The Roundel

Vol. 6, No. 11
DECEMBER 1954

Season's Greetings

1954

ROYAL CANADIAN AIR FORCE

The Roundel

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Royal Canadian Air Force

Vol. 6, No. 11

DECEMBER 1954

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John Griffin Library

A Christmas Message from the Minister

THIS is my first opportunity to extend to you, as Minister of National Defence, my Christmas greetings.

I wish that I could bring to each of you personally my best wishes at this time. I cannot, of course, do so and I therefore take this means of reaching you and your families.

This Christmas finds you in stations across Canada and in the Far North, and also across the Atlantic, in Great Britain and on the Continent. The Air Force which you comprise is stronger than ever before in peacetime, having the finest in aircraft, weapons and equipment that we can obtain. New material is constantly being sought and obtained.

Yet no air force, or other defence organization, is stronger than those who man it. It is a privilege to be able to lead an air force such as ours, and it is a source of constant satisfaction to know the calibre of the men and women who form it. As my contact with the R.C.A.F. extends and grows, so does my pride in those who wear its uniform.

Wherever you are, at home or abroad, and whatever your task and rank, you are helping to make and keep our country strong and secure. To all of you, my warmest Christmas greetings, and my very best wishes for the coming year.

Ralph Campney

A Christmas Message from the C.A.S.

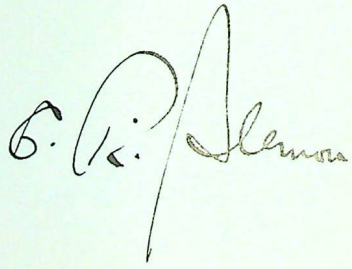
A RECENT remark to the effect that the theme of Christmas must appear somewhat ironical to those of us whose profession is that of arms, moved me to strong disagreement.

In these times of international suspicion and misunderstanding, it is not hard, I suppose, to be cynical about Christmas. Nor is it easy, perhaps, wholly to avoid the reflection that, even during a season which we regard as symbolic of the ideal of universal brotherhood, we must inexorably continue to make plans for the tangible expression, should it be needed, of emotions that little resemble goodwill.

Yet, oddly enough, I suspect that the words "peace on earth" may have an even deeper significance for those whose constant study is war than for those whose lives are primarily spent in building and maintaining the complex civil structure which the sailor, the soldier, and the airman, are called upon to protect.

I feel, therefore, that we airmen have special reason to celebrate Christmas in a spirit of reverence, understanding, and hope. The plans we make are not plans for the oppression of the peaceful, nor are the invisible walls we seek to build about our fields and cities designed to shut out the voices of those millions of good and sincere people who are following their destinies beneath the flags of every nation of the world. To such people, whatever their colour, creed, or tongue, we can still send out our ancient Christmas greetings — and we can add our prayers that their quiet counsels may in the end prevail among mankind.

Meanwhile, to every member of the Royal Canadian Air Force and to their families I send my heartfelt wishes for a Happy Christmas and a Prosperous New Year. May it always be said of us, in a very real sense, that we "knew how to keep Christmas well".



THE PARTY LIN

AIRCREW SELECTION IN THE R.C.A.F.

By Squadron Leader E. P. Sloan

*("Just how does the Air Force choose the men who fly in its aeroplanes?" That is a ques which is asked sooner or later by almost everyone who has seen a condensation-trail da across a blue sky five miles above the earth's surface. The author of the following ar well qualified to answer it. During the war he served as a navigator, first with No. 147 Squa (R.C.A.F.) on Canada's west coast, then with No. 31 Squadron (R.A.F. Transport) in I Later, after obtaining his M.A. in psychology at McGill, he rejoined the R.C.A.F. Em for two years at the Institute of Aviation Medicine, he was appointed as Commanding of No. 1 Selection and Training Analysis Unit when it was formed in Toronto in 1951.—*EDIT

INTRODUCTION

SINCE military aviation began, there has been only one constant element — the human element. Aeronautical science has made tremendous advances in the design and development of aircraft and allied equipment within the past few years, and there is every indication that it will continue to do so. The F-86 Sabre and the CF-100 Canuck, which have replaced the Spitfire and Mosquito of the Second World War, will in turn be made obsolete by aircraft already on the drawing-boards. Within the foreseeable future, however, it remains a certainty that the operational success of any air force will depend on the excellence of the aircrew who fly in its 'planes. Everything turns finally on the human element. The maze of scientific and technological equipment which is a modern aircraft must be completely understood and effectively used by the men who fly in it. Unfortunately, the R.C.A.F. cannot write the specifications for its aircrew and depend upon external sources of production as it can for its aircraft requirements.

Sensory-motor test of aircrew aptitude.

Flight cadets on parade at No. 1 Officers' School, London, Ont.

The Service itself must produce aircrew with the essential skills, knowledge, and attitudes. The progress which has been made in the development and application of scientific methods to the problems of producing the high calibre of aircrew required, while perhaps less spectacular than that made in the purely technological field, is none the less very considerable.

AIRCREW PRODUCTION

At the outbreak of the Second World War the R.C.A.F. had little experience in the selection and training of aircrew. Aided by the pre-war depression, selection had consisted of skimming the cream from Canada's university graduates in engineering. Training involved very small numbers, and it was "tailored", for the most part, to the needs of the individual student. The outbreak of war quickly changed this comfortable situation, and methods of mass production had to be quickly devised and put into execution. Production of aircrew increased from "75 R.C.A.F. and 50 R.A.F. fully-trained pilots" in 1938 to a yearly *average* of 26,000 aircrew graduates in nine different aircrew trades during the five years of the British Commonwealth Air Training Plan (1940-45).

Many of the methods developed to handle wartime problems of selection, classification, and training, have withstood the test of time and scientific analysis, and are still used in the R.C.A.F. This fact does not reflect any lack of progress. Rather, it bears testimony to the soundness of the principles upon which these techniques were originally based. It has been possible, however, to add numerous techniques and procedures developed and used by the R.A.F., U.S.A.F., and other Services. Continuous evaluation and experimentation have provided the R.C.A.F. with a modern and scientific system of aircrew production designed to satisfy current needs and capable of rapid expansion without serious loss of efficiency.

AIRCREW SELECTION

The most important process in any aircrew production system is *training*. Aircrew training is expensive in terms both of time and of the special equipment and highly qualified personnel involved. In order to ensure maximum economy and efficiency in the use of the resources committed to aircrew training, a series of preliminary processes is employed to choose suitable candidates for it. These preliminary processes, commonly referred to collectively as "Aircrew Selection", really consist of three distinct steps:

- Selection,
- Classification, and
- Assignment.

The purpose of this article is to acquaint R.C.A.F. personnel and the general public with the important problems which the Service must solve in choosing aircrew trainees, and also with some of the techniques employed to resolve those problems.

Each of these preliminary processes is designed to answer a particular question with regard to aircrew candidates.

Selection answers the question: "Which applicants shall be trained?" Selection refers only to those processes by which applicants are divided into two groups, one of which is to be retained in the Service, the other of which is to be rejected and returned to civilian life.

Classification establishes the trade for which each candidate is best suited. Classification therefore answers the question: "How should each candidate be trained?"

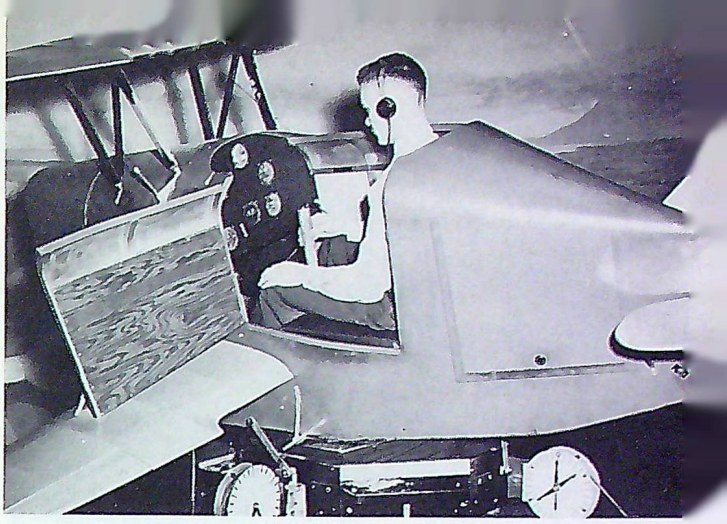
Assignment is the process by which selection information (the number available for training) and classification information (the particular type of training each is best suited for) are integrated

with the requirements of the Service (the number required in each aircrew trade). Assignment, therefore, answers the question: "How *will* each candidate be trained?"

An illustration of the operation of selection, classification, and assignment, is provided by the manner in which a high-school hockey team is formed. After a cursory examination of the talent which turns out for the first practice, the coach quickly eliminates a large percentage on the basis of such elementary requirements as skating ability, physical size, and age limitations laid down by the league, retaining all those who meet his minimum standards. This process of eliminating candidates from consideration continues throughout the pre-season training-period and is equivalent to the process of selection in aircrew production. The second problem confronting the hockey coach is to determine for which position each of his selected players is best suited. By close observation and analysis of each player's skill under various conditions, he assesses the suitability of each for the various positions (classification). To complete our analogy, the hockey coach then assigns his players to the positions for which they are best suited, thus producing the best possible team.

AIRCREW RECRUITING

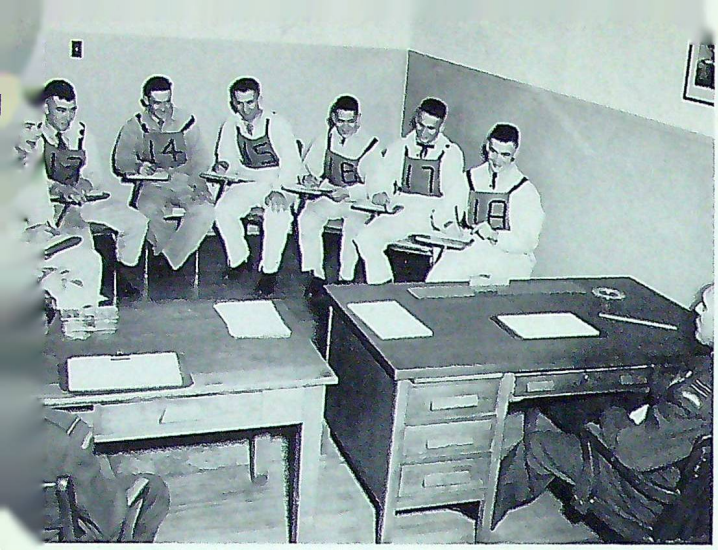
Recruiting is the only process which precedes selection, classification, and assignment, in the R.C.A.F. aircrew production system. Aircrew recruiting is the responsibility of the Directorate of Personnel Manning at A.F.H.Q. The Directorate of Personnel Manning conducts an extensive programme of national advertising designed to interest suitable young men in an aircrew career. In addition, D.P.M. controls twenty-two R.C.A.F. recruiting units dispersed across Canada. The primary function of this organization is to obtain *applications* from as many potential aircrew candidates as possible. However, applicants must measure up to certain pre-determined standards, and everyone who applies is not accepted by recruiting units. In other words, the recruiting organization is responsible for the preliminary stages of the *selection* process.



Testing pilot aptitude in the Visual Link Trainer.

When the self-selected applicant applies at a recruiting unit he is interviewed by an aircrew officer. This officer confirms from the applicant's personal documents that he does *in fact* satisfy the basic requirements for enrolment. If this check is satisfactory, the applicant is then given an intelligence test (the familiar R.C.A.F. Classification Test) and a physical examination. Not until he has successfully passed these hurdles and a second (and more intensive) interview, will his application for aircrew training be accepted.

If we examine this selection process employed at recruiting units, we find that it has certain distinctive features. In the first place, the characteristics on which selection-rejection decisions are based — at this point — are those for which relatively simple and objective methods of assessment are available and for which rigid cut-off levels can be established. This permits the standards of acceptance to be controlled by a central authority (D.P.M.) and ensures that the decision with respect to any individual applicant will be the same no matter to which Recruiting Unit he applies. This is essential if a common standard is to be maintained throughout the recruiting system. If each R.U. was allowed to develop its own "standards", there would soon be gross differences in the candidates accepted by the various units. Because of the problem of standardization, no attempt is made at this stage, other than by means of the interview, to assess such characteristics as officer potential, special aptitudes, and temperamental suitability. Adequate assessment



Officer potential assessment: a group discussion period.

of these qualities is only possible through the employment of specially trained personnel and expensive facilities. In effect, the individual who is accepted at the recruiting unit has been selected for further and more intensive processing at the R.C.A.F. Personnel Selection Unit (Officers). He has advanced from the status of "applicant" to that of "candidate".

No. 2 PERSONNEL SELECTION UNIT (OFFICERS)

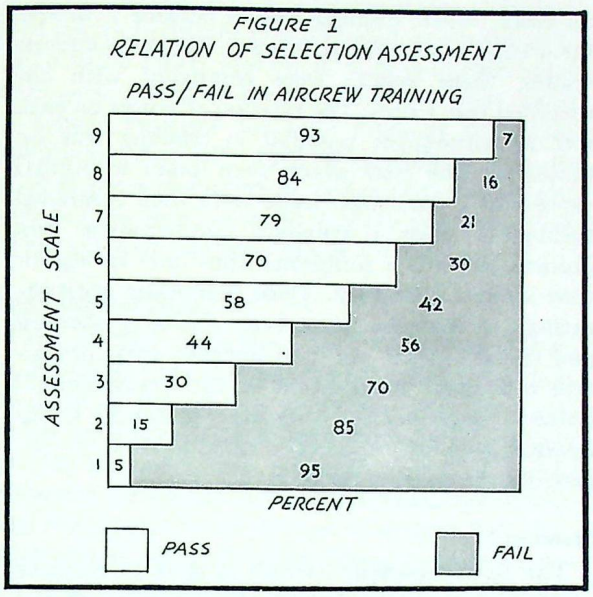
From the various recruiting units, accepted aircrew candidates are posted as civilians to No. 2 Personnel Selection Unit (Officers), at R.C.A.F. Station London, Ontario. Candidates report to P.S.U.(O.) as members of a specific "aircrew intake" and are subjected to an intensive nine-day programme of assessment. At the end of this assessment period, results are compiled and presented to the Flight Cadet Selection and Classification Board of Enquiry. This board, convened under the authority of the Air Officer Commanding, Training Command, is responsible for the selection, classification, and assignment of aircrew candidates. Candidates accepted by this board are enrolled in the R.C.A.F. as Flight Cadets and posted as trainees to No. 1 Officers' School, London, for the first phase of their aircrew officer training. Candidates not accepted by the board are returned to their homes.

The assessments made at P.S.U.(O.) can be divided into those to be used in selection and those to be used in classification. Assessments of personal qualities, skills, and aptitudes which are essential to success in all types of aircrew and officer training, are used in the *selection* of aircrew trainees. Assessments of personal qualities, skills, and aptitudes which are differentially related to success in specific aircrew trades, are used in the *classification* process. Some minor exceptions to this generalization will be pointed out in our discussion.

Selection Assessments

The selection assessments made at P.S.U.(O.) are refinements of those made at recruiting units by means of interviews, medical examination, and the Classification Test. At P.S.U.(O.) the best techniques available are used to assess officer potential, leadership qualities, academic ability, temperamental suitability, and physical fitness. These qualities are essential in every officer, regardless of the type of training to which he may be assigned. Candidates in any group differ widely in the degree to which they possess these qualities, and P.S.U.(O.) selection assessments are designed to measure such differences and to rate each candidate according to his standing in the group with respect to each quality.

All R.C.A.F. aircrew are commissioned upon graduation from basic aircrew training. Within a year of his enrolment as a flight cadet the aircrew graduate must assume the responsibility and authority of an R.C.A.F. officer. The characteristics which combine in an individual to enable him to develop the essential officer qualities within this limited time are difficult to define and assess. Usually they are referred to as "Officer Potential" and "Leadership Qualities". During and since the war many techniques have been tried experimentally in attempts to devise methods of selecting officers and leaders. The current R.C.A.F. programme for the assessment of these qualities is based on very similar techniques used by the British Army, the R.A.F., and the U.S. Office of Strategic Services. Briefly, the method consists of confronting the candidates, as individuals and as members of groups, with problem situations in which they will have the opportunity to display their organizing, planning, leadership, and executive ability. The great advantage of this technique



is that it permits assessment of each candidate by direct comparison of his performance with the performance of all other members of his group in the same realistic situation.

