted resolutions urging that the Association make representation to the Government and the Department of National Defence for the immediate establishment of Air Force Reserve Training;
>
> "AND WHEREAS all Groups have also submitted resolutions drawing attention to the lack of accommodation for such Training;
>
> "IT IS HEREBY RESOLVED:
>
> "THAT the R.C.A.F. Association make representation to the Government and the Department of National Defence urging that direct training throughout the country be initiated by the establishment of Reserve Training Units;
>
> "AND ALSO THAT representations be made urging financial or other assistance in the immediate provision of suitable and centrally located buildings in all key cities for the use of the R.C.A.F., R.C.A.F. Training Reserve Units, Royal Canadian Air Cadets and the R.C.A.F. Association for training and recreational purposes, such buildings to be known as Air Force Centres."

The Rank Question Again

On Saturday morning the delegates streamed back into the convention hall bright and early, and immediately plunged into the "Call Me Mister" controversy again.

Flt. Lt. F. M. Spelliscy, Saskatchewan, opened by declaring that, although yesterday he voted in the affirmative on the question of the abolition of rank, he now wished to move an amendment rescinding that motion as regards correspondence and the Dominion Executive. That set the stage for the most dramatic event of the convention.

Facing the camera, left to right: The Hon. Brooke Claxton, Flt. Lt. R. McCartney, Air Vice-Marshal J. A. Sully

Air Vice-Marshal Sully told the delegates that he felt that he had failed as Chairman on Friday. He had, he said, very strong feelings on the matter, but he had not left the chair to express himself. He then turned over the gavel to Air Chief Marshal Breadner and pitched in with a Churchillian speech that completely swayed the convention.

Despite the objections of Air Cdre. A. J. Ashton and one or two other delegates, when Air Chief Marshal Breadner called for a vote on Air Vice-Marshal Sully's motion to throw out the resolution of yesterday, only six hands opposed.

Later that day, Air Vice-Marshal Morfee, referring to Air Chief Marshal Breadner, said: "I knew him when he was a Squadron Leader, when he was a Wing Commander, a Group Captain, an Air Commodore, an Air Vice-Marshal, an Air Marshal, and an Air Chief Marshal. Only yesterday, I knew him as Mister."

After the reading of the financial report by Air Vice-Marshal K. G. Nairn, Honorary Treasurer, the delegates swiftly approved resolutions calling on the Dominion Executive to consider the possibility of making larger grants to the Wings, and on the Government for increased financial assistance.

Wing Cdr. Eric Webster produced the recommendations of the clothing committee. A smart blue wedge cap, a tie made from the Air Force tartan, arm-bands, crests, blazers, buttons and a set of colours were placed before the Executive for adoption.

Except for Defence Minister Brooke Claxton's off-the-record talk, that concluded the morning's business.

The Election

The delegates spent the noon-hour as guests of Air Marshal Curtis at lunch, following which a film was shown in the lounge of the officers' mess.

The final session began with the passing out of the ballots for the election of officers. While this was going on, the delegates took the opportunity to give formal expression of their appreciation to a number of people and agencies, including:

The Air Force Association of the United States
Air Chief Marshal Breadner
The Provisional Executive
The R.C.A.F.
The Canadian Legion
The Army, Navy and Air Force Veterans' Association
The Chairman

A motion, made by Flt. Lt. F. C. Jewitt, of Sarnia, and seconded by Flt. Lt. J. B. S. Fenning, of Toronto, asking that special steps be taken to organize a Wing or Wings in the province of Newfoundland, was adopted by the delegates.

Before the tabulation of ballots was completed, the Chairman made a formal announcement of the election by acclamation of Air Chief Marshal Breadner as Grand President and Air Vice-Marshal A. L. Morfee as President. Then, finally he read out the results of the election.

Dominion Executive Council. Seated, left to right: Group Capt. G. G. Morrow, Air Vice-Marshal K. G. Nairn, Air Vice-Marshal A. L. Morfee, Miss Ruth Vogler. Standing: left to right: Air Chief Marshal L. S. Breadner, Flt. Lt. R. S. Godfrey, Air Vice-Marshal C. C. Wyatt. (Absent from photo: Air Vice-Marshal A. Raymond and Air Vice-Marshal J. A. Sully)

Dominion Executive Council

Grand President:	Air Chief Marshal L. S. Breadner, C.B., D.S.C.
President:	Air Vice-Marshal A. L. Morfee, C.B., C.B.E.
1st Vice-President:	Air Vice-Marshal Adelard Raymond, C.B.E.
2nd Vice-President:	Flt. Lt. R. S. Godfrey
3rd Vice-President:	Group Captain C. C. Wyatt, M.B.E.
Chairman:	Air Vice-Marshal J. A. Sully, C.B., A.F.C.
Vice-Chairman:	Wing Commander E. O. W. Hall, A.F.C.
Honorary Treasurer:	Air Vice-Marshal K. G. Nairn, C.B.
Legal Advisor:	Group Captain Graham Morrow, O.B.E.
Women's Division Representative:	Corporal Ruth Vogler

Group Representatives on the Dominion Executive

(Elected earlier at Group meetings)

British Columbia:	Air Cdre. A. D. Bell-Irving, O.B.E., M.C., E.D.
Alberta:	Air Vice-Marshal G. R. Howsam, C.B. M.C.
Saskatchewan:	Group Captain J. C. Malone
Manitoba:	Group Captain W. F. Hanna, C.B.E.
Ontario:	Air Vice-Marshal G. E. Brookes, C.B., O.B.E. Flt. Lt. K. K. Gildner
Quebec:	Wing Commander R. E. Morrow, D.F.C Wing Commander C. H. Link, M.B.E
Maritimes:	Wing Commander H. W. Aslin *(One additional Maritime representative to be named)*

Air Marshal G. O. Johnson, Air Vice-Marshal A. L. Morfee, and Wing Cdr. The Rt. Rev. R. J. Renison

Following a brief benediction from Air Cdre. the Rt. Rev. Charest and the singing of the National Anthem, the Chairman banged his gavel for the last time to bring the convention officially to a close.

One hundred delegates pulled themselves to their feet and thought about the trip home. To some it would mean a long trip by air or rail, to others merely a streetcar ticket.

If the delegates were weary, they had a right to be. In the short space of two hectic days, they had expressed their views on many controversial subjects in and out of the organization, laid the groundwork for the operation of the Association during the coming year, and replaced the Provisional Executive with an elected body of their choice.

The R.C.A.F. Association had come of age.

CONVENTION SIDELIGHTS

Even the anti-rank delegates had to admire the sagacity of Chairman Sully when, on giving up the gavel to Air Chief Marshal Breadner so that he himself could freely express his views on tne question of rank, he declared: "Before I relinquish my position as Chairman, I hereby abolish the two-minute time limit on speeches for the purpose of delegate Sully's address."

During the convention, Grand President Breadner took time out to give interviews at two Ottawa radio stations. At both CFRA and CBO he astounded studio engineers with the booming resonance of his voice. The CBO Studios are on the seventh floor of the Chateau Laurier, and during the Chief's talk the CBC engineer muttered: "If we had known the power of his voice we could have saved him the trip up here. Heck, he could stand down in the lobby and carry on the interview."

There was a difference of opinion among the delegates over many subjects, but on at least one all the male representatives were unanimous. That was the charm, sincerity, and competence of the lady delegates. It was significant that every time one of them got up to say something, her views were almost always met by thunderous table-thumping. The Wings that sent Ruth Vogler, Mary Jamieson, Isobel Hutchins, Nan Groundwater, Alice Dexter and Dorothy Webster to the convention certainly knew what they were doing. And the ever-popular Flo Walsh, representing Kay Walker, fitted in perfectly with the group.

The off-the-record speech by Defence Minister Claxton was really appreciated by the delegates. Chairman Sully expressed their thoughts when, in thanking Mr. Claxton, he said warmly: "Your talk has made us feel part of the team."

The old-timers were impressed with the showing made by the young delegates at the convention. Before the meeting, fear was expressed that the younger fry might table some "radical" or at least contentious resolutions. As it turned out, there was no need for worry. In fact more than one

Air Vice-Marshal was a trifle disappointed at the complete lack of fireworks.

During the Friday evening session of the officers' mess, someone must have passed the word around that the Ottawa water supply is something special. Otherwise, how can you explain the mad rush for the water jugs and drinking fountains on Saturday morning?

At first the scarcity of microphones caused some barked shins and evil mutterings among the delegates. But near the end, when feelings began to get a little high over some of the hotly-disputed issues, the distance to the "mike" served as a cooling-off and thought-collecting breather.

Everyone got a big chuckle from Flo Walsh's

Flying Officer G. P. Brophy reading the Manitoba Group Report

horrified and outraged gasp when Defence Minister Claxton referred to the "many" years he had known her.

SPEECH HIGHLIGHTS

The Hon. Brooke Claxton, Minister of National Defence

Our thanks are due to "Bred," who, as the greatest alumnus of you all, has continued his war-time service into the job of leading his flying comrades into closer association together and with their feet on the ground. To him and to all the others who have worked with him in forming and organizing the Association, we should express the warmest appreciation.

The Association itself can be of great use in many different ways. Some of those which occur to me are:

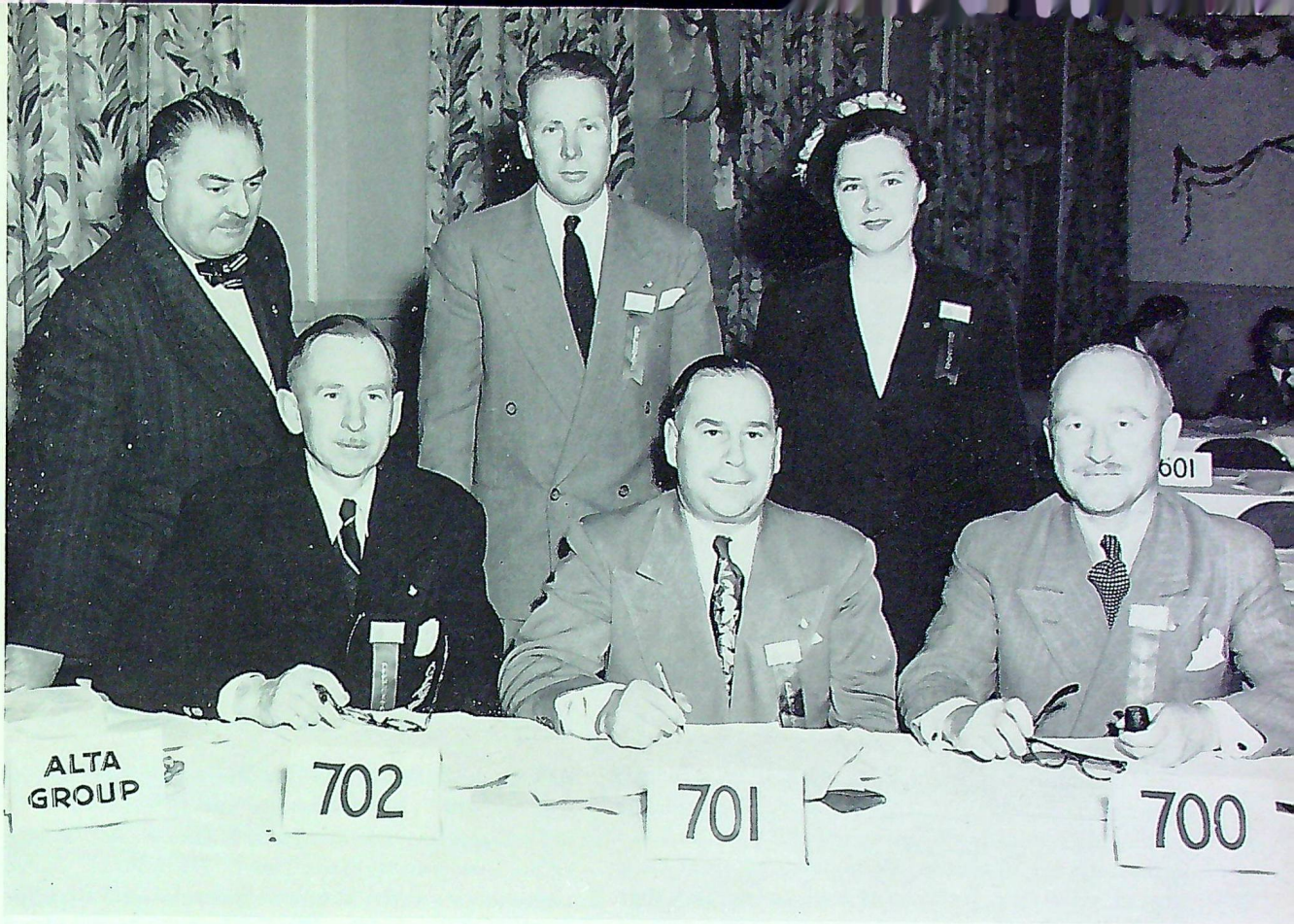
- To maintain war-time associations as an inspiration towards continued peace-time service.
- To keep former Air Force personnel up to date in their knowledge of the Air Force and the defence forces of our country . . .

The Quebec delegation. Standing, left to right: Wing Cdr. E. T. Webster, Wing Cdr. C. H. Link, Flying Officer L. E. Baxter, Mr. G. L. Brady, Flying Officer H. B. Ripstein. Seated, left to right: Mr. R. W. Savage, Miss A. M. Groundwater, Wing Cdr. R. E. Morrow, Miss M. T. Jamieson

- To assist the R.C.A.F. by encouraging new men to join, first, the Active Force, second, the Reserve Force, third, the Canadian Service Colleges at R.M.C. and Royal Roads, and fourth, the other armed Services . . . One thing we have to remember is that we are all members of one team.
- To help in arranging for displays, demonstrations and exhibits of all kinds. We have all kinds of material, including fine films of Trenton Gates Ceremony, Exercise "Sweetbriar," "Stand By To Jump," and numerous others.
- To promote, lead and sponsor the Air Cadet League as a splendid exercise in citizenship and the finest source of recruits for Active and Reserve Forces we can find in the country . . .
- Through your officers, to meet once or twice a year in Ottawa at Defence Headquarters to exchange views, often on a confidential basis, which will enable you to see the picture better and enable us to see how better to meet the needs of the Active and Reserve Forces and Cadets throughout the country . . .

No doubt you have in mind other ways in which your Association will develop. I can assure you that in everything which helps us to do a better job in the defence of our country . . . you will have our wholehearted co-operation and support.

Last year we celebrated the twenty-fifth anniversary of the foundation of the R.C.A.F. and most of you will have seen the historical account. Some of you will remember how different things used to be from what they are to-day.



The Alberta delegation. Rear row, left to right: Sqn. Ldr. R. D. White, Flt. Lt. J. G. Rowand, Miss Alice Dexter. Seated, left to right: T. C. Segsworth, Sqn. Ldr. W. D. Stillwell, Air Vice-Marshal K. M. Guthrie

Let us give you a summary of some of the more recent developments:

The first of the new type of Reserve Units, No. 1 Radar and Communication Squadron, was set up in Montreal, and its achievement of a strength of 450 in a little more than a year reflects great credit on it. One of the first of these new units will be set up in Toronto, others in Halifax and Vancouver. This development with regard to radar is being accompanied by the formation of units for training a variety of key personnel in both technical and administration trades.

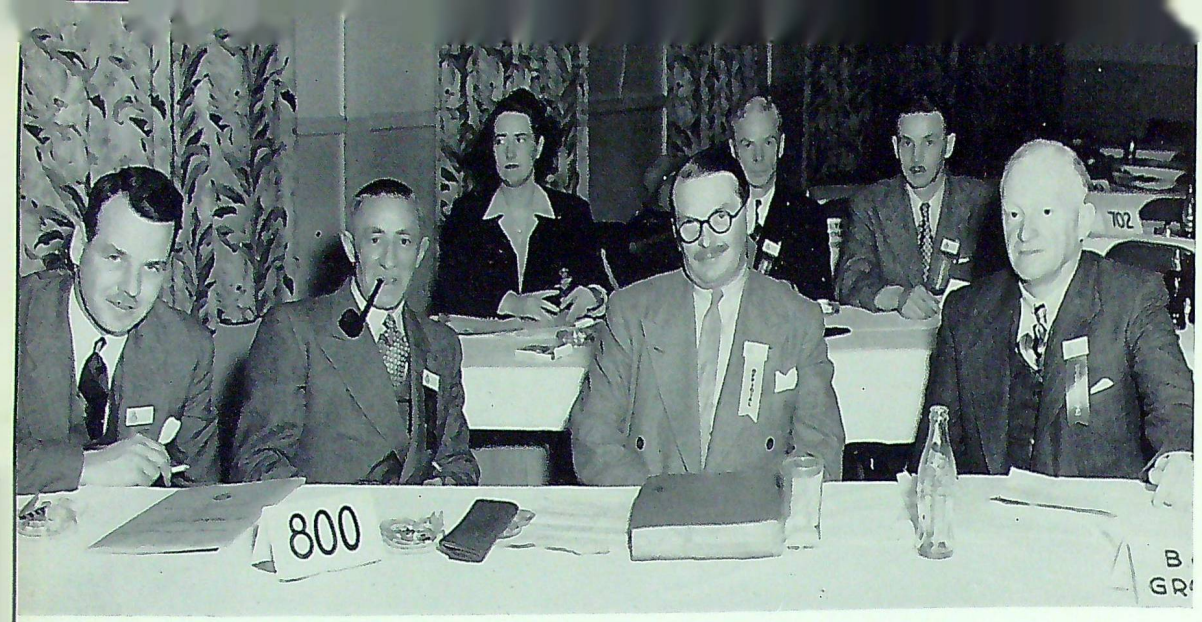
To supplement the radar equipment of the last war, orders have been placed with Canadian industries for new equipment of the latest and most powerful types.

Ten Reserve squadrons are in active operation and another will be activated this year . . . We are making arrangements for Reserve pilots to obtain refresher training on light aircraft at civil flying clubs.

The twin-engine jet all-weather fighter, the CF-100, being flight-tested at Malton, is the most powerful fighter known, with range and navigational instruments specially designed to meet Canadian conditions, and this aircraft may put Canada ahead of any nation in meeting similar requirements. Meanwhile, work is proceeding satisfactorily on the order of one hundred F-86's being built by Canadair Limited.

The production of these two military types and the jet transport, taken with the production of three types of conventional planes and considerable activities in several plants, supports essential air industry in Canada.

During the year, flying time increased by 60%,



The B. C. delegation. Rear row, left to right: Miss I. R. S. Hutchins, Wing Cdr. R. H. Little, Flying Officer H. V. McRae. Front row, left to right: Flt. Lt. H. E. Botterell, Air Cdre. A. J. Ashton, Wing Cdr. D. C. Birch, Air Cdr. A. D. Bell Irving

and the number of hours flown per man on strength compared closely with the U.S.A.F. We had the first Wings Parade of University Flights, and the ceremony at Trenton demonstrated first-class organization and training as well as the fact that the R.C.A.F. stood as high as ever in the eyes of our country and of other nations.

An experimental aircraft, known affectionately as the "Rockcliffe Ice-Wagon," is carrying out valuable work in determining ways to combat icing conditions.

Photo survey aircraft, with good weather conditions, will have photographed most of Canada by the end of this year.

Air sea rescue facilities across the country have repeatedly demonstrated the readiness of this branch, which has over 30 aircraft constantly available as well as a specially trained parachute rescue corps, composed of Air Force personnel, capable of everything from administering first aid to delivering babies.

Two new fighter squadrons, equipped with Vampire III's, personnel trained in jet flying will exist when our Canadian jet supply comes into production.

A maritime squadron, equipped with Canadian-built Lancasters, has been created on the east coast.

Two operational training units, one fighter and one maritime, have been brought into being.

In Exercise "Sweetbriar," R.C.A.F. Air Transport Command lifted into Whitehorse 1,198 passengers and 366,766 pounds of freight. Mustangs, Vampires, Mitchells and Lancasters of the R.C.A.F. flew a total of 174 sorties. Their serviceability was over 80%. On the conclusion of the exercise, the combined forces lifted out from Northway to Whitehorse, in two days, 1,596 passengers with 50 pounds of baggage per passenger. The R.C.A.F. then lifted from Whitehorse to Edmonton 817 passengers, with 50 pounds of baggage each, plus 133,606 pounds of freight . . .

As of 31 March 1950, we had in training for commissions in the Air Force, Active and Reserve:

University Air Training Plan	837
Canadian Services Colleges	90
University undergraduates	79
University postgraduates	3
Active Force	299
	1,308

Recent record flights made by the R.C.A.F. include:

Vancouver to Halifax:	8 hrs. 25 mins.	(North Star)
Toronto to Washington:	48 mins.	(CF-100)
Rockcliffe to Dorval:	8 mins. 30 secs. —average speed of 645 m.p.h.	(Vampire

The Saskatchewan delegation. Left to right: Flt. Lt. F. M. Spelliscy, Mr. C. J. Thurgood, Sqn. Ldr. S. Malach, Flt. Lt. W. Fyles, Flying Officer J. N. Park, Mr. C. A. Bradwell

These are some of the main achievements of the R.C.A.F. at the present time. I think it is a pretty fine record, worthy of the record the Air Force has always maintained in the past. The Reserve is our second line of defence and must be ready in emergency to play its part in quickly building up the solid core of our air defence.

The support and interest maintained through your Association in keeping Reserve and ex-Air Force personnel in touch with Air Force activities is a great contribution and deserves the recognition and gratitude of the Services, the Government, and the people of Canada.

Air Marshal W. A. Curtis, C.B., C.B.E., D.S.C., E.D.
Chief of the Air Staff

The R.C.A.F. Association means a lot to us, and we have been vitally interested in the work that you have been doing. The progress you have made has been outstanding — and the bulk of the credit for that should go to Air Chief Marshal Breadner, whom, I understand, you are about to elect as your Grand President. I would also like to express our appreciation to the different provincial organizations and to the Dominion Executive Council. The whole organization has gone ahead at a tremendous rate.

I have visited some six or eight Wings and have taken part in their Charter Nights. The type of men you have, the enthusiasm with which you are working, the speed with which those Wings have been formed — all have impressed me very much and have made me feel that anything we who are still in the Service can do to take part in this meeting . . . will pay us one hundredfold. Your great and evident interest convinces me that I should try to tell you something of what the Air Force has done since the end of the war . . . and to give you some idea of our plans for the future . . .

At the end of the war, as you know, we did not demobilize according to an over-all plan whereby we would lose so many fitters, so many riggers, so many instrument makers, and so forth. All of our radar people went, a good many of our signallers, and a large number of our specialists in all ranks — who could get twice as much money outside . . . We were in a pretty bad way for a while. We were short some 4,000 men from the approved establishment — which meant that we had to set up a complete organization . . . to train men in all sorts of trades, including aircrew.

Our next task was to start some sort of worthwhile flying activity. During the war we did no photographic work in the north. The Department

Seated, left to right: Miss May Jamieson, Miss Alice Dexter, Miss Ruth Vogler. Standing, left to right: Miss Ann Groundwater, Miss D. D. Webster, Miss I. R. S. Hutchins

of Mines and Resources had been working on photographs taken before the war. We therefore set up a photo organization with first one, then two, and then three squadrons to photograph the north country. In 1948 we did some 911,000-odd square miles of photographing, and that is a lot of territory to cover when one realizes that the bulk of it was in the north where most of the bases were 500 miles away from the areas where the flying was being carried out. It was really quite an achievement.

Then we set up a transport organization to supply those people, and also a search and rescue organization . . . The aircraft we brought back from overseas were Mitchells, Dakotas, and Lancasters. We started off first with Mitchells — and some Ansons — and then we used the Dakotas. Finally we converted some Lancs. In the far north we used principally Lancs . . .

We were able to go into this phase of our flying activities with both the equipment and the personnel required. Our operational side, however, was neglected. That required young men and . . . as the Minister said last night, "we wanted to put some spring into the bow" . . .

We decided to turn back all the fighters we had used in England. Being of the reciprocating engine type, they had become obsolete. We made arrangements to receive 187 Vampires . . . but financially the number presented some difficulty, and we settled on 85. The fact that we were not going to get them for two or three years was in our favour, because in that time we hoped to set our training organization up and get enough young men . . . to start the fighter organization again.

From then on, more developments took place. First of all, Russia began to misbehave. Up to

that time she was our gallant ally, but in 1946 and 1947 it became evident that we were exposed to a threat to which Canada had never been subjected before — the fact that our next-door neighbour (true, two or three thousand miles away) was close enough to launch bombers against us. With the atomic bomb, it was possible for us to suffer damage that would or might cripple us.

