

# *The* ROUNDDEL

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ROYAL CANADIAN AIR FORCE



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*This Month's Cover*



Fire-fighters in training at R.C.A.F. Station Camp Borden. (See page 4.)

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# SGT. SHATTERPROOF

## CAN KEEP A SECRET

"DENTAL Clinic," announced a voice from the receiver.

"Major McCavity, please," I said.

"Sorry, I didn't quite—"

"Major McCavity," I repeated.

There was a pause, during which the owner of the voice apparently arrived at certain conclusions. His next words sounded a trifle testy.

"Now lookit, Jim, I'm busy even if you aren't. An anyway, that one about the waitress and the bank-manager with the harelip . . ."

When finally I managed to get my party on the line:

"Hello, Major," I said, "I'm having a bit of trouble—"

"What's that?" he asked. "Someone's been hit by a bubble? Speak up, please."

"No, no. I'm having a bit of trouble with my—"

"If you'd take that cotton-wool out of your mouth, it might help. Who is it speaking — if it is human speech I'm listening to — and what seems to be the problem?" He hesitated, as though struck by a sudden realization. "Oh, it's you, Tom? If it's that one about the waitress and the bank-manager with the harelip, I've heard it. Besides, I've got an A.V.M. in the chair with the nicest batch of buccals in his bicuspid you ever saw."

Patiently, mouthing my words like a Little Theatre Hamlet, I succeeded at length in conveying to him both my identity and the nature of my complaint. I explained that my lower teeth jumped their moorings every time I yawned, which made it a bit uncomfortable to get through the day's manuscripts. True, I could take them out — as I'd done now — but an editor with only his uppers presented a somewhat rabby and unprofessional appearance.

The honest Major laughed happily, rather like an inquisitor sizing up a husky heretic.

"My dear chap," he said, "no problem at all. Just drill a hole through one end of the plate and attach it by a heavy thread to your lapel. Then it can jump out any time it feels like it without getting smashed."

"Are you seriously suggesting—" I began; but my friend cut me short.

"Let's see. You've been wielding the false for about two months now. Come up in another month or so and I'll reline 'em. That'll calm them down. In the meantime, tie that thread to the bed-post at night. We're dentists, not interior decorators." He chuckled. "Well, back to the buccals. Be seeing you, old boy."

Mumbling to myself, I replaced the 'phone in its cradle. As I did so, a suppressed scream came from the next office. I ignored it. Hildergard, who is at present reading a work entitled "The Satyr Came Prancing", has taken to screaming hopefully whenever her door opens. On this occasion, as on all others of which I am aware, she was disappointed; for there was nothing at all suggestive of the light loves of Arcady in the uncompromising figure which, a moment later, loomed in the communicating doorway.

It saluted, directed upon me a searching glance, and moved forward in an aura of suspended judgement.

"Hello, Shatterproof," I said, without much enthusiasm. "What are you doing in Ottawa?"

His eyes narrowed.

"The more burning question would appear to be, Sir, not what I am doing, but what the editor of

'The Roundel' has been doing. Our lower lip, Sir, exhibits a flaccidity that inspires little confidence in its owner's inflexibility of purpose. Nor is our enunciation suggestive of an alert and penetrating approach to our literary labours. In brief, Sir, we sag."

"My dear Sergeant," I retorted irritably, "haven't you ever seen a man without his lowers? I've had my teeth out since we last met."

"Indeed, Sir? I am most distressed to hear it. Have no fear, though. A Shatterproof can keep a secret."

Shaking his head, he set about refilling his pipe. I seized the opportunity and surreptitiously replaced the choppers.

"On the other hand," Sgt. Shatterproof went on presently, "let us not feel that this is the beginning of the end. For all we know, it may mark the dawn of a new and more productive stage in our career. Spurned by our erstwhile companions, we may turn away from the Babylonian life, forswear our flesh-pots, and shun our Venusbergs. Toothless, we cannot hope — if we ever did, Sir — to turn the heads of any but the most elderly spinsters. Like Nature, the Sex abhors a vacuum."

He paused long enough to let his words sink in. Then:

"It has been said that the irresistible fascination exerted upon the Sex by the male members of my House has been largely attributable to their faultless and indestructible dentition. I myself, for example, haven't a filling in my head; and, as you may recall from your archaeological studies, the canines of Eoshatterproof Erectus were at first believed to belong to the sabretoothed tiger inside whose fossilized



remains he was discovered. Eoshatterproof, if one may judge from the number and distribution of his posterity, seems to have made more than a passing impression on the maidenhood of the Pleistocene Age."

I would have cut him short at this point had I not been forced to swallow a yawn. Shatterproof, evidently interpreting my silence as indicative of interest, considered me speculatively for a moment or two before continuing:

"Physiologists, however, are wont to speak with even greater veneration of my ancestor Praeposterus Shatterproof, who flourished under

Nero. Ther...e, sir, was the noblest tusker of them all. Distinguished at birth by the possession of incisors so developed that they amputated his mother's index-finger at the first joint while she was pointing them out to a circle of admiring friends, he shocked her even more, a few years later, by embracing the true faith. Then, when he was only nineteen, he was accused of trying to convince the Vestal Virgins — who were, of course, unregenerate pagans — of the error of their ways, and he was promptly tossed into the arena along with the previous day's catch of Christians."





"Well," I said, reaching for some papers and wishing that all Shatterproof's ancestor had come to an equally premature end, "it's been very nice to see you again, Sergeant, and —"

"But, Sir," he went on inexorably, "Praeposterus was no ordinary Christian. He merely bared his teeth, which had more than fulfilled their early promise, growled menacingly, and chased the lions back into their cages. After that, though he relinquished none of his beliefs, he speedily became a favourite of the Empress Poppaea and received top billing at all main events of a religious nature. He might, indeed, have reduced the the attrition-rate of the infant Church to almost negligible proportions had not jealousy reared its ugly head. A whisper was circulated around the catacombs that he was deliberately trying to steal the show. So discouraged was my ancestor by such ingratitude that, at his next performance, he kept his mouth shut and shared the martyr's crown with the rest of those who were featured on that day's card."

I could stand no more. I started to my feet

"Of all the drivel that I ever heard—"

"Gee, someone sounds cross! Here's your tea, Sir, and I brung ya

some of me Aunt Mabel's choklit squares."

I shuddered as only Claudette's voice — if one isn't looking at Claudette — can make one shudder. The next instant she appeared from behind Shatterproof, tripping daintily in the diaphanous draperies of spring, and it would have mattered nothing had she been born with a factory-hooter in place of a larynx.

She brushed by the old wardog, glancing up at him through her sooty lashes, and set the tea down on my blotter. Then she held out the little box she was carrying. I shook my head regretfully, mindful of the last occasion on which I had joined battle with one of Aunt Mabel's chocolate squares. Innocent-looking in the extreme, they are of a viscosity without parallel in the chemistry of candy-making.

Claudette's intoxicating eyes widened a little, and a bewitching smile dimpled her cheeks. "Oh yeah," she murmured, like a sympathetic coffee-grinder, "of course! I forgot yer pore plates."

Lightly she turned to Shatterproof, who stood looking not unlike a bull-frog about to emit the mating-cry.

"How's about youse, Muscle-bound?"

He selected a piece of the preferred confection and inserted it into his mouth, thanking her with

old-world courtesy as he did so. And those were the last words we heard from him.

As his jaws clamped tight on Aunt Mabel's chocolate square, I observed a curious succession of emotions pass over his features. First came fear, then hope, and finally abject panic.

"Good, eh, Big Boy?" said Claudette, watching him expectantly.

A hunted expression entered his eyes, and his face began to work in a most alarming way. Claudette stepped back and remained poised on incarnadined toes, ready for flight.

"Jeepers!" she said. "Wassermatter with ya? Gonna have a fit?"

The old gladiator merely boggled at her, lips writhing hideously and cheeks empurpled. Just as I was becoming seriously concerned, his mouth opened wide, only to close again immediately — but not before I had caught a glimpse of his teeth still clenched together as though in the throes of tetanus. Suddenly he gave up the struggle, tottered through the doorway, and disappeared with an inarticulate cry.

"Well, wot d'ya know!" exclaimed Claudette, apparently still unenlightened. "I guess old Muscle-bound's got one o' them sensitive teeth wot jump when you eat candy."

"Yes," I agreed, "I guess he has. Twenty-eight of them, in fact."

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.



# AN OUNCE OF PREVENTION



Fire-Fighting in the R. C. A. F.

THERE IS one branch of the R.C.A.F. which is functioning at its most efficient when it apparently has the least to do. That branch is the small but vital Fire Prevention Service; and the better its preventive work the fewer fires there are to fight.

Before the Second World War there was no fire service, as such, and no established fire-fighter trade. The few stations which existed were responsible for their own fire protection, and this responsibility was met by assigning airmen on a part-time basis to fire-picket duties. Only three Air Force stations had fire-trucks; the remaining stations relied on hoses. In 1940, when the British Commonwealth Air Training Plan began to take shape, the large number of flying-stations which were built made the need for organized fire protection imperative. To fill this need, the Air Force turned to municipal fire departments and provincial fire-marshals' offices for advice and personnel. A separate Fire Prevention Branch was established, first under the Supply Branch, and later under the Directorate of Construction Engineering. To head this new branch came Flight Lieutenant P. Snarr from a firm engaged in the manufacture of fire-fighting equipment.

As the B.C.A.P.T. rapidly expanded, the requirement for trained fire-fighters far exceeded the supply. At first, Air Force fire-fighters were

trained at Toronto under the supervision of the Ontario fire-marshal, but later the increased demand necessitated the opening of an R.C.A.F. training-school, at Trenton, under the direction of Flying Officer W. A. McCallum. At its war-time peak, the Fire Prevention Service numbered approximately 700 people.

At the end of hostilities the fire-fighting service, along with all other branches of the Air Force, was drastically reduced in numbers until, during the period of 1945-1950, there was not a single officer in the branch.

In 1947, when the R.C.A.F. began its post-war expansion, fire-fighting services once again assumed an important rôle, and a re-equipment programme was begun. To-day the R.C.A.F. Fire Prevention Service has approximately 1,200 personnel under the direction of Wing Commander W. A. McCallum, the Air Force Fire-Marshall, and his Deputy, Flt. Lt. B. C. Quinn, and is equipped with the most modern fire-fighting equipment available.