Each aircrew intake at P.S.U.(O.) is divided into syndicates of eight candidates. Each syndicate is under the constant surveillance of two trained members of the P.S.U.(O.) officer staff for a two-day period, during which the syndicate is assigned a variety of problems and tasks. For some of the problems specific candidates are appointed as leaders; in others, leaders are allowed to emerge through the processes of discussion and initiative. The projects consist of both the physical "obstacle course" type and the intellectual or problem-solving type. Every candidate is rated by both observing officers on the basis of his performance on each of the projects. At the end of the two-day session the two assessors discuss their independent ratings and arrive at a mutually acceptable single rating for each candidate. This rating is expressed on a nine-point scale ranging from 9 ("most suitable") to 1 ("least suitable"). In addition to the numerical rating, a narrative report is prepared in which the individual's performance during the tests is analysed in terms of his maturity, practical judgment, ability as an appointed leader, and any other behaviour considered important by the observers.

Academic aptitude, or the ability to absorb theoretical and practical knowledge in a classroom situation, is extremely important in aircrew training. At P.S.U.(O.) a combination of seven paper-and-pencil tests is used, each designed to measure a particular facet of academic ability. The weighted scores on these tests are combined to give an academic aptitude rating, which is expressed on a nine-point scale.

The Medical Selection Unit at London operates in close co-operation with P.S.U.(O.) to check the physical fitness of aircrew candidates. At this unit, as at P.S.U.(O.), it has been possible to centralize special equipment not always available to examining physicians at recruiting units. Several specialist examinations are also carried out at London, occasionally resulting in the recategorization of a candidate as medically unfit or as fit only for aircrew duties other than pilot. Every candidate is interviewed by a psychiatrist, who rates him in terms of emotional stability and temperamental suitability for an aircrew career.

In evaluating selection assessments, comparisons are made between groups of candidates who achieve various assessment scores in terms of later performance in aircrew training. Assessments are not used by the board until research has shown that candidates with high scores have substantially better chances of success in training than do candidates with low scores. For these studies all candidates sent into training are considered together, regardless of the particular trade to which they were assigned. Figure 1 illustrates the type of information which is available for the interpretation of selection assessments.

ASSESSMENTS FOR AIRCREW CLASSIFICATION

The qualities assessed for purposes of aircrew selection are those which are characteristic of all successful aircrew. In assessments made for purposes of aircrew classification, however, interest shifts to those qualities which differentiate successful pilots, navigators, and radio officers from each other. Technically, aircrew classification has

Even rope tricks have their place in the assessment of officer potential.

been defined as the process of "differential prediction". This means simply that classification establishes the individual candidate's relative chances of success in the various aircrew trades available. For classification we must know in which trade the individual has the greatest likelihood of success and, also, how much greater are his chances in that trade than in the others. Although the purpose is different, the methods of assessment for classification are similar to those used for selection.

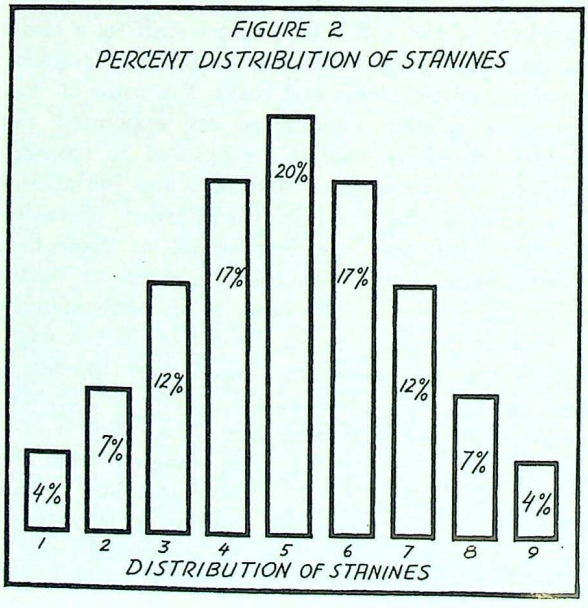
The current R.C.A.F. aircrew classification test "battery" consists of 14 different psychological tests. Each of these tests is designed to measure a specific aspect of human ability. Most of the tests are simple paper-and-pencil examinations which can be administered to large groups of candidates. Others, which involve complex apparatus, can be administered to only one candidate at a time. Every aircrew candidate takes all the tests in the battery. His scores on the tests are mathematically combined to yield three "aptitude stanines", one each for navigator, pilot, and radio officer.

The development of an efficient aircrew classification system is a long and involved process. The present R.C.A.F. battery is based on techniques developed during the Second World War and the results of a continuous post-war programme of experimentation and research. When aircrew training was resumed after the war, a wide variety of tests was administered to all aircrew candidates. A careful record was kept of each candidate's scores on all tests. When training results became available for a large number of trainees in the three aircrew trades, these results were compared with the recorded test scores. The relation of scores on each test to subsequent pass-fail in training was established. The tests which were found to predict success in a particular trade were then combined through a series of standard mathematical procedures to yield a composite apptitude rating for that aircrew speciality. These composite aptitude ratings, or stanines, have been regularly checked and revised in the effort to improve their predictive efficiency. In addition to the "operational" battery, experimental tests are constantly under investigation at P.S.U.(O.) with a view to improving the present battery.

Stanines

The term "stanine", which is used to describe aptitude ratings, is simply a contraction of the cumbersome expression "standard nine-point scale". Stanines are computed by dividing the range of scores for a test or group of tests into nine intervals. The percentage of the total group which falls in each stanine is shown in Figure 2.

The use of the stanine scale facilitates the interpretation of composite aptitude ratings. Suppose,



for example, that a particular candidate obtains a pilot aptitude stanine of 6, a navigator stanine of 8, and a radio officer stanine of 4. It is immediately obvious that 40% of aircrew candidates have equal or higher aptitude for pilot training than this individual; that only 11% of candidates have as good chances of success in navigator training; and that he falls in the lower 40% of the group in terms of his aptitude for radio officer training.

Personal Preference

The aircrew candidate "most likely to succeed" at P.S.U.(O.), is the one who is anxious to be a member of the aircrew team and who does not arrive with preconceived prejudices for or against specific aircrew trades. Aircrew training is rarely related to the past experience of aircrew candidates, and consequently the average candidate has little information upon which to base a preference for one type of training over another. There are exceptions to this, of course, and at P.S.U.(O.) each candidate is given the opportunity to express and explain his preference for particular types of training. Such expressed preferences are subject to some suspicion when they are found to disagree with objective measurements of aptitude and interest. The reason for this is that, as a rule, an individual will get most personal satisfaction and pleasure from the type of work he does easily and well. In other areas of study it has been found that aptitudes are closely related to preferred types of work. Accordingly, in aircrew classification, the onus is placed on the individual to substantiate any preference which is contrary to his aptitude stanines. He must convince the board that his enthusiasm for a particular type of training outweighs his apparent lack of aptitude, if he is to be assigned to training in a trade other than the one his aptitudes indicate.

THE OFFICER SELECTION & CLASSIFICATION BOARD

The Officer Selection and Classification Board of Inquiry convenes at Station London each week to consider candidates who have completed the P.S.U.(O.) assessment processes. The board consists of three senior officers, a representative of Training Command's Senior Personnel Staff Officer, a representative of the Command's Senior Air Staff Officer, and the Commanding Officer of R.C.A.F. Station London. Medical specialists and officers from the staff of P.S.U.(O.) are available to the board for consultation. Each member of the board is provided with a "work sheet" on which is presented all relevant information on all candidates to be considered. The work sheet shows each candidate's name, education, and age; the recruiting unit through which he applied; his pilot, navigator, and radio officer aptitude stanines; his academic aptitude stanine; his expressed preference, medical category, psychiatric rating, Officer Potential assessment, and Classification Test score. The board also has available a statement of the number of trainees required in each aircrew trade.

The board considers each candidate in turn in order to establish, first of all, his suitability for aircrew training (selection), secondly, the type of training for which he is best suited (classification), and thirdly, the number of vacancies available in each of the trades (assignment). Candidates who are obviously suitable and whose aptitudes agree with their expressed preferences (or who express no preference), are assigned immediately.

Selection of Candidates

Candidates whose suitability is subject to doubt, or whose aptitudes do not agree with their expressed preference, are interviewed by the board. After interviewing a candidate, the board members discuss the individual and, if necessary, call for reports from the specialists in attendance. They then vote independently on whether to accept or reject the candidate. It is important to recognize that the members of the board, in voting to accept or reject a particular candidate, rely not on a single assessment but on the general pattern of the individual's record throughout the assessment period. Rarely is a candidate rejected on the basis of a single low rating. On the contrary, every effort is made to give him the benefit of any doubt.

Classification and Assignment of Candidates

Candidates accepted for training by the board are immediately considered for particular aircrew

trades. At this point the classification and assignment processes merge, and a single decision — based on aircrew aptitude stanines, desires of the individual, and the requirements of the Service — is made. To illustrate the manner in which the board conducts aircrew classification, let us assume that there are two types of training available, navigator and pilot, and that the problem is to assign candidates to one or the other. The members of the board are aware of the acceptable minimum aptitude for success in each trade and are provided with statistics which indicate the probability of success for each aptitude stanine. If the candidate has obtained a high navigator and a high pilot aptitude rating, he can be readily assigned to the trade of his choice, as he would have an equal chance of success in each trade. Candidates with stanines below the acceptable minima for each trade must be considered for training in a trade other than pilot or navigator, or else be rejected. It is with the high-low combinations that the problem of reconciling aptitude, preference, and Service requirements, becomes most important. For example, it is obvious that candidates with a high navigator and low pilot aptitude can only be economically trained as a navigator. The reverse is true for the high pilot and low navigator group. Despite the candidates' preferences, it is incumbent upon the board to assign these candidates to the trade in which they have the greatest possibility of success. This action avoids disappointment for the individual and unnecessary expense for the Service.

When all candidates have been considered by the board and those accepted have been classified and assigned to training, the results are made known to the candidates. Successful aircrew candidates are enrolled in the R.C.A.F. as Flight Cadets and posted as trainees to the R.C.A.F. Officers' School to commence their aircrew training. Particular attention is paid to the candidates who were not selected for aircrew training. They are interviewed individually and the reasons for their non-acceptance are explained to them. Since only a small percentage of Canadian youths are estimated to possess the particular combination of aptitudes which suit them for careers as R.C.A.F. aircrew officers, non-selection at P.S.U.(O.) is in no sense a failure. In many instances, the P.S.U.(O.) experience provides the individual with an insight regarding his abilities and interests which is of great value to him in planning his future.

CONCLUSION

It may be pointed out that the present R.C.A.F. aircrew selection system compares favourably in efficiency with similar systems in other air forces. Great progress has been made in the development and refinement of special procedures and techniques for conducting aircrew selection, classification and assignment in the R.C.A.F.

The continued programme of research, experimentation, and evaluation, which is planned by the R.C.A.F. will gradually reduce the margin of error still existing. Until some great new discoveries about human beings and their abilities and aptitudes are made, however, progress beyond our present level is likely to be slow.

The human element is not only the most constant element in military aviation; it is also the element about which least is known.

Views expressed in "The Roundel" upon controversial subjects are the views of the writers expressing them. They do not necessarily reflect the official opinions of the Royal Canadian Air Force.

Feminine Gen

CROWDED HOURS AT ROCKCLIFFE

"A lot of people", says Jean McRae, of R.C.A.F. Station Rockcliffe, "seem to think that, because we're only four miles from Ottawa, we spend most of our spare time dashing into the city for entertainment. They couldn't be more wrong. Sometimes weeks go by and we never even leave the station. After all, why should we, when there's so much to do here?"

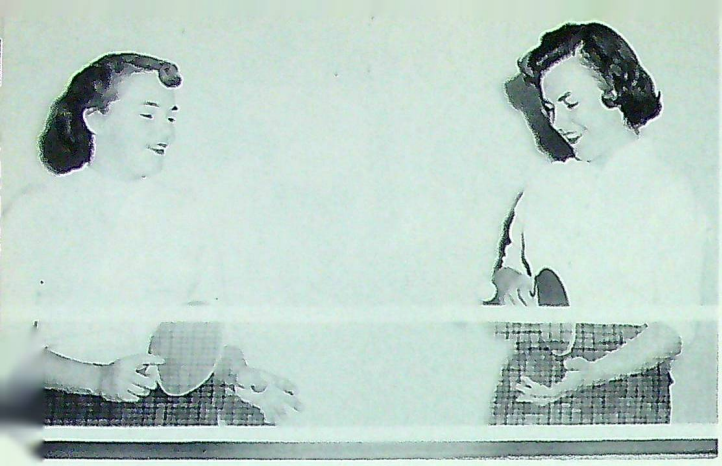
The pictures that follow seem to support her words.

L.A.W. Bunny Williams (standing) and A.W.1 Pat Fournier.

L.A.W. Betty Smith instructs a class in leathercraft.

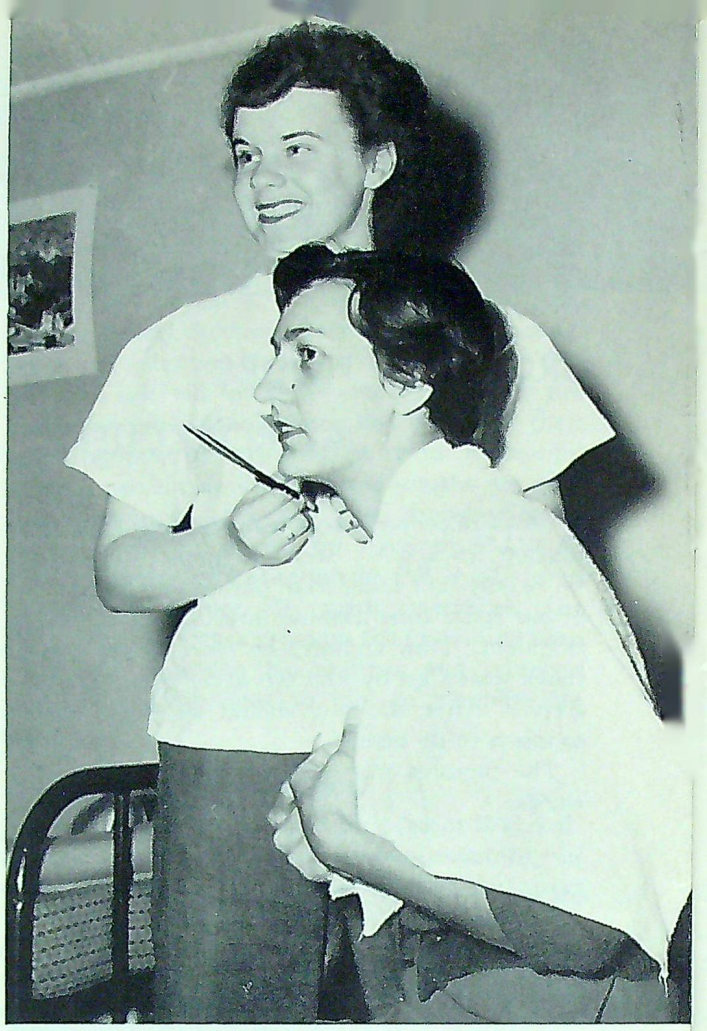
The Glee Club rehearses.

The bed-time brew is shared by (left to right) A. W. Pat Webb, Cpl. Mickey McCarthy, L.A.W. Betty Taylor, and A.W. Mabel Boese.



A.W.1 Mazel Lambert (left) teams up with L.A.W. Bunny Williams.

A.W.1 Pat Fournier is a seamstress of skill.



L.A.W. Kay Pettigrew restyles L.A.W. Helen Allen's hair.

One of L.A.W. Betty Smith's hobbies is painting. Here she shows her work to Cpl. Stella Byrne.

A.W.1 Tiny Davis scores. Behind her is Cpl. Mickey McCarthy.

SKELETONS IN THE CUPBOARD?

We recently received from L.A.W. J. E. Davies, of R.C.A.F. Station Edgar, a poem which has sent Sgt. Shatterproof doubling back to pre-history in defence of his family tree. On his return:

"Sir", he informed us, "though flattered by L.A.W. Davies' tribute, I must report that she seems to have given somewhat free rein to her poetic licence. I have been at some pains to re-check my lineage from the time of Ur Shatterproof of the Chaldees down to the present, but I have been unable to identify even one of the Shatterproofs of whom she sings — except, of course, the first mentioned and the last. It is possible, though improbable, that L.A.W. Davies has stumbled across some Bend Sinister branch of the family which may have been founded by my semi-legendary ancestor, Eoshatterproof Neanderthalensis, whom I understand to have founded quite a number of families in his day. Such a branch, however, if it has ever existed, has never been recognized by the official historians of my House. This fact need not in any way detract from our enjoyment of L.A.W. Davies' muse, and I suggest that we print her verses in full, together with her own prefatory notes . . ."

SHATTERPROOF AGONISTES

The last of all the Shatterproofs,
Heraldic'ly intent,
Pores o'er his genealogy
With knitted brows and bent . . .

* * *

(Caractacus Shatterproof, the Tin-Miner of Polperro, immortalized in the Downvale carvings and believed until recently to have been Piltdown Man.)