That made us look into the re-equipping of our squadrons with British types of aircraft. We knew from experience that we could not count on getting equipment in war-time from the United Kingdom, no matter how anxious they were to supply it. They had their own more pressing problems right at home. We had sufficient trouble under the Joint Air Training Plan to keep the trainers going, and at that time we had to scour the United States to get everything we could.

With that in mind, we decided that our wisest course would be to try to standardize on equipment that we could get . . . *here*. The other consideration was that if we were threatened by bombers from Russia, we would be working with the United States in trying to defend this continent. It was most important that we should have facilities here for the care of any American aircraft that might land on our fields and that our aircraft could be serviced if they landed on fields operated by the United States Air Force . . .

We looked into the aircraft that were available, and, after careful study of the figures that were available to us — and which are *not* available in all of the magazines — we decided that the F-86 had the best features . . . On top of that, at the time we made the decision, the F-86 was just going into production . . . So, we started right from scratch with a new aeroplane that had already been accepted in a Service with which we hoped to be able to work closely in the event of emergency . . . I expect that about the end of this year or early next year we will get the latest Mark of F-86.

Our requirements in Canada call for a special type of aircraft . . . suitable for flying in the north where one's airport is 500 miles away, and where, if one has to make for an alternate, the alternate too is 500 miles away . . . Therefore, in 1946, we settled on the CF-100 design, an all-weather, long-range fighter that we felt would meet our needs.

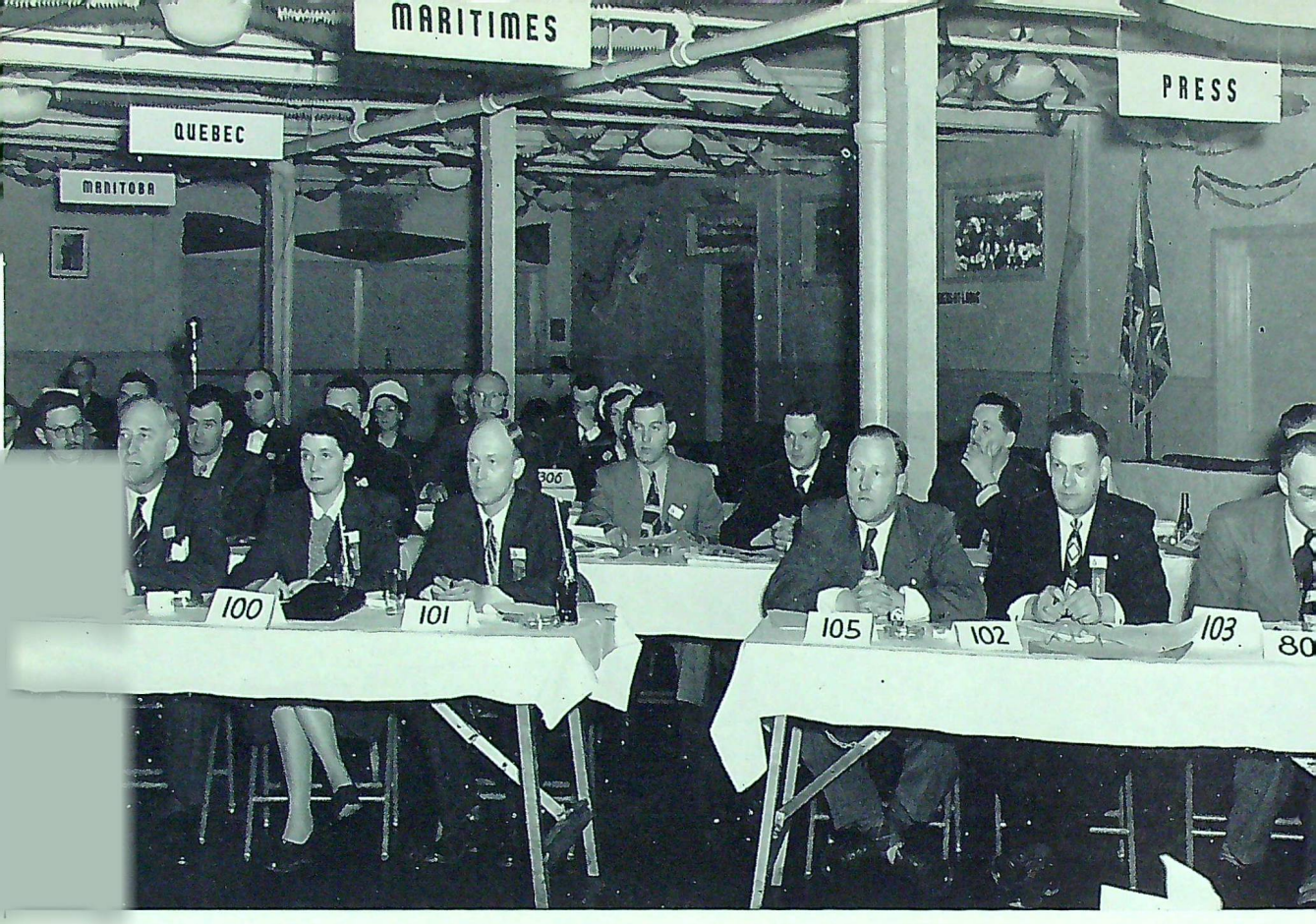
If you must have an Air Force you must have an aircraft industry behind it, and, by encouraging a Canadian factory to build a Canadian type of aircraft, we were not only giving employment to engineers and setting up an engineering staff, but we were helping industry here to support the Air Force.

I have just returned from Washington, where we have had our CF-100 on display, and I was very pleased indeed with the demonstration. We were on a 5,800 foot runway and the aircraft was off the ground at about 2,000 feet. The pilot flew around at about 110 miles an hour into about a 30-mile wind. The versatility of the aircraft — is one of its outstanding features, and the technicians who saw it were very impressed . . . This aircraft is a great credit to Canadian industry.

As you know, during the war, the government decided that we should look into turbine and jet engines; and we had, at the end of the war, a fairly good development (the Orenda) going on here. The government approved of further development, and, at the present time, we have run over 3,000 hours on the test bench. One engine is on its way to Los Angeles to go into an F-86 and two more will be put into a Lancaster bomber to give them an air test . . . If all goes well, we have the engine that is going into the CF-100, and the whole thing will be Canadian-designed and Canadian-built.

I would like to touch on Reserve Training for a minute. We started off with ten auxiliary squadrons. We were to have fifteen — we still hope to have them sometime — but at the moment we have ten authorized and organized. They are fairly expensive forms of Reserve Training, but it was the only type of Reserve that we had before the war and naturally it was the one we started off with again.

The next operational requirements in event of emergency are aircraft early warning and control units. Most of our plan is built on an eight-hour watch for early warning. We have sufficient in our Service and in our plan to take care of eight hours



The Maritime delegation. Front row, left to right: Wing Cdr. H. W. Aslin, Miss Ruth Vogler, Mr. F. V. Shaw, Mr. N. S. McIlvena, Sqn. Ldr. J. E. Comeau, Flight. Lt. C. R. MacDonald. Second row, left to right: Flt. Lt. P. E. Burden, Mr. A. F. Wigglesworth, Mr. R. V. McCabe, Flt. Lt. E. B. Fitzgerald, Flt. Lt. D. M. Logan, Flt. Lt. R. Bardsley

a day but, come an emergency, the first requirement will be to man those early warning stations on a twenty-four hour basis. So . . . our main effort is being put into the training of these early warning units. We have an excellent unit started in Montreal, with branches down the St. Lawrence River as far as Quebec. We hope to have one in Vancouver, one in Halifax, and another in Toronto very shortly . . .

University Training is designed to help us get specialists who can step in and handle the special training that would be required immediately upon the outbreak of a war. These men, young university students, spend the summers with us, and the rest of the year they spend studying for their degrees — mostly engineering, some medical.

This year we have approved a policy of flying instructors' training . . . We have a scheme, approved by the Minister, to give some 600-odd ex-pilots, under 30 years of age, twenty hours of flying and twenty hours of ground instruction every year . . . The flying clubs can handle it with their instructional staff.

One of our problems in trying to set up Reserve units across the country is lack of instructors . . . We have been forced to limit our effort, or at least to make our effort coincide with the amount of instructional help available to the units . . .

I would say that Reserve Training is now getting under way and showing encouraging results. We have been short of accommodation in all urban centres. Most of our airports are a long way from town: the closest is three miles, and most of them are nine, ten, or fifteen miles. Their buildings are fine for the flying part of training, but they are not close enough to town for the urban training

that is necessary for the radar units and many non-flying trades we are trying to foster.

The other two Services are much more fortunate in this regard. The Navy, during the war, was able to erect buildings of a permanent nature . . . I wish that we had been able to do the same thing, but we were working under an agreement with the United Kingdom, Australia, and New Zealand. All the buildings were of a temporary nature . . . to be paid for by all parties to the training plan. They were therefore built to last five years. Some of them are lasting longer than that, but not many . . . To fix those buildings up costs a great deal. It costs more to put a cement foundation under them now than it did to erect the building in the first place. So, while we appear to be getting a lot of money, we have a terrific amount of work to do with it — construction to carry out, aircraft to buy, and so on — and I can tell you that we are not able to go ahead as we should . . . We simply have not the funds.

An Air Force is a very expensive organization, but it is an organization that must be ready to strike immediately in an emergency. We have not got two years in which to get ready; we must be ready at the moment. And we are now spending every cent we can on things that come first, building up the parts of the Service that would hurt us most were they not ready in time of need.

I feel that the formation of this R.C.A.F. Association is very timely and very important to us. The average person does not know why we should have an Air Force ready for immediate action . . . The Air Force is the most mobile part of any fighting force in the world . . . and that means that we must be ready to go. We can probably provide a greater striking force and greater striking power in a shorter space of time than can any other Service . . . I think that through the Association we can keep you and other Canadians informed as to what is happening . . . This organization can fill a very great need in that regard . . .

Air Vice-Marshal A. L. Morfee, C.B., C.B.E.
President, R.C.A.F. Association

I wish to thank you for the confidence you have placed in me by making me your president for this coming year . . . While you have made Air Chief Marshal Breadner your Grand President as of yesterday, I suggest to you that he has been a grand president all the time . . . It is going to be difficult for me to live up to the record that he has set, but I will do my utmost, and he has very kindly offered to give me help and guidance when I require it . . .

The objective that I consider to be most important, and about which I feel strongly, is our support of the Air Force, the Reserve and the Cadets, I feel that it is our main duty to use our influence on the public to see that they appreciate the necessity for air defence in Canada . . . I feel also that the Minister, as he said this morning, will be anxious to receive through the Association any suggestions that may come up. Therefore, we have a public relations job to do in two directions, as it were . . .

There may have been a suggestion that we are a pressure group, but I maintain that we are nothing of the sort. My understanding of a pressure group is a group of people banded together for their own selfish ends. Anything that our association strives for will be for the good of our country as we see it.

In speaking at different places, I have never attempted to give people the answers; but, here and there, I have suggested some of the questions. In Canada here we have limited resources. We have limited resources in manpower and womanpower, but we are a great agricultural nation and a great industrial nation, and our strength in peace or war will depend to a great extent on the output of our factories and our agriculture, as well as on the efforts of our armed forces. It therefore is evident that we cannot muster any great strength for the armed Services without robbing those essential industries which would back us up.

Thus, it seems clear to me that we should use the reserves we have in manpower and womanpower — and in money — where we can get the most returns in our defence effort. That does not apply only in war-time; it applies in peace-time also. We are striving for peace, and it is generally admitted to-day that the only way we can maintain the peace is to be ready to meet any aggressor

and what we now do in peace may well avert war in the future. Therefore we want efficiency *now* and not just when war is upon us, so that any potential aggressor will know very well that we are prepared with the latest weapons. If we are prepared, he may never attack.

I think that is all I have to say on this matter, but I hope and trust that I will have an opportunity of meeting some of you in Groups in your own parts of the country during the coming year.

I must say that I have found this Convention very stimulating — perhaps that is an unhappy word — but you know what I mean. I am sure we will all go back heartened in the work we have ahead of us.

Air Vice-Marshal Sully, C.B., A.F.C.
Chairman of the Dominion Executive Committee, R.C.A.F.A.

I am going to take the liberty of leaving the chair because I think we got completely off the track in this whole matter (of rank). I am going to ask Air Chief Marshal Breadner to take the chair, but, before I relinquish the duties of Chairman, I am going to give myself a little leeway on this two minutes' closure rule.

Now, gentlemen, this organization is an organization for service . . . This organization is set up to help the Royal Canadian Air Force accept its place in the defence of our country . . . to give us an avenue in which we can express ourselves and continue the same spirit enunciated during the war, the spirit of service to our country . . .

We are not a fraternal organization. We do want a display of the *spirit* of fraternalism . . . but this organization will only prosper and be effective if we approach it in a spirit of service — to do something for our country.

We took an action yesterday, and I take the responsibility for letting the thing go ahead, because, as Chairman of the meeting, I should have controlled it better . . . We have done something that is subjecting ourselves to ridicule . . . one of the strongest forces of the people who are opposed to the things we are trying to do.

Any organization, gentlemen, is just a shadow of its leader. I happen to be the managing director of a corporation, and I hope the men who work for me do so because they admire and respect me as their leader. As was said yesterday, most of you fellows are officers . . . All of you see the full importance of air power and all of us feel that the public generally does not appreciate its importance. We feel the Air Force needs support, but we are knocking the king pins out from under the thing.

I am an Air Vice-Marshal. I was promoted to Air Vice-Marshal of the Royal Canadian Air Force and, believe it or not, I am egotistical enough to feel that, by George, that was because I might have had a little bit of ability. You fellows are officers and leaders; and . . . in any business, management is the leader. When the people in the business lose respect for their management, then the business goes to pot.

We are trying to encourage young men to join the Air Cadet League, join the Reserve Forces, and what is their ultimate objective? Serving their country. What do we hold out in front of them? To become officers, leaders — the objectives of every fellow. And here we are as an organization officially saying that the men the country picked out to run our Service in time of war are not entitled to the respect they are receiving. I think it . . . undermines the whole principle of what we are trying to drive at.

I served under Air Chief Marshal Breadner . . . I respected and admired him as a leader — not because he was an Air Marshal or an Air Chief Marshal, but because he was a man of ability and a man to whom I looked for guidance and direction. I was proud to serve under him and I am very proud to call him an Air Chief Marshal.

Now here is the point I am trying to get at, gentlemen. Right in our country we are up against certain subversive forces. These people, twenty years ago, tried to do away with ranks in their army, but they have got more generals per square mile in the Russian army than they ever had in the times of the Czars.

You cannot do away with leadership. Everyone of you gentlemen . . . know that some men whose ability was outstanding were not recongized. But

The Ontario Delegation

that could not be helped. By and large I think we must have done a pretty good job of selection, because everyone is pretty proud of our Air Force. Is not that right? . . .

You fellows have come down here because you are leaders. Why should you not be? Somebody said that this thing was full of brass and scrambled eggs. Certainly it should be. If the men chosen to run the Air Force at the time of a national emergency have not got the capacity to help develop the organization in peace-time, then who has?

Now I say to you again that we are encouraging people to join the Cadets. We are encouraging lads to join the Reserve Force and we are saying to the government that they should support the Reserve Forces . . . It is the privilege and it should be the ambition of every red-blooded young Canadian to wear the King's uniform . . . and it should be his responsibility to wear it at some time during his life. If it is his responsibility, and if it is his privilege, then it should be his privilege to be considered a leader in the job that he has picked for himself. When we say that we want to abolish rank in our organization we are just saying that we do not want any leaders . . .

Air Chief Marshal Breadner has said that my two minutes are up.

Ladies and gentlemen, I speak very feelingly about this because I feel that as . . . citizens, we are anxious to do a job of work. We are anxious that this organization be something of a help to our country. We do not want to bring any ridicule upon ourselves and we do not want to lose our effectiveness in any way . . .

What we may do in our various Wings and Groups does not make any difference; but officially, when we put a tag on ourselves as we did yesterday, we are subjecting ourselves to the ridicule of those people who do not want us to be too prosperous.

FROM THE GROUP REPORTS

Wing Cdr. H. W. Aslin, Maritime Group

I was drafted after the first group was called called together in Ottawa to consider the formation of this Association and asked if I would endeavour to form in Nova Scotia a group of the R.C.A.F. Association. I have had excellent support right along the whole line down there. We have nine Wings formed. The first to be formed was No. 100 (Bluenose) Wing, which is a W.D. club (or was at the time), and I think it is probably the first and only W.D. Wing in the Association. We are working now on the formation of Wings at Moncton, Yarmouth, and Kentville, and there is the possibility of one or two others. The Digby Wing, I understand from Air Vice-Marshal Morfee, is now also in the process of formation — if it has not already been formed.

We have had excellent support from Air Chief Marshal Breadner, Sqn. Ldr. Giguère and Flt. Lt. McCartney, and the staff at the national level.

There are a few little problems, the biggest of which is quarters. I think that we will have to try and meet that difficulty at the local level.

Our Wings in Nova Scotia and New Brunswick are functioning and healthy, and I see a great future for us in the Maritime Provinces. I do want to express to those of the Wings which have done so much work, my deep appreciation for their assistance.

Wing Cdr. C. H. Link, Quebec Group

Our Quebec group had its annual meeting on March 31st . . . Our report has been circulated to all Groups . . . so I do not need to burden you with any details . . . Briefly, there are seven Wings organized in the Group. The first one was in Granby, where a chap named Myers did a wonderful job in spite of all kinds of difficulty. The next one was in Quebec City, where Paul Pitcher . . . organized perhaps the strongest Wing in the province. Eric Webster of the Sherbrooke Wing is here, and that Wing is doing very well.

With respect to the city of Montreal, we were working behind a great obstacle. We had absolutely no place to meet in the Air Force accommodation, and there was no other accommodation available to us until February 1st this year when the C.O. of No. 401 Reserve Squadron very kindly gave us the use of the airmen's mess there. Since February 1st we have formed three new Wings. They are all meeting regularly once a month in Air Force quarters. I notice that one of the Wings which was formed about the eighth or tenth of February now has a strength of 95.

In closing, I just want to say that while we were rather discouraged in the early days by the lack of interest in Quebec and the lack of co-operation on the part of the R.C.A.F., we are now getting very striking evidence of co-operation in various ways. There is the provision of accommodation, and one of the fighter squadrons in Montreal last week officially took under its wing our Air Cadet unit . . . Another R.C.A.F. permanent unit has sent us a letter offering us transport whenever necessary . . . We have some very energetic and capable young fellows leading these new Wings and we are looking forward to a much better report at this time next year.

Air Vice-Marshal G. E. Brookes, C.B., O.B.E., Ontario Group

Twenty-nine Wings have been formed in the Ontario Group, and all but one are represented at this convention by their delegates. These Wings have a total membership in the Association of 2,197 as of Saturday, April 29th.

The activities of the Wings can be summarized briefly as follows:

Monthly meetings, which are business meetings, dinner meetings, or social meetings.

Special events, which include dances, bingos, band concerts, air shows, and other activities along those lines.

They are also sponsoring Air Cadets and . . . they have contributed to funds for hospitals and are furnishing rooms in hospitals and are helping with hospital building plans . . .

Under the heading of co-operation, they are active in Benevolent Fund committees and also in welfare organizations.

The future plans of our Wings embrace Air Cadets, by extending assistance to squadrons already formed, re-organizing squadrons which might be deemed to be dormant, and also in providing funds for scholarships. I must say that the Air Cadets appreciate this form of assistance very much.

I am digressing from my notes for a moment, but I think you all understand that the young fellow who would like to fly generally finds that it costs money. Some of our Wings are getting behind that side of it and are receiving fine co-operation from these energetic young Air Cadets.

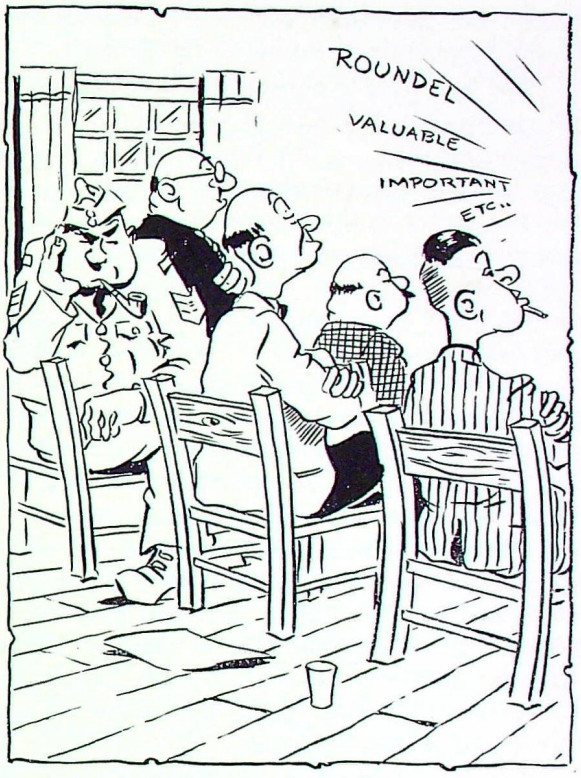
Under the heading of membership come publicity and personal contacts with individuals. Personal contacts particularly have been the method whereby our Wings are attacking this big problem of increasing membership.

Then the question of accommodation. Several Wings have solved this problem by close co-operation with the Legion. Others are renting at a nominal charge suitable accommodation for meetings. Others have . . . plans for taking over properties and maintaining the buildings on a community basis . . . In two or three places playgrounds for the younger end are being maintained.

If these activities are carried forward energetically, there should be a gratifying increase in membership . . . and the number of Wings . . . The Association should become widely known throughout Canada as an organization possessing sound aims and objects, whose members have a well developed sense of duty toward their own communities . . . Real publicity will be obtained for the Association as a whole.

I have a note here about "The Roundel." I do not think my report would be complete without making reference to the great value of "The Roundel." These Service magazines serve an important purpose by keeping us in touch with our own progress, the progress of the Regular and Reserve R.C.A.F., and other groups. I am sure that you will agree that the members of this Association appreciate deeply having copies of this publication mailed to them.

I desire also to place on record our deep appreciation of the co-operation afforded the Executive of the Ontario Group by both the Regular and Reserve formations of the R.C.A.F. Accommodation for the Group convention was provided at R.C.A.F. Station Toronto, and we have been assisted frequently by provision of transportation facilities and also by much needed help from office staff with our correspondence and reports.



Flying Officer G. P. Brophy, Manitoba Group

Dr. Hanna is unable to be here to-day, and I will just read his report to the Manitoba Group convention.

"Your Provisional President was one of those who attended the first organization meeting called by Air Chief Marshal L. S. Breadner in Ottawa in September 1948, and at that meeting he was designated Provisional President of the Manitoba Group. He was very fortunate in being able to

secure the services of Mr. J. F. Gunn as Provisional Secretary-Treasurer of the Group . . .

"The first Wing to be organized in the Manitoba Group was No. 500 (City of Winnipeg) Wing . . . in January 1949 . . . The success of that meeting was due in very considerable measure to the interest shown in the Association by a number of prominent Winnipeg citizens, including the Lieutenant Governor and the Premier of the province . . . It is submitted that the status of the Association as a national organization would be enhanced immeasurably if we were to adopt as a definite policy the appointment to honorary life memberships of prominent citizens throughout the country who are interested in furthering our aims and objects . . .

"Following the organization of the Winnipeg Wing, two other Wings, No. 501 (Lakehead) Wing and No. 502 (City of Brandon) Wing, were formed. Both are now well established. Some interest has been shown in the formation of Wings at Kenora and Sioux Lookout, but as yet no definite steps have been taken . . .

"Total membership in our Group is the third largest in Canada, being exceeded only by Ontario and, I believe, British Columbia . . . There are 542 members in the Wings, with 147 members-at-large, making a total of 689 members in the Manitoba Group.

"Group policy during the past year has been to lay a firm foundation for future development. Our objectives have been strictly limited. In furtherance of this policy, we have undertaken to form Wings only in the larger centres where definite interest in the Association was manifested. It was felt that the first requirement was to establish one or two strong, self-reliant units that would serve as a nucleus for further expansion. Our first objective has been achieved and we are now in a position to organize Wings in smaller centres during the coming year and to increase membership in the Wings already formed.

"Relations with the Navy, Army, Air Force and Canadian Legion are very cordial."