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Its individual units, the Fire Departments (as they are called on the stations), have roughly the same problems to cope with as municipal fire departments. Air Force fire-fighters, however, have one major commitment not generally encountered by their civilian counterparts, namely, that of dealing with fires in crashed aircraft. Although,

fortunately, not too many hours are spent in the actual fighting of such fires, a great many hours — and a great deal of equipment — are taken up in "standing by".

When they can, Air Force fire departments co-operate with neighbouring municipalities, and, on several occasions, Service equipment has assisted in extinguishing fires in cities, villages, or on isolated farms. In Europe, R.C.A.F. fire-fighters have figured prominently in fighting several civilian fires. In England, the city of Nottingham awarded a "Certificate of Meritorious Conduct" to R.C.A.F. Station Langar's fire department for the part it played in extinguishing a blaze in a commercial hangar; and in France, fire-fighters from No. 1 Wing rushed to the town of Montmédy when three blazing tank-cars were threatening a whole train with disaster.

Co-operation between R.C.A.F. and civilian fire-departments is a two-way affair, and help from city fire-departments in Canada is as close as the nearest telephone. At R.C.A.F. Station Lachine, the station fire-alarm system is tied in with the city of Lachine, so that a fire on the station produces an automatic response from the fire-department of that city. In one of the largest post-war fires in the R.C.A.F., which occurred at No. 6 Repair Depot, the municipalities of Trenton and Belleville sent men and equipment to assist their Serv-



ice colleagues during the four-hour battle.

\* \* \*

Training for R.C.A.F. fire-fighters consists of a 16-week course, the first three weeks of which are spent at Station Aylmer in driver-training, and the remaining 13 weeks in trade-training at Camp Borden. For the trade-training phase, a new three-storey building of reinforced concrete has been built to simulate every conceivable condition and hazard found in interior fires. Equipped with fire-proof doors, it can blaze away on any selected floor, or on all floors at once. During the course, the potential fire-fighters learn how to use the tools of their trade — ladders, fire-hoses, fire-trucks, extinguishers, sprinkler-systems, alarm systems, and forcible-entry tools. In the aircraft-crash-and-rescue phase of the training, students are required to enter burning "aircraft" and rescue dummies. The "aircraft" are constructed of corrugated iron. Into and around them are poured a ton and a half of contaminated gasoline. When the gas is ignited, they provide a suitably blazing and smoke-filled inferno into which the fire-fighters can enter to rescue the 100-pound dummies realistically placed in the structure.

It has been found that the greatest problem encountered in such training is, of course, the overcoming of men's natural fear of fire. Continuous practice, however, instills confidence in the trainees and develops their ability. Before rescue operations are carried out, approach and entry procedures are carefully studied. The students receive lectures on aircraft construction, ejection-seats and the way to "disarm" them, and the location of aircraft armament. The protective clothing now in use by R.C.A.F. fire-fighters is the result of years of development. It is light in weight, gives considerable protection, and allows freedom of movement.



Students at the Air Force's fire-fighting school graduate as Fire-Fighters Group 1, and are then posted to stations. There, while employed at their trade, they also receive on-the-job training which brings them up to Group 3 standard. Fire-fighters of the rank of corporal and above are given supervisory training. In order to keep abreast of the latest developments in their field, select personnel of the Fire Prevention Service are sent on special courses, such as arson investigation (at Purdue University) and fire-hazard control (at Oklahoma Agricultural and Mechanical College). In addition, a number of Air Force fire-chiefs attend civilian fire-chiefs' conferences.

The R.C.A.F.'s fire-fighting course is not confined to Air Force personnel, but has also been given to personnel from the Bell Telephone Company who are assigned to sites along the Mid-Canada line.

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On every R.C.A.F. station the finest of fire protection is provided 24 hours a day. When a station is being constructed, the fire-hall is located so that its equipment can reach any point on the station in one minute. This ideal cannot always be maintained when stations are forced to spread out to take care of added commitments, but in no case is a station's growth permitted seriously to increase the fire-hazard.







Wing Commander W. A. McCallum, who was elected vice-president of the Association of Canadian Fire Marshals at the annual convention in 1956.

In the early days of the Fire Prevention Service, the clanging of a bell would herald the approach of the station fire-truck as it sped along the flight-line picking up airmen detailed for fire-fighting duties. Today the station fire-trucks can be alerted by radio and, since they are manned by professional crews, require no volunteer help. The fire-halls themselves are modern in every respect, with electric drying-cabinets replacing the cumbersome hose-drying towers still

seen on many municipal fire stations. The Air Force fire-fighter's life, however, has been bereft of one touch of glamour which still distinguishes that of his civilian counterpart. Since Service fire-halls are all one-storey structures, there is no jumping through a hole in the floor for a fast ride down the pole.

\* \* \*

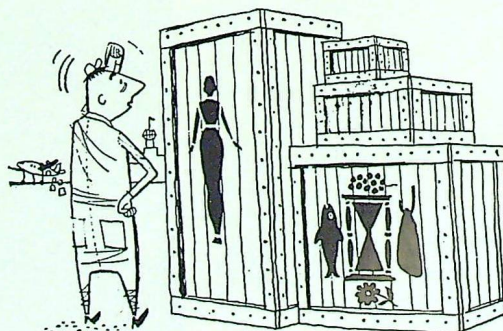
As the name implies, the Fire Prevention Service is as concerned with preventing fires as it is with fighting them. That is the reason why it has been allocated to the Directorate of Construction Engineering. The people responsible for the construction of Air Force buildings thus work closely with the people responsible for their safety from fire. Fire-prevention considerations must influence the choice of materials, the location of stairs, the number of windows and doors, the type of wall-boards, paints and varnishes, and so on *ad infinitum*. Since the hazard of fire in any R.C.A.F. building is the same throughout the country, the same building-standards prevail from coast to coast. The Fire Prevention Service is guided in these standards by the National Building Code, as published by the National Research Council. With the Code as a reference, officers of the Fire Prevention Service examine blueprints and make recommendations before new

construction is begun. When buildings are completed, fire insurance underwriters make acceptance tests of sprinkler-systems on behalf of the Fire Prevention Service, while Air Force personnel are responsible for checks of a routine nature. Fire-prevention personnel also recommend scales of issue for hand-pumps and other fire-fighting devices.

Fire-prevention is everyone's responsibility. Members of the Fire-Prevention Service therefore take the initiative in educating members of the Air Force and their dependents in that vitally important subject. During the annual Fire Prevention Week sponsored by the National Fire Protection Association, colouring-contests are held at Air Force schools. Children are encouraged at all times to visit the fire halls, and their traditional delight in "fire-engines" is fostered. At one station, a Junior Fire-Fighters' League finds eager recruits among the younger set, who love to visit the fire-hall, gaze at all the shiny equipment, and talk to the fire-fighters.

The old saying that "an ounce of prevention is worth a pound of cure" can never be more true than when applied to the business of protecting life and property from fire. For fire, which has brought man from savagery to civilization, is still his most terrible enemy.

New international warning symbols have been adopted for certain types of air cargo. Perishable goods will bear a label that shows a carcass of beef, a cluster of grapes, a fish, and a flower, all surrounding an hour-glass with the sand running out. You are expected to get the general idea wherever you happen to be. ("Air Force": U.S.A.F.A.)





BY WING COMMANDER F. H. HITCHINS,  
Air Historian.

*(This article tells of the expansion of the U.S. Army Air Forces during the Second World War. It should be of particular interest to those concerned with logistics and training on a Service-wide scale.—Editor.)*

IN 1934 the Baker Board, a special committee of the American War Department appointed to report upon the status of the U.S. Army Air Corps, recorded its opinion that: "The ideas that aviation, acting alone, can control sea lanes, or defend the coast, or produce decisive results in any other general mission contemplated under our policy, are all visionary, as is the idea that a very large and independent air force is necessary to defend our country against air attack." Within a decade of the Baker Report the air arm of the U.S. Army had attained virtual independence, *de facto* although not as yet *de jure*, and over Europe and the Far East it was giving a convincing demonstration of the efficacy of air power to produce decisive results, not only in support of land and sea operations, but also in its own domain.

The story of that evolution — the official history of the U.S. Army Air Forces in the Second World War — is being told in seven thick volumes, each prepared by a team of historical specialists under the general editorship of Professors W. F. Craven and J. L. Cate. The first five volumes, published between

1948 and 1953, described the combat operations of the U.S.A.A.F. from Pearl Harbour to Nagasaki. The latest volume in the series\* deals with what might be called, in current phraseology, the "infrastructure" of the previous five — the organization, materiel, and training within the "Zone of the Interior" that were the basis of the combat operations overseas. Discussed in detail in its twenty chapters are such varied yet interdependent topics as the origins of the American air service, the evolution of its Command organization and doctrine, the air defense of the United States, the development of air bases, the planning, production and distribution of aircraft and weapons, the growth of the logistical organization, and the recruiting and training of combat crews, ground technicians and other Service personnel. The theme of the volume is summed up in the dictum of General H. H. Arnold, the war-time commander of the A.A.F., that "an air force is a balanced compound of three essential ingredients — airplanes, combat and maintenance crews, and air bases."

In a brief review of a book so packed with data that some of its pages read like statistics set to words, it is impossible to do more than indicate its scope and touch upon a few of the highlights. A long foreword by the editors gives an introduction to the volume and

a valuable summary of its contents. For the student there is an even longer appendix of footnotes which attest to the thoroughness of the research done by the authors. Other appendices give a list of staff and command appointments from June 1941 to August 1945, and a glossary of terms and abbreviations which is helpful for the reader who may sometimes flounder in the "alphabetical soup" of initials. A number of illustrations and charts and a detailed index complete the comprehensive survey of a very broad field.

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At the end of August 1939, on the eve of the Second World War, the U.S. Army Air Corps had a total strength of 26,526 officers and airmen. Less than five years later, in March 1944, the Army Air Forces had grown to a peak of 2,411,000 Service personnel plus some 400,000 civilians. (Casualties during the war numbered 40,061 dead.) American air installations expanded from a total of 76 at the beginning of 1939 to a peak of 2,252 at the end of 1943, while the number of operational units rose from 59 "skeletonized" squadrons to a maximum, in March 1945, of 243 fully-equipped groups (equivalent to R.A.F. wings), of which 224 were stationed overseas. From a handful of 1500 tactical aircraft on hand in the summer of 1939, the A.A.F. increased to a total of 79,908 of all types in use in July 1944. This, boiled down to the barest statistical outline, is the story told in this volume — the growth of the U.S.A.A.F. under the impact of global war.