A barter-minded Shatterproof
(Oh, woad be unto such!)
Discovered that Phoenicians
Were a pretty easy touch.

(Caius Severus Infractus, the Centurion.)

A sunny-minded Shatterproof,
Retired from active duty,
At Aquae Solis settled
With a little Keltic cutie.

(Eggfroth Shatrprof.)

A Danegeld-minded Shatterproof
With axe and sword and spear
Assisted Alfred burn his cakes
Near Wedmore's reedy mere.

(Sir Senlac Chat-à-prouffe.)

The Domesday-mind Shatterproofs
At Hastings claimed their hides
And set up house in Warwickshire
With Anglo-Saxon brides.

(Spenser Shatterproofe.)

Stanzaic-minded Shatterproof's
Pentameters, I ween,
Were much concerned with proving things
About a Virgin Queen.

(Charlebois Shatterproof)

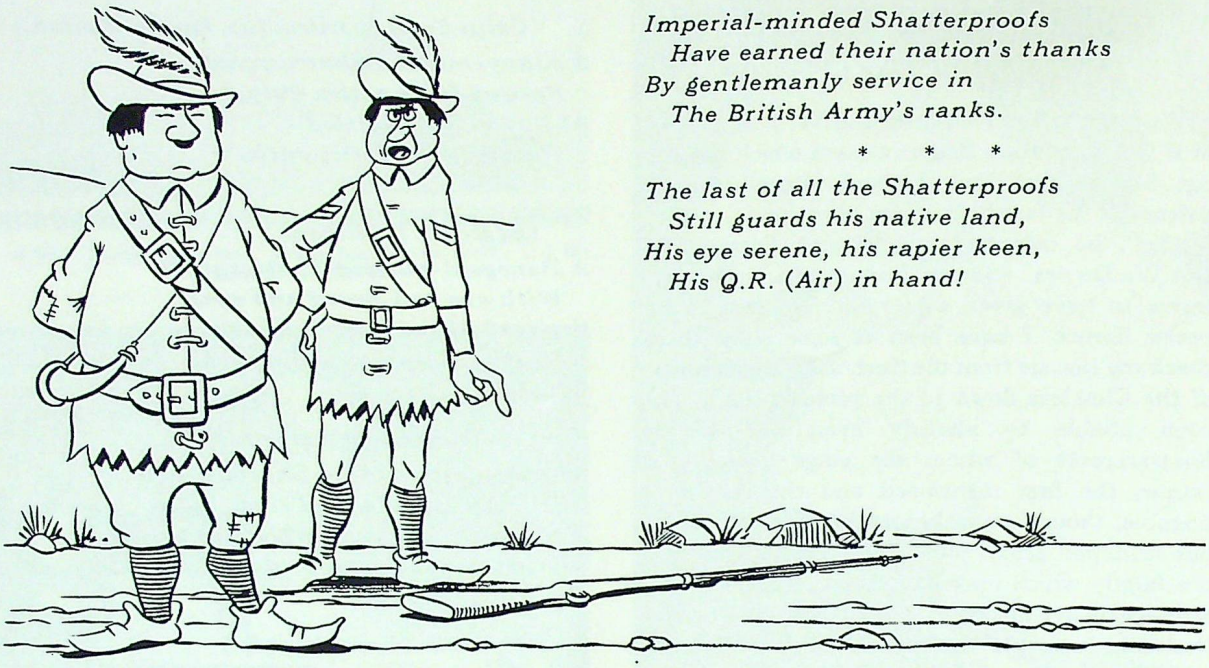
A bawdy-minded Shatterproof,
Of Restoration fame,
To London brought sweet Nellie Gwyn —
Charles Stuart took the blame.

(Hezekiah Shatterproof)

A sober-minded Shatterproof,
With stronger heart than we.
Took up his axe and brewed himself
A cup of Boston tea.

(Small Shatterproof of South Riding.)

A stubborn-minded Shatterproof,
Whom no one could persuade,
Refused to pick up musket which
He'd dropped while on parade.
("Lord have mercy on such as we!")



Imperial-minded Shatterproofs
Have earned their nation's thanks
By gentlemanly service in
The British Army's ranks.

* * *

The last of all the Shatterproofs
Still guards his native land,
His eye serene, his rapier keen,
His Q.R. (Air) in hand!

They Shall Not Pass!

Away back in 1938, an airman was standing guard at R.C.A.F. Station Jericho Beach, in Vancouver. It was a peaceful Sunday, with nothing much doing; but the young man took his duties seriously.

A big car turned into the road leading to the main gate, and stopped in front of him. "I'd like to get into the station", said the driver.

"May I see your pass, please?" asked the sentry.

"I'm sorry; I haven't got it with me", replied the motorist. "But I'm Group Captain J——. Please let me in."

"If you were in uniform there'd be no trouble, Sir, but without a pass I can't let you in as long as you're wearing civilian clothes."

The visitor by now was losing patience, particularly since he was the senior military officer in the district. In those easy days his title was "General Officer Commanding".

"Dammit, man!" he exploded. "I'm the G.O.C.!"

"I don't give a damn if you're the G.O.D.", the sentry said. "You can't get in here without a pass."

Sqn. Ldr. N. W. Emmott, D.F.C.

The Suggestion Box ★ ★ ★

The Chief of the Air Staff has written letters of thanks to the undermentioned members of the R.C.A.F. for suggestions which have been officially adopted by the Service.

Sgt. R. S. Cowley, of R.C.A.F. Station Gimli, designed a modification to the Automatic Radio Compass used on the AN type Link Trainer which renders it fully automatic, thus increasing its efficiency.

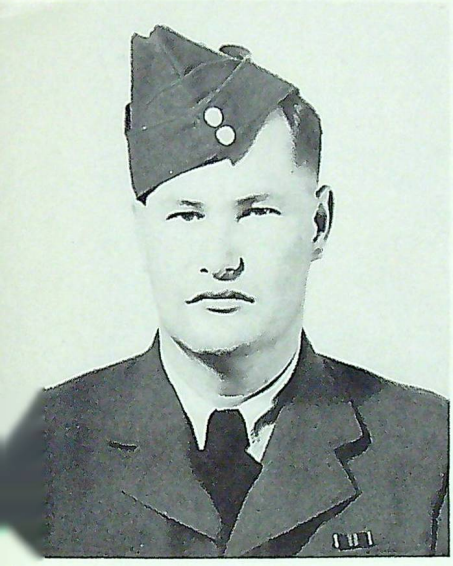
Sgt. R. F. Lewis, of R.C.A.F. Station St. Hubert, suggested that the standard housewife kit be enlarged to include buttons for airmen's 5A jackets and raincoats.

Sgt. H. L. Campbell, of Training Command Headquarters, proposed certain modifications for automatic telecommunications relay systems, which will both simplify their operation and minimize the factor of human error.

Flying Officer V. R. Whitman, of No. 10 Technical Service Unit, and **Flt. Sgt. S. M. Rogers,** of R.C.A.F. Station Chatham, designed a rotatable tool-board that will considerably speed up the work of the tool-crib attendant in selecting and signing out required tools.

Sgt. R. C. Whiskin, of R.C.A.F. Station Uplands, designed a front wheel installation for the 4G/1578 and 4G/1579 compressors which will greatly facilitate the moving around of this heavy equipment.

Sgt. R. S. Cowley.



Sgt. R. F. Lewis.

Sgt. H. L. Campbell.

Flying Officer V. R. Whitman.

Flt. Sgt. S. M. Rogers.

Sgt. R. C. Whiskin.

"H" for "HALLYBAG"

by "Old Lintonian"

*(In our December 1953 issue, under the title of "Obituary", we published a brief history of the Vickers Wellington, of wartime fame. Shortly after it appeared, we received from a friend in the U.K. the following colourful story on the Handley Page Halifax, another valorous old aircraft in which thousands of Canadians did their ops, and which was "demobbed" from the R.A.F. about two years ago, some 14 months earlier than the "Wimpy".—*EDITOR.)

"A STRONG FORCE of Halifaxes from the Canadian group of R.A.F. Bomber Command made an attack through cloud at 8.30 last night on the industrial and railway centre of Oberhausen in the Ruhr . . . " Thus opened Air Ministry *communiqué* No. 16194, of 2 November 1944 — a *communiqué* telling still more of the destruction continually being brought by the Halifax bomber which, alongside that other great "heavy", the Lancaster, was to bring Hitler's crumbling Third Reich to its knees.

One of the truly great aircraft of the war, the Handley Page Halifax had its beginning in an Air Ministry specification of 1936 which called for a bomber powered by two Rolls Royce Vulture engines, then still under development. A foreseen delay in the Vulture programme led the Air Ministry, in August 1937, to ask Handley Page to redesign the aircraft to take four Rolls Royce Merlins instead. The prototype of the new machine first flew on 25 October 1939, piloted by Major J. L. Cordes. It had now grown considerably both in size and weight as compared with the original twin-engined design. Its wing span was nearly 100 ft. and its all-up weight was around 55,000 lbs. by the time it was ready for service.

In 1940 the Halifax was ordered into large-scale production, for which it was eminently suited, being designed for manufacture on the unique and time-saving split-construction and unit-assembly technique pioneered by Handley Page and first used in the construction of the Harrow and Hampden bombers. To undertake the large production programme, an organization known as the Halifax Group was formed. Besides the parent company, it comprised four main members, one of which was the English Electric Co., which had already produced large quantities of Hampdens. Altogether the Group controlled 41 factories (totalling 7½ million square feet of floor area), 600 sub-contractors, and 51,000 employees. Out of 10,018 British heavy bombers built between 1940 and the summer of 1944, 4,046 were Halifaxes — more than 40 per cent. At its peak the Group produced one Halifax every working-hour. Each aircraft involved 30,000 different components. In one hour, 256,000 airframe parts, excluding rivets, were made, fitted, and inspected; two-thirds of an acre (7 tons) of light alloy sheet was cut, formed, and fitted; three miles of sheet metal was rolled or drawn into sections; five miles of light alloy special extruded sections were cut, drilled, and fitted; 700,000 rivets were closed; three to four miles of electric cable and one mile of pipes were fitted.

In all, 6,176 Halifaxes were produced, the last one, an A Mark 9, being delivered to the R.A.F. at the end of 1946.

A year after the outbreak of war the H.P. 57, (as the new bomber was officially designated) was christened by Lady Halifax. During the ceremony, Lord Halifax made a speech in which he quoted an old Yorkshire prayer: "From Hull, Hell, and Halifax, Good Lord deliver us," and he added that the Germans might well like to use the same words. They were now to be repaid — with tremendous interest — for their pounding of the little Yorkshire port of Hull. By strange coincidence, it was

"Embraceable U".

from the broad-acred county of Yorkshire, which has both a Hull and Halifax, that Handley Page's new bomber was mainly to operate. It was to equip No. 4 R.A.F. Bomber Group entirely, and for a long time form the mainstay of No. 6 R.C.A.F Bomber Group also.

At the time of Bomber Command's peak strength it had no less than 76 Halifax squadrons in action. Halifax bombers flew almost 76,000 sorties and dropped nearly a quarter of a million tons of bombs on enemy targets.

On the night of 11/12 March 1941, exactly five months after the first production machine had flown, No. 35 Squadron, based at Linton-on-Ouse — later to become famous as the home of No. 6 Group's 408 (Goose) and 426 (Thunderbird) Squadrons — took the Halifax to Le Havre and Kiel on its first operational mission. From this modest start, the Halifax's contribution to Bomber Command's offensive was to grow rapidly.

The popularity of the "Hallybag" with the bomber boys was to some extent founded on its oft-proven capability to sustain what seemed like fatal punishment and yet still return to fight another day. A classic example was the Halifax that returned from a daylight raid on German lines in France, in July 1944, with its port fin, rudder, tail-plane, and elevator clean shot away. One of the finest tributes to the Halifax was paid by Flt. Lt. N. G. Gordon (R.C.A.F.), of No. 158 Squadron, R.A.F., based at Lissett, near Bridlington, Yorks. He was captain of the fourth crew to complete a tour of ops on "Friday the Thirteenth", which, despite its unlucky title, a skull and crossbones painted on its nose, a reaper, and inverted horse-shoe and other unlucky signs, completed 128 ops by the end of the war. On his return from Gelsenkirchen, which marked "Friday's" 100th operation, on the night of 22 January 1945, Flt. Lt. Gordon said: "We always feel absolutely confident in her. She flies right and she always gets there . . . " "F for Fox" (which was the aircraft's official title) had by then undergone two major inspections and had 550 hours' flying to her credit. She had never been left behind when due for ops — a record which she maintained throughout the rest of her career. Flt. Lt. Gordon, incidentally, was a native of Halifax, N.S.

Apart from the Halifax's primary rôle as Handley Page's "Bloody Paralyzer" of the Second World War (its illustrious predecessor was the 0/400 of 1917), the Halifax took an equally important part in many other tasks. And in order to do so, as operational requirements changed with the course of the war, modifications were continuously introduced to keep the Halifax in step. In all, no fewer than 27 versions were produced during the war, for six different combat rôles. The ultimate war-time bomber version, the Halifax B.Mk.6, had an all-up weight of 68,000 lbs., a cruising speed of 265 m.p.h., a service ceiling of 25,000 feet, and a bomb load of 6½ tons.

Halifaxes of Bomber Command nightly laid mines in enemy waters, while others with Coastal Command harried U-Boats and enemy shipping with depth charges and bombs anywhere from Norway's fjords to the Bay of Biscay. Others made long, arduous, yet vital daily sorties far out over the North Atlantic in all weather to gain vital meteorological information. In the Middle East they kept up the "night mail-run" to Benghazi and bombed Rommel's Afrika Korps all the way from Alamein to Cape Bon. With the airborne forces, they towed gliders during the Allied invasions of Sicily and Europe, dropped paratroops, secret agents, and countless loads of arms and supplies to partisans. With a special Group of Bomber Command, other Halifaxes waged a fantastic war of their own — a war of the ether, jamming and confusing the enemy's radio and utterly confusing his fighter controllers. And here it may be recalled that it was again a Halifax in

which the first trials were made of the bomber's revolutionary "magic eye", H_2S, over Wales, in 1942.

After V-E Day, Halifaxes were sent to the Far East to harass the Japanese, but the atom bomb stole the entire show. Meanwhile, nearer home the Hallybag undertook more peaceful duties. R.A.F. machines flew hundreds of British P.O.W.s home from Italy; others, flown by B.O.A.C. and other civil operators, helped to re-start the airline services to West Africa and elsewhere, carrying cargoes varying from bananas to tulips in addition to their passengers. In the Berlin airlift the Halifax again played an important part — this time carrying coal and petrol instead of its more spectacular wartime fuels.

* * *

At some period during their war-time existence in Britain, all fifteen R.C.A.F. bomber squadrons flew Halifaxes on operations with Bomber Command.

The first unit to be so equipped was No. 405 (Vancouver) Squadron, which had been the first R.C.A.F. Bomber squadron to form overseas. Its first Halifaxes (Mk.2s) replaced its Wellingtons in the spring of 1942, and by May 30th, when Bomber Command made its first 1000-bomber raid on Cologne, No. 405 Squadron's "Hallies" were able to take part.

It is with the airfield of Pocklington, near York, where No. 405 Squadron was based at that time, that the Halifax "Ruhr Valley Express" will always be associated. One of the squadron's most famous machines, its fortunes were followed with great interest throughout No. 4 Bomber Group. One very happy crew at Pocklington christened their aircraft the "League of Nations Kite" or, alternatively, "H-for-Happy". The reason was that it had a Canadian pilot, an English bomb-aimer and navigator, a Scottish wireless operator, a Rhodesian tail-gunner, and another Canadian on the mid-upper guns. The groundcrew were all Canadians. They chanted a verse about the 'plane, which ran like this:

"H is for Happy, that four-engined kite,
She flies in the morning, she flies in the night,
Her aircrew are perfect, her groundcrew the same,
She returns from her ops. and she adds to her fame."

Following the formation of No. 6 (R.C.A.F.) Bomber Group on New Year's Day, 1943, many existing R.C.A.F. squadrons relinquished their battle-tired Wellingtons and went over to Halifaxes, and other new Halifax units were continually being formed. In addition to serving with each of the Group's ultimate 14 squadrons (the 15th R.C.A.F. bomber unit, the Vancouvers, joined No. 8 P.F.F. Group, with which they operated on their Halifaxes for a time), Halifaxes also played a vital if less glamorous rôle in service with the Canadian Group's Heavy Conversion Units and Flights, such as those at Dishforth, Topcliffe, and Wombleton.

An illustration of the Halifax's contribution to the Group's war effort was given on 25 October 1944, when 199 Halifaxes, out of a total force of 243 "heavies", struck at the Homberg-Meerbeck synthetic oil plant without loss. A further indication of its achievements is conveyed by the following statistics relating to No. 427 (Lion) Squadron. They are perhaps typical: "In 1944, No. 427's Halifaxes made 1895 sorties and delivered 5,847.1 tons of H.E., 627.5 tons of incendiaries, and 240.7 tons of mines on enemy targets."