Flt. Lt. F. M. Spelliscy, Saskatchewan Group

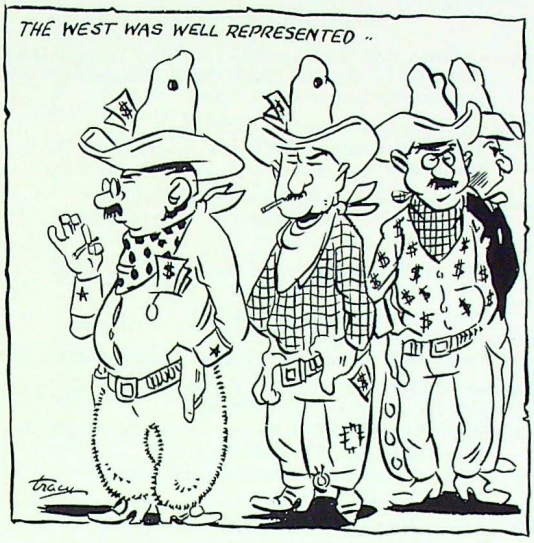
The Saskatchewan Group contains four Wings. We have 482 members-at-large. We have the possibility of forming four more Wings, but I think that will be our utmost effort in the province.

Wing meetings, which include lectures and the showing of films, take place once a month, at various times during the month.

There is one thing we should like to bring up. We are very seriously handicapped by lack of accommodation. We get good co-operation from the Legion, but at the present time they are limited in their accommodation as well. I should like to put in a plug for the future accommodation of the Wings, particularly in the west. We find that out there we are a little more handicapped than you in the east.

Sqn. Ldr. R. D. White, Alberta Group

First of all, four Wings were formed in Alberta, at Lethbridge, Edmonton, Calgary and Red Deer. There are six more Wings in the process of organization now. It may be of interest to you to know that the membership at Lethbridge is 70; at Edmonton, 286; and at Calgary, 144. I cannot give the membership at Red Deer, because the Wing has been only recently formed.



Lethbridge has been giving flying scholarships to the Air Cadets, and four have been granted already. These scholarships have meant that the recipients were able to obtain private licences for flying.

Calgary was having difficulty in connection with Air Cadet recruiting, and the Calgary Wing went to bat over that. As a result the number of Air Cadets in Calgary has increased tremendously . . .

The Edmonton Wing has 286 members. If you look at your club memberships you will find that that is extremely good. Not only has that Wing 286 members, it has something over $4,000 in the bank . . . It has made quite substantial donations to the veterans' comfort fund of our province, to the veterans' hospital, and to the Department of Veterans Affairs. It has also carried on a number of other benevolent operations . . . and has raised money by raffling cars and in many other ways . . .

We are told that the membership in Wings could be increased, not 100 per cent, not 200 per cent, but more. This is the predicted result if there was suitable accommodation for the Wings in the various places . . .

Air Cdre. A. D. Bell-Irving, O.B.E., M.C., British Columbia Group

We have considered the Royal Canadian Air Force Association, in British Columbia, as looking to the future rather than back to the past. Therefore, we have not been so sympathetic toward the idea of raising funds by smokers and of developing Wings more or less for social and welfare purposes. We have had in mind the benefits that would accrue to a more air-minded nation, the welfare of the Royal Canadian Air Force, and the promotion of matters pertaining to the Reserve . . .

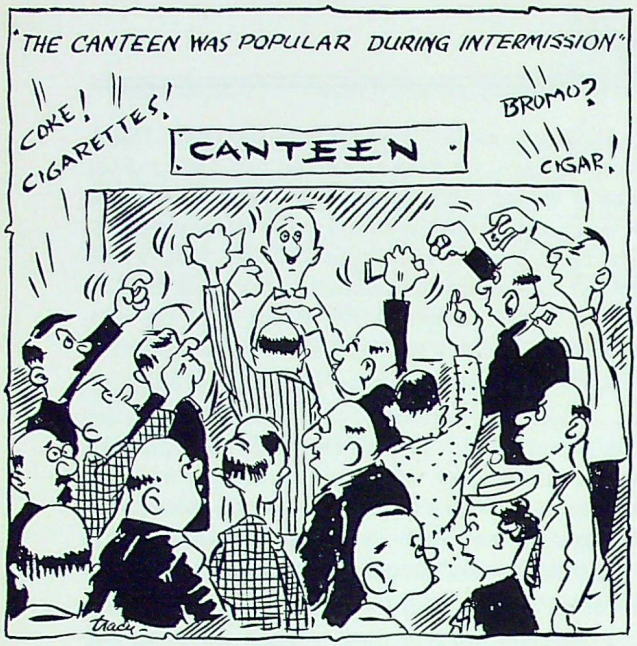
We have made it known that we are reluctant to finance the activities of a broadening Wings' organization in the province without headquarters, and I am happy to report that . . . we have succeeded in Vancouver, through the activities the government here in Ottawa, in obtaining a very fine office building downtown for use as urban headquarters of the reserve unit.

I sincerely suggest that without the very persistent . . . representations of the Royal Canadia Air Force Association in British Columbia, tha building would not have been made available t year . . . We want to do more. We want to lo after other centres in British Columbia . . .

With regard to membership in British Columbia I would like my good friends in the east to modestly at the substantial line of organiz that we have in British Columbia in conn the Air Force . . . We have organizations Air Force officers and Air Force of all ranks, well as Air Force organizations connected with Legion . . .

We are looking for a vastly increased membe ship from men who have been in the Air Force a from girls who have been in the Women's Di throughout the province; but these would necessarily be organized in Wings, because of geographical layout of our province. It seems reasonable to suppose that there will always be considerable number of members-at-large British Columbia. With urban headquarters Vancouver, it is hoped that they will be able have a common place in which to meet when th come to town . . .

We plan to develop . . . an experienced g of veterans with Air Force connections who w be able to indicate what the future policy sh be in regard to Air Force matters in this cour



CONVENTION DIRECTORY

Grand Patron

His Excellency Viscount Alexander of Tunis,
Governor General of Canada

Dominion Provisional Executive

President: Air Chief Marshal L. S. Breadner, C.B., D.S.C.
Kirk's Ferry, P.Q.

First Vice-President: Air Vice-Marshal Adelard Raymond, C.B.E., 3509 Redpath Street, Montreal
Occupation: Company executive

Second Vice-President: Air Vice-Marshal A. L. Morfee, C.B., C.B.E., R.R. No. 2, Granville Ferry, N.S.
Occupation: Farmer

Third Vice-President: Air Vice-Marshal G. V. Walsh, C.B. C.B.E., R.R. No. 3, Magog, P.Q.

Dominion Chairman: Air Vice-Marshal J. A. Sully, C.B., A.F.C., Rosney Manor, Bayfield Road, Goderich
Occupation: President, Dominion Road Machinery Co.

Dominion Vice-Chairman: Wing Commander P. Pitcher
507 Place d'Armes, Montreal
Occupation: Barrister

Dominion Legal Advisor: Group Captain G. G. Morrow, O.B.E., E.D., 26 King Street East, Toronto
Occupation: Barrister

Honorary Treasurer: Air Vice-Marshal K. G. Nairn, C.B.
1611 Drummond Drive, Vancouver
Occupation: Accountant

W. D. Representative: Flight Officer F. T. Walsh, M.B.E.
434 Queen Street, Ottawa

Group Representatives

British Columbia: Air Commodore A. D. Bell-Irving, O.B.E., M.C., E.D., 930 West Pender Street, Vancouver
Occupation: Insurance

Alberta: Squadron Leader R. D. White,
11120—86 Avenue, Edmonton
Occupation: Lawyer

Saskatchewan: Flight Lieutenant F. M. Spelliscy
2671 Garnet Street, Regina
Occupation: Accountant

Ontario: Air Vice-Marshal G. E. Brookes, C.B., O.B.E.
128 Highbourne Road, Toronto

Flight Lieutenant K. K. Gildner,
369 Howie Crescent, Sudbury
Occupation: District Sales Mgr., Cdn. Breweries

Quebec: Wing Commander R. E. Morrow, D.F.C.
4363 Montrose Avenue, Westmount
Occupation: Barrister

Wing Commander C. H. Link, M.B.E.
244 St. James Street West, Montreal
Occupation: Publicity Manager

Maritimes: Wing Commander H. W. Aslin
Nova Scotian Hotel, Halifax
Occupation: Manager Nova Scotian Hotel

Group Secretaries

British Columbia: Wing Commander D. C. Birch, M.B.E.
675 West Hastings Street, Vancouver
Occupation: Executive

Ontario: Flight Lieutenant O. N. Meads
101 Lawton Boulevard, Toronto
Occupation: Purchasing Agent

Quebec: Section Officer A. M. Groundwater
3777 Cote des Neiges Road, Montreal
Occupation: T.C.A.

Dominion Chaplains

Roman Catholic: Air Commodore the Rt. Rev. J. E. A. Charest, C.B.E., St. Anne de Bellevue
Occupation: D.V.A. Hospital Chaplain

Protestant: Wing Commander the Rt. Rev. R. J. Renison
Occupation: Bishop of Moosonee

Wing Delegates

No. 100 Wing (Halifax) Corporal Ruth Vogler
74 South Park Street, Halifax
Occupation: Secretary

No. 101 Wing (Halifax) Sergeant F. V. Shaw
101 Pepperell Street, Halifax
Occupation: Civil Servant

No. 102 Wing (Truro) Squadron Leader J. E. Comeau
Truro, Nova Scotia
Occupation: Doctor

No. 103 Wing (Sydney) Flight Lieutenant C. R. MacDonald
67 Catherine Street, Glace Bay
Occupation: Barrister

No. 104 Wing (Liverpool) Flight Sergeant A. F. Wigglesworth, B.E.M., Liverpool, Nova Scotia
Occupation: Electrical and Water Supt.

No. 105 Wing (Amherst) Flight Sergeant N. S. McIlvena
River Hebert, Cumberland Co.,
Occupation: Manager

No. 250 Wing (Saint John) Flight Lieutenant R. Bardsley
12 Pugsley Avenue, Saint John
Occupation: Hat Manufacturer

Flight Lieutenant D. M. Logan
87 Spring Street, Saint John
Occupation: Chief Clerk

Flight Lieutenant E. B. Fitzgerald
Box 1045, Saint John
Asst. District Administrator, D.V.A.

No. 251 Wing (Edmundston) Corporal R. V. McCabe
15 — 22nd Avenue, Edmundston
Occupation: Accountant

No. 252 Wing (Fredericton) Flight Lieutenant P. E. Burden, D.F.C., 487 Charlotte Street, Fredericton
Occupation: Kennel Operator

No. 300 Wing (Granby) Aircraftman R. W. Savage
70 Cairns Avenue, Granby
Occupation: Clerk

No. 301 Wing (Montreal) Flying Officer H. B. Ripstein
2075 Lincoln Avenue, Montreal
Occupation: Asst. to Construction Engineer

No. 303 Wing (Sherbrooke) Wing Commander E. T. Webster, A.F.C., 147 Victoria Street, Sherbrooke
Occupation: Retail Hardware

No. 304 Wing (Montreal) Airwoman M. T. Jamieson
48 Crepin Avenue, Montreal
Occupation: Stenographer, D.V.A.

No. 305 Wing (Montreal) Aircraftman G. L. Brady
2243 Melrose Avenue, Montreal
Occupation: Office Manager

No. 306 Wing (Montreal) Flying Officer L. E. Baxter
4668 Coolbrook Street, Montreal
Occupation: Sales Engineer

No. 400 Wing (Guelph) Flying Officer J. T. Kendal
421 Woolwich, Guelph
Occupation: Salesman

No. 401 Wing (Kirkland Lake) Flight Sergeant S. S. Johnson
50 Kirkland Street, Kirkland Lake
Occupation: Garage Operator

No. 402 Wing (Sudbury) Flight Lieutenant G. G. Barton, D.F.C., 58 Lorne Street, Sudbury
Occupation: Tinsmith

No. 403 Wing (Sarnia) Flight Lieutenant F. C. Jewitt
263 Nelson Street, Sarnia
Occupation: Bank Accountant

No. 404 Wing (Kitchener-Waterloo) Corporal W. G. Roberts
80 Ahrens Street West, Kitchener
Occupation: Salesman, Merchants Printing Co.

Group Captain A. J. Snetsinger
38 Union Street East, Waterloo
Occupation: Mortgage Manager

No. 405 Wing (Timmins) Flying Officer W. Drew, D.F.C.
63 Patricia Boulevard, Timmins
Occupation: Miner

No. 406 Wing (North Bay) Flying Officer A. W. Larden, C.G.M., 566 Ferguson Street, North Bay
Occupation: Engineering Department, Bell Telephone

No. 407 Wing (Mount Forest) Wing Commander S. Jones
Box 286, Mount Forest
Occupation: Town Clerk-Treasurer

No. 408 Wing (Toronto) Flight Sergeant B. B. Ross
97 Keele Street, Toronto
Occupation: Printer and Bookbinder

Flight Lieutenant J. B. S. Fenning
857 Carlaw Avenue, Toronto
Occupation: Accountant

Sergeant F. J. Ellis, 2156 Queen Street East, Toronto
Occupation: Stock Controller

No. 409 Wing (St. Catharines) Flying Officer K. G. Thorne
43 Lloyd Street, St. Catharines
Occupation: General Insurance Business

No. 410 Wing (Ottawa) Group Captain J. D. McNee, M.B.E.
113 Belmont Avenue, Ottawa
Occupation: City Passenger Agent, C.P.R.

Flying Officer R. C. Moffatt
471 Cole Avenue, Ottawa
Occupation: Assessor, City of Ottawa

Flight Sergeant Dorothy D. Webster
130 MacLaren Street, Ottawa
Occupation: Accountant, Benevolent Fund

No. 411 Wing (Chatham) Corporal R. L. Ulch
109 Sunnyside Avenue, Chatham
Occupation: Vice-Pres. & Sales Director, Eastern Business Supply Co.

The convention hall

No. 412 Wing (Windsor) Flying Officer L. N. Baldock
Calverts Corners, Windsor

No. 413 Wing (Trenton) Flying Officer R. C. Kent
P.O. Box 287, R.R. No. 4, Trenton
Occupation: Accountant

No. 414 Wing (Cobalt, Haileybury, New Liskeard)
Flying Officer J. B. Sullivan, D.F.M.
28 Baker Street, Cobalt
Occupation: Customs Officer

No. 415 (Picton) Warrant Officer D. F. MacDonald
R.R. No. 9, Picton
Occupation: Farmer

No. 416 Wing (Kingston) Sergeant D. W. Cain
230 Collingswood Street, Kingston
Occupation: Merchant

No. 417 Wing (Richmond Hill) Sergeant H. W. R. Sayers
Church Street, Richmond Hill
Occupation: Editor, MacLean-Hunter Publishing Co.

No. 418 Wing (Belleville) Flight Lieutenant L. W. Digby
139 West Bridge Street, Belleville
Occupation Engineer, Northern Electric

No. 420 Wing (Oshawa) Flight Lieutenant George A. Slocombe
Oshawa Flying Club
Occupation: Flying Instructor

No. 421 Wing (Newmarket) Corporal T. Surgeoner
52 Lorne Avenue, Newmarket
Occupation: Salesman

No. 422 Wing (Leamington) Flight Lieutenant Morgan Brown
Leamington Hotel, Leamington
Occupation: Hotel Proprietor

No. 423 Wing (Chapleau) Flight Lieutenant J. Crichton
Chapleau, Ontario
Occupation: Yardman, C.P.R.

No. 424 Wing (Cornwall) Squadron Leader H. G. Williams
337 Fourth Street East, Cornwall
Occupation: Executive with Courtaulds, Ltd.

No. 425 Wing (Goderich) Wing Commander J. M. Roberts, M.B.E., Goderich, Ontario
Occupation: Registrar of Deeds, Goderich

No. 426 Wing (Brockville) Flight Lieutenant T. D. Dailey
35 Sherwood Street, Brockville
Occupation: Merchant

No. 427 Wing (London) Flight Lieutenant F. L. Ray, D.F.C.
256 Oxford Street, London
Occupation: Estimator

No. 428 Wing (Peterborough) Flying Officer F. L. Mason
586 Charlotte Street, Peterborough

No. 501 Wing (Port Arthur—Fort William)
Flying Officer G. P. Brophy
362 Rita Street, Port Arthur
Occupation: Machine Room Man, Provincial Paper Co.
Flight Lieutenant W. K. McGregor, D.F.C.
427 Algoma Street North, Port Arthur
Occupation: Sales Finance

No. 502 Wing (Brandon) Flight Lieutenant R. S. Godfrey
333 Tenth Street, Brandon
Occupation: Accountant

No. 600 Wing (*Regina*) Flight Lieutenant W. Fyles
1956 Montague Street, Regina
Personnel Technician and Secretary
Squadron Leader S. Malach
8 Etty Apartments, Regina
Occupation: Advertising Manager

No. 601 Wing (Moose Jaw) Sergeant C. J. Thurgood
573 Ominica East, Moose Jaw
Occupation: Warehouseman, C.P. Express

No. 602 Wing (Saskatoon) Aircraftman C. A. Bradwell
228 – 8th Street East, Saskatoon
Occupation: Accountant

No. 603 Wing (Yorkton) Flying Officer J. N. Park
157 – 6th Avenue, Yorkton
Occupation: Jeweller

No. 700 Wing (Edmonton) Air Vice Marshal K. M. Guthrie
C.B., C.B.E., 10041 – 148 Street, Edmonton
Flight Lieutenant J. G. Rowand, D.F.C.
521 Tegler Bldg., Edmonton
Occupation: Optometrist
Flight Sergeant Alice Dexter
9853 – 84 Avenue, Edmonton
Occupation: Photographer

No. 701 Wing (Calgary) Squadron Leader W. D. Stillwell
1028 – 6th Avenue West, Calgary
Occupation: Accountant

No. 702 Wing (Lethbridge) Flight Lieutenant T. C. Segsworth
8 Tudor Manor, Lethbridge
Occupation: Teacher

No. 800 Wing (Courtenay) Flying Officer H. V. McRae
P.O. Box 676, Cumberland
Occupation: Asst. Paymaster, Canadian Collieries

No 801 Wing (Victoria) Air Commodore A. J. Ashton
c/o Bank of Montreal, Vancouver
Flight Lieutenant H. E. Botterell
1314 Government Street, Victoria
Occupation: Lawyer

No. 802 Wing (Vancouver) Wing Commander R. H. Little
3650 Quesnelle Drive, Vancouver
Occupation: Contractor
Flight Officer I. R. S. Hutchins
c/o Joint Services Officers' Mess, Second Avenue West and Trimble Street, Vancouver
Occupation: Hostess

No. 410 (Cougar) Squadron

Prepared by Wing Commander F. H. Hitchins, Air Historian

No. 410 (Cougar) Squadron of the Royal Canadian Air Force has the distinction of being the top-scoring night fighter unit in the Second Tactical Air Force during the period from D-Day to VE-Day. Its records show that the squadron's Beaufighter and Mosquito crews were credited with 75¾ enemy aircraft destroyed, two probably destroyed, and eight damaged. Of these 85 successes, 60 were won in the 11-month period between June 1944 and the end of April 1945.

The war-time history of the squadron falls into five periods. No. 410 was formed at Ayr, Scotland, on 30 June 1941, under the command of Sqn. Ldr. P. Y. Davoud. Originally it was equipped with Defiants, a single-engined monoplane carrying a pilot and an air gunner and armed with four machine-guns in a turret. The squadron soon completed its training, one flight being ready for operations by the end of July and the second flight a month later. But more than a year passed before the Cougar crews were able to have any "joy" in combat with the enemy. The Defiant was out-of-date as a night fighter and the area in which the squadron was stationed between June 1941 and February 1943 was comparatively quiet.

From Ayr No. 410 moved in August 1941 to Drem, near the Firth of Forth, sending one flight to Acklington and then to Ouston. In April 1942 the squadron was reunited at Drem to exchange its Defiants for Beaufighters equipped with radar for hunting down enemy aircraft in the night sky. When, in June, conversion training had been completed, No. 410 moved again to Ayr, where it remained until September and then went to Scorton in Yorkshire. During this period of changes in station and equipment, the squadron had also changed commanders. After seeing the new unit through its early stages of training and operations Sqn. Ldr. Davoud left No. 410 in September 1941 and was succeeded by one of his flight commanders, Sqn. Ldr. (later Wing Cdr.) M. Lipton. At the end of July 1942 Wing Cdr. Lipton was repatriated and Wing Cdr. F. W. Hillock then took command, just before the squadron moved to Scorton.

The move to this station brought No. 410 its first success when a crew damaged a Ju. 88 during an enemy raid on the Middlesbrough area one night early in September. Six weeks later the Cougars left Scorton for Acklington where, to their great delight, they received Mosquito night

Wing Cdr. P. Y. Davoud, D.F.C.

Wing Cdr. G. A. Hiltz, A.F.C.

fighters. They remained at this station for four months, and won their first confirmed kill, a Do. 217 bomber which Flt. Sgt. B. M. Haight and Sgt. T. Kipling (R.A.F.) shot down into the sea off Hartlepool.

This first long period of training, scrambles and defensive patrols, ended late in February 1943 when No. 410 moved south to Coleby Grange in Lincolnshire, where it remained for eight months. It was an active and successful period. The squadron, in addition to its normal night defence duties, undertook offensive missions into enemy-held territory, by day and night, to attack trains, vehicles, canal shipping, airfields and, whenever possible, aircraft. For a time, too, Cougar crews made long daylight patrols over the Bay of Biscay to protect aircraft of Coastal Command engaged in hunting down U-boats. A sortie which Pilot Officer M. A. Cybulski and his R.A.F. navigator, Pilot Officer H. H. Ladbrook, carried out on 27 March 1943 was hailed as the first daylight penetration into Germany by a Mosquito of Fighter Command. In the course of their sortie the Cougar crew attacked two locomotives, six freight cars, a tug, two barges and two army buses. Altogether, during the Coleby Grange period, the squadron damaged more than 30 trains, as well as many freight cars, vehicles, barges, factories and freight yards, and in air combat destroyed four enemy bombers and shared in the destruction of two more aircraft. But it was also a costly period, for nine crews were lost on these operations and two more in training accidents — almost half the casualties suffered by the squadron throughout its career.

While at Coleby Grange, Wing Cdr. Hillock finished his tour and was succeeded by Wing Cdr. G. H. Elms in May 1943.

The third period in the history of the squadron opened late in October 1943 when it moved from Lincolnshire to No. 11 Group's sector in south-eastern England. It was stationed at West Malling in Kent for three weeks, then at Hunsdon in Hertfordshire for seven weeks, and finally at Castle Camps in Cambridgeshire for four months (30 December 1943 to 28 April 1944) before returning to Hunsdon when D-Day was drawing near. These six months (November 1943 to April 1944) were the period of the "little blitz" on England, and the Cougar crews had many encounters with enemy raiders over the east coast or the North Sea. Fourteen aircraft were destroyed by them, and five more probably destroyed or damaged. Outstanding among these victories was a triple kill scored one night in December by Flying Officers R. D. Schultz and V. A. Williams who in quick succession shot down three Do. 217's over the North Sea between Clacton and Dunkirk and won immediate awards of the D.F.C.

In February 1944 Wing Cdr. Elms left the squadron on completion of his tour and was replaced by Wing Cdr. G. A. Hiltz who remained until the last weeks of hostilities.

Shortly before D-Day No. 410 returned to Hunsdon where it remained until a fortnight after the landings had been made in Normandy.

Sqn. Ldr. I. A. March, D.F.C.

Then, for the next two months, it was stationed at Zeals and Colerne in Wiltshire, coming back to Hunsdon early in September to prepare for a move to the Continent. During these weeks the squadron maintained a schedule of nine sorties a night, weather permitting, to keep guard over our shipping in the Channel and over the beachheads on the Norman coast. It was the most successful period in the Cougars' history. On the eve of D-Day they could count 19 enemy aircraft destroyed, plus two shared, one probably destroyed and five damaged. Fifteen weeks later, when they moved across to France, their score stood at 50¾ destroyed, two probables and seven damaged.

Twenty crews shared in this brilliant achievement which gave the squadron top rank among the night fighter units in 2nd T.A.F. Sqn. Ldr. J. D. Somerville and his navigator, Flying Officer G. D. Robinson, accounted for four of the kills; two crews, Sqn. Ldr. I. A. March and Flt. Lt. K. M. Eyolfson, Flt. Lt. C. E. Edinger and Flying Officer C. L. Vaessen, were credited with three each (the latter crew having a damaged enemy aircraft as well); and four crews had destroyed a pair of Germans each. Included in these victories was a unique kill scored one night in June by Flt. Lt. W. G. Dinsdale and Pilot Officer J. E. Dunn. While on patrol south-east of Caen they sighted a curious composite aircraft lumbering along at 11,000 feet. It proved to be a Ju.88, packed with explosives, carrying pickaback an Me.109 in which sat the pilot. A short burst from Dinsdale's guns sent the whole contraption hurling earthward in flames. When it crashed, the terrific explosion lit up the whole countryside.