\*W. F. Craven and J. L. Cate (editors): "The Army Air Forces in World War II; Volume Six—Men and Planes". Published by the University of Chicago Press, 1955. Pp. 808. Illustrated; index. Distributed in Canada by University of Toronto Press. \$8.50.



The first section of the book deals with the very complex subject of evolution of the U.S.A.A.C. from 1934, when it was "a subordinate and yet autonomous arm of the United States Army", to the end of the war when it was "virtually a hard independent Service." In the early days the Air Corps had faced a perennial "struggle for recognition and adequate funds"; then, as a result of Munich, the fall of France, and the "blitz" of 1940, the situation was reversed and the A.A.C. was thrust into new problems of tremendous expansion of equipment, personnel, and training. Redesignated as the "U.S. Army Air Forces" on 20 June 1941, under the command of General Arnold, the air arm soon gained equality with the Army's ground forces and continued its organizational development, through "a bundle of compromises", until on V-J Day there were sixteen numbered air forces, twelve of which were overseas and four within the continental United States. Other chapters in this section are devoted to the air defence of the United States and the development of base facilities, two topics that are particularly reminiscent of Canadian problems.

In 1939 the U.S. aircraft industry ranked forty-first among the nation's industries; five years later it had become the largest in both volume of business and earnings. Its production had risen from 2,141 aircraft in 1939 to 96,318 in 1944, with a peak monthly rate of 9,113 attained in March of that year. The total production between 1 July 1940 and 31 August 1945 amounted to 299,293 military aircraft, 802,161 engines, and 807,424 propellers, at a total cost of almost 35 billion dollars. "Apparently the United States produced almost as many aircraft as did Britain, the U.S.S.R., Germany and Japan together." Of the total production the A.A.F. received 230,175 aircraft (including 5,254 produced in Canadian plants) and

653,847 engines. When the great industrial expansion began, the U.S.A.A.C. was in a position of "both quantitative and qualitative" inferiority to the other air forces of the world; it was for the most part equipped with "antiquated weapons" and only one of the aircraft types in use in August 1939, the B-17, actually flew on operations in the war. Yet, so great is the time-lag between the original conception of an aircraft and its production in quantity, that all the aircraft with which the A.A.F. fought the war "were in production or under development before Pearl Harbour." (The F-86, it is interesting to note, was in the design stage when the war ended.) Brief biographies are given of the major aircraft types among the more than one hundred used by the A.A.F.

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Underlying these production statistics was "the quest for better weapons". ("The first essential of air power", Lt. Gen. Ira C. Baker once remarked, "is pre-eminence in research.") After examining some basic problems — the contest between quality and quantity, when to stop development and begin production — the author of this chapter describes the close collaboration that existed between the industry, governmental groups such as the National Defense Research Committee, and the A.A.F., and pays tribute to the co-operation between the United States and Great Britain (for example, the Tizard mission of August 1940), which was a great stimulus to research on both sides of the ocean. Three projects are examined in detail — the development of the B-36, jet propulsion, and guided missiles. In the jet field Anglo-American collaboration resulted in the U.S. receiving more than it gave; the first American jet, the XP-59A, made its initial flight on 18 October 1942 with American-built Whittle engines.

Almost one-fifth of the aircraft accepted by the A.A.F. (about 42,000 out of the total 230,000) were transferred to Great Britain and the U.S.S.R. In the period before Pearl Harbour the allocation of aircraft to these two warring nations made it difficult for the American air service to attain its own planned aircraft strength, and for a time indeed American requirements were subordinated to the needs of Great Britain. Almost 50% of American production in 1941 went to the R.A.F., while the U.S. delivered to the U.S.S.R., between 22 June 1941 and 20 September 1945, almost 15,000 aircraft, including about 4,000 manufactured on the British account.

It was this demand for American aircraft by Britain (and for a time by France) that was "the most important single stimulus to the early expansion of the . . . industry . . . Indeed, it is perhaps not too much to say that the expansion financed by British and French funds in 1939 and 1940 advanced by as much as a year the time within which American aircraft production would reach its peak." Orders from abroad and successive proposals for large-scale expansion at home forced the planners into "mass production of programs" based "educated guesses" as to types and quantities required. When Pearl Harbour came, the A.A.F.'s curriculum, which had been proved in March 1941, called for 7,600 aircraft, 84 groups, and 600 men. Within a few days the planners worked out a new program for 87,937 aircraft, 273 groups, 2,922,637 personnel — an objective that came amazingly close to peak strengths actually attained.

The various steps by which aircraft production was expanded to reach this goal are studied — conversion of the industry from handwork to assembly-line production, the adaptation of the automotive industry to aircraft and



manufacture, the use of subcontracting; and the many problems that arose — the acute shortage of management and engineering talent to operate the new plants, the shortage of machine tools, of materials (especially aluminum) and of spares, the fear of a labour shortage, and the conflict between standardization and incessant demands for modification (mass production was achieved only at the cost of a heavy burden of modification).

Although the aircraft manufacturers were at first opposed to the use of the automotive industry for aircraft production and the auto manufacturers were reluctant to venture into that field, the remarkable production record of the war years could not have been achieved without the help of the auto industry. In the final total, that industry built well over one-half of all the aircraft engines produced between July 1940 and August 1945 and about 40% of the airframe weight. An engine plant built at Chicago by the Dodge Division of Chrysler Corporation — the largest plant sponsored by the A.A.F.—had a floor-space equal to that of the whole American aircraft engine industry at the beginning of 1941, while the Ford Company's great plant at Willow Run in 1944 reached a peak monthly output in airframe weight that was equal to one-half the peak monthly output of the whole German airframe industry. Between January 1940 and December 1944 the total floor-space of the American aircraft industry mushroomed almost thirteenfold. Statistical tables show the production record by types and companies, and also the steady decrease in man-hours per aircraft and average cost per 'plane — better 'planes for less money.

The task of moving 230,000 aircraft from the factories to the training or operational bases "was one of the great logistical feats of

the war." Probably two-thirds were ferried to their destination and about 45,000 were shipped by water. Shipping-space presented difficult problems, which were solved in some degree by developing the "meccano deck" for the deck-loading of aircraft and by the conversion of "Liberty" ships to carriers.

The U.S.A.A.C., unlike other components of the Army, had always exercised some logistical functions; during the war these were greatly expanded, until the A.A.F. became in large measure logistically autonomous. The number of stock items held by the air arm rose from about 80,000 in 1940 to more than 500,000 in 1944. The problems of inventory recording and identifying, warehousing, and determining requirements for such a vast stock are discussed. Two major lessons learned were the need for flexibility and the fact that "the most economical supply system is not necessarily the best from the standpoint of combat operations." Mass production enabled the A.A.F. to maintain an ample cushion of aircraft stores; indeed the quantities held of some stocks might be criticized as uneconomical "except that the end result tends to an economical expenditure of the lives of those who fly the planes."

\* \* \*

The third section of the book deals with matters of recruiting and training. After Pearl Harbour, the A.A.F. "had to become the largest single educational organization in existence in a very short time", and its success in developing its training programme is termed "the outstanding achievement on the home front." One of the greatest problems that had to be overcome in building up an establishment capable of producing 93,000 pilots and 600,000 technicians annually was the lack of instructors. "The difficulty was primarily due to long-established military usages. Traditionally, any officer by definition

was a qualified instructor, an impractical assumption at best and one that could be hazardous." The wide use of professional educators helped to solve the problem.

One striking feature of the American programme was the great emphasis placed on the pilot; he was always "the principal object" of air force training and for a long time other aircrew categories received scant consideration in the training programme. The original pre-war course for pilots covered twelve months, divided about equally into primary, basic, and advanced stages. Successive abridgements reduced it to 27 weeks by the end of 1941. In all, between 1 July 1939 and 31 August 1945, 193,440 pilots graduated from the A.A.F.'s advanced schools, the production peak being reached in December 1943. "Wash-outs" were high, numbering 124,000 or about 40% of the total intake.

Before the war there was virtually no specialized training for bombardiers, navigators, or air gunners; they learned their trade "on the job" in their operational groups. Not until late in 1941 were special schools for these trades set up, their output during the war totalling 45,000 bombardiers, 50,000 navigators, and 297,000 gunners. Failure rates were 12%, 20%, and less than 10%, respectively. Navigator training was so much in arrears that only in 1944 did the production rate begin to match requirements in that field. The training of flight engineers, carried only in the B-29 heavy bomber, did not begin until April 1943; by war's end 7,800 had been graduated. Radar observer training was given to more than 9,000 personnel, most of whom were employed in bombers.

The training of crews to function as a team was originally done within the operational unit. Early in 1942, however, the A.A.F., inspired by R.A.F. practice and experience, set up two types of train-



ing units to prepare new groups for combat (Operational Training Units) and to supply replacements for casualties (Replacement Training Units). The primary function of this O.T.U.-R.T.U. system was to prepare heavy-bomber crews for combat, but they also trained over 35,000 day-fighter pilots and 485 night-fighter crews. The training tended to become more and more specialized, with reference to the particular theatre where the new groups or crews would be employed.

From aircrew training the volume turns to groundcrew. In the year 1938-39 the Air Corps had trained only 900 maintenance personnel; between July 1939 and August 1945 more than 700,000 graduated from courses given at A.A.F. technical schools, civilian vocational schools, and factory schools. The individual instruction given in many different trades is described, with particular reference to the mobile training units that became "models of efficiency".

In addition to its own personnel,

the A.A.F. had large numbers of men attached from other branches of the Army, such as medical, ordnance, finance, signal, engineer, quartermaster, military police, and chemical warfare. In April 1943 these attached troops constituted one quarter of the total enlisted strength of the A.A.F. Initially they were trained by their own corps, but, as time passed, the A.A.F. assumed increasing control over their specialized instruction.

After examining the trend from theoretical to practical and realistic instruction, and after discussing various morale problems that arose in training, the volume ends with a chapter on several special training programmes, including ferry pilots and transport crews, the Women Airforce Service Pilots (W.A.S.P.s), administrative officers, "combat cadre", staff and intelligence officers, and the training of foreign nationals. The training of airmen from other countries had started in 1938 with the admission of limited numbers of Latin-American stu-

dents to U.S.A.A.C. schools. The programme was greatly expanded in 1941 through the Lend-Lease Act, and in the next four and a half years 21,302 airmen from thirty-one foreign nations were trained in American flying and technical schools. More than one-half (12,561) were British, with large contingents also from France (4,113) and China (2,238). Canada was represented by a small group of 110.