Came V.E. Day, and with it — for those war-winning veteran Halifaxes — the sad but inevitable fate of the scrap-heap. At two main "graveyards"— Rawcliffe, in Yorkshire, and High Ercall, in Shropshire — the veteran R.C.A.F. Hallies touched down for the last time (Rawcliffe's runway controller stood awestruck one day when one complete squadron all got down well within a minute). The grand old veterans squealed to a standstill and their gallant crews bade them a regretful goodbye. For weeks they stood marshalled in orderly rows, their engines now silent and the wind singing a mournful lament as it whistled through their aerials. But they carried their battle-honour-inscribed noses high in the air to the end.

There was "C-for-Charlie" of No. 408 Squadron, whose crew (it is said) would never fly without their silver replicas of the "Scottie" dog painted on their bomber's nose; "Embraceable U", another of the Goose Squadron kites; Linton's grand old "W-for-Willie" ("the ropiest kite in the squadron", as the R.A.F.'s Flying Officer Harry Inman, D.F.C., former flight engineer in No. 408 Squadron, told me); the "Ruhruhr" and "Pubwash" from Dishforth; "Overseas Zombie" of the Leasides at Eastmoor; "Snoop'n Droop" and "Little Lulu" of the Alouettes at Tholthorpe; and "The No Nuttins", with its amusing "Shoot — you're loaded" advice to the tail gunner painted beneath his turret. Yes, and there were many others also awaiting their end.

But, like the Phoenix, perhaps there even now emerges from the melting-pot a newer "Bloody Paralyzer" of the jet age, in the shape of the Handley Page Victor — a reincarnation of the bomber in which so many famous squadrons fought, and, it may be, our guarantee for the future. Who knows?

IN MEMORIAM

In the military cemetery at Toul, in France, L.A.C. Terry Keir salutes the graves of 65 Canadian airmen who were killed during the Second World War.

Crossword Puzzle

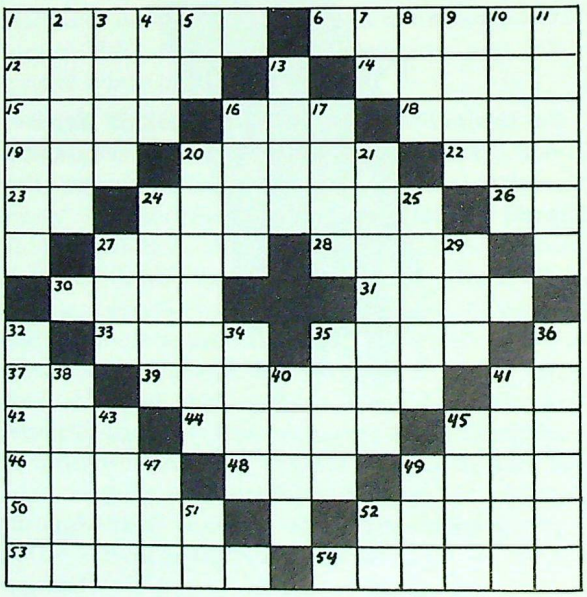
*(Yet another puzzle from Sgt. G. J. Langill. In this one, there are two words which appear in "Webster's Collegiate Dictionary" but not in "The Concise Oxford".—*EDITOR.*)* *Answers on page 48.*

ACROSS

1. This Johnny's ready for a scrap in any sort of weather.
6. Alternatively Sir Arthur.
12. Tracy must do this when his pencil slips.
14. A musical note can enthrall a Slav.
15. Every R.C.A.F. station stands on one.
16. A tear that none can shed.
18. No North in this particular sphere of action.
19. A Brazilian might wonder if this senior station officer had been canonized.
20. A Canadian Army Corps which incorporates another Army Corps and a political party.
22. Always comes last.
23. Polaris should show the way to this R.C.A.F. aircraft's initials.
24. A card-game, apparently related to bridge and well known to all seaplane crews.
26. A bearing of 135° leads to a First World War aircraft.
27. Roses, horsemen, and freedoms.
28. Here, in short, is what is said of the subject.
30. The substantive result of the United Nations' absence.
31. Though some of its commanders are winged, none of them are wing.
33. They go with books, weeks, and rears.
35. A girl who brings truth to a city.
37. Briefly in charge.
39. Small detachments of airmen will furnish the particulars.
41. Or RR.
42. The Mother of Air Forces.
44. Whichever way you look at it, it's a seat of learning.
45. Moses' brother is partially submerged in this Swiss river.
46. Rooms normally not frequented by many of the R.C.A.F.'s healthiest personnel.
48. Not a thing to be found here.
49. — over lightly.
50. Even if it's up wrong, it's upright.
52. Better it remain in a Marshal's right hand than be left on his escutcheon.
53. An intimation that the river's no good for skating.
54. A type of squadron that existed without aircraft in the R.C.A.F.

DOWN

1. A type of aircraft that brings luck (Irish) to North America.
2. Often heard in the Met.
3. Though born in Italy, it originated in Washington, D.C.
4. Employ but not hire.
5. A branch of the R.C.A.F. which is always on the make.
7. One would expect neatness from this sergeant.
8. Heard in a Provincial Parliament but not in the Federal.
10. No odds.
11. Both educates and is educated.
13. An Italian car provides authorization.
16. A famous railway with a royal head becomes part of the Navy.
17. This airman operates power plants.
20. Sgt. Shatterproof often vets it for pornography and subversion.
21. Though learned-looking, it was only an elementary trainer in the R.C.A.F.
24. A British bill that's lighter than it sounds.
25. Both R and T qualify.
27. The last of I.F.F.
29. A Government Department in which the will of God comes first.
32. Oh, happy is the day when these chaps get their pay!
34. Give him his Laurel.
35. Seven were poured out in Revelations XVI.
36. Stone of a fruit, used for putting out fires.
38. Where Khedives once sat unthroned.
40. 53 across in Quebec.
41. This potential great oak's confusion results in a radio facility.
43. The Hobby Shop provides saws to cut out this worry.
45. Not pro.
47. A slight rearrangement is necessary before it appears so.
49. Essential to the man or woman who loves a good row.
51. Its head is in Trenton, but its branches spread far.
52. Despite its name, universities will give it to both married men and married women.



They Blasted Amiens Jail

By Pat Pointon

(Several of our readers who are also subscribers to the "Royal Air Force Flying Review" have suggested that we reprint this story of what was certainly one of the most thrilling air operations of all time. Since, we believe, comparatively few of our readers have an opportunity of reading the above-mentioned extremely interesting publication, we are following herewith the suggestion made to us. — EDITOR.)*

TEN years ago, on a bitter February day in 1944, a small force of Mosquitoes roared at tree-top height across France to carry out one of the most daring raids of the war. Their task was to make a low-level, precision attack on the jail at Amiens to effect the release of over a hundred patriots who were imprisoned within its grim walls.

Boldly planned, and bravely carried out, the operation was an audacious challenge to fortune by a band of gallant men who "dared fantastic tricks before high Heaven." Their courage fired the imagination of the free world in the dark days of the war, and added an epic chapter to the chronicle of heroism in the air.

Over seven hundred prisoners languished inside Amiens jail. Some had defied the Gestapo by carrying out acts of sabotage with the French underground Resistance movement. Others were key links in the British espionage net-work. Still more had hidden and helped Allied airmen to escape after their 'planes had been shot down over France. As each patriot was trapped, he faced the travesty of a trial; and each in turn heard the same sentence pronounced: "Guilty. Condemned to death." From prisons throughout France, the Germans began to move their captives to Amiens — to await execution.

The Maquis resolved that some attempt, however desperate, must at all costs be made to release the prisoners, and they appealed for help from across the Channel. This plea received a prompt pledge of full and speedy assistance. Unhesitating and unequivocal as the promise of aid was, it nevertheless placed its guarantors in something of a dilemma. What plan was most likely to prove successful?

Obviously, the operation was bound to be a gamble. The risks that had to be considered were great, but not so overwhelming that they completely daunted all hope of success. A low-level, precision bombardment, coupled with a simultaneous attempt at a break-out by the prisoners, was the only possible solution. Carefully the plan was drawn up, but few people were allowed to have any inkling of its exact nature. Everything hinged on the closest secrecy—coupled with speed.

From intelligence reports and stereoscopic photographs, an exact scale-model of Amiens jail was made out of plaster of Paris as it would appear to the pilot of an aircraft flying at 1,500 feet from a distance of four miles.

Each phase of the operation was carefully worked out and timed down to the last second. Perfect synchronization was the prime factor of importance and every facet of the plan had to be meticulously dovetailed into the major scheme with precise continuity and a minimum of overlap. It was obvious that the prison walls would have to be breached in at least two places to enable any escape to be made. At the same time, both ends of the building itself had to be opened up to release the prisoners from their confinement, while the wing that housed the German guards had to be ruthlessly pulverised.

All this had to be achieved as rapidly as possible. There had, besides, to be close liaison with the French Underground. Local Resistance groups were responsible for smuggling small quantities of explosive into the jail so that the patriots could blow the locks off the internal doors. It was their task,

*The "Royal Air Force Flying Review," published monthly, 13s.6d ($1.85) per annum. Editorial Office: 180 Fleet St., London E.C.4., England.

too, to assist the prisoners once they had managed to win clear of the outer walls, and hide them from the swift retribution that was certain to follow.

* * *

Noon on February 18th, when the German guards would be eating their midday meal, was fixed as zero hour.

Under the code name of "Operation Renovate" the job of blasting open Amiens jail was assigned to the Mosquito Wing — 140 Wing — of the Second Tactical Air Force, which had made a specialty of exacting, pin-point attacks.

In command of the Wing was 28-year old, Sheffield-born, Group Captain P. C. Pickard, a triple D.S.O. and D.F.C. who had notched up more than a hundred operational sorties against the enemy. Tall, blond-haired and good-looking, his features and his fame were widely known in Britain. "Pick", as he was called, had been chosen to play the part of the pilot in the war-time film of Bomber Command, "Target For To-Night". Commissioned in the R.A.F. in 1937, his log-book recorded raids on all the major targets in the mounting and not unimpressive list at Air Ministry. He had fought through the Dunkirk evacuation, through the frustrating campaigns in France and Norway, and in 1940, when he was a Flight Lieutenant, he won his first D.F.C. In 1941, when he was a Squadron Leader, he led No. 311 Czech Squadron with such dashing skill and *élan* that the Czechs awarded him their Military Medal.

After four years on ops, the Powers-That-Be decided that Pick had earned a rest. He was switched to a desk job at Fighter Command Headquarters. He hated it. He itched to be back in the air. He pestered and complained until, at last, he got his wish. He was appointed to command the crack Mosquito Wing of Second TAF.

Pick decided to lead the raid on Amiens himself. With him, as navigator, was to fly Flt. Lt. J. A. Broadley, D.S.O., D.C.M., D.F.M. They were a perfect partnership, almost inseparable in the air ever since they first crewed-up together in the early days of the war. Together, they had braved common dangers and shared in common triumphs.

The Mosquito Wing was, in miniature, an excellent example of the Commonwealth war effort, the comradely spirit of the friendly rivalry that knit the R.A.F. with its younger brothers of the Dominions. There was, for instance, No. 21 Squadron R.A.F., No. 487 Squadron of New Zealanders and No. 464 Squadron consisting of aircrews from Australia.

From the most experienced pilots and navigators in these squadrons, Pick chose his team. Six crews from each squadron were needed for the operation. From the Wing Headquarters at Sculthorpe, he went to the Mosquito base, R.A.F. Station Hunsdon, to prepare the final arrangements.

* * *

Dawn on February 18th, 1944. Heavy storms of sleet and snow whip in an icy fury over the Hunsdon airfield. The route to the target is blanketed with low clouds. As the aircrews sleepily pull on their clothes and gulp down scalding cups of tea, the whole operation is on the verge of being postponed for twenty-four hours until the weather improves. Over the underground radio link a faint crackle of Morse carries the despairing appeal from the French Resistance: "Strike now or never. The executions are imminent." That decides the issue. Come what may . . . ops are *on*.

The hubbub of chit-chat and repartee dies away. An Intelligence Officer stands up and motions to an orderly who removes the covering shroud from the model of Amiens jail. Interested eyes follow his movements. Heads crane forward to study the exhibit. Clearing his throat, the briefing officer starts to outline the plan.

Each of the three squadrons is so keen for the honour of being the first into the attack, that Pick decides to let them toss for it. A spin of the coin gives the New Zealanders the first place, and then the Australians beat the British Squadron for second place. The part each man was to play is now described in detail.

The initial assault by the New Zealanders must be made precisely at noon. At that hour exactly, the leading formation of the three aircraft from No. 487 Squadron had to blast a hole in the eastern wall of the prison. On the run-in, the second box

of three 'planes from the same squadron had to break away at a distance of ten miles from the target, wheel in a circle, and follow on the heels of the first wave, attacking the northern wall at noon plus three minutes, immediately after the leading section was climbing away.

Then it was the turn of the Australian squadron, making the second main attack. They had to bomb the ends of the jail building. Like the New Zealanders, the six Mosquitoes from the Australian squadron were to split into two sections of three a short distance from the target. One group had to bomb the south-eastern end of the jail, while the other trio dealt with the opposite wing to the north-west.

The third and remaining squadron — No. 21 Squadron, R.A.F. — was to remain in reserve, ready to carry out any part of the plan in the previous attacks which might have failed.

As the briefing ended a hush fell over the Ops Room. In the silence Pick stood up and said simply:

"It's a death or glory job, boys. You have to break that prison wide open. Good luck."

The three squadrons took off from Hunsdon in a blinding snowstorm at 11 a.m. Each 'plane carried two 500-lb. bombs — including some semi-armour-piercing type — all fused for a time delay of eleven seconds. For each formation of Mosquitoes, there was a squadron of Typhoons acting as a close fighter escort, while an extra Mosquito accompanied the party for photographic reconnaissance duties. Pick himself flew with the Australians in the second wave.

From their base, the Mosquitoes headed first for Littlehampton, where they made a rendezvous with their escorts. Then, after crossing the Channel and Northern France at "nought feet" they swept round to the north of Amiens and approached their target down the straight, poplar-fringed Albert-Amiens road alongside which the prison stood.

The attack went precisely according to schedule. Most of the German guards were peaceably eating their dinner when the Australians' bombs splintered and shattered their wing. As the 'planes roared overhead, the prisoners condemned to solitary confinement blew out the locks on their cell doors with explosive smuggled to them by the French Underground, and speedily made their way through the gaping holes torn in the ends of the building to the yard where other patriots, who had been at exercise, had already begun to stream through the breaches in the outer wall.

The first squadron of New Zealanders had roared into the fray from a height of a mere fifty feet, and the leader's bombs were seen to hit the eastern wall five feet from the ground. Other bursts were adjacent to the wall, and some overshot into the surrounding fields. The Australians were equally successful in scoring direct hits on their specific parts of the prison.

Here is part of the account given by the Australian pilot who led a section of the second wave at the de-briefing when he landed after returning to Hunsdon:

"From about four miles away I saw the prison and the first three aircraft nipping over the top. I knew then it was O.K. for me to go in. My squadron was to divide into two sections — one to open each end of the prison, and it was now that one half broke off and swept to attack the far end from the right. The rest of us carried on in tight formation. Four hundred yards before we got there, delayed action bombs went off and I saw they'd breached the wall. Clouds of smoke and dust came up, but over the top I could still see the triangular gable of the prison — my aiming-point for the end we were to open.

"I released my bombs from ten feet and pulled up slap through the smoke over the prison roof. I looked around to the right and felt mighty relieved to see the other boys still two hundred yards short of the target and coming in dead on line. They bombed and we all got away O.K., reformed as a section, and made straight for base."

Over the target, Pick had detached himself from the Australians to act as "Master Bomber" and direct the operation. It was left to him to decide whether or not the objects of the raid had been achieved by the first two waves of aircraft — the New Zealand and Australian squadrons — and to order the reserve force — the Mosquitoes of 21 Squadron — either to attack or withdraw accordingly. Calmly and efficiently, in his un-

flurried fashion, Pick skilfully took his 'plane right over the jail, through the smoke and crash of the exploding bombs. Only when he was fully satisfied that each phase of the plan had been efficiently carried out did he announce his decision. Over the radio-telephone the other pilots heard his encouraging tones saying the code word: "Daddy, Daddy, Red, Red, Red."

"Daddy" was a nickname, and Pick had arranged at the briefing that he should say "Red" if the attacks had been successful, and he wanted the 'planes of No. 21 Squadron to turn for home, or "Green" if any part of the operation had misfired, and he wanted them to go in and drop their bombs.