By early September the Battle of Normandy was over and the Nazi forces were retreating to the Rhine, with the Allied Armies sweeping across

Flying Officer C. L. Vaessen, D.F.C. (left), and Flt. Lt. C. E. Edinger, D.F.C.

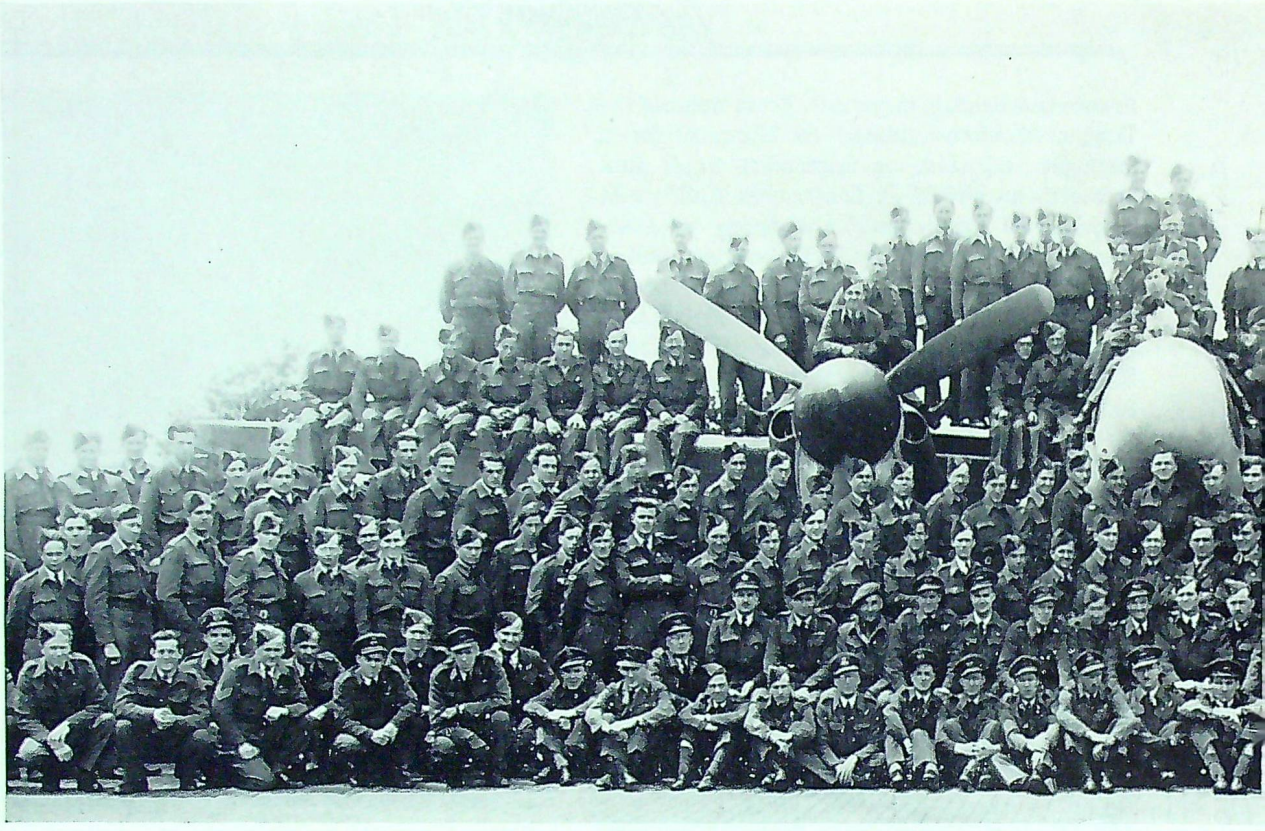
France and Belgium in pursuit. From Colerne the Cougar squadron returned to Hunsdon for a fortnight and then, on September 22nd, flew across to an airfield at Glisy, near Amiens. It remained in France until the spring of 1945, based at Glisy until early in November when it moved to Vendeville, near Lille, for two months, returning again to Glisy on 7 January 1945. Then, in April, as the Allied Armies crossed the lower Rhine and drove into northwestern Germany, No. 410 moved forward to Gilze-Rijen in the Netherlands, where it remained until the end of hostilities.

These last seven months of the war were not as fruitful as the previous period over the Normandy beaches, but the Cougars were able to add 25 destroyed and 1 damaged to their score, much of the action occurring in December when the Nazis made their counter attack in the Ardennes. Junkers bombers (of the 87, 88 and 188 varieties) figured prominently in the squadron's record of kills during this period, but there were frequent encounters too with enemy night fighters, of which the Cougars accounted for at least seven. One night late in November, Lt. A. A. Harrington, an American Air Force pilot serving with the squadron, and his R.A.F. navigator, Flying Officer D. G. Tongue, fought and destroyed three Ju. 88G night fighters in rapid succession.

Lt. A. A. Harrington, D.S.O., D.F.C.

Flying Officer V. A. Williams, D.F.C. (left), and Flying Officer R. D. Schultz, D.F.C.

Harrington and Tongue were the outstanding team during this period, with five enemy aircraft to their credit; they had previously accounted for two. Flt. Lt. Edinger and Flying Officer Vaessen added three more kills to their score; Flying Officers D. M. MacKenzie and G. P. A. Bodard also brought down three; and Flt. Lt. B. E. Plumer bagged three more, flying with a different



No. 410 (Cougar) Squadron

Flt. Lt. B. E. Plumer, D.F.C.

The airmen's committee of
Cpl. G. M. Little, LAC A. K. W
Cpl. C. A. Edwards, and

410. Left to right:
, LAC R. Cumming,
C P. E. Lefebvre

Left to right: Sgt. W. DuPerrier, Sgt. L. L. Fairley, Sgt. Don Freeman, and Sgt. L. Hall

navigator on each occasion. Three successes, the last victories won by the squadron, were also credited to Flt. Lt. R. D. Schultz and Flying Officer J. S. Christie, a Canadian in the R.A.F., who had completed one tour with No. 410 before returning to it early in 1945 to begin their second tour.

Operations ceased on 4 May 1945 with the German surrender on Luneburg heath. A month later, on June 9th, No. 410 Squadron was disbanded, not quite four years after it had been formed. At the time of disbandment Wing Cdr. E. P. Heybroek was commanding officer, having succeeded Wing Cdr. Hiltz at the beginning of April 1945.

Among the pilots who had served with the Cougars the most successful were:

Flt. Lt. R. D. Schultz, D.F.C. & Bar	8 destroyed
Lt. A. A. Harrington, D.S.O., D.F.C. (U.S.A.A.F.)	7 destroyed
Flt. Lt. C. E. Edinger, D.F.C.	6 destroyed 1 damaged
Sqn. Ldr. J. D. Somerville, D.F.C.	5 destroyed 1 damaged
Flying Officer D. M. MacKenzie, D.F.C.	4 destroyed
Flt. Lt. B. E. Plumer, D.F.C.	4 destroyed

The leading navigators were:

Flying Officer D. G. Tongue, D.F.C. & Bar	8 destroyed
Flying Officer J. S. Christie, D.F.C. (R.A.F.)	6 destroyed 1 damaged
Flying Officer C. L. Vaessen, D.F.C.	6 destroyed 1 damaged
Flying Officer G. P. A. Bodard, D.F.C.	6 destroyed
Flying Officer G. D. Robinson, D.F.C.	5 destroyed 1 damaged
Flt. Lt. V. A. Williams, D.F.C.	5 destroyed

Personnel of the squadron won 41 awards, including one D.S.O., one M.B.E., two Bars to the D.F.C., 19 D.F.C.'s, one B.E.M., and 17 Mentions in Despatches. On the Roll of Honour are the names of 62 officers and airmen. Two were taken prisoners of war and 30 were killed or presumed dead on operations against the enemy. Thirty more lost their lives in aircraft or vehicle accidents.

The squadron badge, approved by His Majesty the King in May 1945, depicts a cougar's head superimposed on a crescent moon. The moon and the motto "Noctivaga" (Wandering by Night) refer to the unit's war-time rôle as a night fighter unit.

The cougar was selected as the squadron emblem because it was a Canadian animal noted for its speed and power in striking down its prey. No. 410's record testifies how well its personnel lived up to these characteristics of its namesake.

In December 1948, after an interval of three-and-a-half years, No. 410 Squadron was reformed at St. Hubert, P.Q., as the first fighter squadron in the post-war Regular Force. Equipped with Vampire jet fighters, it began training for its new rôle as a day interceptor squadron in the R.C.A.F.'s Air Defence Group. When training and other arrangements have been completed, it is proposed to move the unit to another base in eastern Canada. During the war No. 410 was adopted by the City of Saint John, N.B. Although no longer directly associated with its war-time foster-parent, the squadron will be part of the air defences of the Maritimes and its personnel will, no doubt, have many opportunities to renew the old bonds of friendship. By a happy coincidence, Flt. Lt. R. D. Schultz, who was the squadron's most successful pilot during the war, is again flying with the Cougars as they begin their second tour of service in the R.C.A.F.

JULY TRANSFERS

Officers

S/L J. T. Arnold (G.L.)—Instrument Flying School to No. 103 Search & Rescue Flight

G/C D. S. Blaine (G.L.)—Cdn. Joint Staff, Wash., to A.M.C. Headquarters

S/L J. F. Corrigan, D.F.C. (G.L.)—N.W.A.C. Headquarters to Air Nav. School

S/L D. F. Dunning (A.E.)—A.F.H.Q. to R.C.A.F. Stn. Trenton

S/L C. C. Graham (Acc.)—A.F.H.Q. to A.M.C. Headquarters

S/L H. B. Hay, D.S.O., D.F.C. (Med.)—No. 9420 R.C.A.F. Unit to Institute of Aviation Medicine

G/C R. J. Lane, D.S.O., D.F.C. (G.L.)—A.T.C. Headquarters to R.C.A.F. Stn. Edmonton

W/C J. F. K. MacDonald, D.F.C. (G.L.)—N.W.A.C. to A.T.C. Headquarters

W/C H. G. Marriott (G.L.)—R.C.A.F. Staff College to N.W.A.C. Headquarters

S/L J. M. G. McCormack (Supply)—A.F.H.Q. to R.C.A.F. Stn. Rockcliffe

S/L G. M. D. Shiles (Supply)—R.C.A.F. Staff College to No. 11 Supply Depot

S/L A. E. Smith (Acc.)—A.M.C. Headquarters to Cdn. Joint Staff, London, England

W/C J. M. Stevenson, M.B.E. (Tech.)—R.C.A.F. Staff College to A.M.C. Headquarters

S/L J. C. Wickett, A.F.C. (Med.)—No. 9420 R.C.A.F. Unit to Institute of Aviation Medicine

Warrant Officers

WO2 W. E. Burnham (M. Arm. Tech.)—R.C.A.F. Stn. Trenton to Air Armament School

WO2 H. D. Carter (M.R.T.)—No. 426 Sqn. to A.M.C. Headquarters

WO2 S. R. Carter (M. Arm. Tech.)—Air Armament School to No. 6 Repair Depot

WO2 J. H. Langlois (Clk. Adm.)—A.F.H.Q. to R.C.A.F. Stn. Rockcliffe

WO2 W. Statt (M.R.T.)—No. 12 Grp. Headquarters to No. 9442 Aircraft Control & Warning Unit (Res)

AUGUST TRANSFERS

Officers

S/L J. C. Anstead (Sup.)—Cdn. Joint Air Trng. Centre to No. 10 Repair Depot

G/C L. J. Birchall, O.B.E., D.F.C. (G.L.)—Cdn. Joint Staff, Wash., to R.C.A.F. Station Goose Bay

S/L F. H. Bowler (A.E.)—No. 6 Repair Depot to No. 1 Trade Adv. Board

W/C F. F. Foster (Sup)—N.W.A.C. Headquarters to A.M.C. Headquarters

W/C J. Greenhalgh (R.A.F.)—United Kingdom to R.C.A.F. Staff College

S/L R. T. Hamilton (A.E.)—No. 2 Tech. Trng. School to Winter Exp. Est.

W/C F. F. Lambert, D.S.O., D.F.C. (G.L.) — Cdn. Joint Staff, London, Eng., to No. 12 Group Headquarters

S/L W. A. G. McLeish, D.F.C. (G.L.)—No. 103 Search & Rescue Flight to Trng. Cmd. Headquarters

W/C R. W. McNair, D.S.O., D.F.C. (G.L.)—A.F.H.Q. to Cdn. Joint Staff, Wash.

S/L E. E. Parks (Sup.)—Cdn. Joint Staff, London, Eng., to A.M.C. Headquarters

S/L E. S. Perkins (A.E.)—No. 2 Trade Adv. Board to No. 10 Repair Depot

S/L M. A. Rosenthal (Sup.)—A.M.C. Headquarters to Cdn. Joint Air Trng. Centre

W/C J. D. Somerville, D.S.O., D.F.C. (G.L.)—N.W.A.C. Headquarters to A.T.C. Headquarters

S/L R. O. Stabler (A.E.)—No. 10 Repair Depot to A.M.C. Headquarters

Warrant Officers

WO1 S. Heap (M. Arm. Tech.)—R.C.A.F. Station Edmonton to R.C.A.F. Station Trenton

PILOT OFFICER PRUNE

*(In response to many letters endorsing Sgt. Shatterproof's suggestion that we publish the life-story of Pilot Officer Prune, we have obtained the permission of the R.A.F. to reprint the brief genealogical and biographical sketch of him that appeared in the final issue of "TEE EMM".—*EDITOR)

PRUNE — DOES HE EXIST?

WE ARE HORRIFIED. We are shattered. We are speechless with rage, surprise and indignation. We . . . . Words fail us.

For *someone* — may Allah turn his beer to vitriol and moths breed in his pin-stripe suit — has just 'phoned us up and spoken words to this effect: "Now that TEE EMM is packing up, you're going to come clean about Pilot Officer Prune, aren't you? I mean you're going to confess at last that he doesn't really exist?"

Did you *hear* that sacrilege? *Prune doesn't exist*! Shades of crashed Spitfires and forced-landed Lancasters! Not exist indeed! Long, long ago, when the first whisper of suspicion raised its ugly head, didn't Prune at once pen a letter to TEE EMM with his own fair hand? And didn't we print it in our January, 1942, issue and reproduce his signature in facsimile — thus proving not only that Prune existed, but also the extremely unlikely fact that he could actually write? Prune not exist, forsooth — why, he is more real and alive than most of us!

We know we have already devoted a lot of space in this issue to the affairs of our gallant Percy and had not intended to write any more. But after such a vile innuendo we feel we must give this heretical telephoning clot the final works about Prune, even if it means recapitulating what is generally known to many of you.

So far from being a war-time myth, Percy Prune, of Ineyne Manor, Prune Parva, Sussex, comes of a very old and illustrious stock, a certain Percivalle de Prun having indeed come over with the Conqueror. He fell at the Battle of Hastings. Three times to be precise, on each occasion having got his sword, as usual, between his legs.

The best known member of the family, however, appears some two hundred years later. He was Sir Percivale de Prune who was knighted after Crécy.

"Does anyone really say that I don't?"

He it was who took as his crest the now famous emblem of an index finger, inflexant, non-movant, with the motto "Semper Inanum."

Then there was Sir Pritchard Proon (1530-1592), who, fired by Sir Walter Raleigh's example, once spread a cloak over a puddle for Queen Elizabeth. The fact that he was a trifle short-sighted and that what he took for a puddle was really an open manhole led to his speedy, very speedy, retirement from Court.

Three hundred years later we hear of a Percivall Pruin who fought as a Royalist in the Civil War and had the family characteristics developed to a high degree. Indeed, when King Charles heard that Percivall had taken up arms on his behalf he at once expressed grave doubts of ultimate victory. A Prune cousin, however, fought on the other side and so evened things out. He was named, after the religious fashion of the day, Praise-him-all-ye-works-of-the-Lord. P. H. A. Y. W. O. T. L. Pruin joined Cromwell's Ironsides, was nicknamed "Ironhead," and put in the front of all the charges to soften up the opposition.

Other illustrious Prune ancestors were Captain Percy Prune who served on Marlborough's staff — when he remembered to do so; Paul "Beau" Prune, who for many years was a leader of fashion in Bath, but ultimately died in Penbury while on a holiday there; and Major Pritchard Prune of that famous regiment the Hundred and Eightieth Foot, or "Fighting Drunks."

Then there was our Percy's own grandfather, Philip Prune, the well known racing motorist. He took part in the big race of 1895 from Paris to Bordeaux and back — or rather would have taken part if he'd been able to get his car to start. He was still trying three days later when the winning car returned. In true Prune tradition, from 1900 to 1902, he owned and succeeded in damaging beyond repair, thirteen cars. He died in January, 1903 at the age of 43 years and a speed of 35 m.p.h., together with three friends to whom he was giving a lift.

Last but not least, came Percy Prune's father, Peter "Ropey" Prune. He flew in the last war and in three months had destroyed twenty-seven aircraft — mostly Bristols and Sopwiths. After his twenty-sixth machine was confirmed he was sent home for a rest. His twenty-seventh, and final, machine was, of course, the one he flew home in. He only went up once again — shortly before his death. Very shortly indeed, in fact.

And so we come finally to Pilot Officer Percy Prune.

Percy was born, naturally enough, on April 1st, 1922, at Ineyne Manor. At the age of six months, beginning as he meant to go on, he crashed his cradle, and within the next six months had crashed five replacements. As a child in the nursery he was so backward that at one time his parents weren't certain which way he was growing, or going. They went so far as to engage a mind specialist; but he soon threw up the job, saying he had nothing to work upon.

Percy, however, did manage to grow up and went to school at St. Finga's, Herts, rising through the following years from "new-bug," via "Upper

"New-bug"

III B" to "blood." He left suddenly under a 10/10ths cloud, and in 1940 went up to the 'Varsity to Judas College. No sooner had he gone up than he was sent down and then called up.

He was commissioned in the R.A.F. on the 1st April, 1941, his birthday, and funnily enough the date of the first issue of TEE EMM.

"Upper III B"

"Blood"

Since then he has been in Fighter Command, where he accounted for so many Spitfires that he was transferred to Bomber Command where he accounted for so many Lancasters that he was transferred to Transport Command, who wouldn't let him touch a single one of their planes, but had him transferred to the Air Ministry, where from sheer force of habit he promptly accounted for the three model aircraft hanging in this office.

And in this office he stayed till his demobilisation this month. Had the distrustful clot who telephoned to us his base suspicions only paid us a visit he would have been able to see Prune with his own eyes. Well not Prune in person perhaps; for it's rather difficult to catch him in — the girls and the licensing hours being what they are in the neighbourhood, but at least he would have seen his name on our door, his desk and chair in our office, the many letters addressed to him, as usual awaiting to be answered till Prune feels like it, and above all his name in the official Air Ministry telephone directory.

At Judas College

And so, bah, to you, sir, unbelieving infidel and sceptic! Are you convinced *now*?

MORALE BUILDER

The sky looked ominous, and a passenger spoke to Sadie the Stewardess as she came back from the cockpit: "How is the weather ahead?" Sadie replied brightly, "Oh, it's good. The pilot said he could see our finish already."

("*Aviation Week*")

A Shaker for Shatterproof

Despite our most caustic critic's oft-expressed despair, these Flight Cadets don't seem too depressed by what they're reading.

Holding "The Roundel" are (left to right) Flight Cadets Donald Onyske and David Parsons, while Flight Cadets Dennis McNeil and Gerald McDougall look over their shoulders. Flight Cadets McNeil and Onyske are students at the University of Manitoba, and McDougall and Parsons are from McGill. All four are taking summer training in R.C.A.F. administration and technical trades at the Flight Cadets' Training School at R.C.A.F. Station London, Ont. After three summers of such training, and on graduation from their respective universities, they will be able to join either the Regular or Reserve Air Force as qualified technical or administrative officers. There are 260 undergraduates (from nine different Canadian universities) under training at London this summer, and many more at various R.C.A.F. Trade Schools and Stations across the country.

WHAT'S THE SCORE

We made our way down the hall to the office of Flt. Lt. S. E. Alexander, the R.C.A.F.'s polar pundit. Toying with the whale's ear-drum that serves him as an ash-tray, he listened to our request for something to take our readers' minds off the heat. "Ug glugalug uglimug?" he asked. We nodded. "Ug!" we said eagerly. He then commended us to the special care of the Great Sky Spirit and reached for a piece of pemmican. As we left, he was chewing upon it thoughtfully, tapping his teeth the while with a pen made out of the pelvis of a walrus . . .

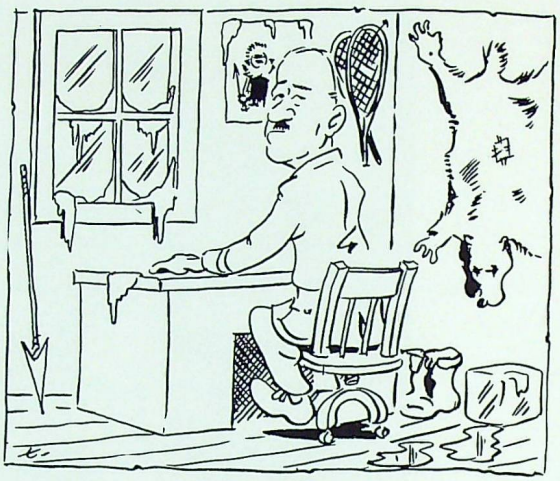
Though Flt. Lt. Alexander's twenty questions relate only to our own Canadian Arctic, a score of ten seems to be about average for us sub-tropical types here in A.F.H.Q. Correct answers are given on page 80.

1. The arctic summer lasts:
   (*a*) From July to September, inclusive
   (*b*) From about the 16th to the 18th of June
   (*c*) From about June 15th to July 21st
   (*d*) From June to August, inclusive

2. The timber line:
   (*a*) Touches the Arctic Ocean only at Aklavik
   (*b*) Never approaches the Arctic Ocean closer than fifty miles
   (*c*) Runs directly east and west
   (*d*) Is a purely imaginary line

3. A koodluk is:
   (*a*) An Eskimo knife-and-fork combination made of bone
   (*b*) A boat
   (*c*) A polar-bear trap
   (*d*) A seal-oil lamp

4. An igloo, or Eskimo house, is built:
   (*a*) Entirely of ice
   (*b*) Of snow blocks arranged around a wood-and-hide framework
   (*c*) Entirely of snow
   (*d*) Of ice lined with snow for insulation purposes



5. Wolverine fur is highly prized by Eskimos because:
   (*a*) Of its waterproof qualities
   (*b*) It is used on the bottoms of sled-runners to prevent back-slip when climbing hills
   (*c*) The frost can be beaten out of it without matting or damaging the fur
   (*d*) It will not frost up

6. A polar bear walks on three feet when hunting:
   (*a*) So that he can cover up his revealing black nose with one paw
   (*b*) So that he will make 25% less noise
   (*c*) Because he can run faster on rough ice
   (*d*) If he has a sore foot

7. A polar bear hunts seal in water:
   (*a*) By swimming after them
   (*b*) By lying at the edge of the ice and killing them with a blow of his paw
   (*c*) By floating in the dark until curiosity brings them close to him
   (*d*) By leaping on them from ice-floes

8. The arctic fox feeds chiefly on:
   (*a*) Lemmings
   (*b*) Arctic hares
   (*c*) Squirrels
   (*d*) Fish

9. The arctic hare is:
   (*a*) Carnivorous
   (*b*) Graminivorous
   (*c*) Omnivorous
   (*d*) Somniferous

10. The walrus lives on:
   (*a*) Seaweed
   (*b*) Walrus
   (*c*) Seal
   (*d*) Clams

11. In the Arctic, the "Midnight Sun" is:
   (*a*) The Aurora Borealis
   (*b*) The brilliant polar moon in winter
   (*c*) The planet Venus in spring
   (*d*) The nocturnal sun in summer

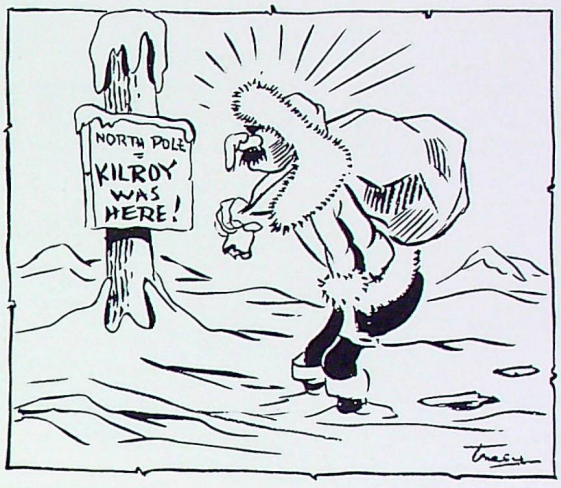
12. The Eskimo language is:
   (*a*) A phonetic language
   (*b*) A highly inflated language
   (*c*) A sign language
   (*d*) A ural-altaic language

13. Eskimos are:
   (*a*) Of Dravidian origin
   (*b*) Of Mongolian origin
   (*c*) Of unknown origin
   (*d*) Of Caucasian origin

14. A komatik is:
   (*a*) An Eskimo cradle
   (*b*) An Eskimo sled
   (*c*) An Eskimo witch-doctor
   (*d*) An Eskimo bow

15. The Arctic Circle coincides with:
   (*a*) Lat. 66° 33′ N.
   (*b*) The timber line
   (*c*) The southern limit of the polar ice-drift
   (*d*) Lat. 89° N.