\* \* \*

For anyone interested in the study of institutional developments or the problems involved in large-scale expansion of organization, procurement and supply, recruiting and training, the volume contains much of interest and value. The Canadian reader in particular will be impressed by the numerous parallels between U.S.A.A.F. problems and those of the R.C.A.F., and the influence of British experience upon American developments in many fields

## R. C. A. F. HOCKEY MANUALS

The R.C.A.F.'s three hockey manuals which appeared last year have met with a reception, both in Canada and the United States, far exceeding all expectations. Written for the Recreation Branch by Flying Officer W.J. L'Heureux, who is a Supplementary Reservist as well as a professor of Physical Health and Recreation, the manuals were distributed to all stations and units on a quota basis and also advertised for sale to the general public and to all Service personnel requiring individual copies.

With one foresighted eye on the 1957-58 hockey season, we would remind our more athletic readers, whether Service or civilian, that copies of the manuals may be purchased from:

Superintendent of Publications,  
The Queen's Printer,  
Ottawa, Ontario.

Orders must be accompanied by a money order or cheque made payable to the RECEIVER GENERAL OF CANADA. Prices of the booklets are as follows:

Beginning Hockey:	15 cents
How to Play Better Hockey:	25 cents
Coach's Manual; Hockey:	75 cents

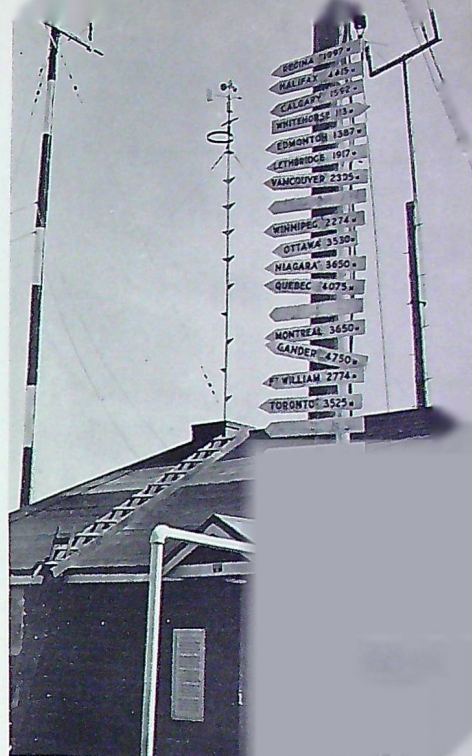


# THE NORTH-WEST STAGING ROUTE

## PART FOUR

BY FLYING OFFICER S. G. FRENCH

*(In Part Three the writer took us from Aishihik to Snag, then back down the Alaska Highway to Whitehorse and further glimpses into Mr. MacBride's unique scrap-book.—Editor.)*



Signpost at Teslin.

FROM Whitehorse we drove south towards Teslin, our next stop along the Staging Route. On the way, we turned off to visit Carcross, a small town whose present name is a somewhat colourless abbreviation of its original one, Caribou Crossing. There I hoped to have a chat with George Simmons, a bush-pilot who has spent twenty years in the North and whose headquarters is an airstrip which he himself hewed out of the wilderness.

Although we learned, to my disappointment, that he had taken off for Skagway earlier that morning, the side-trip proved anything but unrewarding; for the vital old lady who serves as ticket-agent at the Carcross depot of the White Pass and Yukon Railway regaled me with several hair-raising stories of the past.

The most tragic of them concerned an American B-17 *Flying Fortress* which landed at Whitehorse one day in 1943 in order to carry out a few repairs. The work completed, the aircraft took off on a short test-flight, taking with it

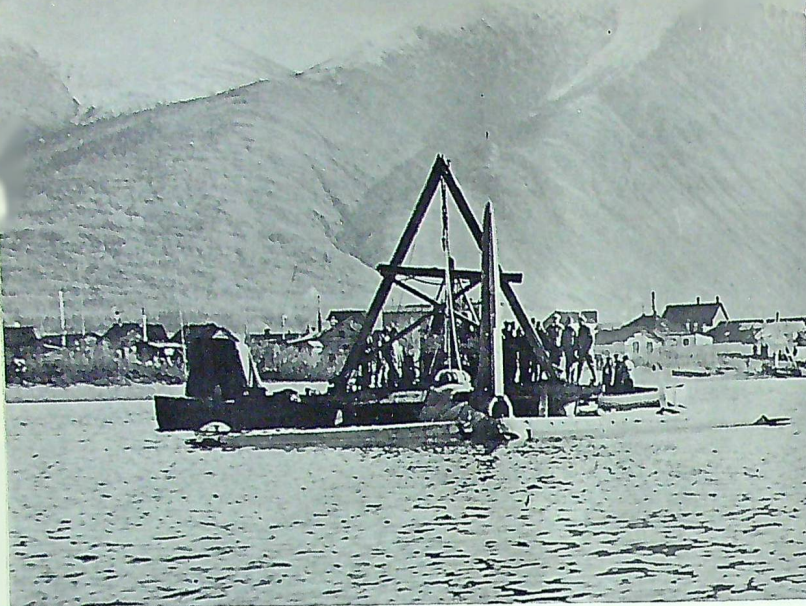
some eighteen R.C.A.F. personnel who had been invited to go along for a ride. Over Lake Bennett, beside which Carcross stands, one of the engines cut out and the 'plane crashed into the water. The pilot went down with his aircraft. Most of the others, who had managed to climb out on to the wings, clung there for the few moments until the 'plane sank, when those of them who could swim struck out for the shore. "But", as my old lady said, "very few people die from drowning in this country. Their hearts stop when they hit the icy water." Only seven people were saved — by boats which, having been dry-docked all winter, took a long time to reach the swimmers. A *Norseman* flew into Lake Bennett with doctors and supplies, landing on George Simmons' field. When it took off on the following morning, its wing hit the wind-tower and two more were killed. As my friend said: "The ironical thing about the whole incident was that a sand-bar was hidden under the water only a few feet in front of the wrecked air-

craft, but the survivors didn't swim in that direction."

Leaving Carcross, we passed the night at Marsh Lake Lodge, a hunting and fishing lodge used extensively by those who can afford to pay fifty dollars a day. Mike Nolan, its guide and outfitter, is a veteran of the R.C.M.P. While we sat in the lounge of the two-storey log building, with the rain beating heavily upon the roof and the wind roaring around the chimney of the fireplace, Mike told us many tales of his days spent in the North as a Mountie. Among his stories was one concerning Pat Ivy, who flew with the R.C.A.F. on the Staging Route throughout the early war years and was later killed in Europe. When Aishihik was under construction, Pat flew in one day and pancaked his *Dakota* after taking the undercarriage off on the top of a bulldozer. "His entire load consisted of nails. You can find nails on the runway to this day — often when you least want to."

"In the final years of the war," Mike said, "when a quart of milk





*The B-17 that crashed at Carcross, 1943.*

cost \$1.50 — so you can imagine what a quart of whisky cost — a few of the R.C.A.F. and U.S.A.A.F. boys decided to go into business. They built three 75-gallon stills in the hills surrounding Whitehorse. They got away with it for many months, too, bringing their moonshine down to the thirsty thousands through a system of metal pipes rather like miniature Canol Pipelines. It was my unhappy duty to have to locate these installations and put an end to their flourishing distilleries."

From Marsh Lake Lodge we drove on to Teslin, where I had an interesting conversation with Mrs. R. McCleery, the local postmistress. Her recently deceased husband, a member of the R.C.M.P., had made the original clearing at Teslin in 1940, some two years before the airport was actually built, in the hope of attracting aircraft to the little town. When construction began, the problem of bringing in supplies was solved in customary northern fashion. All materials came in on three stern-wheelers belonging to the White Pass and Yukon Company: the *Nisutlin*, the *Keno*, and the *Whitehorse*. The three vessels steamed down the Yukon River from Whitehorse, across Lake Laberge, and up the Teslin River. Each made one 240-mile trip a week, for two months. Bulldozers

built a road from the wharf to the airport site, where construction crews went to work under the direction of D.O.T. Several months later, when a section of the Alaska Highway was begun at Teslin, American negro soldiers and their equipment were brought in by the same means.

\* \* \*

From Teslin we proceeded south, through Seagull Creek, Rancheria, and Upper Liard River, to Watson Lake, our last stop in the Yukon before entering British Columbia.

The name of Watson Lake will conjure up fond memories in the minds of many R.C.A.F. personnel. Situated on a peninsula which juts into the lake, and surrounded by tall pines, it is a place of rare beauty as well as a fisherman's paradise. The flight sergeant who commanded the Detachment introduced me to Vic Johnson, a civilian who has fulfilled various functions around Watson since 1938.

The story of the building of this lovely, but lonely, northern airport is a good example of the courage and ingenuity which characterizes the development of flying in Canada's North. "All the material", Vic told me, "was assembled at Vancouver in the spring of 1941. The means of transportation also had to be constructed in Vancouver. One stern-wheel river-steamer, three shallow-draft power boats (called 'tunnel-boats'),\* and twelve barges, were built. Then, dismantled for shipment, they were

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\* A tunnel-boat has a shallow draft, and the propeller is positioned above the level of the bottom of the boat, thus being protected from submerged rocks. The water is "led" to the propeller through a "tunnel" built into the bottom.

*Tunnel-boats.*





taken to the port of Wrangell, Alaska, on coastal steamers.

"Meanwhile, a sawmill was flown in to the site. Logs for the buildings were cut in the Liard Valley, and brought by land five miles to a landing across the lake from the peninsula. The logs were boomed across the water, and there dressed by the sawmill for later use.

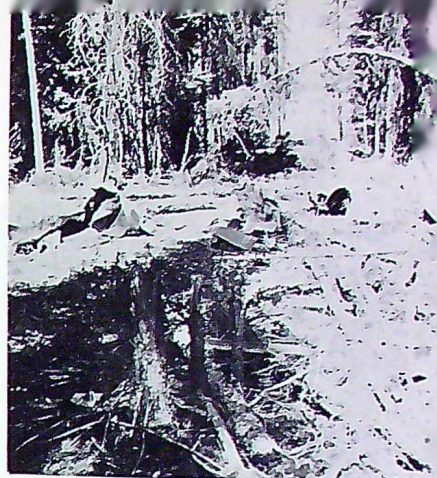
"At Wrangell, the craft I spoke of were reassembled and employed to freight the supplies up the Stikine River to Telegraph Creek, in B.C. From Telegraph Creek, the boats and the freight had to be portaged 72 miles to Dease Lake, one of the gold-rush centres of 1898. A trail already existed between Telegraph Creek and Dease Lake, but much work had to be done by 'cats' to make it into a road. The bridges especially had to be strengthened."