That short sentence of simple, prosaic, and even homely words which signalled complete success was a prelude to personal tragedy. Just as he ordered the last wave to head for base, Pick saw one of his Mosquitoes brought down by the fierce light flak put up by the German defences. The aircraft piloted by Squadron Leader I. R. Mc Ritchie, who was leading a formation of the Australian squadron, was hit near Albert as it swung away from attacking the target. Losing height, McRitchie gamely kept on his course, but near Freneuville his starboard wing tipped ominously, and a few seconds later his 'plane spiralled earthwards.

Noticing the incident, Pick wheeled his 'plane in a tight turn and then pushed the stick down to make a low run over the spot in the hope of determining the fate of the crew. Caught preoccupied and detached from the British fighter escort which was then covering the withdrawal of the main formations, Pick was bounced by a couple of F.W. 190s rushed to the scene to intercept the Mosquitoes. A vicious stream of bullets tore through the fabric of "F for Freddy". Smoke streamed from an engine. Next minute the Mosquito flicked on its back and plunged into a field a few miles from Amiens.

* * *

McRitchie lived to fight another day, but for Pick and Broadley the attack was lethal. Villagers who had seen the whole attack on the prison hurried to the spot, but the 'plane's gallant occupants were beyond all help. They removed the bodies to the local church. Later the Germans forced them to hand over the remains, but not even the local Gauleiter's sternest decree could prevent them from attending the funerals in the cemetery alongside Amiens prison.

After the liberation, when Pick and Broadley's comrades went to seek news of their fate, the villagers presented them with photographs of the flower-heaped graves, and with the few personal belongings of the two men which they had secreted from the Germans.

Their deaths had not been in vain. Out of a total of more than 700 prisoners in Amiens jail, over two hundred — including nearly all the men facing death for helping the Allies — were able to escape.

True, some were later recaptured, but apart from the immediate results of the operation, the raid on Amiens jail struck a shattering blow at German morale and helped to hasten the rout which only ended with the complete eclipse of the Third Reich.

SO WOULD WE!

The following letter was recently received by the Directorate of Ground Defence at A.F.H.Q.:

Dear Gentlemen:— I was wondering if I could get some information on flying saucers, if you have any available. I would like to know the speed and description of them, and how big they are. (Writer's name withheld.)

The ROYAL CANADIAN AIR CADETS

By Arthur Macdonald, Air Cadet League of Canada.

1954 IN REVIEW

As another year draws to a close and the festive season is upon us, let us take time out from our Christmas planning to reflect upon some of the more notable performances on the Air Cadet scene across Canada during 1954. Some of these achievements have already been recorded in special announcements from League Headquarters, but they bear repeating here because of their interest to everyone connected with the Air Cadet movement.

Our sincere congratulations are extended first of all to No. 266 Squadron, of Kimberley, B.C., which was rated as the "most proficient" of Canada's 263 Air Cadet units and awarded the R.C.A.F. Association Trophy for 1954. The Kimberley squadron rolled up an impressive total of 1,983 points out of a possible 2,000 to wrest the trophy from last year's winner, No. 22 (Powell River) Squadron.

The R.C.A.F. Association award takes into account all phases of squadron operation, including attendance at parades, effectiveness of the training programme, participation in community activities, and level of interest on the part of the civilian sponsoring committee. Squadrons are rated in accordance with a special formula by visiting officers of the R.C.A.F. at the time of the annual inspections.

The R.C.A.F. Association Trophy — a striking design symbolizing modern flight — was presented to officials of the Kimberley squadron at the annual meeting of the British Columbia Provincial Committee held in Vancouver last month. The award carries with it a cash grant and a framed parchment for the squadron's permanent retention.

No. 266 Squadron also captured the Air Vice-Marshal Guthrie Trophy which goes each year to the top squadron in western Canada. Guthrie

H.R.H. the Duke of Edinburgh inspects a tri-Service cadet guard of honour at Camp Sardis, B.C. The Duke is honorary Air Commodore-in-Chief of the R.C.A.C.

No. 51 Squadron's drill team with some of the trophies won by the squadron in 1954. The Commanding Officer, Sqn. Ldr. A. E. Percival, stands on the right.

Shields, awarded to the most proficient unit in each of the western provinces or zones, went to No. 22 (Powell River) Squadron, B.C.; No. 187 (High River) Squadron, Alta.; No. 25 (Campion College) Squadron, Sask.; No. 302 (Flin Flon) Squadron, Man.; and No. 66 (Fort William) Squadron, North-Western Ontario Zone.

In the Atlantic provinces, the prize squadron of the year was undoubtedly No. 315 (Newcastle), which won the Price Trophy, awarded annually to the top squadron in the area supervised by Maritime Air Command. The Newcastle squadron also copped the Lambert Trophy for the most proficient squadron in New Brunswick, and the provincial Strathcona Award as the outstanding school squadron in the province.

A number of other Maritime squadrons deserve special mention for their showing in 1954. No. 60 (Charlottetown) Squadron carried off the Group Captain Lewis Trophy, awarded to the top squadron in Prince Edward Island. Nova Scotia's leading unit was No. 517 (Middleton) Squadron, which won the Provincial Committee Trophy in competition with all other squadrons in the province, and the Strathcona Award as the most proficient school unit in N.S. It is encouraging to note that a relatively new squadron, No. 543 (Musquodoboit), was rated as the best squadron at the Greenwood Summer Camp and received the C. K. Beveridge Trophy. In Newfoundland, No. 515 (Atlantic) Squadron, of St. John's, led the parade and won the Macgillivray Trophy for all-round efficiency.

At the time of writing, we lack complete information on the various awards made in the central provinces of Ontario and Quebec, although we hope to mention these in a later issue. Reference must be made, however, to the superb record of No. 51 (Ottawa Optimist) Squadron, which carried off no less than three coveted trophies — the A.O.C.'s Trophy, awarded to the most proficient squadron in Quebec and Eastern Ontario; the Walsh Trophy, for the best Air Cadet drill team in the same area; and the Lumsden Trophy, for the top unit in the Ottawa district. Congratulations are also extended to No. 4 (Chomedey de Maisonneuve) Squadron, winner of the Illsley Band Trophy for no less than eight consecutive years.

One of the most coveted individual awards of the year went to Arthur de Vries of No. 395 (Edmonton) Squadron, who captured top honours in the summer scholarship flying training course. Cadet de Vries topped the 250 cadets across Canada who were competing for the Air Cadet League Trophy, by chalking up an average of 90.75% on flying and written tests. His victory gave Edmonton the trophy for the fourth successive year, previous winners having been Cadets Roger Neill, Fred Parkinson, and Gerald K. Shook.

The Air Training Corps "Token of Friendship" Trophy again went to the North-Western Ontario Zone Committee headed by Gordon Dalzell of Fort William. This trophy is awarded to the area committee whose cadets score the highest average results on the flying scholarship course. Lakehead Air Cadets, training at the Thunder Bay Flying Club, rolled up an average score of 76.32%. Saskatchewan took second place with 76.24%, and New Brunswick third with 75.2%.

Winner of an important Air Cadet League scholarship in 1954 was Cadet Sannu Molder of No. 283 (Toronto) Squadron, who received a $500-grant enabling him to enroll as an aeronautical engineering student at the University of Toronto. A native Esthonian whose parents made their way to Canada to escape the Russian occupation, Sannu Molder has already proved himself to

Flt. Sgt. M. Thom, of No. 223 (Vernon) Squadron, meets King Gustav Adolph during the former's exchange visit to Sweden.

be an outstanding Air Cadet and a promising citizen of Canada.

This report would hardly be complete without again offering a salute to Cpl. R. J. Lawson of No. 259 (Penticton) Squadron, who received the President's Trophy awarded to the No. 1 cadet on the Senior Leaders' Course, and to Warrant Officer P. R. Murray of No. 562 (Cabot) Squadron, North Sydney, N.S., who captained the Air Cadet precision drill team which appeared before 35,000 spectators at the Minnesota State Fair.

A unique distinction earned by Cadet Gary Nelson, of Sault Ste. Marie, is worthy of mention here — if only because of the space it commanded in several of Canada's largest newspapers. Here's how Clifford Luton told the story in the Toronto "Telegram":

It was the smartest salute young Gary Nelson chopped off in his several years as an Air Cadet — and it stopped the Duchess of Kent.

She spotted Gary — smartly to attention in a newly-pressed uniform as she left the Royal York Saturday night on the way to dinner with Lieutenant Governor Louis Breithaupt.

Radiant in a white and silver evening gown, a spray of green flowers pinned over the blue sash of a Royal order, she stopped and took his hand.

"Hello", said the Duchess, "how old are you?"

Several hundred people squashed the grinning Mounties against the Royal car to hear Gary gulp: "Sixteen, Ma'am."

Princess Alexandra was grinning, too.

Gary, dazzled at the sudden splendour of what started out as one smart salute, found himself surrounded by equerries, ladies in waiting, and smiling brass-hats.

"I'm from Sault Ste. Marie, Ma'am, and I just spent two weeks training at Clinton air station", he said nervously. "I could have gone to the Exhibition, but I thought I'd like to come here instead."

The Duchess asked a few more questions, and told Gary she was enjoying Canada.

Then the Royal party was gone and Gary was joined by his back-slapping buddies from No. 155 Squadron, Sault Ste. Marie Air Cadets.

Five of them crowded in the Royal York vestibule when Mrs. Ina Woods told her 16-year-old son Jerry Woods — a cadet corporal — that the Duchess was due to leave.

Patient hotel detectives turned a blind eye while 155 Squadron fell in — arguing whether one should take pictures and salute, or salute first and take pictures. Finally they gave L.A.C. Chris Greaves the camera, and strict orders to concentrate on the pictures while the rest saw to the formal side of the turn-out.

Sgt. Owen Moore, 17, called the party smartly to attention when the Duchess appeared. Three of the lads saluted. Chris nearly dropped the camera in the excitement.

But the Duchess slowed down, waited while he got a good snap, smiled, and carried on.

Cadet Gary Nelson salutes the Duchess. (Photograph by "The Telegram", Toronto.)

Pin-Points in the Past

In June 1949 we published in "The Roundel" an account of the Hudson Strait Expedition of 1927-28. Since then we have received from Mrs. Duncan Black, whose husband was a member of the Expedition, and from Flt. Lt. G. B. Randall, several additional photographs of that interesting episode in the early days of the R.C.A.F. We recapitulate below, very briefly indeed, the story of the Expedition.

The Hudson Strait Expedition in 1927-28 was sent into the field to determine an absolute time-limit for marine navigation, to test the use of aircraft as an aid to navigation, and to explore the possibility of establishing air operational bases in the Hudson Strait.

On July 17, 1927, the expedition, consisting of forty-four permanent personnel aboard the Canadian Government ice-breaker "Stanley", and of non-permanent personnel such as construction men (together with all supplies and equipment) aboard the S.S. "Larch", sailed from Halifax for Port Burwell. Three bases were to be established: one at Port Burwell, one on Nottingham Island, and one at Wakeham Bay. Each base was to be equipped with two Fokker aircraft, a 30-foot motor launch, a tractor, and all other necessities of life.

Establishment of all three bases was completed before winter had set in; and routine patrols were carried out daily from each base (weather permitting), and also special patrols. Floats gave place to skis around the end of November, and during the ensuing winter season three incidents occurred that might have ended disastrously.

Expedition members at Borden before departure. Left to right: Flying Officer A. J. Ashton, Cpl. A. H. Warner, Cpl. D. B. Chambers, Cpl. F. J. Ewart, Sgt. W. Keighley, Cpl. Kircaldy, Flt. Sgt. D. Black.

The first of them happened when Flt. Lt. A. A. Leitch, M.C., D.F.C., returning from Eric Cove at Cape Wolstenholme to Nottingham Island, ran into snow-storms, became lost, and was forced to land on the ice floe and wait for clearer weather. Thanks to his good calculations and his emergency kit, he arrived back at the base next day — but with only about one quart of fuel in the tanks.

The second incident occurred when Squadron Leader T. A. Lawrence was proceeding from Wakeham Bay to Nottingham Island in early January. Heavy snow-storms were encountered about twenty miles east of Digges Island, and the pilot turned back and landed at Sugluk Inlet to await better conditions. The following day another attempt to get through to Nottingham was made, but the weather was still too bad. It was then decided to go back to Wakeham Bay, but snow-storms near Cape Weggs necessitated a landing in Deception Bay. Here the aircraft and crew were forced to remain for nine days, during which time typical arctic weather and storms prevailed. On the eighth day, while making ready to take off, a search aircraft arrived from Wakeham Bay. Lawrence's plane was dug out, and both aircraft returned to their base at Wakeham on the following day.

The third and last incident was nearly a fatal one. Flying Officer A. Lewis, on patrol from Port Burwell with a mechanic and native, became lost in a heavy snow-fall on his return from Resolution Island. Exhaustion of his fuel supply necessitated a forced landing on hummocky floe ice. The crew were

The abandoned Moravian Mission at Port Burwell, used by the expedition as living-quarters.

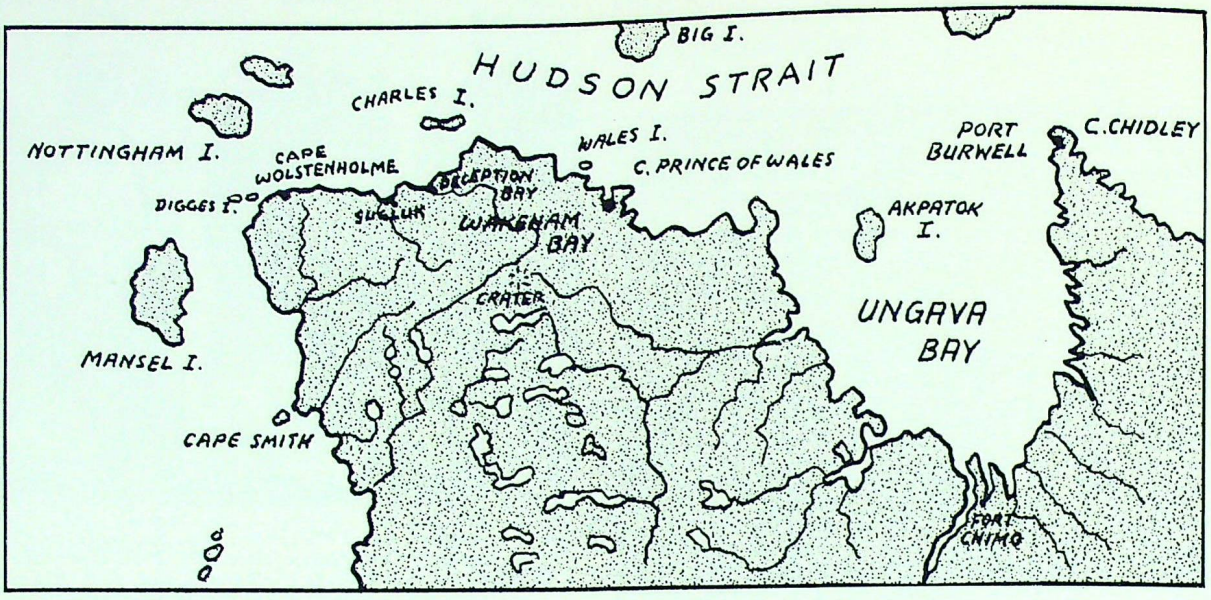
unhurt, but it became necessary to abandon the aircraft. The men set out east across the ice, to discover after one full day's travel that they were actually on floe ice in the Atlantic Ocean off the Labrador Coast, and not in Ungava Bay, as they had at first estimated. They travelled westward for seven days, reaching the Labrador Coast after much privation. Their food all gone, they were forced to live on raw walrus shot by their native companion. After reaching the land, the party travelled north along the Labrador Coast for four days. During this time they saw no signs of life of any description, human, animal, or bird; and having no fuel for their primus stove, they suffered greatly from cold as well as hunger. On the fifth day they were favoured by fortune and came in contact with an Eskimo hunter and his wife. They arrived back at Burwell, by dog-team, at midnight on the thirteenth day of absence from their base.

After the replacement of floats on the aircraft (about the end of June 1928), operations were carried out until Aug. 3rd, by which time all ice had left the Strait and further aerial observations were unnecessary. Recommendations were then made to the leader of the expedition to have flying operations cancelled and to begin at once the conditioning of aircraft for the flight south to Ottawa, as it was the intention to fly all serviceable machines out from the area of operations. The condition of the aircraft proved inadequate, however, and they were eventually shipped home aboard the "Canadian Voyageur."

Before the freeze-up at Wakeham Bay. Seated (l. to r.): Flying Officer B. Carr-Harris, Sqn. Ldr. T. A. Lawrence. Standing (l. to r.): Cpl. A. H. Warner, Cpl. J. F. Riggs, Sgt. A. Caggie (R.C.A.F.), Flt. Sgt. D. Black.