16. Tides in the Eastern Arctic have an extreme range of:
   (*a*) 6 ft.
   (*b*) 12 ft.
   (*c*) 25 ft.
   (*d*) 40 ft.



17. The first explorer to reach the North Pole was:
   (*a*) Peary, in 1909
   (*b*) Amundsen, in 1926
   (*c*) Cook, in 1908
   (*d*) Stefansson, in 1915

18. The lowest temperature recorded in Canada is:
   (*a*) —93° F. (Fort Ross)
   (*b*) —81° F. (Snag)
   (*c*) —110° F. (Grant Land)
   (*d*) —70 C. (Resolute Bay)

19. The most disastrous arctic expedition was:
   (*a*) Amundsen's
   (*b*) Nobile's
   (*c*) Kane's
   (*d*) Franklin's

20. The most dangerous sea-mammal in the Arctic is:
   (*a*) The beluga
   (*b*) The seal
   (*c*) The walrus
   (*d*) The blue whale

SALUTING

Mr. Winston Churchill, when asked in the House of Commons in 1944 if he would consider the issue of an order to put an end to the practice of saluting off duty, replied as follows:

"No, Sir. A salute is an acknowledgement of the King's Commission and a courtesy to Allied Officers, and I do not consider it desirable to attempt to make the distinction suggested. If my honourable friend had an opportunity during the war of visiting Moscow he would find the smartest saluting in the world. The importance attached to these minor acts of ceremony builds up armies which are capable of facing the greatest rigours of war."

AIR DEFENCE

An Address to the Royal Empire Society by

FORMER CHIEF OF THE AIR STAFF, LORD TEDDER, G.C.B.

(Reprinted by courtesy of "Air Clues")

BEFORE DISCUSSING the specific problems of air defence I want to say a few words about defence as a whole. I think it is essential that we should always remember that in these modern days war is total; it is a unity involving every branch of national life. Defence is not merely a matter of guns, ships and aircraft. Every man and woman in the nation has his or her share in its defence.

Interdependence of National and Service Morale

A nation is very much like a boxer. If he is going to fight it is not good enough for him merely to have bulging biceps and knobbly knuckles. He has got to be fit all round. First and foremost his morale must be good. I am sure everyone would readily accept that high morale is the first principle governing the effectiveness of armed forces. I am not so sure whether it is always realized that the real key of the whole business is national morale. The Armed Forces are after all merely that part of the nation whose particular rôle in the national effort involves them in actual fighting or the direct support of fighting units.

If the morale of the nation is weak you cannot hope to have high morale in the forces. The strength of our nation has always been in its unshakable morale, its flat refusal to consider the possibility of defeat. When we commemorate the Battle of Britain each year we rightly honour the airmen who fought that battle in the air over this country, over the Channel and the North Sea and over the Continent, but I have always felt that one factor no less vital to that victory than the courage and skill of the airmen was the unquenchable morale and spirit of the people of this country.

We have had plenty of signs recently that that spirit is as live now as ever it has been. All the same I think there is one thing we must watch carefully. We are rather proud of talking about "backs to the wall," "thin red lines," and "last ditches," and it is in one way something to be proud of that the tougher things look the tougher we become. But I do not think we can afford in these days to be complacent about this characteristic.

Advice from an Admiral

During that awful period so appropriately called "The Phoney War" I not infrequently heard it said that until the nation was really frightened it would not really get down to business properly. I am afraid there is a modicum of truth in that

comment. In the last war we lost all the first rounds of the contest and in fact were unpleasantly near being knocked out. With the modern developments in the technique of war we simply must realize that we cannot afford to take such chances again.

I have noticed in the Press recently that there have been some public differences of opinion in America between admirals and airmen. Nevertheless, without entering into that controversy, I would like to quote what one American admiral has said. This admiral said:

> "It behooves countries whose people, like all free peoples, object to paying for large military establishments, to see to it that they are at least strong enough to gain the time to turn the spirit and capacity of their subjects into the new activities that war calls for."

Since Admiral Mahan died some years ago I trust that my quoting him will not be regarded as any intervention in current controversy on the other side of the Atlantic. I believe that statement to be as true now as it was when it was written, but its application must be adjusted to fit in with modern conditions. There are two main points, firstly the time factor and secondly expense, or, as I would prefer to express it, economy.

Time to Prepare—But not Prepared in Time

As regards the last war Providence was very kind to us. We were given considerable warning before the war. It was four years before the Battle of Britain that the Royal Air Force expansion began. We had the further warning and breathing space as the result of Munich and then we had more than eight months of "The Phoney War."

Despite all that, we were overwhelmed in Norway, in France, in Greece and in Crete. Those were the days when soldiers and sailors who had passed through hell in those tragic campaigns came home with bitterness against the Air Force — the R.A.F. had let them down — yet those were also the days when many of our brightest and best had given their lives in the air against hopeless

odds in gallant attempts to help our men on land and at sea. Magnificent but not war.

We can only be thankful to Providence and those in authority at the time that there were enough left — The Few — to hold the fort in the crucial struggle — The Battle of Britain. What had happened? What was wrong? The position was really quite simple. Once air power had become a real factor in war — as it now had — nothing could carry on effectively on land or sea (whether military, naval, or economic) without air superiority: unless and until we had command in the air our Army and Navy were virtually paralysed — *and* if we lost that command in the air over our own country our whole economic life was in danger of being paralysed. In those days though we were superior in quality of aircrew and aircraft we lacked the numbers needed to deal with the overwhelming numbers of the *Luftwaffe*, and we had no secure air bases in Norway, France, Greece or Crete.

Air Battle is Continual

I can imagine you may be thinking — this is old stuff, ancient history; we are concerned with the future, not the past. What about "push-button warfare"? That may come, in some form or another, in the future. But not now or in the immediate future. Personally I am quite sure that

so far as we are concerned the principle which was proved again and again in the last war is true now and will remain true for years, and that is, that in war, nothing on the surface of land or sea can operate effectively unless and until the situation in the air is under firm control. This is sometimes expressed by saying that the air battle must first be won. That is rather an over-simplification. The air battle is not a matter of hours like a naval battle or of days like a land battle — it is a continual fight which continues so long as any enemy bombers can operate.

It is often thought that the Battle of Britain took place in August and September of 1940. One phase of it did — the daylight phase over this country — but it continued, at first at night over England and then gradually, as, first Bomber Command at night and, later, the American bombers by day, step by step forced the fight across the Channel, across the Rhine, until finally it was being fought out over the heart of Germany.

I have sometimes felt that there are people who think that Air Defence is simply a matter of fighters and anti-aircraft guns. I cannot imagine any more dangerous fallacy. One might as well say that because we sometimes call boxing the noble art of self-defence, all a boxer need do is to cover up.

Attack in Defence

In the later part of 1944 the Nazis had nearly a million people directly involved in operating their air defence organization — guns, searchlights, radar and control — they were producing more fighters than the total combined production of Britain and the United States, which had to meet world-wide commitments, and yet Allied air superiority over the whole of Germany daily became more and more complete, and systematically the whole war effort of Germany was being paralysed.

No; the Bomber Command attack on Peenemunde which wrecked the V-bomb development and set it back for many months, the attacks on the VI sites in Northern France which delayed the VI attack by three or four months, the attacks on transportation in Northern Europe and Western Germany which utterly disorganized the supply of V weapons and enormously reduced the scale of the attacks — these were as much a part of the Battle of Britain as the fighter battles which weaved in the sky over London in September, 1940. Moreover I have yet to hear of the fighter or the gun which can deal with the rocket. But the bomber did — and, as I see it, alone can do so.

Gaining Time

But now to return to Admiral Mahan's statement. He spoke of being "strong enough *to gain the time* to turn the spirit and capacity of the subjects into the new activities that war calls for." That was all very well in the old days, as when Shakespeare so beautifully described our country as "this little world, this precious stone set in the silver sea, which serves it in the office of a wall, or as a moat defensive to a house." That moat gave time — to turn the spirit and capacity of the nation to war fitness. That moat still has its value but against air attack it means little. The purely passive defence afforded by the Channel, covered by the Navy, will no more give the time which is needed than did the Maginot Line manned by the French Army in 1940. Yet time we must have.

Since no democracy will be an aggressor it will always be relatively unprepared and must somehow gain time at the outset of a war. But, in this connexion, as in most others, time costs money and, as the Admiral so surely remarked, "free peoples object to paying for large military establishments." Moreover, unfortunately, in these days when modern equipment becomes more and more expensive, it becomes more and more difficult to provide forces which will be "strong enough to gain the time." In point of fact, if great care and discrimination are not used it i quite conceivable that a country might spend s much on its "military establishments" as to sa its economic health and so render its militar defence quite valueless. I do not myself believ that any single democratic country — even th United States — can or will pay for forces whic by themselves, will suffice to gain the time.

"Long Wars Do Not Pay"

I imagine no one will contest the statement that the most immediate and the most dangerous threat would come from the air, and the trouble is that that threat can develop a great intensity so rapidly. The time factor is vital. The inevitable relative unpreparedness of democratic nations has in the past often proved to be an irresistible temptation to an aggressor; and the trouble is that the potentialities of a sudden blow from the air are now so great that that temptation may well be greater even than it has been in the past.

On the other hand there is ample evidence for the whole world to see that long wars do not pay either victor or vanquished. In other words, while the possibilities of a short *blitzkrieg* are probably more tempting to an aggressor than ever before, the prospects of a long war are most unappetizing. If therefore the free peoples can ensure that they *are* strong enough to gain time and make it clear to the world that they can defend themselves effectively during the opening phase of a war, I believe the risk of any would-be aggressor trying a *blitzkrieg* will be greatly reduced. Hence the association of nations now being formed under the Atlantic Pact. By thus *combining* their efforts the free peoples aim to provide forces which will meet the Admiral's requirement, each nation providing for the common pool forces appropriate to its special position and its capabilities. In the past one of the prices of democracy has been a military unpreparedness which only too often has had tragic results. The pooling of resources and collective defence now being organized should provide a combined strength to deter aggression in place of the separate weakness which in the past has invited aggression.

"Tactical" Misunderstanding

There is just one point regarding the Allied Air Forces on which I want to comment. I have seen it suggested a number of times recently that in view of the fact that while the United States has long-range bombers and the R.A.F. at present has none it should be arranged that the R.A.F. should concentrate on "Air Defence" and a "Tactical Air Force" leaving the rôle of strategic bombing to the United States Air Force. I believe that those who make proposals of this sort have the completely erroneous idea that an "Air Defence" force is composed entirely of fighters, and a "Tactical Air Force" of fighters and fighter/bombers.

I must plead guilty to having been largely responsible for coining the phrases "strategic bombing" and "tactical bombing." At that time, in 1943, those titles were valuable in defining two somewhat different rôles, but I am very much afraid that recently they have come to be misunderstood and dangerously misused. Because we have called forces which are assigned to the rôle of strategic bombing "Strategic Air Forces" and those assigned to the tactical rôle "Tactical Air Forces" it has come to be thought in some quarters that they comprise quite different types of aircraft, different forces.

Actually, of course, "strategic" is a relative term. What is strategic to an army divisional commander is tactical to an air force commander, and what is strategic to an air force commander is probably completely outside the ken of an army commander. I imagine people who talk of strategic air forces would say that in the late war Bomber Command and the U.S. Eighth Air Force were "strategic" — yet, as I have mentioned already, Bomber Command played a vital and direct part in the air defence of the United Kingdom: Bomber Command and the Eighth Air Force not only carried out a number of attacks in very close support of the armies, but also for many weeks carried out operations which paralysed the movement and supply of German forces trying to reach Normandy — "strategic" work from the Army point of view, but "tactical" from the Air Force point of view.

No, these mistaken attempts to draw hard and fast distinctions between strategic and tactical are not merely unsound but dangerous. If applied in this way such distinctions would destroy that flexibility which is one of the chief characteristics of air forces, the quality which makes it possible to concentrate air power in a manner quite unattainable by any other force. Nothing could be

more dangerous than to weaken that power of concentration. This is particularly true as regards air defence.

The Bomber — The Punch

I have spoken of the air battle. I have shown how inevitable it is that the air battle must come first, and the critical nature of that battle needs no emphasis. The deduction from that is clear — the initial job of the R.A.F. as a whole will be air defence, and bomber, fighter bomber and fighter, each in accordance with its own particular powers and limitations, will be directed towards the single aim of gaining air superiority and pushing the air battle away from British skies. The fighter, the fighter bomber and the bomber are complementary.

An air force without a punch is no force, and the punch is the bomber. The noble art of self-defence would mean little if the boxer had no punch. Nor to use a different analogy, could one ever win a match with a side of 11 goalkeepers. Moreover, let us not forget that it is the bomber that pushes the air battle back from our skies. The less one's own people and one's own land and sea forces see of the air war, the better that war is proceeding.

In this last war the air situation was not safe until the air war had moved away from our skies and the Battle of Britain had become the Battle of Berlin. In any possible future war, more than ever would it be vital that the air battle be pushed far from our own skies.

When Maestros Confer

W.O.1 Clifford Hunt, Bandmaster of the Training Command Band, and three-year-old son, discuss the finer points of their art. Clifford Junior is probably dazzled by the splendour of the new R.C.A.F. Bandmen's uniform just as much as by his father's musical lore.

The ROYAL CANADIAN AIR CADETS

by Arthur Macdonald

SUMMER PROGRAMME

As this is written, the Royal Canadian Air Cadets have just about completed their ninth full training year and plans are being made for one of the busiest summer programmes in Air Cadet history. Since regular squadron meetings are not held during the vacation season, the summer schedule is built upon a series of special activities intended to serve largely as a reward for outstanding service with the squadrons. The following projects are definitely on the books for 1950.

Exchange Visits

Tentative plans for the 1950 exchange of cadets between Canada, the United States and Britain were made recently at a three-way conference held in London, England. The Air Cadet League was represented by Honorary President C. Douglas Taylor and General Manager George M. Ross, who were accompanied by Wing Commander R. M. Cox, D.F.C., A.F.C., Senior Air Cadet Liaison Officer. The American delegation was headed by General Carl A. Spaatz and Major General Lucas V. Beau.

Following the conference it was announced that Canada would exchange 25 cadets with Britain and a similar number with the U.S. The British exchange will get underway on August 3rd, when the Canadians leave Dorval airport in an R.C.A.F. North Star. They will return on August 24th after three weeks of sightseeing and entertainment in the United Kingdom. The U.S. exchange is slated to commence on July 29th when the Canadian lads depart for the U.S.A. They are scheduled to return to Canada on August 11th, following an aerial tour of the western States.

Canadian reception plans for the return parties of visiting cadets call for the British lads to be entertained in Ontario and Quebec. The U.S. Civil Air Patrol cadets will be flown to western Canada and will spend their two weeks' holiday in British Columbia and Alberta.

Selections of Canadian exchange candidates are now being made and names of the lucky winners should be announced by the time this appears in print.

R.C.A.F. Scholarship Flying Training

Over 500 applications were received for the 225 vacancies on the 1950 R.C.A.F. Scholarship flying training course. The four weeks' course, conducted at the Flying Clubs across Canada, offers 50 hours of ground-school instruction plus 17 hours of air tuition in standard light planes.

Candidates were required to write qualifying examinations in navigation, meteorology and airmanship before being considered for the course. Flying scholarships were awarded to the top 225 cadets on the basis of their standing in the qualifying examinations. Cadets who successfully complete the course are permitted to wear the official Air Cadet flying badge on their tunics.

In addition to this R.C.A.F.-sponsored course, it is expected that many additional cadets will be awarded private flying scholarships by the civilian committees of the Air Cadet League. It is estimated that in the past four years more than 1,200 Air Cadets have been taught to fly under both League and R.C.A.F. sponsorship. A large

majority have gone on to earn private pilots' licenses. Many have enlisted in the R.C.A.F., and several are engaged in commercial flying activities.

No. 2 (Hamilton) Wing

The precision squad of No. 2 Wing put on a very fine show indeed during its May inspection by Air Commodore W. W. Brown, C.S.O. at Training Command. Another of the day's highlights was the presentation to the Wing of a cadet ensign by Mrs. M. C. Dorsey, Vice-Regent of the I.O.D.E. Chapter.

The accompanying photograph shows Air Cdre. Brown in conversation with some of the cadets of No. 2 Wing. Perhaps, as "The Hamilton Spectator" remarks, he is enumerating the first rungs in the ladder of Service success. The five cadets are (left to right), Sgt. Albert Seager, LAC Donald J. McDougall, LAC Wayne Cruickshanks, LAC Cecil Kipfer and Cpl. Kenneth MacLennan.

International Drill Competition

The 1950 International Drill Competition will be held at Des Moines, Iowa, on August 30th. The

event is being sponsored this year by the Iowa State Fair, working in co-operation with the U.S. Civil Air Patrol. This is the third annual competition for the coveted Major General Lucas V. Beau Trophy. The two previous competitions (held in New York and Toronto) were won by Canadian teams from Ontario and Quebec.

The 1950 Canadian team will be chosen from Air Cadet squadrons in North West Air Command. Each squadron will nominate one candidate who will undergo special training at the Air Cadet summer camp, Gimli, Manitoba. Competition will no doubt be extremely keen for the forty positions on the squad.

Summer Camps

It is expected that upwards of 4,000 cadets will attend the annual summer camps at R.C.A.F. Stations this year. The camps will be located at Summerside, P.E.I.; Aylmer, Ontario; and Gimli, Manitoba. They will be of two weeks' duration.

The camps offer a full programme of organized sports and other recreational activities as well as up-to-date instruction in aeronautical subjects. All cadets attending the camps are given familiarization flights in Service aircraft as part of the training programme. Throughout the camping period they are supervised by Regular Force officers and N.C.O.'s as well as by officers and instructors of their own squadrons.

A highlight of each summer camp is a track and field meet during which cadets and squadrons compete for a variety of trophies and awards. These have helped to make the summer camps one of the most popular features of Air Cadet life.

Trophy Winners Announced

Congratulations are extended to the Air Cadet rifle teams of No. 287 (Lamont) Squadron and No. 22 (Powell River) Squadron, winners of the 1950 Air Cadet rifle competitions.

The Lamont Squadron walked off with the Dominion Challenge Trophy awarded annually by the Air Cadet League, while the Powell River Squadron placed first out of 56 Air Cadet squadrons in a contest sponsored by the Dominion of Canada Rifle Association.

Both competitions are held during the months of January, February and March. Squadrons fire on one set of special targets each month and the targets are forwarded to Ottawa for final assessment. Top scores in each of the competitions were as follows:

Dominion Challenge Trophy

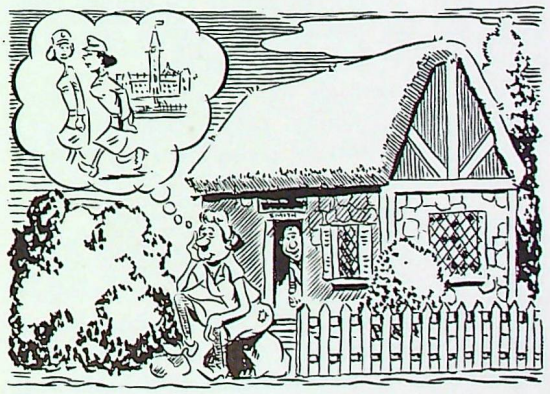
No. 287 (Lamont) Squadron: 96.63%
No. 176 (Winnipeg Optimist) Squadron: 95.92%
No. 22 (Powell River) Squadron: 95.63%

D.C.R.A. Air Cadet Trophy

No. 22 (Powell River) Squadron: 96.11%
No. 176 (Winnipeg Optimist) Squadron: 95.22%
No. 330 (Danforth Tech) Squadron: 95.13%

TRACERS

Mrs. W. J. Smith (formerly Sgt. R. B. Frost) would like to get in touch with Sgt. (W.D.) M. L. McCutcheon and Sgt. (W.D.) S. E. Hickey. Her address is: "Bisley," Main Road, Little Carleton, North Louth, Lincs., England.



The Interceptor's Future

(This article, reprinted by permission of the Editor of "Air Pictorial" (formerly the "Air Reserve Gazette"), gives an interesting statement of British designers' approach to the problem of interception.—EDITOR)

by James Hay Stevens

THE ADVENT of the jet engine in 1944 gave a terrific impulse to fighter design by doubling the engine power and advancing the speed by 150 m.h.p. in one fell swoop. The jet engine, although its fuel consumption for power ratio was almost double that of a piston engine, weighed only about half. It seemed that the millennium of the fighter had arrived.

The Germans got the Me 262 into service. Capable of over 500 m.h.p., with a phenomenal rate of climb and high ceiling, it seemed just the thing to tackle the Fortresses and Liberators of the U.S.A.A.F. Not only did it fall a victim to the bomber's guns, but it was shot down fairly easily by the escorting Mustangs. The trouble was that, fast though it was, the Me 262 had so high a wing-loading (65 lb./sq. ft.) that it was difficult to manoeuvre, particularly at great heights.

This was but the foretaste of the problems to come. The difficulty of combining speed and manoeuvrability in the most effective proportions has existed ever since the first fighters, Fokkers, Nieuports, Spads, Pups and Camels appeared about 1916. To-day the answer has still not been found and the divergency of expert opinion is perhaps greater than it has ever been.

The five essentials for a fighter are: speed, climb, manoeuvrability, range (endurance) and fighting power. Without giving these any priority as yet, I propose to assess the requirements of each and their effect on the aeroplane — only saying at this stage that the last is largely dependent upon the first four, although these are, of course, useless on their own.

Speed is attained by good streamlining and ample power. A tiny aeroplane with small wing area will be faster, power for power, than a large one. A laminar-flow, thin-wing section will reduce air resistance and delay compressibility effects. Sweepback will go further still in raising the critical Mach number.

Good streamline is fairly easy in itself, although in its perfect form it may spoil the pilot's view (Fig. 1) and interfere with operational equipment and accessibility generally. High power means greater engine size and weight and more fuel. Small wing area means a high wing-loading and consequently higher stalling speed. This in turn reduces the rate of climb and manoeuvrability;

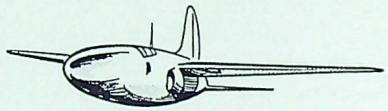


Fig. 1.—The SO-M2 is a research aeroplane, but such a "submerged" pilot's position has been suggested for fighters!

particularly at height, where the rarified air will only support the aeroplane's weight at much higher speeds. A thin, high-speed wing section generally has a lower lift co-efficient. Sweepback also causes trouble with the stalling speed. The two together tend to make the stall more abrupt and dangerous.

Climb (and a high ceiling) comes from a low wing-loading and high power. Large wing area and low all-up weight are the first answers — both incompatible with high speed. High aspect ratio, meaning relatively large span, also improves the climb; but this reduces the rate of roll, since this depends directly on the span (Fig. 2). The height-record Vampire had its span increased by extended wing tips that increased both the wing area and the aspect ratio.

Manoeuvrability is in three planes. Rate of roll is increased by reducing the span (as in the "clipped" Spitfires, the Meteor 4 and the Vampire) and by fitting power-boosted ailerons. Turning and pulling out of a dive, both controlled principally by the elevator, depend on keeping the wing-loading down to a reasonable figure — 40-45

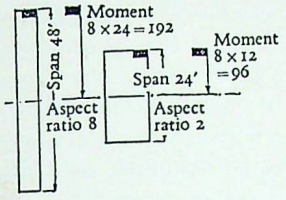


Fig. 2.—Two wings of the same area, showing how the larger span causes greater resistance in roll than the squat low-aspect ratio.

lb./sq. ft. by British ideas, 60-70 lb./sq. ft. by American or French. Wing area has to be sufficient to take the increased weight of the aeroplane in these high "G" turns and pull-outs, so that it does not easily flick into a high-speed stall (Fig. 3).