I heard the rest of the story from Big Alex MacDonald, whom I met later at Lower Post. Big Alex, an immense Scot who still retains his burr after sixty years in the North, is now a trapper. At one time, during the Klondike Gold-Rush, he was so rich that he was able to afford a trip back to Europe, where he mixed with Royalty. Travelling

in gold-inlaid coaches, however, and giving nuggets away to everyone he met, he soon lost his fortune. He returned to the North, where he was eventually to assist in the building of R.C.A.F. Detachment Watson Lake.

"From Dease Lake," Big Alex told me, "supplies were transported down the Dease River into the Liard River at Lower Post, a famous old Hudson's Bay trading-post. One of the river-boat pilots on the trip down the Dease was an Indian called 'Captain Sandbar'. His real name was Ritchie, and he was skipper of a stern-wheeler which would haul two forty-ton barges of supplies. He owed his nickname to the fact that, at his previous job on the Fraser River, he always got stuck on the bars. He made a few successful trips down and up the Dease, and then his stern-wheeler hit a rock in the Two-Mile Rapids and sank.

"After this, the tunnel-boats pulled all of the freight on the Dease. They took two days to go down the rushing river, with its many rapids, and six days to make the return trip up it. The Cottonwood Rapids were so bad that a



*Remains of Russian P-39, on Watson Lake Island.*

road had to be built around them for the freight, and a final 26-mile portage was necessary from Lower Post to Watson Lake. The road which was built for this portage was later to become a section of the Alaska Highway."

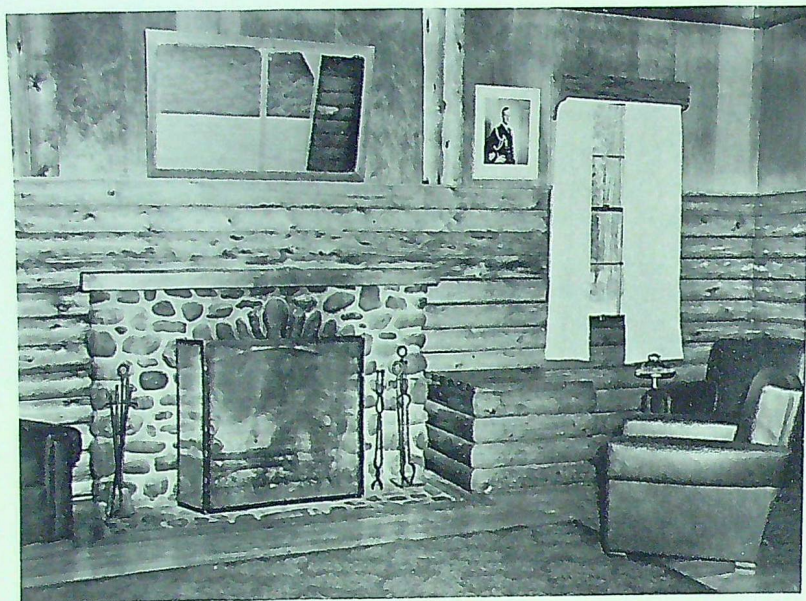
To return to Vic Johnson at Watson Lake. He showed me Sandy's Point, a point on the peninsula to which McConachie and Fields moved from Lower Post in 1938. There, Yukon Southern Airways set up a radio-station in a log cabin and another cabin for the pilots of their *Wacos*, *Norsemen*, *Junkers*, and *Howards*. I looked in at the war-time officers' mess, long since locked up. Carved out in the log facing of the fireplace are hundreds of R.C.A.F. and U.S.A.A.F. pilots' names. I recognized many of them, some as belonging to men who are now senior officers in the R.C.A.F., others as those of pilots who flew on to Europe or the Pacific, never to return.

Although control of the Staging Route was handed over to the R.C.A.F. in September 1942, the first commanding officers of the various units arrived in July. They were chosen with two qualities in mind. The first was diplomacy: they had to be capable of ensuring friendly co-operation with the American forces (including the Engineer Corps engaged in construction of the Highway). The second was implied in Ted Holmes' remark to me in Edmonton: "Someone in Ot-

*The crashed Lincoln.*







The fireplace in the officers' lounge at Watson Lake.

Outside the quarters at Watson Lake during the war. (Nat. Film Board Photo.)



tawa must have run his pencil down a list of R.C.A.F. pilots until he found six former bush-pilots. You'll notice he didn't get past 'H.'" Wing Commander C.M.G. (Con) Farrell went to Edmonton, and Squadron Leaders J. F. Bythell to Grande Prairie, E. S. Holmes to Fort St. John, A. C. Heaven to Fort Nelson, G. W. du Temple to Watson Lake, and J. Hone to Whitehorse. In addition, Flight Lieutenant D. M. Shields, an experienced airways traffic control officer, was sent to Edmonton to direct the establishment of a general control over the Route.

Vic Johnson told me about one of the first things done by Sqn. Ldr. du Temple and his airmen. "They scrounged some wood and built a flat-bottomed boat. Then they went to a U.S. Army maintenance camp on the Alaska Highway and scrounged a washing-machine engine to propel it. In those early days, the men at the Staging Route units were often forced to eat their emergency rations for want of supplies. The fish they caught from their boat were sometimes actually necessary for survival."

On my tour of the lake with Vic in the crash-and-rescue launch, he pointed out several spots where tragedies had occurred in the past. We saw the wreckage of a *Sea Fury*, two *Airacobras*, a *Dakota*, and a *Lincoln*. The *Dakota*, which belonged to the U.S.A.A.F., had forced-landed on a deserted bridge several miles west of Watson, killing the pilot and co-pilot. The two remaining members of the crew sat in sight (from the air) of the airport runway for eleven days while aircraft from No. 2 Air Observer School in Edmonton, as well as many others, searched for them. On the eleventh day, each of them with a broken leg, they began to crawl towards Watson Lake. For eight days they crawled through the waist-deep snow which buried that frigid and mountainous terrain, using sections



of engine-cowlings as sleighs, and surviving on emergency rations. They were finally spotted by an R.C.M.P. constable who had followed their tracks in the snow. The two men crawled almost to the end of the runway.

From this incident came a realization of the necessity of training pararescue crews to operate throughout the North. No. 2 A.O.S. constantly received calls to search for lost crews, men who were not trained to take care of themselves in the wilderness. The American flyers especially, many of whom had never seen snow before, did not know how to cope with extreme cold, icing, and other conditions which were commonplace in northern bush-flying.

Eventually, a school to train pararescue personnel was organized in Edmonton, under North-West Air Command. The School was under the direction of Wing Commanders H. J. Winny and H. L. Watson, Flight Lieutenant S. Knapp, and Sergeant O. Hargraves. Volunteers were called for from the trades of Hospital Assistants (Male), Aero-engine Mechanics, Airframe Mechanics, and Electricians. Twelve of the hundreds of volunteers were chosen to take the first course which began in December 1944 and continued for fourteen weeks.

The course included such subjects as first aid, parachute theory, signals equipment, supply-dropping, bush lore, codes (W/T, helio, and lamp), and physical fitness. In addition, the students made twelve practice jumps and spent a week in the bush putting their woodcraft theory into practice.

Two courses were trained, providing the R.C.A.F. with twenty-seven pararescuers. The graduates were awarded a special emblem, to be worn on the sleeve, bearing a crown and parachute and the words "RESCUE — R.C.A.F." A measure of the value derived from such training — quite apart from the number



War-time construction at Watson Lake.

Parade at Watson Lake during the war.







Dal Dalzel's Curtiss Robin, 1936.

of pilots who owe their lives to pararescue — is the fact that the R.A.F. requested all details of the school and its training, with a view to adopting a similar procedure for use in the Far East.

\* \* \*

After we had left the airport site at Watson, I stopped off at the Watson Lake Hotel to talk to Dal Dalzel, more commonly known to students of northern flying as "The Flying Trapper", and famous for his ability to get into places where no one else would. Dal told me about the aircraft that were flown to the Russians during the War. Lockheed *Lightnings*, Douglas *Invaders*, and other types of tricycle fighters and bombers passed along the Staging Route on their way to Fairbanks. Fighters were usually escorted by a mother-ship, such as a *Liberator* or *Fortress*, and it was not uncommon for forty or fifty to pass through every day. "The Russians," he said, "preferred the P-36 — *King Cobra* — because the location of the cannon in the crankshaft was ideal for anti-tank work."

I had heard it said and seen it written that Russian women piloted the aircraft from Fairbanks. "Actually," Dal said, "there were few if any women pilots. The women were mostly lieutenants who acted

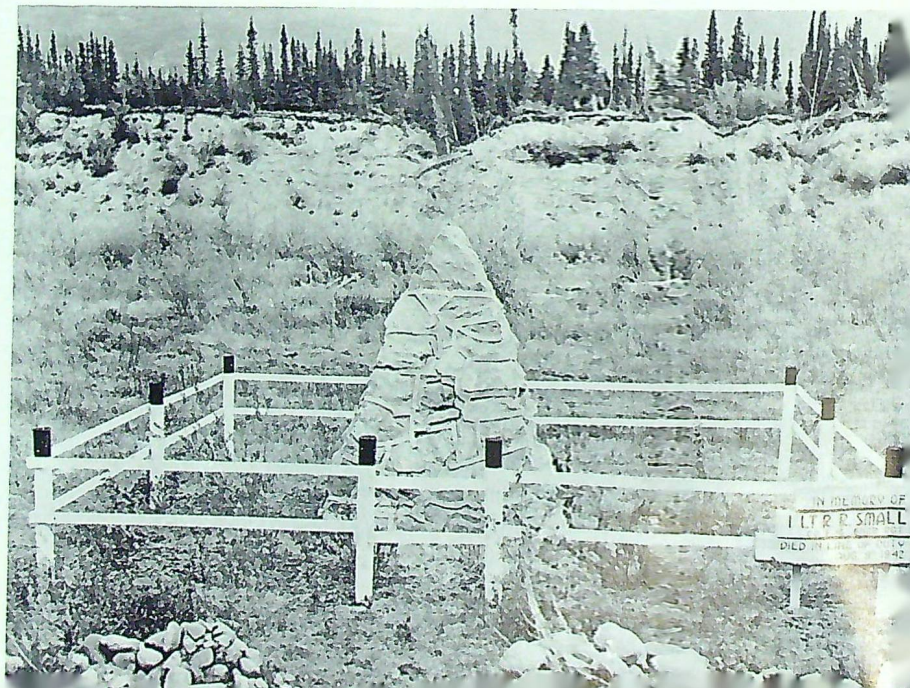
as mechanics and translators. The Russians had their own mess in Fairbanks, and used to ship over their own vodka. Occasionally, when they could be persuaded to visit the American PX, they made their purchases with a called-in issue of very large orange-coloured American bills — bills hoarded by them since the time of an American occupation which had taken place during a slight naval war between Russia and Japan."