Cpl. A. H. Warner with two Wakeham Bay belles.

Concert party at Wakeham Bay. Left to right: Dr. W. J. K. Clothier, Flt. Sgt. D. Black, Capt. W. Laurie, Flying Officer B. Carr-Harris, Cpl. J. F. Riggs (R.C.A.F.) Romeo Lemieux. In front: Sqn. Ldr. T. A. Lawrence.



The Wakeham Bay orchestra. Left to right: Flying Officer B. Carr-Harris, Romeo Lemieux (storekeeper), A. E. Axcell (wireless operator), Sqn. Ldr. T. A. Lawrence, Dr. W. J. K. Clothier.

Flying Officer B. Carr-Harris.

On board the S.S. "Nascopie", which brought the expedition's first mail to Port Burwell on 12 Sept. 1927. Front row (l. to r.): Capt. W. Laurie (R.C.C.S.), Dr. W. J. K. Clothier (M.O.), Cpl. Torrie (R.C.A.F.), Cpl. F. J. Ewart (R.C.A.F.), Flying Officer A. J. Ashton, Cpl. A. H. Warner (R.C.A.F.), Sgt. P. Semple (R.C.A.F.), Flt. Sgt. Terry. Back row (l. to r.): Flt. Lt. F. S. Coghill, Flt. Sgt. D. Black, Sqn. Ldr. T. A. Lawrence, unidentified ship's officer, Sgt. Hall (R.C.C.S.), Cpl. Nichols (R.C.M.P.).

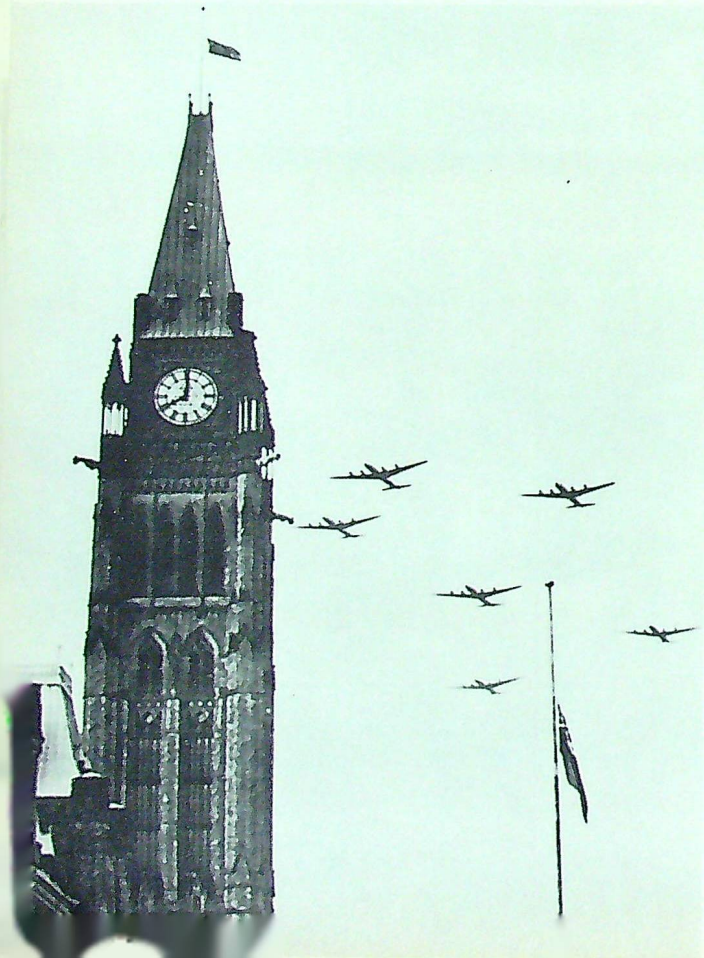
Checto and Sqn. Ldr. T. A. Lawrence, on completion of a seven-day trip by dog-team from Port Burwell round Ungava Bay to Wakeham Bay.

OPERATION "HAWK"

By Flying Officer W. D. Stevenson

(The R.C.A.F.'s part in the Korean airlift received its share of public attention during the four years in which it was being played. As far as we know, however, a concise picture of Operation "Hawk" as a whole has not as yet been sketched. We therefore feel that Flying Officer Stevenson's article may be of some interest to our readers. The author, who joined the R.C.A.F. in 1951, has been a Radio Officer with No. 426 Squadron since May 1952.— EDITOR.)

SHORTLY after the North Korean communist armies struck south across the 38th parallel on 25 June 1950, it was rumoured that the R.C.A.F. would send a transport squadron to Korea. Then, early in July, Prime Minister St. Laurent announced officially that No. 426 Transport Squadron had been offered for service with the U.N. forces.



The first flight, Korea-bound, flying past the Parliament Buildings in Ottawa.

The commitment was directly from Canada to the U.N., but the squadron was to serve under the operational control of the United States Military Air Transport Service (M.A.T.S.), a unified air transport organization of the United States armed forces. The squadron's job was to be the airlifting of personnel and equipment to and from the Korean theatre of war. For the airlift, the R.C.A.F. chose the name "Operation Hawk."

No. 426 (Thunderbird) Squadron was ready for the task. It had carried out many flights to the United Kingdom and Europe and was just completing a series of special training flights, in Canadian-built North Stars, to the Azores, North Africa, and South America. In preparation for the new job, its commanding officer, Wing Cdr. C. H. Mussels, D.S.O., O.B.E., D.F.C., and other Air Transport Command officials attended conferences at Washington and Ottawa during the first half of July. The base of operations for the airlift was to be McChord Air Force Base, near Tacoma, in the state of Washington.

On July 25th, six North Stars took off from Dorval airport. At Ottawa they passed in formation over the parliament buildings, dipped their wings in salute to the late Rt. Hon. Mackenzie King, whose body was lying in state in the Peace Tower, and set course for the west and the beginning of Operation "Hawk". The next day they landed at McChord and began to set up their servicing and administrative organization. Within

Over the Pacific. Flt. Lt. A. J. P. Byford, D.F.C., and Flying Officer D. H. Kuhn.

36 hours, the first three aircraft were headed for Tokyo. They completed the round trip in an average elapsed time of 81 hours.

The early days were hectic. At the time of the opening of the Korean War, McChord A.F.B. had been the base for a single fighter squadron. Now, almost overnight, it had become the stepping-off point for what was to be the greatest long-range air transport operation of all time.

When the North Stars arrived, M.A.T.S. had already brought in two transport groups, one from Texas and one from Germany. McChord's servicing facilities were completely overtaxed, and the Americans could offer only limited aid to the Canadians. Thus, the Canadian technicians depended almost entirely on the equipment they had brought with them from Dorval. There was hangar space for only one aircraft, so that much of the work had to be done outside. However, it was summer, and there was little bad weather to interfere with the airmen's round-the-clock work. ("Nose-docks", which were constructed later, eased the servicing problem.)

Almost immediately, the squadron was operating on a schedule several times heavier than that which had been expected. By mid-August, the six aircraft and twelve crews were flying one round-trip per day over a route of 10,000 miles. This meant that aircrew began a new trip every eleven or twelve days, sometimes logging 150 hours or more per month, while each North Star was flying more than 300 hours per month. But the cargoes were as vital as the schedule was heavy. Often the entire load consisted of fully-armed infantry or bazooka rockets. Speed was the essential factor to be considered.

The route flown was the great-circle track through Elmendorf A.F.B., at Anchorage, Alaska, to Shemya, far out in the Aleutian chain, and terminating at Haneda A.F.B., on Tokyo bay. Drawing on their trans-Atlantic experience, the Canadian navigators were key men in setting up procedures for all M.A.T.S. aircrew. During the early months of the airlift, it was No. 426 Squadron crews who conducted the route briefings at McChord. The Shemya-Tokyo leg skirted close by the Russian-held Kurile Islands, far beyond range of radio and radar navigational aids. The navigators depended on astro, pressure drift, and dead reckoning navigation — and often they had to do without astro because of overcast cloud layers.

Cpl. C. E. Hawton (left) and L.A.C. A. J. Hazel go shopping in Tokyo.

Shemya. Not contemplating a swim are L.A.C.s W. D. Fiddler (left) and J. B. Barton.

It was Shemya that early made the greatest impression on the aircrew, and, as the years went by, its reputation grew until it became famous throughout the Air Force. It had a reputation for thick fog — largely, no doubt, because the airlift began in mid-summer, when "pea-soupers" are common. Ground-Controlled Approach landings were the rule rather than the exception. However, the U.S.A.F. always supplied its best G.C.A. operators: during the early airlift days they were mostly veterans of the Berlin Blockade. Their skill was welcome when, as often happened, conditions of minimum or below-minimum ceiling and visibility were complicated by the gale-force winds that blow for days across the barren island.

The northern route was used most of the time, but, for six months after December 1950, the return from Tokyo was routed through the South Pacific. From Tokyo, flights steered a course for Wake Island, and from there they flew via Honolulu to Travis A.F.B., sixty miles from San Francisco, and thence back to McChord.

Along the routes the squadron placed servicing detachments of fifteen or twenty airmen. They were at first commanded by senior N.C.O.s, later by officers. Handling as many as two aircraft arrivals per day, the detachments contributed much to the Canadian technicians' remarkable servicing record.

A "slip-crew" system was used at most of the stopping-places. Tired crews turned over their aircraft to the fresh crews who were waiting at each such place, and then waited, in their turn, for the next aircraft.

Each stop-over point evokes special memories for past and present members of No. 426 Squadron.

At Elmendorf they found the highest food-prices and the greatest concentration of bars and saloons they had ever encountered. It was said there was one bar for every fifty people in the nearby city of Anchorage.

Shemya meant days of boredom alleviated by continuous card games. There was also the opportunity of swimming in the Bering Sea and the North Pacific, but this pastime never became too popular.

Tokyo, on the other hand, was *very* popular. Until the end of the occupation in 1952, the officers stayed at the Australian-run Marunouchi Hotel, a luxury establishment featuring ten-cent drinks

Sgt. J. Ward and Cpl. H. Canuel meet Canadian reinforcements arriving at Haneda. Descending the ramp are: Privates F. Young, E. B. MacDonald, A. Hearsey, and I. Baker.

and marathon meals of epicurean standards. In the Ginza shopping-district, the officers and airmen practised and enjoyed the oriental art of bargaining. When they tired of the city, they could take their choice of a series of American leave hotels situated near Mount Fuji and other famous Japanese tourist attractions.

At Wake Island — seven miles of coral and snow-white sand — they prepared their sun-tans for the stay in Honolulu. Regular members of the squadron early learned respect for the potency of the burning Wake sunshine, but the island became notorious for the disastrous sun-burning of pale-skinned staff officers who frequently did familiarization trips on the route.

At Honolulu, the Canadians learned the joys of a tropic isle — and loved every minute of it. The slip-crews stayed at the Moana Hotel, near the famous Royal Hawaiian, alternating their spare time between surf-boarding and a club called "Don the Beachcomber's".

Around the airlift there inevitably grew up a collection of nostalgic stories. They were the folklore of the route and they may still be heard whenever veterans of Operation "Hawk" are reminiscing. Unfortunately, many are not suitable for publication and can therefore not be published in these chaste pages.

Mention of the officers' billet in Tokyo, the Marunouchi Hotel, always brings up tales of Flt. Lt. (now Squadron Leader) Forbes Nelles' prodigious bouts with the hotel's delicious food. The menu listed about every variety of food imaginable, so that normal mortals could no more than sample it. On one occasion, however, Flt. Lt. Nelles started an Air Force legend when, after perusing the menu, he remarked casually to the wide-eyed waitress: "Well, I don't see anything I don't like"— and then proceeded to prove his boast.

At McChord there took place the escapade of a Radio Officer who probably will prefer to remain anonymous. Fresh from Lachine, he had joined the squadron at McChord in the spring of '51. Nobody had thought to inform him on his arrival that the barracks' cleaners were women. Therefore, when he decided to freshen up after his long flight to McChord, he left his room *sans* everything except soap and towel. Just as he reached the shower-room door, the "batlady" of the barracks (unfortunately for him, rather young and attractive) was leaving it. He swears to this day that she calmy regarded his undraped form and drawled archly: "Ah, September Morn!"

Shemya had its perennial story of the mythical "Saturday-night dance" at the nearby island of Agattu. Every initiate to the airlift was told, as he approached Shemya, that Saturday was the big night on the island, for on that occasion, the girl-

Viscount Alexander inspecting the Guard of Honour during his visit to McChord Air Base. Behind him is the former Minister for National Defence, the Hon. Brooke Claxton.

starved men of the U.S.A.F. base could take the boat to Agattu and dance with the fish-cannery girls. Elaborations on the story were endless, and more than one neophyte was talked into pressing his clothes and shining his shoes on a Saturday afternoon. Some are even reputed to have spent dismal hours in the blasts of the North Pacific winds, waiting vainly at the shore for the boat to come and pick them up . . .

After the first hectic months, Operation "Hawk" settled down to a routine of fifteen trips per month.

Some of the squadron's airmen.

By June 1951, Wing Cdr. Mussels had handed over command of the squadron to Wing Cdr. (now Group Captain) J. K. F. Macdonald, D.F.C., and the squadron returned to Dorval soon afterwards. From Dorval it continued to carry out its airlift commitments as well as its other flying duties. One year later the schedule was reduced to eight trips per month, and it remained at that rate until the end of the operation. In July 1952, Wing Cdr. H. W. Lupton, A.F.C., took over command of the squadron.

Statistics of the work done during the four years of the airlift are impressive. In 599 round trips, No. 426 Squadron carried 13,000 personnel and 7,000,000 lbs. of freight and mail. This added up to 34,000 flying hours, during which not a pound of cargo or a single life was lost.

After the return of the squadron to Dorval in 1951, the airlift, as has been already implied, was only part of its commitments. The flights between Dorval and McChord were utilized for trans-Canada schedules. Arctic and other special flights were resumed, and the North Stars flew on an increasingly heavy schedule to Europe in support of the Canadian N.A.T.O. forces located there.

Operation "Hawk" was concluded on 9 June 1954, when trip no. 599 was greeted at Dorval by a modest concluding ceremony. The operation had been ended by the removal of the weather facilities at Shemya. Without Shemya as a staging-point, it would have been uneconomical to operate the North Stars over the long flight to Japan.

In announcing the decision to end the operation, Minister of National Defence Brooke Claxton said: "To all those who have taken part in the R.C.A.F.'s operations on the airlift, I pass my personal congratulations for a demanding task done in proper Air Force fashion. I can give no higher praise than this."

THE ROOT OF TYRANNY

The people always have some champion whom they set over them and nurse into greatness. This is the root from which a tyrant springs; when he first appears he is a protector. (*Plato.*)

Unveiling of the ALAMEIN MEMORIAL

Commemorating those soldiers and airmen of the British Commonwealth and Empire who fell in the Egyptian and Libyan campaigns of the Second World War, the Alamein Memorial was unveiled by Field Marshal Viscount Montgomery on October 24th. The memorial stands, on land given by the Egyptians, at the north side of the existing military cemetery at Alamein, to which it forms the principal entrance. Along the cloisters, which run for nearly 270 feet, panels of Portland stone bear the names of 11,945 men. Of that number, 2,138 served with the R.A.F.; 215 with the R.C.A.F., 317 with the R.A.A.F., 90 with the R.N.Z.A.F., and 460 with the South African Air Force.

Canadian representatives at the ceremony included:

Lt.-Gen. M. Pope, C.B., M.C., Canadian Ambassador to Spain, representing the Canadian Government.

Air Cdre. A. D. Ross, G.C., C.B.E., Air Member of the Canadian Joint Staff, London, representing the R.C.A.F.

Air Vice-Marshal G. E. Brookes, C.B., O.B.E. (ret.), representing the R.C.A.F. Association.

The Very Rev. J. O. Anderson, M.C., Dominion President of the Canadian Legion.

Mr. A. J. Wickens, Dominion President of the Army, Navy, and Air Force Veterans.

An R.C.A.F. detachment of one officer and fourteen airmen from air bases in Europe.

Seven airmen of the R.C.A.F. detachment. Front row (left to right): L.A.C. P. Jennings, L.A.C. R. L. Fiegehen, Flt. Sgt. W. J. Jenkins. Back row (left to right): Cpl. A. Wood, Cpl. A. C. Stebbing, L.A.C. E. L. Jones, L.A.C. J. A. S. Smith.

Air Vice-Marshal Brookes.

Air Cdre. Ross

The Canadian Aeronautical Institute

By Wing Commander E. P. Bridgland,
Power Plant Development Section, Directorate of Development "A", A.F.H.Q.

On October 14th and 15th the Sheraton-Mount Royal Hotel in Montreal was the scene of an important event in Canadian aeronautical history. The newly-formed Canadian Aeronautical Institute took part in its first joint international meeting with the Institute of the Aeronautical Sciences. Before describing the happenings at this meeting it may be well to provide our readers with a short history of the formation of the C.A.I. and a description of its aims.