Range (or endurance) obviously affects the operational efficiency of a fighter and is not easy to provide in jet aeroplanes. It means a large fuel capacity — that is a great deal of weight and bulk — and squeezing tanks into fuselage and wings or that fashionable make-shift the drop tank. Low engine power assists long range, but jet engines do not save fuel when throttled, so it is a case of fitting lower-powered engines, thereby reducing speed and climb.

There are two other alternatives: to use two engines mounted near the centre line, thus allowing single-engined cruising, or to use a lower-powered engine, with re-heat or water injection for extra combat power. The recent successful refuelling of a Meteor in flight indicates the possibility of fighter patrols being refuelled at height from

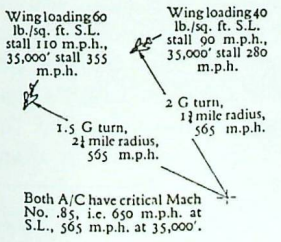


Fig. 3.—The effect of wing loading on turning radius at height. Both aeroplanes can safely negotiate 5g or 6g turns at sea-level, provided the pilot has a G-suit, but at 35,000 ft. the difference is great.

tankers — though these, of course, might fall easy victims to enemy long-range fighters.

Fighting power means that the aeroplane must be able to make its "kill". It must be a steady sighting platform with a high fire power, for the target must be hit hard in a very short time, probably five or ten seconds. Good hitting power means cannon, the largest, with the highest rate of fire and as many of them as possible. This again means weight and bulk. Because of the cold at height and the heat generated by high-speed flight, the cockpit must have both heating and cooling. Rarified air requires pressurisation for pilot efficiency and a G-suit — all adding weight and complicated systems. The target must be found, and at 40,000 ft., where the sky is dark, the small 500-m.p.h. bomber is hard to see and the 600-m.p.h. fighter can easily pass it by — at that speed the range of vision, five miles, represents 30 sec.

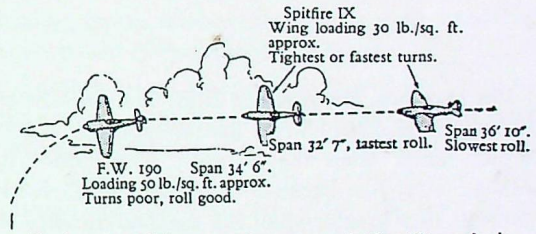


Fig. 4.—A fast roll is a spectacular manœuvre, but its military value is restricted to the escape "peel-off" shown. The Spitfires could turn well inside the Fw 190 because of their lower wing-loading, but the latter were able (until the Spitfire wings were clipped) to get away by peeling off.

This means that radar is almost essential for interception — certainly it will be when speeds increase further, as they will in another year or so. Radar is bulky and can mean an increase in weight of anything up to half a ton. Its effect on the Shooting Star and the Vampire, as well as on an aeroplane designed from the start to take it is shown in Figs. 5, 6 and 7.

Such in brief, are the basic problems — and they show at once why the R.A.F. (and many foreign countries) are quite satisfied with the Meteor and Vampire for the time being. Aeroplanes of improved performances have been designed and built, but what will be the best compromise for operational use is not yet clear.

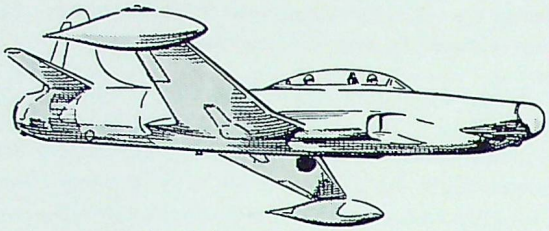


Fig. 5.—Introduction of radar spoils line; hideous nose on the F-94 all-weather version of the Shooting Star. The fat tail indicates that an after-burner (re-heat) is fitted.

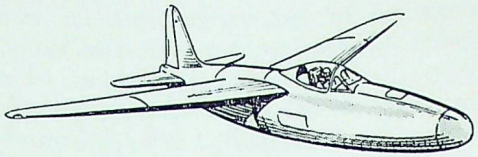


Fig. 7.—The Arsenal VG-90 is a single-seater with radar, but the weight of equipment necessitates a large aeroplane if the wing-loading is to be at all reasonable, actually 53.3 lb./sq. ft. on a span of 44 ft. Moderate high-level performance and climb with a rather low rate of roll are to be expected.

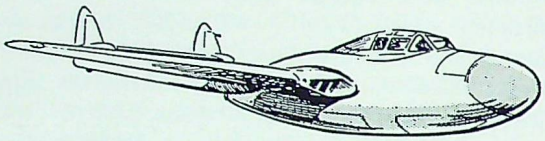


Fig. 6.—The fat nose necessary to carry the radar scanner on the D.H. 113 (Vampire night fighter) gives an idea of what may be common in the future.

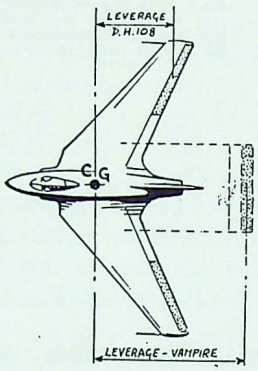


Fig. 8.—This sketch of the D.H. 108 shows how the relative large span reduces rate of rol while the short distance betwe the tail and the C.G. redu elevator control leverage.

For instance, the research D.H. 108, because of its improved streamlining and sweepback, is 100 m.p.h. faster than the Vampire from which it was derived, but because of its smaller elevator leverage and greater span the manoeuvrability is markedly inferior (Fig. 8).

The Avon-engined Meteor can climb to 40,000 ft. in four minutes, because its engines deliver some 13,000 lb. thrust, or not far short of the aeroplane's weight. That is to say, it climbs by jet thrust more than by wing lift. Because it is similar to a standard Meteor, and only slightly heavier, manoeuvrability and landing characteristics are normal for the type, but the range is reduced because of the increased fuel consumption. The speed is probably little greater, being restricted by the critical Mach number for this airframe — 0.83, I believe.

In America jet fighters have not proved too successful when intercepting high flying B-29's at 30,000 ft. The newer American fighters, the F-84 Thunderjet and the F-86 Sabre, have wing loadings of about 50 lb./sq. ft. against the 60 lb./sq. ft. of the F-80, but even this is high for manoeuvre the stratosphere.*

The Vampire and Meteor can be used as in ceptors (a flight endurance of rather under a hour including 15 min. combat at maximum power without having their drop tanks fitted, but t American fighters are almost always flown wi drop tanks. Their internal tankage is small cause of thin wings and, in the F-84 and F-8 because of the space occupied by the long duc from the nose air intake. The new "penetration fighters have more internal fuel space — and the are about 60 ft. long as a result.

What, then, are the designer's possible answers First he *must* carry essential operational equi ment: pilot and ejector seat; at least four guns a about a 30-sec. burst of ammunition; full in struments and radio, including blind landing a and, in the near future, search radar. To get a goo fire pattern guns are best in the nose, and radar scanner should be there too, yet a sh

*Individual figures are not quoted because published data are mo vague and unreliable owing to both official and unofficial reticence abou conditions of load.

point is best for high speed! Anyway, a nose intake is pretty well ruled out. It must be in the wing roots or fuselage sides. This means increasing frontal area, but as it also increases the internal fuel capacity it is one of the happier compromises.

A thin-section laminar-flow wing is essential for high speeds and there are two ways of keeping the wing thick enough to give reasonable structural strength as well as stowage space. These are low aspect ratio and sweepback. The former has the advantage of increasing manoeuvrability at some cost in take-off, range and performance at heights. The Meteor 4 appears to evade some of these penalties. Although its aspect ratio is only 3.9 it has a ceiling of 49,000 ft. and needs no assisted take-off. Its low wing-loading is its great asset.

A good answer to the power versus range question is found in the use of re-heat, which, as developed in Great Britain, can give as much as 50 per cent power increase for, say, overtaking a fast bomber.

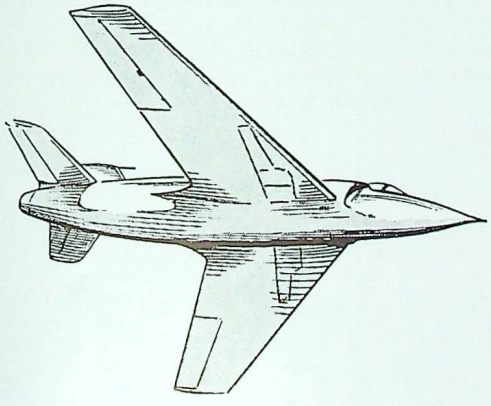
Weight and space could be saved by abolishing the undercarriage and using a skid with, perhaps, a special landing area like the Navy's "flexible deck". Even here, there is a snag, for the aeroplane then becomes dependent on an elaborate ground organisation (with trolleys and tractors) and is difficult to operate from temporary aerodromes.

This last point leads on to a most serious side issue — maintenance. However good a fighter may be, if maintenance is poor it will be useless. (In jets maintenance means accessibility in the main, because vibration troubles are nil, but engine changes are fairly frequent.) During the war there were one or two fighters of exceptional performance that hardly made an operational sortie because they could never be made airworthy in sufficient numbers — and in one instance the average number of aircraft available at any time was about 5 per cent of the total.

In the immediate future the Vickers 510 and Hawker P-1052 are likely to give a good idea of the qualities required in a good fighter. These can be listed as follows: Reasonable size, span less than 40 ft., and wing area, over 250 sq. ft.; internal tankage for interceptor duties (Figs. 9 and 10). Moderate engine power, 5,000 lb. thrust, but with the addition of re-heat for speed or climb bursts. the sweepback gives a high critical Mach number (probably sufficient for sonic flight) with wings that are thick enough for strength, and yet with landing characteristics that appear good. Modified noses would allow radar to be fitted.

Further away, the delta-wing will probably be the answer — though much depends on flight tests with such aeroplanes as the Avro 707 (Fig. 11). They allow close grouping of equipment and, because the chord at the centre line may be as much as 25 ft., the maximum thickness with a 10 per cent laminar-flow section will be 2 ft. 6 in. —

Fig. 9.—Span of the Vickers 510 (38 ft. 11 in.) is slightly more than the Attacker, so that the greater chord only reduces the aspect from 6 to 5.5 despite a 21 per cent increase of wing area; hence improved high-level performance and climb. The new sharp nose improves air flow into the "elephant's ear" intakes.



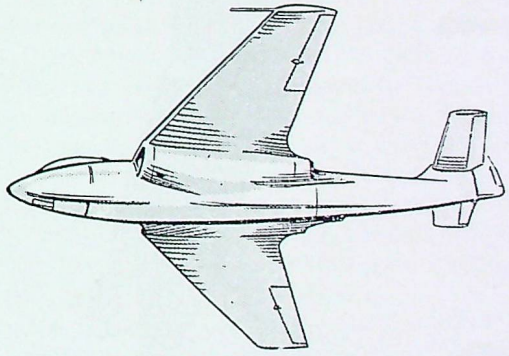


Fig. 10.—The Hawker P-1052 has a span of only 31 ft. 6 in.—less than that of the P-1040 (high rate of roll) and low aspect ratio (high Mach number); thickened wing roots hold air intakes, divided jet trunks *and* fuel space.

ample both for strength and stowage. The ultra low aspect ratio gives almost unstallable properties, but although the wing can be flown at low forward speeds at an incidence of 45 deg., the sinking speed is high so that a sturdy, long-stroke undercarriage is necessary to make use of the slow flying properties.

One imagines that the delta will have a good rate of roll, because of its small span, but its other controls may well be poor, because the centres of pressure and gravity are rather far aft and close to the elevators and rudder. For the same reason, stability may be troublesome, as is usually the case with tailless aeroplanes. The addition of external tanks to this type of wing would increase the drag enormously. The internal volume of the design might, however, be great enough to avoid them altogether.

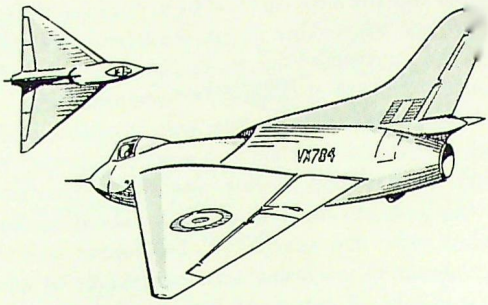


Fig. 11.—The span (33 ft.) of the experimental Avro 707 was greater than its length (30 ft. 6 in.), although it does not look like it. Air intake well aft in the top of the fuselage leaves the fuselage and thick wing-root free for fuel and equipment. This aeroplane is likely to be a pattern for the future. If anything, elevator leverage on a delta wing is worse than on the normal tailless aeroplane because the centre of pressure and C.G. are farther aft. On the other hand, span is less, so that rate of roll is better.

FEATHERED FOOLISHNESS

This rook got in the way of a Hornet Moth and was neatly—if rather astonishingly—transfixed on the pitot.

Many experiments have been made to combat the menace of birds to the operation of aircraft from airfields—for instance, with falcons and the "Kro-Scarer," a delayed-action pyrotechnic device. Now supersonic projectors are being tried out.

("Air Clues")

The Big Explosion

by Major J. A. Stairs, M.B.E.
Directorate of Armament Development, Army Headquarters, Ottawa

(*Reprinted by courtesy of the "Canadian Army Journal"*)

ONE NIGHT a few months ago an unusual photograph was removed from the new 200-inch telescope on Mount Palomar. On it there appeared many points of light, but one of these was of particular interest, not only to astronomers but to sober-minded people everywhere. This pinpoint is not a star, but an island universe combining the light of many millions of stars. This light had been travelling across the vast and lonely depths of space for a thousand million years. Through all these eons of time it never varied its pace from a steady 186,000 miles every second.

What is the background to such immense distance? What are island universes? What do we know of space as a whole? What do we mean when we say it is curved or that it is expanding? What are stars? Where do the sun, moon and earth fit in?

The sun is a star. It doesn't look like a star because it is so close to the earth. Light takes a little over eight minutes to come the ninety-three million miles from the sun to the earth, but it takes over four years to come from the nearest star. The sun is a very ordinary star. It is 865,000 miles in diameter, has a surface temperature of about 11,000 degrees and is kept burning by the large scale release of atomic energy deep inside where the temperature goes up to many millions. It is radiating light or burning up at the rate of four and a half million tons a second, but this is so small an output that it takes hundreds of millions of years to show any appreciable change.

Moving around the sun are nine major bodies called planets. One of these is the earth. Other familiar ones are Venus, sometimes called the Morning or Evening Star; Saturn, the plant with rings (probably the debris from a moon that broke up); and Mars, sometimes thought of as a place where life like our own might exist. All these are relatively close to the sun, the most remote being a distance that light travels in a few hours. Most, like the earth, have at least one moon and the two largest have nine and eleven.

In addition to the planets, there are in the sun's family a number of close-knit groups of meteors which, if they pass close to the sun, heat up and give off bright gaseous tails for several days and are called comets. Meteors are fragments of metal varying from the size of a dust particle to that of a small mountain. When large strays enter the earth's atmosphere they burn themselves out as "shooting stars." They have nothing whatever in common with stars proper which are suns like our own many light years away in space.

Now the sun by day and the stars by night are all members of one large family. This is sometimes called a galaxy or an island universe, but people as they look up at it from the inside call it by the more familiar name of "Milky Way."

Far outside our own Milky Way there are other Milky Ways or island universes which float like vast star cities in empty space. These island universes — and there are millions of them — are shaped like poker chips. In our own the sun is

located about half-way between the centre of the chip and its edge. In directions where we look through a very small thickness of the chip we see relatively few stars. But when we are looking straight at the Milky Way where it stretches across the sky, we look through the full breadth of the chip. The faint light that we see is caused by millions of suns belonging to our own island universe but too far away to be seen as separate stars.

The total number of stars and matter in an average island universe is very large, probably enough to make one or two hundred thousand million suns the size of our own. The diameter of these poker chips varies. Light takes only 50,000 years to cross the smaller ones, but in some it takes twice as long. They vary in thickness from about 3,000 light years near the edge to 15,000 at the centre. Most of them appear to be rotating and some have the appearance of giant whirlpools. The time per whirl is one or two hundred million years.

The distance from our island universe to the next nearest is 800,000 light years. In between there is vast emptiness.

The exact number of island universes and the size of the space in which they move are not accurately known but estimates have been made by the mathematicians. One of them gives the radius of space as roughly one hundred times the distance seen from Mount Palomar. Another gives the population of space as 100,000,000,000 island universes. These estimates assume space to be finite, but until we have more exact information there seems to be no reason why space might not be infinite, in which case the universes may go on forever.

Whether there is life on nearby planets, around other stars or in the distant universes is not known. Recent studies of our neighbour Mars indicate that it probably supports some tough types of plant life. But the atmosphere is thin and dry and the temperature is never far above freezing. Life there would have none of its earthly luxuriance and complexity.

How much life exists around the distant suns depends on whether or not these have planets. Observation and theory tend to support the idea that planets are not uncommon. If this is so it is probable that in a space teeming with millions of millions of millions of suns there will be many accompanied by life. Perhaps some day we shall discover new ways of enlarging our knowledge and new means of conquering time and space to reach worlds as yet unknown.

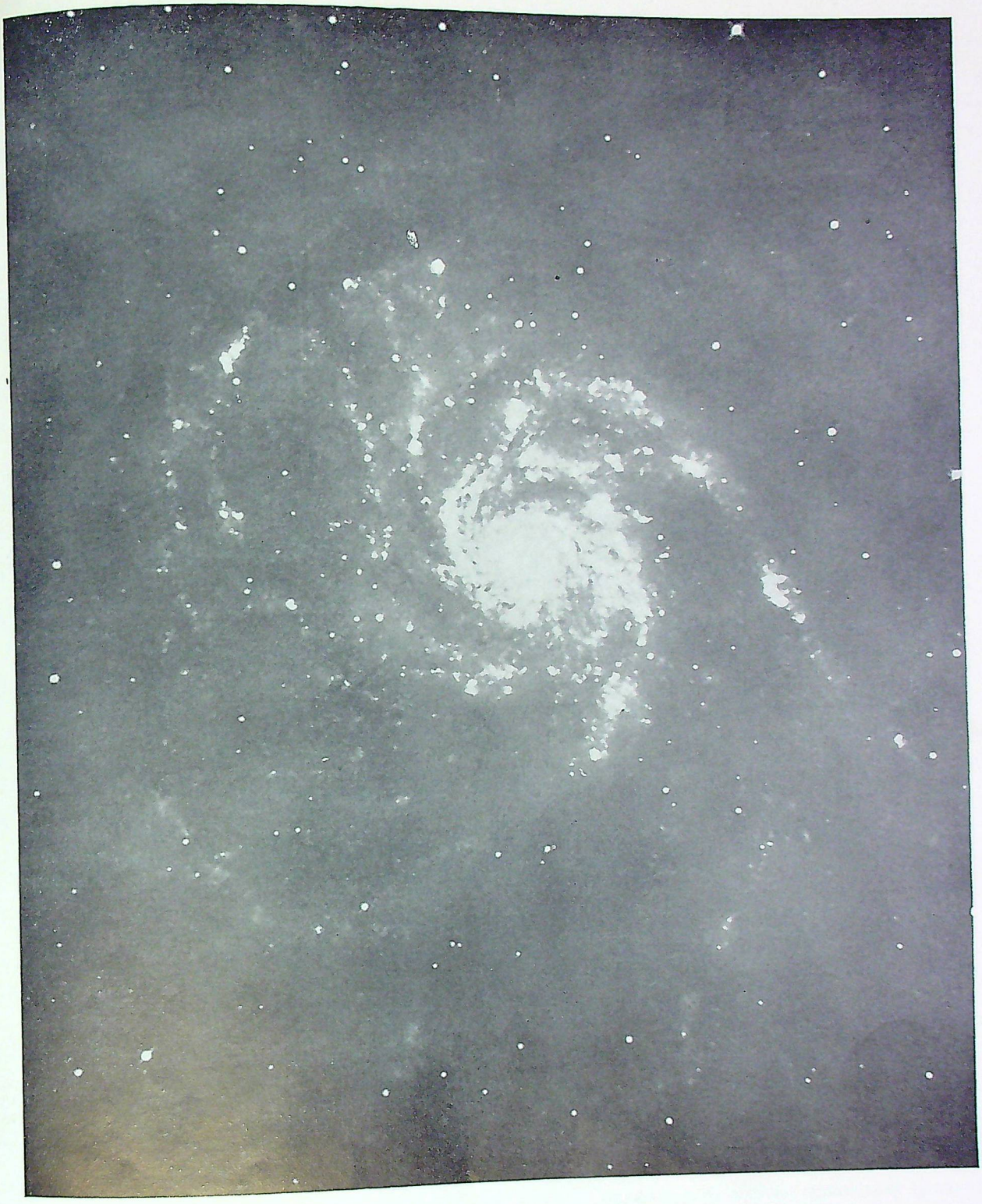
How did it all start and how will it end? The best guess is that a violent explosion about two thousand million years ago was the curtain raiser. Do not ask science what went before or why it all began. And the end? When the universes have dispersed and the fiery suns have burnt themselves out, the energy of the explosion will be spent, the show will be over and the curtain will fall. But long before the final act comes to its close all life will have vanished from the stage. Science cannot tell you what it all will have meant. Such meaning as it may have each man must find within himself.

Mount Palomar's 200-inch telescope is one of the great works of Western Civilization. Unlike atomic energy it was not hastened by war but is the gradual outcome of our search for truth. One feels that the vast panorama which it unfolds will deeply alter the spiritual and philosophic springs from which the future will take its rise. Perhaps when historians look back on the twentieth century from a vantage point of several thousand years hence, they will say that the crowning jewel of our age was not the white flame over Hiroshima but a tiny pinpoint of light one thousand million light years away.

Space is Exploding

A strange fact emerges when we analyze the light from island universes. All of them are moving away from us and the more distant they are the faster they move. At the limit, these outward velocities amount to many thousands of miles a second. Space is not only expanding: at these velocities it appears to be exploding.

It is fairly simple to understand why we appear to be at the centre of the explosion. Suppose we have a balloon with spots all over the surface.



An island universe seen full face. This is in the constellation of the Big Dipper

An island universe seen edge on

Choose any spot as our own Milky Way and see what happens to the other spots as we blow up the balloon. As the rubber surface expands the distance between the spots grows and no matter which one is chosen all the others will appear to be moving away from it. This balloon illustration is a rough three dimensional analogy of four dimensional space. The spots lie only on the surface of the balloon while the universes exist in all directions.

The balloon also serves to illustrate the idea of curved space. If an ant starts off from any point on the balloon he will eventually walk right around it and come back to the same point. Mathematicians believe that this might happen also to an imaginary space traveller if he went long enough and fast enough in the same direction. It is easy to think of the balloon as analagous to curved space, but do not waste time trying to imagine what it would look like in four dimensions. It cannot be done. This may worry some people who would not hesitate to use the term "atomic energy." But who can visualize an atom or its nuclear energy other than by analogy? What atoms or curved space really are or what they really look like is something that no one will probably ever know.

Mount Palomar's 200-inch telescope can see twice as far as the 100-inch on Mount Wilson. This means that the volume of space it can explore is eight times greater than that already explored by the older instrument. But this is only true if space is flat. If space is curved spherically the new volume will be less than eight times the old.

This can be illustrated with an orange peel. Cut a slice off the orange and scoop out the centre so that you are left with a piece of skin shaped like a skull cap. Now push it against a flat surface. If it is a small piece it may flatten without splitting, but the larger pieces all have to be split. This is because the area of the spherical orange peel is smaller than the corresponding area on the flat. It is the same in space. The volume of a piece of spherical space is less than would be expected if it were flat. And the bigger the piece the bigger the difference.

Hyperbolic Curvature

Should the new telescope show more than eight times that of the older one it will also mean that space is curved, but instead of the curvature closing up like an orange peel it will be a type that does the opposite and opens out toward infinity. This is called hyperbolic curvature, but it is a type of space too difficult to illustrate with oranges and balloons.

It is assumed that the island universes are spread about fairly evenly and the above volumes are therefore compared by counting universes. This is a slow process. The giant telescope can look at only a tiny portion of the sky at any one time. "Seeing" the limit is done by long photographic exposures. Many thousands of these must be taken before anything definite can be established. The schedule for use of the telescope is worked out well in advance so that it will never be idle. Even the intricate controls have all been devised to save precious time in the survey of space. It is unlikely that astronomers will devote much time to looking at the moon or even the nearby planets as long as the new depths remain uncharted.