Dal knew a lot about Russian

habits because, during the war, he had acted as a flying guide for the flights of aircraft destined for Europe. He told me of the time, early in the winter of 1944, when Molotov flew down the Staging Route to Edmonton. In Edmonton, the Russians asked the R.C.A.F. for six DC-3s and crews to fly them. Molotov's departure-time was kept a big secret, and the crews waited for three days so that the element of surprise could be utilized. Since they would not tell which aircraft of the six Molotov would eventually use, five of the aircraft and their crews were, in actual fact, only decoys. While Molotov was in the city, the Russians requested that an entire H-building be given to him and his retinue. They also asked for a new car, a garage, and a new refrigerator; then, constantly surrounded by police guards, they proceeded to dismantle the car and the refrigerator, investigate their mechanical features, and put them back together.

Before 1939, Dal used to fly out of Telegraph Creek; after that, he operated from Sandy's Point. In the winters of '39 and '40 he did a

A grave beside the Alaska Highway.





lot of aerial surveying for D.O.T. in his Curtiss *Robin*. He also carried out extensive aerial surveys for the Alaska Highway, and later "acted as a sky-guide and mother-protector for the flights of Russian aircraft."

Mike Nolan, at Marsh Lake Lodge, had already related to me an anecdote about him. Late in 1945, an aircraft piloted by a Colonel Fox made a forced landing on what later became known as Fox

Lake, between Teslin and Whitehorse. A twenty-mile road was bulldozed into the lake from the Alaska Highway. Engineers, engines, and food for the 17 passengers and three crewmen, were brought in. The weather was icy cold, and the frozen legs of meat were cut with a cross-cut saw. Dal was requested to fly in with his *Norseman*. All arrangements went off smoothly, and Col. Fox's plane took off from the ice on wheels over

a cleared runway of 1248 feet. Dal wished to be the first to report the success of the operation, but so did a U.S.A.A.F. lieutenant. A heated argument ensued, and the short 135-lb. lieutenant managed to get into the *Norseman*. The spectators, of whom Mike Nolan was one, started to make bets about who would give in first. Seemingly Dal did; for the aircraft began to take-off. The attempt, however, was unsuccessful. So were three more attempts. Finally the *Norseman* stopped, the door opened, and out stepped the lieutenant. "I", he stated ruefully, "must have made the load too heavy."

Several readers have drawn our attention to an error in Part One of the foregoing series. It was stated that, "of the six units (of the Route) now operated by the R.C.A.F., two more will be passed over to the Department of Transport before very long. At the present time, the responsibility for the various units is allocated as follows:" etc. We then proceeded to show the responsibility for the various units as it has been allotted since Flying Officer French's article was prepared. We apologize both to our puzzled readers and to the author. —Editor.

(To be continued)

## Plus ça change

This little item, quoted from "The National Guardsman" (U.S.A.), may possibly strike a responsive

chord in the drill-conscious breasts of our pilots:

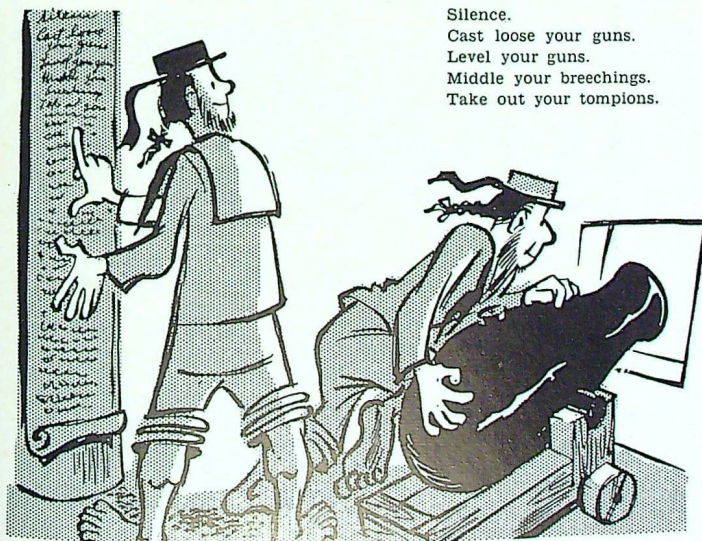
According to Naval Regulations dated 1818, the sequence or orders for gun-drill went like this:

Silence.  
Cast loose your guns.  
Level your guns.  
Middle your breechings.  
Take out your tompions.

Take off your aprons.  
Pick and prime.  
Lay on your aprons.  
Handle crows and handspikes.  
Point your guns at the object.  
Level your guns at the object.  
Blow your matches.  
Take off your aprons.  
Fire.  
Stop your vents.  
Sponge your guns.  
Return sponge.  
Load with cartridge.  
Wad to cartridge and ram home.  
Shot your guns.  
Wad to shot and ram home.  
Return hammer.  
Put on your aprons.  
Man your side tackles.  
Run out your guns.

After that command, they were ready to start all over again with the command: Level your guns.

Although a glib-tongued radio announcer can hardly recite those orders in less than a minute, the top-notch gun crews on *Old Ironsides* under Capt. Isaac Hull could fire broadsides every 75 seconds!

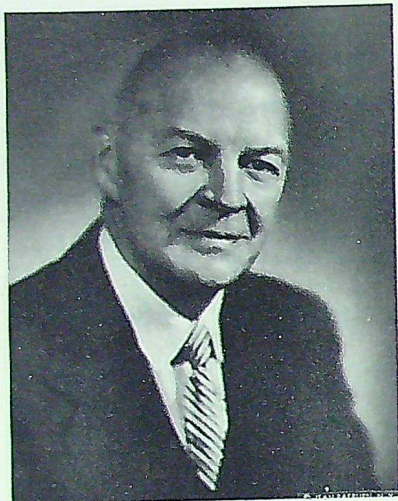




# R.C.A.F. Association



The Seventh National Convention of the R.C.A.F. Association will be held in Saint John, New Brunswick, on 6, 7, and 8 June, 1957.



Mr. Gill Robb Wilson.

## CONVENTION GUEST SPEAKER

Mr. Gill Robb Wilson, Chairman of the Board of the Air Force Association of the United States, will be the guest speaker at the Annual Convention Dinner on June 8th. Gill Robb Wilson has been on the directorate of the A.F.A. since 1946 and served as President 1955-56.

During the Great War, Mr. Wilson served as a pilot in the Lafayette Escadrille and later in the American Air Service. A close friend of "Billy" Mitchell, he was one of a handful of men who actively supported the views of the General in his efforts to gain recognition for Air power in the 20s. Mr. Wilson is now the editor and publisher of "Flying Magazine".

The members of the National Executive Council consider that the Association is most fortunate in securing the services of Gill Robb Wilson as our guest speaker.

## R.C.A.F. ASSOCIATION BONSPIEL

The Fourth International Air Force Bonspiel was held in Lethbridge on March 22nd and 23rd. This unique event was conceived and sponsored by the members of No. 702 Wing. It has grown from a 22-rink competition, 3 years ago, to one embracing more than five times that number this year. That this event is increasing in popularity is evidenced by the fact that rinks came from points as far away as Newfoundland, Whitehorse, Fort Nelson, and the U.S.A.

The Flying Officer Del Martin Memorial Trophy was captured this year by the Gibb Booth rink from Moose Jaw.

No. 702 (Lethbridge) Wing has adopted the International Air Force Annual Bonspiel as its major activity. Those who attended the Bonspiel were high in their praise of the splendid arrangements and delightful entertainment which were afforded. It is endeavours



No. 437's President Arthur Leonard and Flight Lieutenant Glenn Kessler, C.O. of No. 172 Squadron, R.C.A.C.

such as this that sustain interest in our Wings.

## WING NEWS

### No. 437 (York) Wing

On April 15th, at R.C.A.F. Station Toronto, the executive of the Leaside Lions Club formally handed over sponsorship of No. 172 Royal Canadian Air Cadet Squadron to

Winners of the Flying Officer Del Martin Trophy. L. to r.: Flying Officers J. Brock, F. Elvins, H. Gropp, and G. Booth. ("Lethbridge Herald" photo).





No. 437 Wing of the R.C.A.F.A. The Lions Club of Leaside has continuously and successfully sponsored No. 172 Air Cadet Squadron since 1944. The R.C.A.F. Association is very grateful to the Leaside Lions for the equipment, furniture, and so forth, which they turned over to the Association at the time of the transfer of sponsorship. This is just another step forward for No. 437 Wing.

#### No. 438 (Algonquin) Wing

No. 438 (Algonquin) Wing, Pembroke, held its first Charter night recently with Air Vice-Marshal G. E. Brookes, C.B., O.B.E., as the guest speaker. On behalf of the National Executive Council, the Air Vice-Marshal presented to President Frank Lynch a set of flags which the Wing had won as first prize in the recent Membership Campaign.

#### No. 406 (North Bay) Wing

Efforts by No. 547 (Canuck) Air Cadet Squadron to augment its supply of band instruments received a boost when Donald Rumble, chairman of the 406 Wing sponsoring committee, personally donated a new brass drum to the squadron. More instruments are needed and donors will be welcomed.

#### NATIONAL PRESIDENT ON TOUR

At the time of writing, the National President, Air Vice-Marshal F. G. Wait, C.B.E., accompanied by Flight Lieutenant M. E. Ferguson, is visiting Wings in Nova Scotia.

#### LADIES' AUXILIARIES

The members of the Association are most appreciative of the services performed and the co-operation extended by Ladies' Auxiliaries, and heartily approve of their establishment at Wing level.