For many years technical societies for the advancement of aeronautical sciences have existed in the United Kingdom and the United States. These societies are respectively, the Royal Aeronautical Society, which was founded in 1866, and the Institute of the Aeronautical Sciences, founded in 1933. Through Canadian branches of these organizations and other local groups, Canadians interested in the science of aeronautics were able to satisfy their need for a technical society.

Gradually, however, the requirement became more and more apparent for a wholly Canadian organization; and in the summer of 1953 the first organizational meeting was held. At this meeting an Interim Council was formed, with Group Capt. H. R. Foottit, the present Director of Development "A" at A.F.H.Q., as chairman. To his council, which undertook its considerable task with zeal and determination, goes the credit for the successful formation of the Canadian Aeronautical Institute.

The object of the Institute, as outlined in its Bylaws, is the advancement of the art, science, and engineering relating to aeronautics. This object will be achieved by providing for the exchange of information between members through the media of meetings, establishment and maintenance of libraries of aeronautical information, and the publication of a journal. In addition, the Institute will promote the exchange of aeronautical information between itself and other aeronautical societies in the United Kingdom and the United States, encourage invention and research, and establish a professional status for its members corresponding to that of members of the Royal Aeronautical Society in the United Kingdom and the Institute of the Aeronautical Sciences in the United States.

In the short space of nine months much was accomplished. The name and official emblem were agreed upon and adopted. Bylaws and regulations were drawn up, and an official Canadian charter was obtained. The aeronautical societies in Toronto, Montreal, and Ottawa were officially dissolved and their members made application for membership in the Canadian Aeronautical Institute. Branches of the C.A.I. were formed in Toronto, Montreal, and Ottawa. Canadian aeronautical firms were approached to provide financial support as sustaining members of the Institute. And, finally, arrangements for the first annual meeting and the inauguration of the first executive were made.

The first Annual Meeting, held on 25 May 1954 in the Chateau Laurier Hotel in Ottawa, was a tremendous success. The after-dinner guest speaker was a distinguished aeronautical engineer, Air Vice-Marshal Allan Ferrier (retired), who has contributed substantially to Canadian and international aviation during his career with the R.C.A.F., the Air Transport Board, and the International Civil Aviation Organization.

As already stated, part of the Society's objective is the exchange of information between the

Institute, the Royal Aeronautical Society, and the Institute of the Aeronautical Sciences. To this end, the International Meeting sponsored by the I.A.S. and the C.A.I. was held in Montreal on 14 and 15 October 1954.

The meeting was officially opened by Mr. E. B. Schaefer, chairman of the Montreal branch. He then turned the meeting over to Mr. T. E. Stephenson, of the Department of Defense Production, who was technical chairman for the first session.

Dr. G. N. Patterson, Head of the Department of Aeronautical Engineering, University of Toronto, read the first paper, entitled "The Rôle of Fluid Mechanics in Aeronautical Development". He dealt briefly and simply with theoretical advances in aerodynamics, illustrating how these had contributed to advancement of aeroplane design. He spoke, too, on the subject of the calculation of lift and drag, effects of boundary layer and compressibility, and, finally, on temperature effects.

The next paper was given by Mr. A. Scott Crossfield, of the National Advisory Committee for Aeronautics in the United States. Mr. Crossfield is one of the leading pilots of supersonic aircraft, and his lecture was entitled "Flying Techniques on Research Airplanes". He outlined the American policy of building research aeroplanes to obtain data at supersonic speeds for use in the design of aircraft destined for production. He also described some of his experiences in flying research aeroplanes, thus supporting his view that piloted aircraft will be in vogue for some time to come.

The first session was concluded with a lecture by Mr. Harry Hall, of the National Aeronautical Establishment, on "The Nature and Stiffness of Swept Wing Deformation with Reference to the Prediction of Normal Modes and Frequencies". Mr. Hall gave an elaborate theoretical treatment of his subject, showing the variation of frequency and form of vibration with wing stiffness and sweepback. His own theoretical studies and experimental work have led to the method presented by him of estimating modes and frequencies for various wing shapes.

The afternoon session was ably handled by Mr. W. K. Ebel, Vice-President, Engineering,

Dr. J. J. Green addresses the meeting.

Canadair Limited. The opening paper was presented by Mr. B. A. Avery of the Gas Turbine Division of A. V. Roe Canada Limited. Mr. Avery spoke on problems that had been encountered in designing the Orenda engine and how they had been overcome. He then discussed some of the future problems that faced gas turbine designers if improved performance was to be achieved. Finally, he quoted some data illustrating the importance of obtaining maximum engine performance in supersonic aircraft.

The second lecture of the afternoon was a stimulating talk by Ernest G. Stout, of Convair, entitled "Bases Unlimited". This lecture, well supported by slides and motion pictures, outlined the Convair conception of an air force without airfields. Various operations were shown in which the new Convair turboprop-powered flying boat was used as a supply aircraft, mobile workshop, or mother ship for the two Convair fighters, the Sea Dart and the vertical-take-off aircraft. Motion pictures of the Sea Dart taking off and landing on water were shown. Further pictures showed the vertical-take-off aircraft in controlled flight inside the hangar and in free vertical flight outside.

The final paper of the afternoon session was delivered by Mr. R. K. Anderson, Assistant Industrial Engineering Manager, Aircraft Division, A. V. Roe Canada Limited. The subject of his paper was "Production of an All-Weather Long-Range Jet Fighter". Mr. Anderson presented the case for beginning to build new aircraft in limited quantities by production methods rather than by starting off with hand-built prototypes as has

been the practice in the past. With this method, he maintained, time and money could be saved in getting aircraft into production, as it eliminated the delay in re-engineering for production and reduced manufacturing costs of early aircraft.

In the evening, 450 members and guests gathered in the Sheraton Hall for dinner. The dinner was presided over by Dr. J. J. Green, President of the C.A.I. Other members of the head table were Admiral Richardson and Mr. S. Paul Johnston, of the A.I.S.; Group Captain Foottit, of the C.A.I.; and a number of distinguished guests including Dr. H. L. Dryden, Director of N.A.C.A. and guest speaker, Dr. O. M. Solandt, Chairman of the Defence Research Board, and Air Vice-Marshal C. R. Dunlap, Vice-Chief of the Air Staff, R.C.A.F.

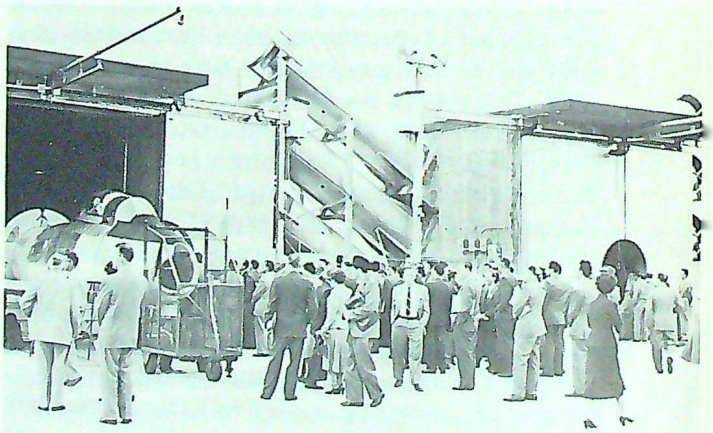
Dr. Dryden gave an interesting address on research and the "art" of engineering. He outlined the change that has taken place in aeroplane design procedures since the Wright brothers' first flight. The Wright brothers did their own research, their own design, their own construction, and finally their own test-flying. Nowadays, on the contrary, an aeroplane is the result of the collaboration of many research groups, a large design team, and many workers. Dr. Dryden gave examples from his own experience of collaboration between research workers and designers. His address was witty and humorous, with laughs provided at the expense of both the researchers and designers.

After the guest speaker had been thanked by Prof. T. R. Loudon, the chairman adjourned the meeting and the first I.A.S.-C.A.I. dinner was ended.

On the following day the third and last technical session was held under the chairmanship of Mr. G. R. McGregor, President of Trans-Canada Airlines. Mr. Charles W. Carmody, of the Civil Aeronautics Administration, presented the opening paper, entitled "Air Traffic Control for Turbine Transports". He dealt with the problems peculiar to turbine-powered aircraft and indicated that a revision in the present regulations will be necessary to make these aircraft competitive with reciprocating-engine powered transports. In particular, the holding, stacking, and flight clearance procedures must be changed in order to conserve fuel. The speaker expressed the opinion that turbine-powered aircraft, since they will be in the minority for some years to come, will be forced to conform to the existing traffic regulations and will suffer as a result, but that changes to the procedures will occur when such aircraft are more numerous on scheduled operation. The talk gave rise to a discussion which quickly indicated the provocative nature of this subject.

Wing Cdr. C. H. Mussels, C.O. of the R.C.A.F. Central Flying School at Trenton, Ontario, presented a paper on R.C.A.F. Training Operations. He outlined the existing pilot training methods, and indicated that the current thinking was directed away from the medium-powered reciprocating-engine trainer, such as the Harvard which is the present mainstay of the training operations. The speaker felt that a short course on low-powered primary trainers (to eliminate trainees who suffered from sickness or complete ineptitude) should be followed by "all-through" jet training. By this means, students would become accustomed to turbine engines and tricycle undercarriages at an early stage in their training. Wing Cdr. Mussels then emphasized the importance of crew selection

At the Canadair plant.



on modern interceptors such as the Canuck, where pilot and radar observer must integrate their efforts in order to achieve successful interceptions.

The final paper of the session was given by Mr. Kenneth C. Gordon, of the Boeing Airplane Company. Mr. Gordon described in some detail the design aspects of the new Boeing turbojet airliner, the Model 707. After the lecture, a film of the early flights of this aircraft was shown. The audience then had an opportunity to ask questions, and Mr. Gordon was kept busy until Mr. McGregor was forced to adjourn the meeting in order not to interfere with the visit to Canadair in the afternoon.

The visitors were split into groups of eight, each group being escorted by a Canadair representative who provided information on the various processes on display. They were able to see the various steps taken in the production of T-33 and Sabre aircraft as they progressed along production lines. The excellently planned trip was climaxed by a flying display by a T-33 and a Sabre 5, performed against an impressive cloud background provided by approaching Hurricane Hazel.

All members who attended the first I.A.S-C.A.I. meeting were unanimously agreed that it was a most successful event. Great credit is due to the Montreal branch of the C.A.I. for the efficient arrangements for the technical sessions, the dinner, and the tour of Canadair; and to the programme committees of the I.A.S. and C.A.I. for the stimulating lecture programme.

(Editor's note:— Copies of the papers read at the above meeting, as well as full details of membership in the C.A.I., may be obtained from: Mr. H. C. Luttman, Secretary, Canadian Aeronautical Institute, 304 Laurier Ave. W., Ottawa, Ont.)

MACROCOSM and MICROCOSM

Taken by L.A.C. D. G. Ashley, of R.C.A.F. Station Saskatoon, the accompanying photograph shows a T-34 Mentor trainer beneath the wing of a U.S.A.F. C-124 Globemaster. This was the first occasion on which either type of aircraft had visited the station.

On the Abolition of Weapons

By Air Marshal Sir Robert Saundby, K.B.E., C.B., M.C., D.F.C., A.F.C. (R.A.F. ret.)

(There are many thousands of sincere people in the world today who honestly believe that the unprecedented severity of a possible future war can be mitigated by "outlawing" nuclear weapons. In this article, which consists of excerpts from a longer one published in "The Aeroplane", one of England's most distinguished airmen returns a sane and tolerant answer to the holders of any such beliefs.—EDITOR.)

ONE OF THOSE who advocate friendship with the Soviet Union . . . writes: "Many newspapers have drawn the very sensible conclusion that now is the time to make new efforts to get agreement on outlawing the H-bomb and atomic weapons."

Now this is a proposition which has a strong appeal to all people of goodwill, whatever their political or philosophical beliefs. If it could be achieved, one might suppose that it would, at one stroke, remove from the world the horrible threat of weapons of mass-destruction, and all the loss of life and the general ruin and catastrophe that their employment would inevitably cause.

The abolition of something that human brains and ingenuity have invented has often been attempted in the past, but such attempts have never succeeded. Of course, there is a legend that the use of gunpowder to propel missiles was discovered by the Chinese thousands of years ago, and that the invention was successfully suppressed by ruthless administrative action.

If this story is founded on fact, the suppression of this invention succeeded for two reasons. First, because it arose long before its time, in an age when mechanical ingenuity was mistrusted and in a land whose people were traditionally contemptuous of the military virtues and devoted to peaceful arts. Secondly, its suppression was the autocratic act of an all-powerful ruler, blessed with a wise, well-balanced and philosophic mind. Not since the ending of Japanese isolation can such conditions have obtained anywhere in the world.

The next time that gunpowder was invented, in the middle ages, it was regarded with great disfavour by the nobility and gentry, as it conferred on the common musketeer the power to penetrate their personal armour. This destroyed their supremacy on the battlefield and, in the course of a few centuries, rendered obsolete the whole tactical doctrine of land and sea warfare which had been built up from time immemorial.

Many serious attempts were made to prohibit or restrict the use of gunpowder in battle. The best known of these was an edict of an Oecumenical Council, which prohibited the use of gunpowder in war "except against infidels". But all these attempts came to nothing.

Then there is the important case of chemical warfare, which seems to give some grounds for hope that effective agreements can be made. Chemical warfare was developed by the Germans in the early stages of the First World War, and it might have won the war for them if they had not used it prematurely in small quantities. After the war it was outlawed by almost universal agreement. Indeed, there is a natural but quite unjustifiable tendency to regard chemical warfare as something which has been successfully abolished by international agreement.

Why did the Germans, or indeed any other belligerent, not use gas in the late war? I do not think that any authoritative pronouncement has ever been made on this matter, but I believe the answer is to be found in the fear of retaliation, in the appalling misery and discomfort of life, civilian and military, under conditions of chemical warfare, and in Hitler's conviction that he could win the war quickly without having to employ it.

When Germany entered the war, she had planned a *blitzkrieg*. She was confident that her new armies, with their armoured divisions supported by powerful air forces, and her new tactics of a hurricane offensive, would speedily overrun her victims, and that there would be no need for her to make use of gas and thus waste time, money and effort in protecting her population from retaliatory

attacks. So she decided to abide by her agreements, confident that if she did not use gas, no one else would.

Later in the war, when her plans went wrong, and defeat must have seemed at least a possibility, we had the mastery of the air over Germany, and Hitler dared not risk the dreadful prospects of Allied retaliation. So gas was not used, but it would be a mistake to suppose that because Hitler did not use it no future aggressor will be tempted to do so.

In fact, with so much of our attention taken up by A-bombs and H-bombs, the use of some new lethal gas might appeal to an aggressor nation as a good opportunity of effecting a devastating surprise. It is a thing against which we must always be on our guard.

During the Disarmament Conference at Geneva, which came to a climax in 1930-31, various proposals involving the limitation or abolition of new weapons were considered. Among them was a proposal for the total abolition of military aircraft. Another called for the prohibition of bombing from the air, except in undeveloped countries. This last qualification was insisted upon by Britain, to safeguard an inexpensive, humane, and effective method of imperial policing, but it has a startling resemblance to the proposal to abolish the use of gunpowder, "except against infidels". All these proposals came to nothing, chiefly owing to the insuperable difficulties of enforcing adherence to such agreements.

It is now suggested that the development of the H-bomb by Russia provides an opportunity for making renewed efforts to obtain agreement for the abolition of these terrible weapons. It is difficult to see in what way it does so. The West cannot agree to abolition unless some absolutely knave-proof system of international control and inspection is set up, which could genuinely guarantee that no country was in fact secretly stockpiling these weapons.

This brings me to the last point. If by some miracle a satisfactory agreement were reached, all A-bombs and H-bombs were destroyed, and the manufacture of all fissionable materials internationally controlled, would such a step in itself add anything to the security of the Western Powers?

It would, of course, remove the dreadful fear of sudden catastrophic attack from the air, bringing destruction and ruin on an appalling scale. But it would, at the same time, divest air power of its chief weapon, and great armies would once more become the chief instrument of national power. The main strength of Soviet Russia lies in her vast manpower, channelled into huge land forces which, for size, are not matched anywhere in the world. The combined land forces of the North Atlantic Treaty Organization fall very far short of the totals which Russia could put into the field.

In my view, it is the possession by the Western Powers of a superior stockpile of atomic weapons, and of a strategic air force capable of delivering them at the target, that has confined Russian aggression since 1945 to cold war and vicarious campaigns in areas where the fighting, by mutual consent, can be limited. Without this deterrent, I have little doubt that by now Russia would have overrun a large part of Europe, the Middle East, and India, and made much larger incursions into Asia.