If space is spherical and light can go right around it, might we not some day build a telescope big enough to see ourselves from behind? The answer is no. At the present rate of expansion the circumference of space is increasing much faster than the velocity of light. The balloon is growing faster than the ant can walk. In practical terms this means that if we look much further into space we will come to a point where the speed of recession of the universes reaches 186,000 miles a second. Beyond this we will see nothing. Cosmological theory indicates that this is but a small part of space. What lies beyond may be forever outside our grasp. It is as though the expansion in becoming an explosion has limited us in scope to the little piece on which we are outward bound.

If space is finite, what exists outside? In our present state of knowledge the term "outside of space" has no meaning. If visualizing a spherical space with no outside worries anyone, he might try to imagine a hyperbolic space that goes on forever.

You Don't Have to Fly

(Reprinted by courtesy of the "Medical Bulletin," Continental Air Command, U.S.A.F.)

A FLIGHT OF NAVY FIGHTERS was engaged in a camera gunnery exercise when the training officer noticed erratic action on the part of one of the planes. He immediately called the plane by its voice-call but received no answer. The training officer continued calling and finally received an answer after using the pilot's name. The answers received were often unintelligible and gave evidence that the pilot of the erratic plane was definitely without complete possession of his faculties.

After assuring himself that the ill pilot had on his oxygen mask and was taking oxygen, the training officer assigned another pilot to take over the job of staying near this plane and coaching the pilot. He then took the lead and led the pilot to the nearest airport.

On arrival, the responses from the pilot indicated that it would be dangerous for him to attempt a landing at a strange field, so the flight continued to the home field about 40 miles away. Constant coaching was necessary to keep the pilot on course and at a safe altitude. The home field was alerted, traffic was cleared from the area, and preparations were made for an emergency landing.

In the course of the landing it was necessary to tell the pilot when to turn to each new heading, when to lower his gear and flaps, what throttle settings to use, nose up or down, when to cut the throttle, and when to flare out for the landing. The plane was landed successfully and the pilot indicated that he had recovered sufficiently to taxi safely. He responded well to tower instructions until he neared the aircraft parking area, where the plane appeared to go out of control and the pilot no longer answered radio calls.

In response to a warning from the tower bullhorn, an alert Aviation Machinist's Mate jumped on the Wing, cut the switches and brought the plane to a stop without damage. The pilot was unconscious. He was removed from the cockpit and taken to the dispensary.

Investigation revealed that this pilot had reported to the dispensary on the previous day, complaining of a bad cold. He had been given some medicine which contained opiates and was directed regarding its use. He was warned not to fly. However, his Commanding Officer was not notified and a grounding slip was not issued.

In the interval between this visit to the dispensary and the near-tragic flight, the pilot had not only taken the prescribed medicine, but had obtained a patent cold medicine which he also consumed. He was feeling "better," and when he found himself on the flight schedule he decided to take his hop. He has little memory of the flight and says that the aircraft must have landed itself, since he is positive that he contributed little or nothing to the evolution.

Unfortunately, we can't all expect to be as lucky as this fellow was. It's not hard to imagine what would have happened to him had he been on a single-plane flight when he first began to lose consciousness.

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Rockets and Interplanetary Travel

*(At last summer's meeting of the Society of Automotive Engineers, Dr. Gerald Wendt, the former editor of "Science Illustrated," presented a paper on "The Space Ship and the Man-Made Moon". The following excerpts from this paper are reprinted here by courtesy of the "SAE Journal".—*EDITOR)

WHAT ARE THE actual prospects for traversing space beyond the limits of the earth's atmosphere?

To do so, two real difficulties must be overcome. The first is command of the actual principles and the engineering involved. This is relatively simple. The second is much harder. It is psychological. It involves readjustment of one's thinking and point of view, overcoming our natural earth-mindedness and even air-mindedness and becoming space-minded or cosmic-minded.

Escaping from the earth and the air — just psychologically, for the present — involves acquiring a conviction, not just intellectually, but emotionally and spiritually, that the earth is just a small globe spinning on its axis, and gliding unsupported through space, somehow making a circuit around the sun once a year. We must automatically look at it like that — from the outside, from space, not from a spot on the surface.

It requires also a new sense of what speed is, so that high velocities seem normal — as indeed they are. The earth rotates once in 24 hr. At the equator this means a speed of 25,000 miles in 24 hr., which is more than 1000 mph or 17 mpm.

The first problem is how to get off the earth. Aviation had already taken the first step — but even that began only 45 years ago. Planes leave the surface but they are still immersed in the surrounding air, like fish in the ocean.

But to rise above the air itself, to dispense with the air both as a supporting medium and for the combustion of fuel involves two further steps. The first is a motor that does not push against anything, that has no supports or wheels or propellers but operates purely by recoil, that is completely independent of all the rest of the universe. The second requirement is that this motor must be

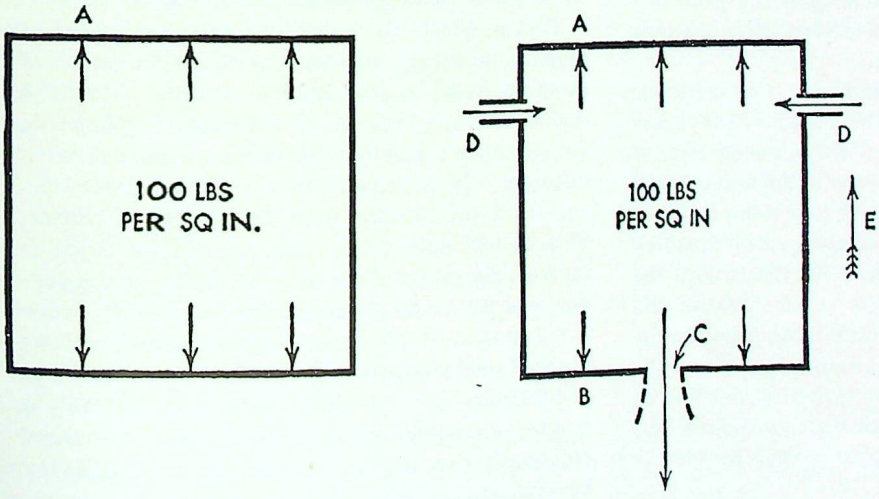


Fig. 1—Simplified thrust diagrams. An opening one sq. in. in area gives a net upward pressure on the chamber of 100 lb, provided the original pressure is maintained within the chamber in spite of the opening. (Courtesy G. Edward Pendray)

very light so that it can propel many times its own weight. This is the rocket or "reaction motor".

A good modern automobile engine weighs about 800 lb. for 160 hp — about 5 lb. per hp. For comparison a modern airplane engine weighs about a ton and delivers 2000 hp — one lb per hp. That is the difference between wheeling and flying. But the rocket motor in the V-2 weighs about 1000 lb and generates 600,000 hp — one lb for 600 hp. That is the difference between flying and rocketing. In other words, 1000 lb of automobile engine gives 200 hp. In the aviation engine it gives 1000 hp. In the rocket it gives 600,000 hp.

Principles of Rocketry

The reaction motor operates by recoil exactly like a gun. In the explosion of a shell the amount of motion, or inertia, imparted to the gun itself is exactly equal to that imparted to the bullet or shell. The thrust which pushes the gun in one direction — or, in other cases pushes the jet plane or the rocket — is equal to the mass of the material propelled out of the mouth of the nozzle times its velocity. The rocket does not "push" against the air — or against anything else. If the motor is immersed in air, the chief effect of the air is to slow down the velocity of the exhaust and thus to reduce the thrust. Power is wasted in churning the air. The motor is efficient only when there is no air, hence in outer space or in the thin upper atmosphere. Rockets have the great advantage that they have no moving parts and thus waste no power in friction.

Since the purpose of the motor is to drive the rocket forward and since the motion of the rocket builds up continuously even with a steady velocity of the exhaust gases, the peak of efficiency is not reached until the rocket itself is moving forward, relative to the earth, at the same speed at which the exhaust gases emerge. At that time, the emerging exhaust gases will, in effect, stand still relative to the earth and all the motion goes to the rocket. Consequently the reaction motor and the rocket are justified only at high altitudes and at high velocities. In modern reaction motors, the velocity of the exhaust gases is 5000 to 8000 ft per sec.

It is important for the understanding of rocket flight to remember that about 79.5% of the mass of the atmosphere is in the troposphere which extends about 10 miles up at the equator, about five miles at the poles. It contains nearly all the clouds and weather and is the medium for ordinary flight. Above it the stratosphere extends to about 50 miles from the earth's surface. It contains another 20% of the air mass. Thus at only 50 miles up about 99½% of the air mass is below. But the ionosphere extends for some 2000 miles beyond that, though it contains only ½ of 1% of the air mass. It is ten million times rarer than the air at the earth's surface, and is indeed a better vacuum that has even been attained in the laboratory. This is the present area of rocket performance. Obviously a rocket must carry its own oxygen as well as fuel.

Thrust could be increased either by ejecting more mass or by using a higher exhaust velocity. Obviously it must be the velocity that is increased and this can be done by concentrating energy in the fuel. Therefore, the fuels used are much more concentrated in energy than are ordinary explosives.

One of the major advantages of liquid fuels is that until they are sent into the combustion chamber they can be carried in comparatively light tanks and thus greatly reduce the weight of the rocket. It is now possible to work to a practical standard of one pound of payload for every two pounds of rocket structure plus six pounds of fuel. These are present high-altitude rockets.

They go effectively beyond the atmosphere; but they do not escape from the earth in the sense of escaping from its gravitational pull. Yet if a rocket could rise high enough it could do that too, for the earth's gravitational force dies out with distance. It is reduced proportionally to the square of the distance from the earth's center. Thus at 4000 miles up an object would be twice as far from the center of the earth as it is at the surface and would weigh one-fourth as much (since 2×2 is 4). An object that weighs four pounds at sea level would weigh only one pound at an altitude of 4000 miles. at 12,000 miles it would weigh only a quarter of a pound and at 28,000 miles an ounce. No object can ever get quite beyond gravity because, theoretically, gravity goes on forever.

But because gravity steadily gets less it is possible for an object to travel upward so fast that any decrease in speed caused by gravity would always be less than the decrease in gravity itself. That velocity is 6.85 mps, or about 37,000 fps. Once that speed, the escape velocity or liberation velocity, is attained, the object would be lost to earth and would continue into outer space.

But an exhaust velocity of that size from the rocket motor is far beyond any present achievement or even beyond any immediate hope. Velocities of 7000 to 8000 fps have been attained and it is quite possible that speeds of 10,000 or even 12,000 fps will be attained within the next few years. But that would require an efficiency of at least 85% in using the energy content of gasoline and liquid oxygen. Therefore, to attain an exhaust velocity of 37,000 fps will require a much more concentrated source of energy than can be had from chemical fuels. This probably means that escape from the earth's gravity will not be possible until the much greater energy concentration of atomic or nuclear fuels can be utilized. This does not mean that escape from the earth is impossible or even that it must be long delayed. The atomic bomb uses that energy now. It was created and used within three years. The combination of nuclear power research with rocket research may make the escape velocity available within the near future, though — so far as is known on this side of the secrecy wall — it is not even being studied now.

To relate the present to the future I want to list 10 different stages in this field of research and engineering. They are:

1. The gas turbine.
2. Jet planes.
3. Rocket-assisted planes.
4. Rocket missiles.
5. High-altitude rockets.
6. Space missiles.
7. The island in space or man-made moon.
8. Interplanetary travel.
9. Reconstruction of the solar system.
10. Exploration of the universe.

These are 10 logical steps in the development of jet propulsion. The first five of them are actualities that came from nothing in the past 10 years. The next two are commonplace items in today's engineering. The sixth is on the verge of accomplishment. Only the last four remain in the future.

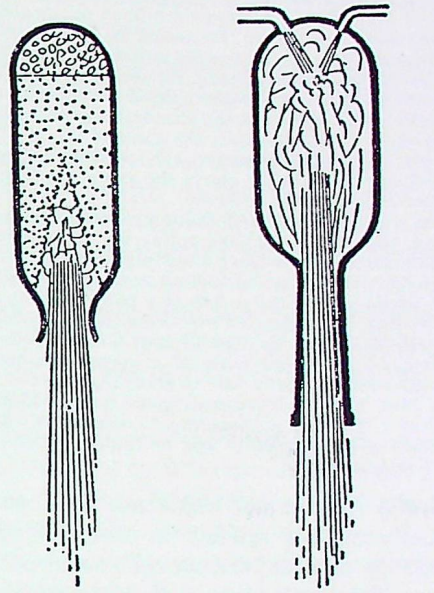


Fig. 2—Two types of true rocket motors. (Courtesy G. Edward Pendray)

Rockets that can travel hundreds or even thousands of miles are at present the major field of rocket study. They are sufficiently successful to make very real the possibility of long-range bombardments in the future war and the possibility of transcontinental and transoceanic transit of mail or express even before that war, at speeds of 1000 mph and upward to perhaps 5000 mph.

But passenger flight by rockets is quite another matter. I shall take the liberty of quoting a few thoughts from G. Edward Pendray's recent book, "The Coming Age of Rocket Power," on this phase of the subject:

"The probabilities are that passengers will not be traveling in rockets until after these projectiles have been fully developed for carrying mail and express. The minimum requirement for a human passenger would be an enclosed cell supplied with air at about sea level pressure, continually enriched with oxygen and free of carbon dioxide. The passenger would also need some shock absorbing equipment in case of hard landing. He would need to lie down on a spring-mounted hammock. He would depend entirely on the automatic steering gear of the

rocket; it would be out of the question for him to have any control over these functions—a human pilot's reflexes would be too slow and erratic. He would be able to see little. On the upward part of the trip he would perhaps catch a vague glimpse of the ground rapidly receding from him. Clouds and mists of the upper stratosphere would soon obscure the familiar features of the earth. In the stratosphere the world would be completely buried in haze; the glare of the sun would hurt his eyes. The first passenger will spend a cramped and terrifying few minutes far above the earth. Very likely he will be glad enough when it is over.

"At a jet velocity of 8000 fps, we can design a single-step rocket that could fly 400 miles—say from New York to Pittsburgh. If it is to carry a ton of payload the structure will weigh two tons and the fuel six tons, a total of nine tons. This would permit the weight of a pilot and four passengers.

The fuel, liquid oxygen and acetylene, or gasoline, at 20c. per gal (2.5c. per lb.) would cost $300—$75 a passenger. Adding all the other costs of operation maintenance and management, "it seems safe to guess that the cost of a ticket from New York to Pittsburgh would come to $300 or $400 at the least." Since an airplane ticket comes to only $25.01 "this is rather a steep price to pay for saving, at the most, two hours in travel time."

Speed itself is not important since we are now actually moving around the sun at a velocity of almost 19 mps and are not even aware of it. What does affect the human body is the change in the rate of speed, which is acceleration.

"We may safely conclude," Pendray continues, "that the maximum practical average acceleration permissible to a passenger-carrying rocket would be about three or four times gravity, or 96 to 128 fps per sec.

"Of course, acceleration is not the whole story. The psychological difficulties encountered in rocket flight might well be less easy for the passenger to take than the physical ones.

"The rocket is accelerated for only a brief part of its journey —the first minute or two will be quite enough, at 3 G's, to provide the velocity needed. The fuel having by this time been expended, the motors will cease operation. Instantly the passengers will pass over from a condition of accelerated flight, in which their normal weight will appear to have been multiplied three or four times, to a condition the physicists call free fall, in which they will seem to weigh nothing at all.

"For the state of weightlessness is approached in human experience only in falling. There may accompany this experience in flight an emotion of intense terror. Most of us are mortally afraid of falling.

"These sensations accompanying free fall will be matched by some other queer experiences. Since everything in the rocket ship is in free fall with it, none of the objects riding with the passenger will appear to have weight either. Assuming that the passenger is hungry, and food is available, he will find it out of the question to eat solids from open plates, or move them to the mouth in ordinary spoons or forks. When pushed or disturbed in any way, food will simply float away in the direction of the push. Liquids in open containers will be impossible to drink. A glassful of water would float up out of the glass in a round globule.

"The passengers will have to be strapped to bunks or hammocks. If they attempt to walk about during the period of free fall, they will very likely bump their heads against the ceiling."

Just for contrast I want to return you now to the practical level of the engineer. On the actual status of all the research I quote R. W. Porter, of the Aeronautic & Ordnance Systems Divisions, Apparatus Department, General Electric Co.:

"Theoretical values of specific impulse have been calculated for most of the interesting propellant combinations. Tests show that we can expect to obtain at least 90% of this performance in practical motors. Experience in making and handling propellant materials is being accumulated rapidly, expecially in the case of liquid hydrogen, metallic hydrides, fluorine, and hydrazine.

"Test facilities have been built capable of testing rocket motors many times larger than the V-2. Because of the terrific temperatures involved, the matter of heat transfer is vitally important, and here too, some progress is being made, both in understanding the phenomena and in designing the motor so it will run cool.

"Information about the performance of electronics equipment under missile flight conditions, and about the nature of the upper atmosphere, is being gathered by frequent flights of the German V-2's, Aerobees, and other test vehicles. At least half a dozen sizeable supersonic wind tunnels will go into operation this year, and we will begin to use new mathematical machines capable of handling the complicated equations of missile flight dynamics.

"Yes, we're really getting started. But it will be a long time before a rocket engine can be designed from a handbook like a motor-generator, or a supersonic missile with the certainty of a radio set."

That's where we are now. In the last five steps of our list, we pass from actualities into what are presently impossibilities. As soon as exhaust velocities of seven miles a second are attainable, small missiles can be thrown into space, perhaps sent out from a high rocket by detonation of its warhead at the top of its path, as proposed by Dr. Fritz Zwicky. They could escape from the earth entirely to wander in outer space and probably to be attracted inward by the sun. At our distance from the sun, the sun's gravitational field is still enormous. No object, even after escape from the earth, could escape from the sun, from the solar system, until it attained a velocity of 26.2 mps — the sun's escape velocity.

But such particles need not escape entirely from the earth. Many of them could have sufficient sideways velocity, parallel to the earth's surface, so that their centrifugal force would balance the pull of gravity and they would circulate in orbits around the earth exactly as the moon does. If they could be given such a horizontal velocity by the explosion of a warhead, they would not return to the earth's surface even though they had less than the full escape velocity. Therefore, small satellites could be established in the space close to

the earth even before it becomes possible to leave the earth altogether.

How near this phase is may be judged from a quotation from a paper on "Morphological Astronomy" by Zwicky.

"The possibility of some rudimentary form of experimentation with the members of the planetary system has existed for some time by using radio waves and radar. The general possibilities have been greatly enhanced through the availability, brought about as a result of World War II, of rockets as carriers of scientific instrumentation. Much has already been done with V-2 rockets to observe conditions in the upper atmosphere and to get data on cosmic rays and the spectrum of the sun. In many ways the atmosphere remaining above the maximum height (200 km) of the V-2 is still very troublesome. For ultraviolet light, soft X-rays, atomic rays, and other messengers of space are still absorbed far too efficiently to be observable.

"The author, therefore, is working on rockets to reach 1000 km height. By means of secondary rockets to be launched from primary carrier rockets, this goal should not involve too many difficulties.

"In the second place, work is in progress to eject small test particles from the carrier rockets with velocities surpassing the velocity of escape from the earth. Designs are being made, and have partly been realized to confer such velocities upon test bodies whose masses lie in the range from milligrams to one kilogram. With these bodies, the outskirts of the earth's atmosphere can be explored, hypersonic aerodynamics may be studied both in the Boltzmann and Smoluchowski regions of the atmosphere, and a direct exploration of the electromagnetic field around the earth appears possible. It is also hoped that the collisions of the test bodies with the moon and other planetary bodies can be observed and a new method of direct experimentation with these bodies can be established."

But we still have no "man-made moon." This will come when a full-sized rocket can be sent a few thousand miles up and can then be given a horizontal velocity and thus a centrifugal force that would keep it there.

After an island in space has been established it could be used to accumulate and assemble the parts of a major rocket for interplanetary travel. Since the force of gravity would be much reduced on such an island in space and there would be no air to get in the way, little additional force would be needed to start a voyage through space. Indeed, it would be difficult to avoid stepping off into space even with the slight power of human muscles. Thus a rocket assembled there could use all of its fuel for the long voyage through space, it would quickly achieve the escape velocity of seven miles per second, and thereafter, its flight would continue indefinitely by inertia without additional propulsion — unless the passengers were also interested in a return flight which would introduce additional problems.

Without such a satellite (or even with it) the problem of raising a payload to escape velocity is enormous.

I suspect that these two stages of rocket development — which I have called the man-made moon and the space ship are decades away. The first may come within 10 years, the second within 20. I should consider it more than probable that they both will have been accomplished and much improved beyond our present ability to imagine by the end of this century, by the year 2000 A.D.

But there remain two more steps in our list of 10. They deserve brief mention to complete the survey of present thinking. If we reach the planets, what shall we find there and what shall we do with them? Here I can do no better than to quote the serious fantasy of a British amateur astronomer, Olaf Stapledon. In the November 1948 issue of the Journal of the British Interplanetary Society, he wrote:

"Interplanetary travel should be possible within a few decades. Man should not only reach but land on other planets. Will he find inhabitants comparable to intelligent man? It seems unlikely. The moon is almost wholly without atmosphere and water, Mercury is far too hot on one side and far too cold on the other, Venus is more temperate, has atmosphere but lacks oxygen, may also lack water. Mars has lost most of its atmosphere and water, the asteroids are far too small, and the outer planets, Jupiter and Saturn are too big with the wrong kind of atmosphere.

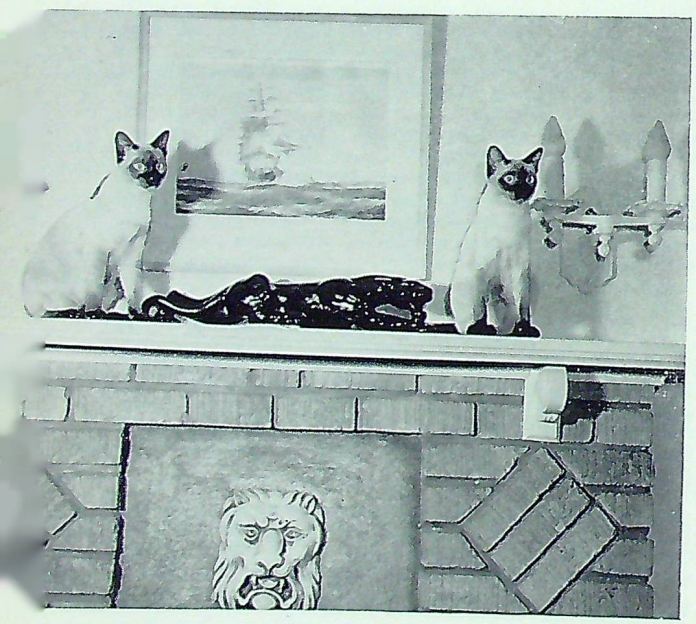
"If the planets are uninhabited, what should be done with them? The first job is scientific exploration. If man has used his scientific knowledge to reconstruct our own world and unify the people then he can turn his productive attention to the other planets, not alone for economic expansion but as possible homes for man."

If this seems over-optimistic I shall return you once more to the redoubtable Dr. Zwicky of California Institute of Technology. I remind you that he is no amateur, that he is director of research for Aerojet Engineering Corp., which is making JATO rockets in huge quantities. In a recent lecture, he proposed nothing less than the "reconstruction of the solar system." If the planets such as Venus or Mars prove uninhabitable because of temperature conditions he would move them into other orbits, either nearer to the sun or farther out until the climate suited us, presumably using nuclear

rockets. Thus their conditions could be so modified as to make them habitable.

Then just for the record, there is the final stage, which is quite unimaginable at present, when man will not be confined even to the solar system, when he can achieve exhaust velocities in his rockets faster than 26 mps and can thus defy not only the pull of the earth but even that of the sun and can wander about the limitless reaches of outer space, can approach the distant stars and — quite possibly — can find among them planets which are more to his liking than any of the satellites of the sun.

It is important to stress that the actual escape of rockets from the earth's gravitational pull is entirely impossible with present fuels and will require the perfection of atomic engines and their adaptation to rocket propulsion. Yet nuclear research has a way of leaping ahead in colossal jumps. So it seems altogether probable that the next two steps, the island in space, and interplanetary travel, can be taken within 20 years or certainly by the end of the century.