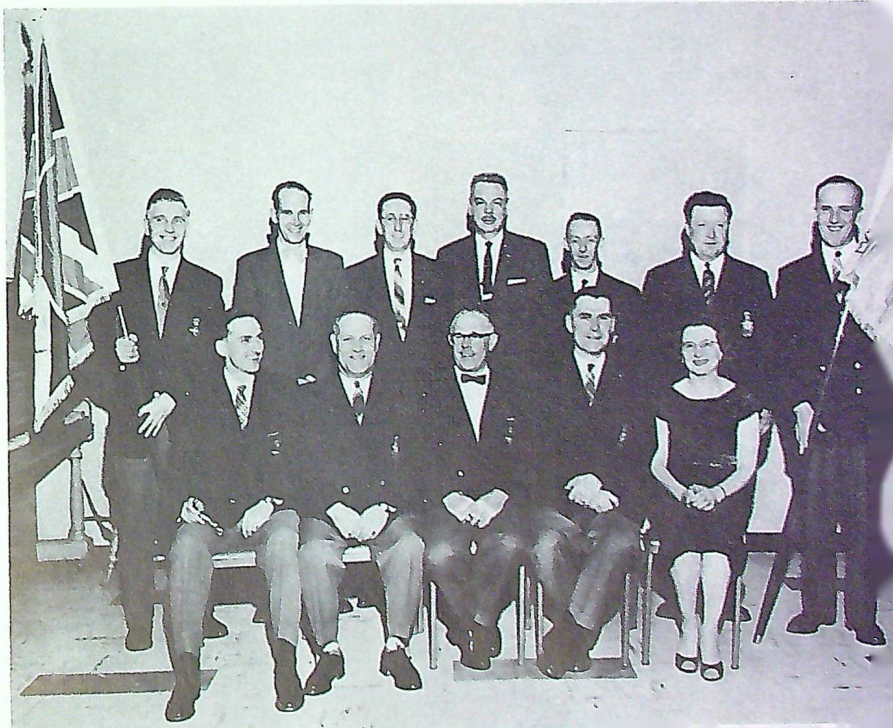
A distinctive lapel badge to be worn by members of the Auxiliary has recently been issued.



Seventh Annual Convention Committee, No. 250 (Saint John) Wing. Front row (l. to r.): E. B. Fitzgerald, Dorothy Clark, Eileen MacLean, Aleta Gould, Norman Jackson. Back row (l. to r.): J. E. Richards, P. F. Connell, M. H. Hutchinson, B. Stead, R. E. Jackson, L. North, A. H. Buckley, D. F. Welsford, D. B. Flower, C. L. Dunbrack, J. N. Wills.



No. 438 Wing's 1957-58 Executive. Front row (l. to r.): K. McGuire, B. Pappin, Air Vice-Marshal G. E. Brookes, F. Lynch, Florence Brumm. Back row (l. to r.): O. Ruhnke, G. Cayen, M. Switzer, E. Fischer, A. Turner, G. McCauley, R. Meitz. Absent: H. Godin and Mrs. E. Martin.





# BADGES OF THE R.C.A.F.: 4

*This is the fourth in our series of illustrations of the badges of the R.C.A.F. Black-and-white reproductions of the badges may be obtained by writing to: Director of Public Relations, Air Force Headquarters, Ottawa, Ont. Glossy or matt prints are available in two sizes: 8" x 10" (50c.) and 11" x 14" (\$1.00). Cheques or money orders (not cash) must be made payable to the Receiver General of Canada.*

## NO. 3 WING

(April 1956)

The German Eagle, charged with three maple leaves.

*Agmen Primum Libertatis*  
(Freedom's vanguard)

The design and motto of No. 3 Wing's badge were chosen as symbolic of the fact that it was the first R.C.A.F. formation to be stationed in Germany in support of the North Atlantic Treaty Organization.

No. 3 Wing of the R.C.A.F.'s No. 1 Air Division was formed at Zweibrücken, Germany, on 1 February 1953. The three *Sabre* squadrons, Nos. 413, 427, and 434, arrived on 7

April 1953, having completed "Leapfrog III" from Canada, and three weeks later the French High Commissioner for Germany formally handed over the station to the Canadian Minister of National Defence.

## CENTRAL EXPERIMENTAL & PROVING ESTABLISHMENT

(February 1955)

Hercules in combat with Hydra.

*Experto Crede*

(Believe one who knows from experience)

Among the twelve tasks, or "labours", imposed on the Greek hero Hercules, one of the most difficult was to slay the monster Hydra which, when one of its numerous heads was severed, was able to grow two new heads unless the wound was cauterized. Like Hercules, C.E. & P.E. is called upon to solve many varied tasks for which great ingenuity, ability, and persistence are required.

From the earliest days of the Air Board and the Canadian Air Force, test and development work was carried on at Ottawa Air Station (at Rockcliffe and Shirley's Bay) where, eventually, a special flight was formed for this purpose. The outbreak of war greatly increased the demands for test flying for research and experiment, and, as a result, the flight was expanded into the Test and Development Establishment in November 1940. Six years later its name was changed to Experimental and Proving Estab-

lishment. On 1 September 1951 the Central Experimental and Proving Establishment was formed by the amalgamation of the E. & P.E. at Rockcliffe, the Winter Experimental Establishment at Edmonton, and the R.C.A.F. (National Research Council) Unit at Arnprior. Headquarters of C.E. & P.E. are at Rockcliffe, with detachments at several sites across the Dominion.

## NO. 430 SQUADRON

(August 1955)

In front of a sun in splendour, a gyrfalcon's head erased.

*Celeriter Certoque*  
(Swiftly and surely)







The gyrfalcon, found in northern Canada, is noted for its alertness and fighting ability. The sun symbolizes the unit's war-time rôle on fighter reconnaissance operations, supplying photographic and visual information for the ground forces.

Formed at Hartford Bridge, England, on 1 January 1943, No. 430 was the third squadron in the R.C.A.F.'s No. 39 (R.) Wing which served as "the eyes" of the British Second Army through the campaign in N.W. Europe. Its battle honours are Fortress Europe 1943-1944, France and Germany 1944-1945, Normandy 1944, Arnhem, and Rhine. The squadron was disbanded at Luneburg, Germany, on 7 August 1945, and reformed at North Bay, Ont., on 1 November 1951, as a fighter squadron equipped with Sabres. From North Bay the squadron flew overseas late in 1952 to become part of No. 2 (F.) Wing based at Grostenquin, France.

## George Medal Awards

Her Majesty Queen Elizabeth II recently approved the award of the George Medal to Flight Lieutenant R. G. Morgan and Leading Aircraftman H. J. Waters for an act of outstanding courage performed in July 1955 at No. 1 (F.) Wing's base at Marville, France.

An R.C.A.F. Sabre, coming in for a landing, stalled and crashed short of the runway, bursting into flames.

L.A.C. H. J. Waters.



Flt. Lt. R. G. Morgan.

Flt. Lt. Morgan, who was on runway control duty, sprinted 150 yards to the crash. Then, in the words of the citation, "with complete disregard for his own safety, ignoring the flames and exploding ammunition, he attempted, while standing on the wing over partially-filled fuel tanks which were in imminent danger of exploding, to open the jammed canopy which had trapped the pilot." There he was almost immediately joined by L.A.C. Waters, who had been working nearby.

When the two men had tried without success to pull open the jammed canopy, Flt. Lt. Morgan attempted to break it open with a stone. He was finally successful in smashing it with an axe obtained from the fire-truck which had reached the scene. He and L.A.C. Waters were then able to remove the partially-conscious pilot from the cockpit.

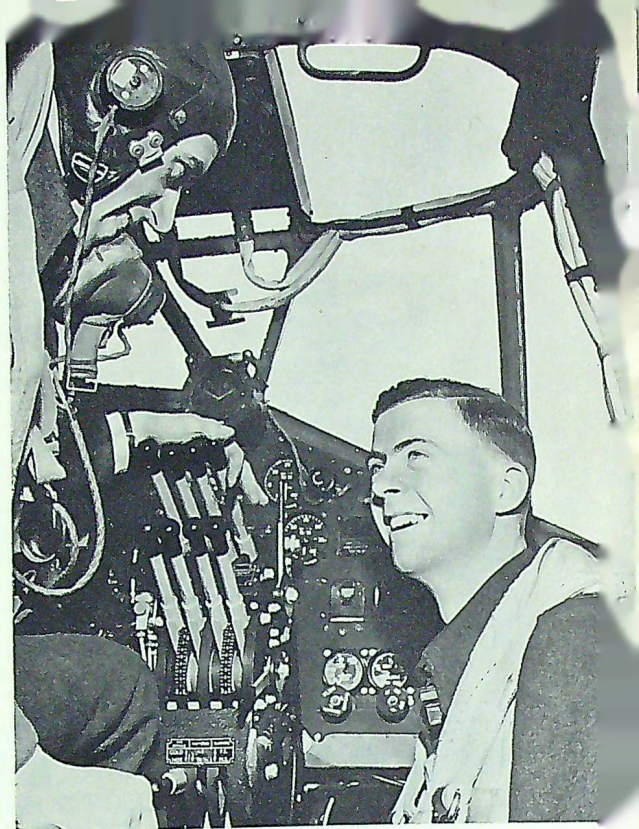




# No. 425 Squadron

## PART TWO

BY FLIGHT LIEUTENANT A. P. HEATHCOTE,  
Air Historical Branch.



*Flt. Lt. Yvon Côté (left) chats with his flight engineer, Pilot Officer D. James, of England.*

As April 1943 neared its end, the Alouettes concentrated on preparations for a move to another theatre of war. Over Duisburg on 26 April they had bidden adieu to the Reich for a period of nearly eight months. Now they were to operate against one of the junior Axis partners, Italy, and that meant their wholesale transfer to North Africa. Their preparations for the move involved, among other things, outfitting with tropical kit and, in a flying way, acceptance-tests of 20 *Wellingtons* Mark X (Tropical). After a short embarkation leave, a ground party consisting of five officers and 312 airmen entrained at Thirsk station on the first leg of the long trip to the Middle East. Not included in the draft were No. 425's original flight commanders, Squadron Leaders Georges Roy, D.F.C., and Logan Savard, both of whom had recently been posted, the former to No. 424 (Tiger) Squadron, the latter to No. 429 (Bison) Squadron. Savard was lost during a raid on Mulheim in June, three weeks after taking command of the Bisons. Roy eventually took over the Tigers. He became a

prisoner-of-war after being brought down during a raid on Bochum in October 1944.