The unfair and, indeed, shameful terms of the Korean armistice as regards prisoners who do not wish to be repatriated, into which we have been betrayed by our eagerness for a cease-fire, should be a warning to us of the dangers of seeking compromise and agreement with those who hope and work only for our destruction and dissolution. Truly it is said "who sups with the devil needs a long spoon."

There are those who will say that the only alternative to an agreement with Russia is a third World War. I do not believe it. I believe that if we can keep the peace, as I think we can, by superior air power, superior technical ability and wise statesmanship, for the next 15 or 20 years, the Russian system must change. For many reasons which it would be inappropriate to go into here, it is bound to liberalize itself. The truth must gradually seep through the Iron Curtain, and the Kremlin will find it necessary to seek a *modus vivendi* with the rest of the world.

Provided that we make certain that our air power is strong enough to deter any aggressors, time is on our side.

ROYAL CANADIAN AIR FORCE Association

CHRISTMAS GREETING

The members of the National Executive Council of the R.C.A.F. Association join with me in extending to each member of the Association and their families every good wish for their happiness at Christmas and during the year to come.

G. E. Brookes,
National President,
R.C.A.F. Association

THE WINGS

No. 105 (Cumberland) Wing.

Congratulations are in order to No. 105 Wing at Amherst, N.S. This Wing has more than doubled its paid-up members since March 31st of this year.

No. 306 (Maple Leaf) Wing, Montreal

On the recent occasion of the departures of Air Force personnel and their families overseas from the port of Montreal, No. 306 Wing presented baskets of fruit, as well as books for the personnel. The books are to be donated later to overseas station libraries. This Wing has been instrumental in supplying thousands of books to the overseas libraries.

No. 306 likes to think that the remarkable success of the "Alouettes" this year may have been helped by the enthusiastic get-together which they (Wing members) had with members of the team early in September. Coach Doug E. Walker was the guest speaker. The Wing presented ties to members of the team.

Note for Western Wings

It is surprising that we have not had any reports from our Western Wings (where they really take their football seriously) of any such get-together with the football teams. (This note will appear in "The Roundel" after the Grey Cup has been played for, and we trust our face will not be too red.)

. . . and a suggestion for all Wings.

Wings are continually asking how they can make their meetings more appealing to their members. Here's a suggestion.

Recently the Maple Leaf Wing invited members of the Toastmasters Club to attend their meeting and give a demonstration of speech-training in action. These members gave short prepared speeches, impromptu talks, and, in review, explained the fundamentals of speaking well. Why not embark on a constructive programme of this nature?

No. 400 (Guelph) Wing.

No. 400 Wing has been quite active during the past few months, and has drawn up a programme of events which should prove very attractive to its members. Recently they acquired their own Wing Colours (reproduced in this issue). During the month of September the Wing obtained five new members.

Members are now preparing for the visit of the National President on Monday, December 6th.

No. 306 Wing. Left to right: J. Dunn, ass't coach of "Alouettes"; C. Stone, vice-president of "Alouettes"; D. Walker, head coach of "Alouettes"; A. Clibbon, Wing president; M. Simon; J. Carver.

No. 433 Wing. Group Capt. W. H. Schroeder, O.B.E., presents Charter to President E. St. Amand.

No. 433 (Renfrew) Wing.

Group Captain W. H. Schroeder, O.B.E., presented the Charter to No. 433 (Renfrew) Wing on October 26th at a dinner-meeting held in the Renfrew Golf Club, with over 125 members and friends in attendance. A dance followed the formal proceedings, and music was supplied by the R.C.A.F. Band.

Much credit is due to the Wing Executive for the splendid work they have done in Renfrew, and we are confident, from the enthusiasm shown by all members on the opening occasion, that great things are in store for the Renfrew Wing.

No. 500 (Winnipeg) Wing.

To open its activities for the coming season, No. 500 Wing held a most successful corn-roast on September 24th, and is planning Sunday night movies each month, as well as bingoes, dances, and social gatherings.

No. 251 (Madawaska) Wing, Edmundston.

When the R.C.A.F. Central Band from Ottawa played in Edmundston recently, the silver collection was taken up by members of No. 251 Wing and donated to the Edmundston Rotary Club, sponsor of No. 313 Squadron, Royal Canadian Air Cadets, to further the activities of the Air Cadets in Edmundston. The collection amounted to $111.26.

Some time ago No. 251 (Madawaska) Wing offered to assist the Rotary Club in financing the lodging of the Air Cadets who would be taking flying lessons at Saint John through the Flying Training Scholarships offered annually by the R.C.A.F. Based on last year's expenses, the amount promised was $180.00. Of this amount $120.00 has now been sent to the Rotary Club.

The Edmundston Rotary Club spends approximately $700.00 annually in maintaining the activities of the Edmundston Squadron of the Air Cadets. One of the objects of the R.C.A.F. Association is to support the Royal Canadian Air Cadets, and the Edmundston Wing is doing this by donating monies and other assistance whenever needed. G. P. Murphy is chairman of the sponsoring committee, while G. Matheson acts as liaison officer between the Air Force Wing and the Air Cadet Committee.

No. 603 (Yorkton) Wing.

In an effort to increase its membership and attract members to turn out regularly to the meetings, No. 603 Wing recently held a most successful social evening, with forty couples in attendance. Dancing held the spotlight for the

No. 400 Wing's Colours.

No. 303 Wing. Mrs. G. O'Boyle draws winning ticket in raffle for television set, won by Dr. P. H. Boisvert. On left, G. Gaucher; on right, L. Gingras (president). (Gerry Lemay photo.)

No. 500 Wing's new Executive. Seated (l. to r.): Mrs. Sally Buchanan, R. Johnson, Miss Kay McLeod. Standing (l. to r.): J. M. Deniset, W. D. Flatt, R. Busch, R. G. Stewart, W. E. Ellis, D. R. Stevenson, G. W. Walker, E. A. Carlyle, A. M. Buchanan.

evening, the music being supplied with a record-player and a good variety of records (everything from Jump to Hoe Down). Lunch was followed by a general sing-song, with Herb Flook at the piano. Everyone present agreed that it was a real good "do" and that the Wing should have more of them.

No. 600 (Regina) Wing.

On October 6th, No. 600 Wing held a very successful meeting, at which Wing Commander A. J. Ayotte, C.O. of No. 11 Wing of the Air Cadets, gave a very interesting talk on his recent tour through the eastern United States as accompanying officer for "Exchange Visit" cadets.

LIFE MEMBERSHIPS

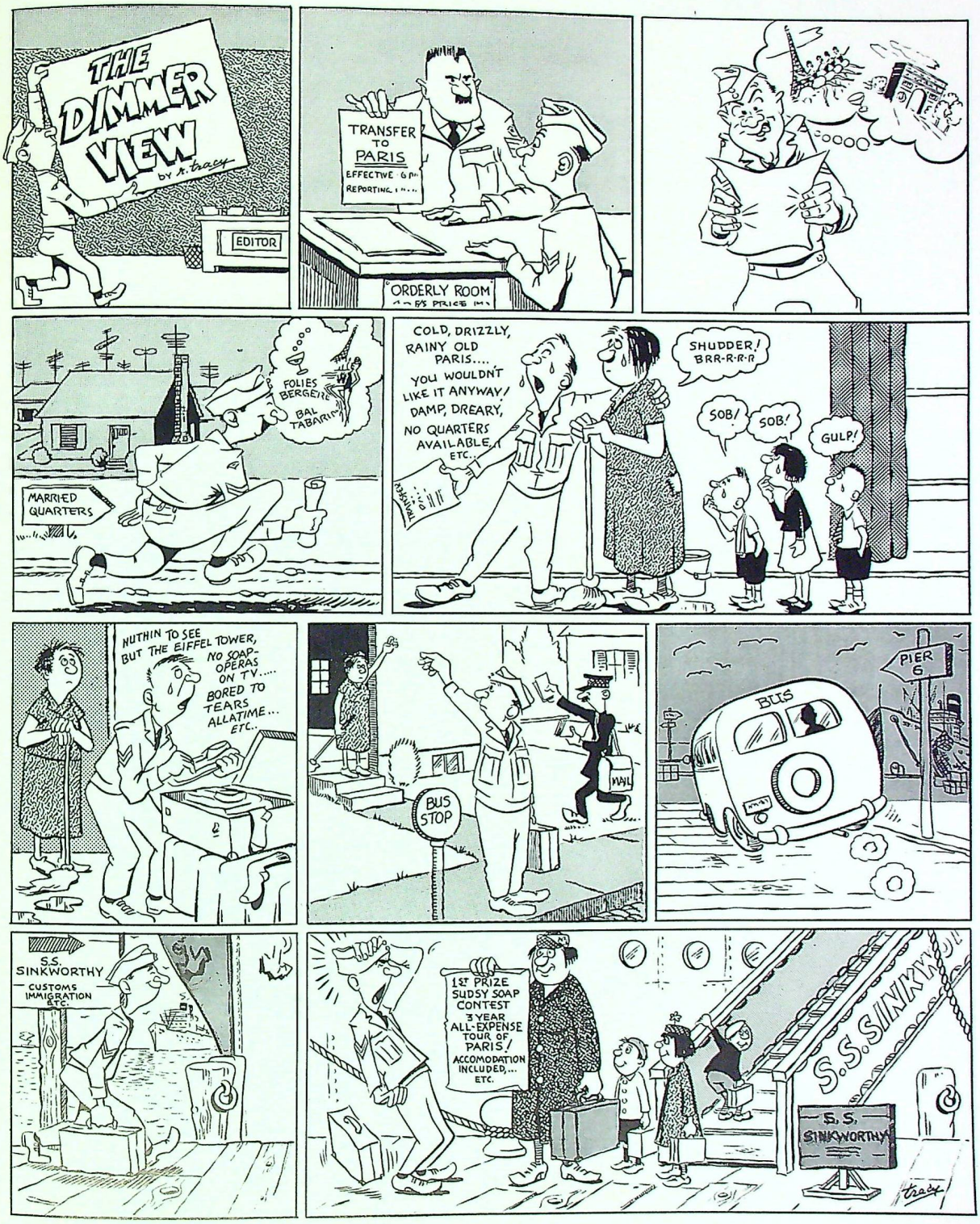
We take pleasure in announcing the following additions to our Life Membership List:

Regular Life Members:	B. Blakey, No. 601 (Moose Jaw).
	R. M. Christie, No. 406 (North Bay).
	R. J. M. Hickey, No. 252 (Fredericton).
	T. R. Myles, No. 252 (Fredericton).
	C. E. Smith, No. 252 (Fredericton).
Honorary Life Members:	T. H. Ross, M.P., No. 431 (Krakow).
	His Worship L. D. Jackson, Mayor of Hamilton, No. 431 (Krakow).

2,300 YEARS AGO

When there is an income-tax, the just man will pay more and the unjust less on the same amount of income. (*Plato.*)

THE Roundel


THE DIMMER VIEW
by A. Tracy
EDITOR
TRANSFER TO PARIS
EFFECTIVE 6 P.M.
REPORTING I.M.O.
ORDERLY ROOM
FOLIES BERGERE
BAL TABARIN
MARRIED QUARTERS
COLD, DRIZZLY, RAINY OLD PARIS....
YOU WOULDN'T LIKE IT ANYWAY/ DAMP, DREARY, NO QUARTERS AVAILABLE, ETC...
SHUDDER! BRR-R-R-R
SOB!
SOB!
GULP!
NUTHIN TO SEE BUT THE EIFFEL TOWER, NO SOAP-OPERAS ON TV.... BORED TO TEARS ALLATIME... ETC..
BUS STOP
MAIL
PIER 6
BUS
S.S. SINKWORTHY
CUSTOMS IMMIGRATION ETC.
1ST PRIZE SUDSY SOAP CONTEST 3 YEAR ALL-EXPENSE TOUR OF PARIS! ACCOMODATION INCLUDED... ETC.
S.S. SINKWORTHY
Tracy

Letters to the Editor ★ ★ ★

EATON TROPHY WINNERS

Dear Sir:

In examining the photograph of the Eaton Trophy winning team, which appears on page 46 of the September issue, I noticed a discrepancy that fills me with alarm.

In the text you state that the scoring was based as follows:

Turnout and appearance	100	points.
March discipline (en route)	100	"
Fire control (by officer)	75	"
Fire discipline	75	"
Score on target	250	"
Total	600	points.

The scoreboard in the photograph, however, shows:

Turnout and appearance	125	points.
March discipline	125	"
Fire control	100	"
Fire discipline	100	"
Score on target	250	"
Total	700	points.

Can it be that somewhere along the line No. 17 (Aux.) Wing has been done out of some hard won points?

Sgt. H. J. Hamnett,
R.C.A.F. Station Portage La Prairie.

(The mystery is one that only No. 17 Wing can clear up.— EDITOR.)

WOMEN'S HIGH-SPEED RECORD

Dear Sir:

On page 15 of September issue it is stated that both Jacqueline Auriol of France and Jackie Cochrane of the U.S.A. broke the sound barrier in Sabre aircraft. This, of course, is a double error. The aircraft used by Jacqueline Auriol was a Vampire, and in it she broke, not the sound barrier, but the women's high-speed record. The critical Mach no. of the Vampire is .82.

Sqn. Ldr. J. H. G. McArthur, D.F.C.,
R.C.A.F. Station Lac St. Denis.

ARE MEN NECESSARY?

Dear Sir:

After reading "Feminine Gen" in the September issue, I am inspired to make comment.

I have no doubt that there are numerous air women in the R.C.A.F. who could satisfy the medical and educational requirements for flying — but is it really desirable that they should? Women are already doing so many of the jobs formerly reserved for men that they may soon be wondering what on earth they need men for at all! The thought of a world without men is not entirely pleasant to contemplate.

I strongly agree with Warrant Officer Harding that "a woman's place is in the home and certainly not in the cockpit."

L.A.W. Lorraine Garrison,
R.C.A.F. Station Goose Bay.

INFORMATION WANTED

Dear Sir:

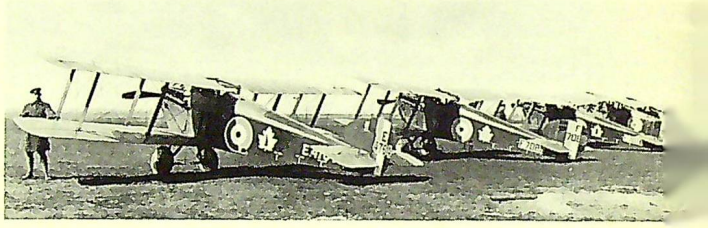
With reference to your September "Pin-Points", are you sure that No. 1 Squadron of the C.A.F. was equipped with S.E.5A fighters? I have a photograph showing a line of Sopwith Dolphin fighters, each with a large numeral 1 superimposed on a maple leaf on the side of the fuselage. I believe that this was the marking for No. 1 Squadron.

Can any of your readers tell me if the "Cadet Wing Review", which made its appearance in July 1918, was the first Air Force periodical and possibly the first aviation magazine in Canada? I would like to get some particulars, too, on such station papers as the "Bordenaire" and the "Rockcliffe Record". I have been trying for some time to trace all the aviation periodicals that have been published in this country, and any help your readers can give me will be greatly appreciated.

One more question. I have on several occasions seen pictures of an early R.C.A.F. 'plane with "XX" on the side of the fuselage. What is the meaning of these markings?

C. J. Toms (R.C.A.F.A.),
Box 473,
Orangeville, Ont.

(On its formation in November 1918, No. 81 Squadron, R.A.F. (also known as No. 1 Squadron, C.A.F.) was equipped with 18 Dolphin single-seater fighters, powered by 200 h.p. Hispano-Suiza engines). (See accompanying photograph.) The squadron also received two S.E. 5As in November 1918, and it is believed that it was later re-equipped with this type.



With reference to Mr. Toms' third paragraph, the "XX" markings on the aircraft would appear to be the abbreviated form of its civil registration. Service aircraft of the R.C.A.F. carried numerals; aircraft used by the R.C.A.F. on civil government air operations were marked with the last two letters of the civil registration. — EDITOR.)

C	A	N	U	C	K	■	B	O	M	B	E	R
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S	I	T	E	■	R	I	P	■	A	R	E	A
S	A	O	■	R	C	A	P	C	■	E	N	D
N	S	■	P	O	N	T	O	O	N	■	S	E
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R	A	F	■	L	A	V	A	L	■	A	A	R
M	I	R	S	■	N	I	L	■	O	N	C	E
E	R	E	C	T	■	S	■	B	A	T	O	N
N	O	T	I	C	E	■	M	A	R	I	N	E

To all Readers of "The Roundel":

A MERRY CHRISTMAS!

And whatever the Brew in which we drink to the happy and well-ordered March through Life of our Friends, may the Words of our Toast be the same:

God bless us all —
and help us keep in Step!


The
ROUNDEL