A Matter of Protocol

We gather that Their Highnesses Prince Sandi and Princess Tia of Burrandy were a little put out by an item in our list of June transfers. "It may," remarked Princess Tia, "give our friends the wrong impression. We don't really mind ourselves, of course — but even in these democratic days it isn't usual to announce the movements of an aide without even mentioning the persons he is attending."

We therefore publish above a photograph for which Their Highnesses posed last month, just before entering the royal travelling crate and leaving for Patricia Bay, B.C., where Sqn. Ldr. C. N. S. Burridge is now functioning as C.O. of No. 122 Marine Squadron when not occupied by his varied duties as royal aide.

"Glamorize" Your Home Town

(We hope that this little article will inspire some of the many skilled amateur photographers in the Service to send us samples of their work for publication in "The Roundel". Almost any of our Stations provides endless opportunities for the man with a camera and an imagination. —EDITOR)

By Frank Meister, A.P.S.A.

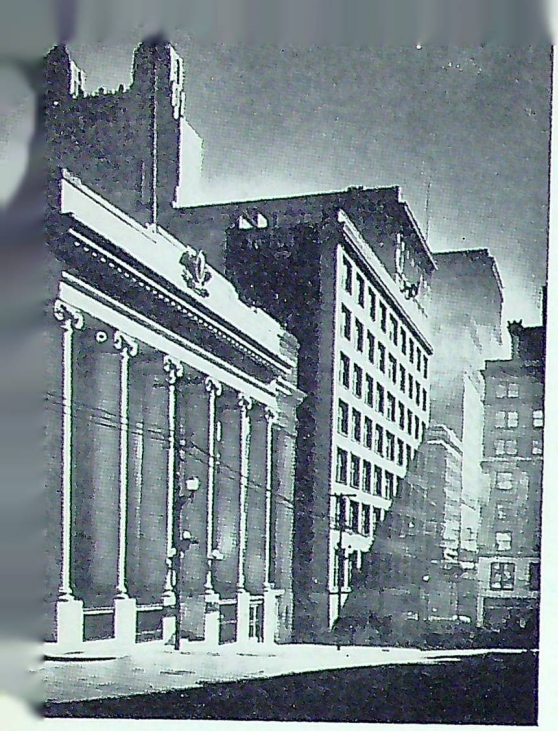
(Reprinted by courtesy of the "P.S.A. Journal")

THERE IS glamour and beauty in your own home town. The problem is how to achieve it in pictures so that they will be more than an illustrative record or mere documentation. To have universal interest and appeal, our town must be interpreted not only as it is but also as we feel its many moods and facets. We must aim for the unusual in treatment, with a creative viewpoint and dramatic effects. City scenes are not static — they have a personality, mood, and atmosphere of their own.

The everyday scenes in our home town too many times go unnoticed, for the lack of a fresh approach to familiar subject matter. We often think that the paradise for picture making is in some far distant place, when it actually is at our own back door. Cities and towns, villages and hamlets, are essentially alike almost everywhere. There may be a slight difference n architecture, but people, places and things are much the same wherever you go. Your own home town offers the greatest possibilities because you have a personal and intimate knowledge of its character, which you should strive to produce in your pictures. Put feeling and emotion into their interpretations so that they will have something to say and invite admiration from any audience.

You may think that everything has been photographed in your town and that there is nothing new. This may be true, but you can give fresh interest to familiar scenes. Interesting subject matter is all about if the photographer creates it from his imagination and uses an alert viewpoint. Assume the rôle of a stranger in your quest for pictures, and you will take on a new approach to your familiar surroundings. Subject matter must be viewed with an alert eye, striving all the time for unusual and dramatic treatment. Scenes that look dull and lifeless in the daytime often have beauty after dark, whether the night be dry or wet. Lighted buildings, theatrical districts and street scenes offer glamour pictures at night. A lens shade and a tripod are necessary for longer exposures, and you will find a whole new aspect of your city unfolding.

Sunbeams



Tenth Street on Sunday

Every city has its own glamour and you can photograph its own entity as you know and understand it. Picture street scenes, tall buildings, churches, the zoo, parks, river fronts, industries and historical places. Familiar scenes often take on a new character under various light conditions, time of day and season of year. Seek out new viewpoints, different angles, and dramatic contrasts in light and shade. Subject matter may be very commonplace, but it is how you treat it and how much of your own personality you put into your pictures that counts.

As you go about your daily tasks, make it a practice to observe your surroundings with a photographic eye. How would a certain subject look in early morning sunlight or in late afternoon, or even at some other season of the year? Long shadows in early morning or evening impart a mood and feeling not found at mid-day. Think about your subject matter in terms of all kinds of weather and all times of day or night.

In this way, you will get the feeling and spirit of a city and your pictures will have spontaneity and a freshness of viewpoint. You can plan glamour in your pictures beforehand if you visualize just what you are striving for before taking them. Hometown pictures must be vital, alive and impersonal so that whoever looks at them can visualize like situations in his own locality and be stimulated to appreciate and record them in a like manner. Human interest is the same the world over, and scenes that thrill you will probably interest others.

The finest scenes are those that capture a feeling, atmosphere, mood or emotion of the city itself. Sunlight is not always an essential factor, as rain, fog and snow lend themselves to good city scenes. Fog and snow tend to obliterate any undesirable details in a picture, and after a rain there is a washed atmosphere with glistening and sparkling reflections on wet pavements.

A street scene after a rain, with a backdrop of dimly outlined buildings, will be a transformation of commonplace subject matter with the many reflections from wet surfaces. Compared with ordinary dry weather conditions, you will be amazed at the results of pictures taken in the rain. Again, you will miss a lot if you do not take advantage of foggy weather. Your subjects will take on a soft beauty in the mist, and this is a good time to find pictures in the parks, where the trees and the paths will offer a recession of planes from dark to light in aerial perspective, and you will see beauty of half-hidden trees in the mist. Snow is also a great transformer of familiar scenes to those of beauty. A white mantle of snow will often provide a virtual fairyland to many city scenes. So do not leave your camera on the shelf in bad weather. Take advantage of unusual weather conditions to help dramatize your pictures, thus lifting them out of the ordinary and making them unusual in treatment.

You might like to photograph the older homes and buildings of your city. The older buildings you love and cherish and are proud of need not pass into oblivion if you make a pictorial record of them for the benefit of posterity. Pictures of your home town will have a historical value as the years go by. Great changes will occur in the future as they have in the past, and you may regret it later if you have failed to preserve what you can record to-day.

In the handling of subject matter, it is highly important to avoid the objective viewpoint in your picture making. A record shot depicts only what

Day's End

is before the camera. If you would have glamour in your home town pictures, it is the subjective interpretation of the photographer which counts most of all. Make them show deep feelings, drama, human emotions, and personality in life and architecture. Strive for such effects in glamour pictures of your city. Have people in your pictures whenever possible. Nothing attracts more human interest than to see other people in pictures, and whenever they bear a convincing relationship within your subject matter, be sure to include them. Sometimes, however, people or figures may detract from a picture. In such cases leave them out.

Be so intensely interested in your city that the pictures you make will reveal what you feel as well as what you see. This emotional quality approaches the calibre of a salon print and you will find that many times a salon print will emerge from some interpretation of city life. Have your pictures say something, be genuine and convincing — a vital cross-section of our American way of life and the spirit of our times, and our cherished ways of living. This approach will depict the most meaningful pictures of your home town and capture its beauty and charm.

We may ask what profitable value can we place on our collection of city pictures. To be sure, there is a steady outlet for them, other than to be filed away for posterity. An incentive will always make us produce better pictures so that they will be admired by others and provide some reward for our efforts. The writer has had close to a hundred Sunday feature reproductions in his home town newspaper, depicting almost every phase of city life in his locality. Many of these same pictures have had a long life in the salons, and have appeared as features in magazines and as illustrations to numerous articles written by the writer. Still further, the main city library has preserved all the pictures featured in the local newspaper in their archives. Likewise, many of these pictures have found their way as murals into places of business. Other outlets are the Chamber of Commerce, the Historical Society, calendar companies, and for unusual postcards if you are looking for the profitable side. Each and every source has its own requirements, and if you are versatile you can satisfy almost any request.

This achievement comes from knowing your home town on the surface and below the surface, and knowing how effectively to produce pictures which evidence that vital spark of glamour. When your audience can recognize your pictures on sight, then you have transmitted your inner self and personality so fully in your pictures that an observer can feel the same emotion and feeling you had when you made them. You can do this, too, if you have an interest in, a love for, and an understanding of your own home town.

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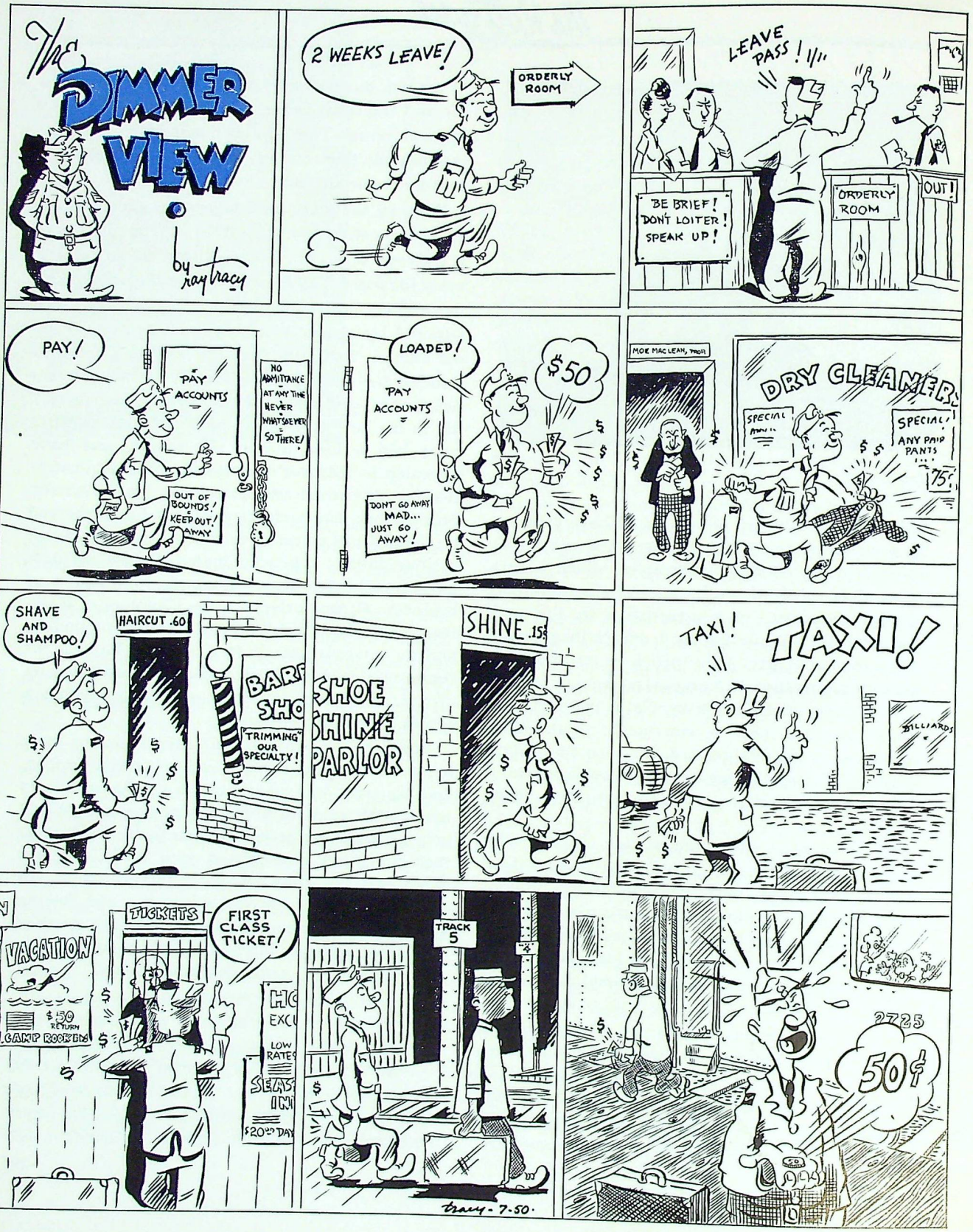
The DIMMER VIEW
by ray tracy
2 WEEKS LEAVE!
ORDERLY ROOM
LEAVE PASS!
BE BRIEF! DON'T LOITER! SPEAK UP!
ORDERLY ROOM
OUT!
PAY!
PAY ACCOUNTS
NO ADMITTANCE AT ANY TIME NEVER WHATSOEVER SO THERE!
OUT OF BOUNDS! KEEP OUT! AWAY
LOADED!
PAY ACCOUNTS
$50
DON'T GO AWAY MAD... JUST GO AWAY!
MOE MACLEAN, PROP.
DRY CLEANERS
SPECIAL
SPECIAL! ANY PAIR PANTS 75¢
SHAVE AND SHAMPOO!
HAIRCUT .60
TRIMMING OUR SPECIALTY!
SHINE .15
SHOE SHINE PARLOR
TAXI!
TAXI!
BILLIARDS
TICKETS
FIRST CLASS TICKET!
VACATION
$50 RETURN CAMP ROOKIM
LOW RATES
$20.00 DAY
TRACK 5
tracy-7-50.
2725
50¢

Letters to the Editor ★ ★ ★

"CANADA'S RADAR OUTPOSTS"

(Wing Cdr. Limbrick, whose article, "Canada's Radar Outposts," appeared in our May issue, has given us the following letter which he has received from Flt. Lt. E. Daly. Flt. Lt. Daly was, like Wing Cdr. Limbrick himself, one of the first radar officers to go overseas. He served with the R.A.F.—and with considerable distinction—in the Western Desert.—Editor)

Dear Charlie:

I have just completed a delightful journey into the past through the medium of the last copy of "The Roundel." That was a grand article on the W.A.C. radar chain and it was a tribute long overdue to the boys that sweated it out on those isolated spots without even the honour of being considered either very "active service" or "overseas."

It reminded me of a few trips I made to these same spots . . . It brought back the taste of that dark brown liquid that passed for water, and the memory of three weeks marooned at St. James with gales and rains, running the same old films every night till we knew them backwards, switching to rice after the potatoes gave out. I also remember thinking that the boys were living in luxury after the experience I had so recently had with the Desert Rats in Africa.

I often think the whole story of the Canadian activity in R.D.F. would be worth the telling . . . Wouldn't it be interesting to see an omnibus of the history of the original twenty-six (was it?) officers transferred in the Fall of 1940 to R.A.F. for Special Signals work? Of course, everyone considers his experiences to be unique and by far the most interesting, so we all have a certain amount of fear that we are shooting a line when we mention our own. I know I've often been tempted to record radar's part in the Western Desert campaign, and I still think it's an interesting story. In the rush and confusion of business life, I still find time to follow the fortunes of the R.C.A.F. . . .

Edmund Daly (R.C.A.F.A.)

★

No. 126 WING AND NO. 419 SQUADRON

Dear Sir:

I was with 126 Wing for three years, being in England and on the Continent. The Wing had a very fine record, and well merits a story.

LAC J. Stanley

Dear Sir:

How about doing a story of 419 Squadron (Moose)? I think it was one of the originals as far as heavies were concerned.

Flying Officer W. G. Farrow, (R.C.A.F.A.)

(Note is being made by the Air Historian of all suggestions of this kind. Action will be taken on them after we have published the stories of all presently active squadrons, whether Regular or Reserve.—EDITOR)

"AN IDYLL OF THE SOUTH ATLANTIC"

Dear Sir:

I must point out that there is a passage in the edited text of my article in the May issue which does not convey the meaning intended in my typescript. Your rendition, "The Dipper is in full view, though inverted," appears to suggest that the inversion is peculiar to the locale, an assumption which is without basis in fact. Possibly my own text was misleading, and led to this error. The radial position, of course, varies with the time of observation.

Cpl. J. H. Belanger

(We apologize to Cpl. Belanger for the slip.—EDITOR)

★

6 GROUP PINS

Dear Sir:

Re item on page 48 of April issue, inquiring about 6 Group pins. As other readers may be interested, you might run a note to the effect that the pins are manufactured by Henry Birks and Sons, Ltd., and may be purchased or ordered from them.

Wing Cdr. F. H. Hitchins,
Air Historian

★

"TEE EMM"

Dear Sir:

I feel sure there are many who, like myself, would like to laugh again at the unique humour of that wonderful publication, including the numerous awards of the H.D.O.T.I.F.

May I also take this opportunity of congratulating you on the excellent quality of your publication.

C. E. Onley (R.C.A.F.A.)

Dear Sir:

The suggestion of Sgt. Shatterproof that Pilot Officer Prune be brought forth from his post-war obscurity is indeed a wonderful idea, and I feel sure that it will meet with the hearty approval of all. His shining example can never be forgotten by his many war-time admirers and disciples. It is only fitting that the exploits of this indestructible paragon of all flying fools be preserved for posterity. As one of his ex-6 Group admirers, I would very much like to see the best of them republished either in a single volume or as a series of articles in your very excellent magazine.

L. B. Buckmaster (R.C.A.F.A.)

Dear Sir:

Here's to P.O. Percy Prune,—the greatest of all the "gen bods." Bring him on!

It might interest you to know that we of the R.C.A.F. Association in this city need a bit of aid in begging for an Auxiliary Squadron here

Yours is a fine magazine and is enjoyed by all the ex-R.C.A.F. types I know. Your are achieving your purpose admirably.

P. E. Burden, (R.C.A.F.A.)

(We are now trying to arrange for a whole series of reprints of the best of "TEE EMM."—EDITOR)

Letters to the Editor (Cont'd.) ★ ★ ★

THE WHITE PASS

Dear Sir:

I have just read, in the March Roundel, Part 1 of Mr. W. D. MacBride's most interesting article on "The Trails of '98" —on page 18 the author refers to the White Pass as being named for Sir Thomas White, Canadian Minister of the Interior.

I think there is an error in this and that to be correct it should read. "named for the Hon. Thos. White, Minister of the Interior 1885-1888." (See "Canadian Men and Women of the time," 1898, by Morgan.) The Rt. Hon. (William) Thomas White, G.C.M.G., never was the Minister of the Interior. (See "Canadian Who's Who," 1938-39, by Roberts and Tunnell.)

Mr. MacBride might like to have the above information and to check it up.

P. J. Montague

(The Air Historian tells us that, according to Mr. L. B. Skinner of the Canadian Board of Geographical Names, neither Mr. MacBride nor The Honourable Mr. Justice Montague is correct. He states that White Pass was named for a Mr. James White, who was a geological assistant to a Mr. Dawson, one of the early government geologists. Mr. White later became a Commissioner of Conservation. The name "White Pass" was approved by the Board in 1885, some years before the gold rush.

—EDITOR

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METASUPERSONICS

One of "Aviation Week's" correspondents writes as follows in that magazine's "Strictly Personal" column:

HAVING NOW GONE well beyond the speed of sound, the next goal of aviation should be the production of a plane that will exceed the speed of rumors. This may not be too difficult, for it is known that rumors have reached fantastic speeds propelled by only a very small amount of hot air.

Some experts think the "Flying Saucers" that recently aroused such fascination may have been late model rumors going places. For they had many of the same characteristics: origins unknown, shape and substance difficult to define, speeds fantastic, and no pursuer ever caught up with one.

404 (ONT.) ASSOCIATION

Dear Sir:

We have noticed in the past few publications of "The Roundel" that you are publicising different squadrons for their action in the various theatres in the past world war. It is wondered if No. 404 (Buffalo) Squadron is to be honoured in this regard. In this event, it is possible that we could furnish information not included in the 540's . . .

The 404 Association was actually formed overseas and at that time it was intended that one would be formed in Montreal for Quebec and the Maritimes, one in Winnipeg for Saskatchewan and Manitoba, and one in Vancouver to take care of British Columbia and Alberta. Unfortunately, the 404 (Ontario) Association is the only one still actively engaged in the welfare of past personnel. It is believed that we were the first overseas unit to form in Canada and, to the best of our knowledge, the only one (with the exception of the R.C.A.F. Association) still in existence to-day.

We held our first meeting in December 1945 and managed to get 22 past members out that night. Officers were chosen and the Association formed with the intention of meeting only once a year. For the next two years we met each May at different places, but now we have permanent quarters, and we meet six times a year and have a mailing list of approxi mately 145. Twice a year—May and November—we invite lady guests.

The May "do" is a dance while the November "do" is more or less a social get-together. This year the May affair was held on the 20th, at 22 College Street, Toronto, We hope to double our membership in the next two years.

G. V. Stevens, President,
404 (Ont.) Association,
22 College St., Toronto,

(As regards an article on No. 404 Squadron, please refer to reply to LAC Stanley's letter. Mr. Stevens' kind offer will be taken up.—EDITOR)

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MORE "GEN" WANTED

Dear Sir:

. . . a fine little magazine. But how about increasing its size and carrying a little more "gen" so that we may keep more fully abreast of things?

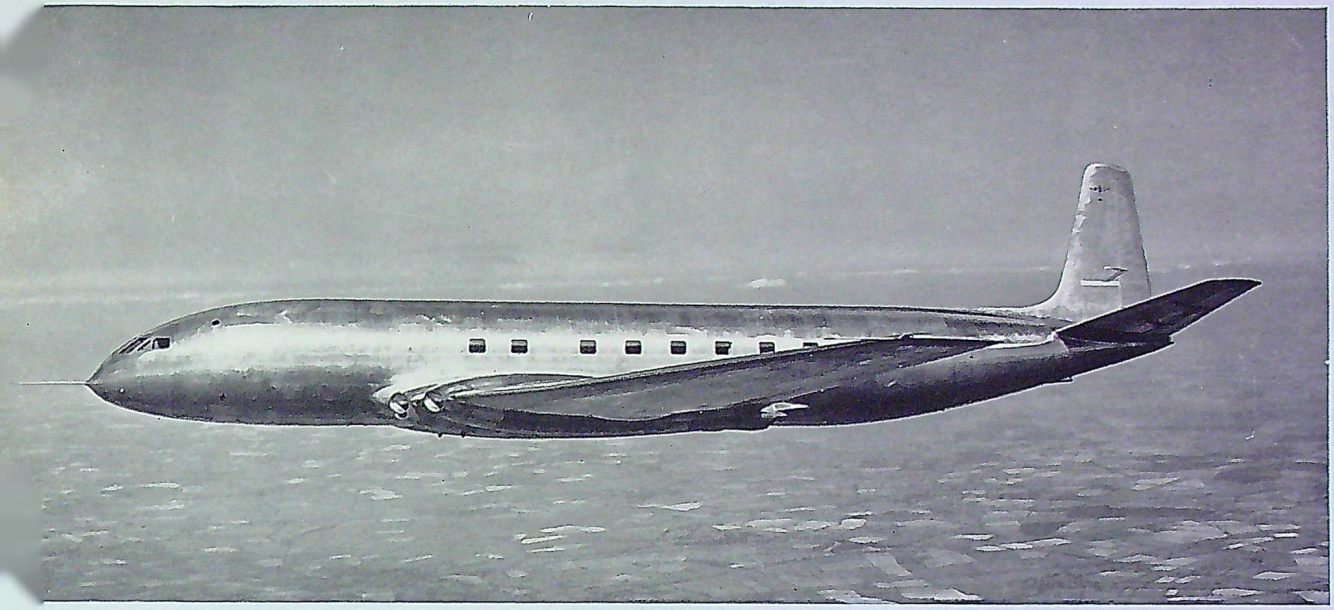
F. C. L. Wyght (R.C.A.F.A.)

(Mr. Wyght's request for more topical "gen" is one we hope to be able to fulfil in the course of time. At present we have no staff to collect and correlate more material of this nature.—EDITOR

Answers to "What's the Score?"

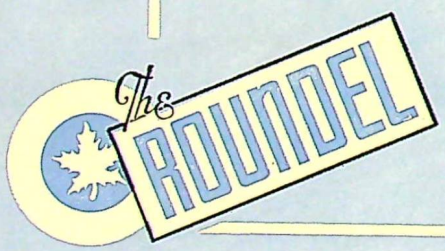
1: (d)	2: (b)	3: (d)	4: (c)
5: (c)	6: (d)	7: (b)	8: (a)
9: (c)	10: (d)	11: (d)	12: (a)
13: (c)	14: (b)	15: (a)	16: (d)
17: (a)	18: (b)	19: (d)	20: (c)

TWO GREAT AIRLINERS



The de Havilland Comet, which flew from London to Cairo in 5 hrs. 10 mins.—half the time taken by the airlines. The distance is 2183 miles.

The Canadian-designed and -built Avro Jetliner streaks above New York. It made the trip from Toronto to La Guardia Airport in 1 hr. and 5 mins.—just more than half the time taken by the airlines.


The
ROUNDEL