The sea voyage of the ground party was interrupted by sporadic attacks by German bombers in the Bay of Biscay area, attacks which, except for livening up the trip somewhat, were inconsequential, there being no casualties. The same could not be said for the aerial part of the transfer. Twenty aircraft left Portreath on 4 June and nineteen reached Telergma, Tunisia, the same day. The lone exception encountered trouble over the same Biscay area, trouble in the form of the airborne enemy. Its crew and two groundcrew passengers were eventually obliged to hit the silk when over Portugal. All were interned in that country for the remainder of hostilities.

By mid-June most of the personnel and equipment had reached the new airfield-home at Kairouan. Now started all over again the arduous process of establishing themselves in the business of carrying bombs to enemy places. For this phase of operations the squadron

formed part of No. 331 Wing, in No. 205 Group.

The Alouettes soon became aware of the physical and meteorological nature of their environment. There was eternal sand; there was eternal heat; there were periodical torrential rains that transformed the airfield into what looked more like a swamp minus the bulrushes; there were the sand-laden breezes of the sirocco, fresh from the desert, which seared the eyes, dust-draped everything in sight, and finally dried everything up, making it possible for the miserable cycle to start all over again. The Alouettes had traded the mud, wind, and rain of Yorkshire for the mud, wind, and rain of Tunisia, with heat thrown into the bargain. Just when they were getting reasonably adjusted to this sort of thing, they were called upon to attack their first target in this theatre.

Their immediate concern was the softening-up of Sicily in prepara-





*Back from operations. After each raid, another note was added to the melody on the Wellington's nose. Left to right: Pilot Officer J. Leigh, Flt. Sgt. "Scotty" MacKay, Sgt. S. Blackert, Flt. Sgt. F. LeDressay, Pilot Officer C. Spooner.*

tion for the invasion of that island. One of many key points selected for high-explosive treatment was the port town of Sciacca, a predesignated landing-point. The Alouettes redonned operational harness by bombing it on the night of 26 June. The operation's general success was marred in one way, augmented in another. One crew was lost, one enemy aircraft destroyed. At least one Ju. 88 was prowling in the Sciacca area that night. When almost directly over the town, *Wellington* "R"-Roger (captain, Flt. Lt. C. M. Blakeney, who, though in the R.A.F., hailed from Texas) was attacked by a Junkers whose presence was realized only when it opened fire. Gunner Flight Sergeant J. P. Goyette was so startled that his thumbs automatically hit the firing buttons and froze there for fully six seconds. The range throughout most of the long burst was practically point blank. He couldn't miss. The German fell away, and moments later an aircraft was seen blazing on the Mediterranean. Claimed as destroyed, the Ju. 88 was No. 425's aerial victim number one.

Two cracks at Messina on succes-

sive nights resulted in casualties, one crew failing to return and one member of another being lost at sea during a ditching. Thereafter No. 425's losses in this theatre were limited to one crew in 721 sorties.

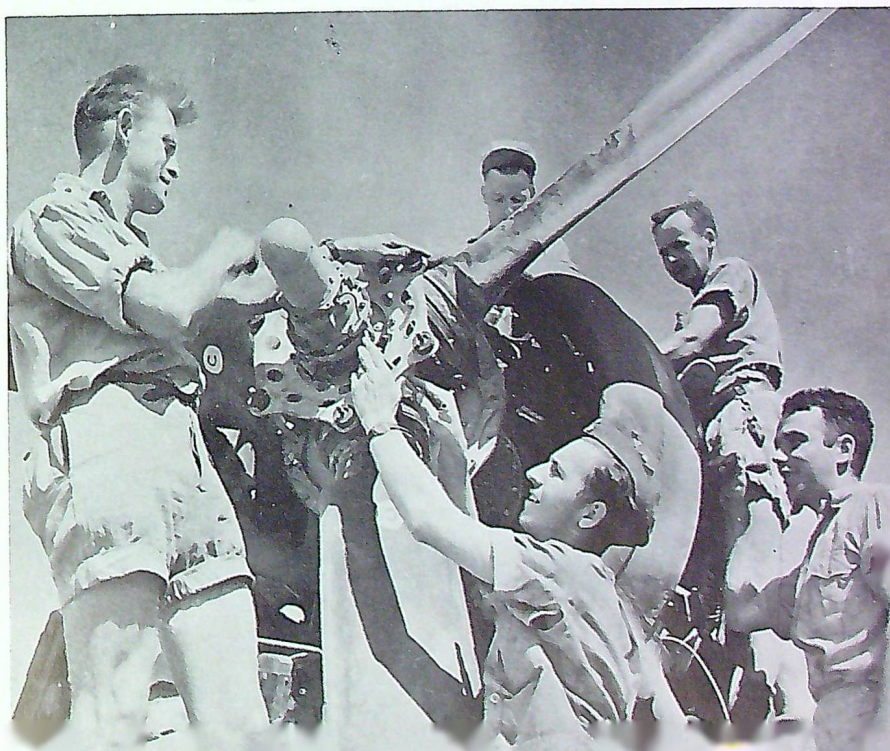
The Italian brand of anti-aircraft fire, while comparing unfavourably in accuracy and intensity to its German counterpart, did occasionally achieve some measure of success. *Wellington* "E"-Easy, on the point of making its bombing run on a 'drome at Catania, was sprayed by some well predicted flak to the extent that its hydraulics were perforated (whereupon the flaps and one wheel came down and stayed down, and the bomb doors opened) and, as was learned later, its tires were riddled. Although "Easy" was mashing noticeably and responding poorly to controls, its pilot, Flt. Lt. J. C. H. Delisle, pushed it on to the proper target, bombed as briefed,

and laboured it back to base. Despite two punctured tires and the unquestionable difficulty of controlling the kite generally, he made a masterly landing and prevented injury to his crew and further damage to the aircraft. Reference to his courage and skill on this and many other operations was made in the official citation that accompanied his award of the D.F.C.

\* \* \*

The Alouette offensive continued against ports in Sicily and Sardinia and also against Sicilian airfields that were considered most likely sources of embarrassment to the Allies in the invasion which was now imminent. Perhaps the hardest-hit air base in Sicily was Gerbini, springboard for so many attacks on Malta during its time of trial. With the shoe now on the other foot, Gerbini was taking a liberal dose of its own medicine.

*A final check by the groundcrew before the night's operation, an attack on the Italian mainland. Left to right (counterclockwise): Cpl. P. E. Giguère, L.A.C.s N. Viger, A. Gagnon, J. E. N. Pelletier, J. A. Clouthier.*





Four days after the Allies hit the beaches of Sicily, the Alouettes began to deliver a series of good swift kicks on the shin and toe of Italy. They went after docks, rail yards, and airfields in the Naples area, and ports bordering the Strait of Messina. The war in the Mediterranean was a different sort of war from that to which they had become accustomed. Much the greater part of their work was tactical or semi-tactical in nature, rather than strategical. Airborne interference with it was limited largely to sporadic and half-hearted passes by the *Luftwaffe*. (Only twice were agents of the *Regia Aeronautica* sighted by the Alouettes, one sighting being of a Macchi 202, the other of a Ju. 88 with Italian markings). As heretofore implied, Italian anti-aircraft fire, both in point of accuracy and intensity,

was not on a par with the German variety. On the other hand, our Africa-based crews had no navigation aids like "Gee" or "H2S" to guide them. Navigators plotted their positions by means of visual pin-points, flak positions, star shots, and quite often by the glow of Mounts Vesuvius and Etna. There was no Pathfinder Force to mark the aiming-point. On every night-operation each squadron sent one or more flare-dropping crews to light up the target for the bombing crews. Another difference was that ops. in the Mediterranean zone required no deep penetration of enemy territory, though they did involve considerably long periods over water. Possibly the biggest difference was in the pace of operations, which was much more intensive than ever before. (The Alouettes, during the Tunisian period, completed 88 oper-

ations in 101 days). Finally, and most important of all, casualties were much lower.

By August, the situation for the defenders of Sicily was no longer tenable. The Nazis were being chased across and out of the island. For them the port of Messina became a miniature Dunkirk in reverse. Thirteen times in fourteen nights the Alouettes combed the evacuation beaches or the sandy strip on the mainland directly across the narrow strait. Attempting to hinder as much as possible the shuttle of German troops and supplies to the Italian toe, they aimed at barges and ships in harbour and in open water, stockpiles of war materials spread over the shoreline between Messina and Cape Peloro, roads and railways in the Messina area, and likely-looking targets in the city itself. Once they caught a convoy of 25 or more vehicles, all with head-lights co-operatively aglow. On these forays they toted incendiaries along with high explosive, intending to burn up, as well as blow up, the enemy's fuel and transport that were undoubtedly cached, albeit camouflaged, along the beaches. Messina was one of the fatter targets in this theatre. Naples was another. Both were quite consistently flakky, and occasionally put on searchlight displays that called to mind operations in the so-called "big league" of the European war. It was while returning from Naples in early August that the squadron sustained its final loss of the Tunisian period. Approaching to land, one *Wellington* dived into the sea near base and went down with its crew.

After the beaches came the railways and the airfields. The squadron's work in the latter half of August and most of September traced a clear-cut pre-invasion, invasion-support pattern. Marshalling-yards, roads, key road and rail junctions, and airfields from Taranto in the south to Pisa in the

Wing Cdr. J. A. D. Richer.





north, all so vital to the now-regrouping enemy in matters of supply and troop movements and defence, were attacked with very good results. It was, in fact, the obviously great contribution made by these raids to the successful outcome of the invasion of Italy that prompted the Allies to adopt similar methods by way of preparation for D-Day.

Fog, a phenomenon relatively rare for this region, complicated the landing for eleven crews returning from a rail-ripping job on Foggia. Two *Wellingtons* crashed, but only one serious injury resulted.

In more than one respect August of 1943 was a record month for the *Alouettes*. It saw them fly 267 sorties to bomb 26 targets and "nickel" six others. It saw them operate on all but five days. (Over one stretch they operated on 14 successive days, certainly a period of "intensive operations" in the most cogent sense.) It saw them make a flight which, in point of elapsed time, was probably their longest ever. The flight, involving the dropping of not an ounce of high explosive, entailing not even the slightest hostile gesture, was made by Wing Commander St. Pierre and crew, who were airborne for 10 hours, 40 minutes. Their payload was 250,000 leaflets, which were duly distributed over the city of Modena. Only a few days later the *Alouette* leader was decorated personally by Lt.-Gen. Carl Spaatz, Commanding General, North-West African Air Forces, who pinned on the wing commander's breast the American D.F.C.

August was notable also for having seen the completion of tours by a goodly number of *Alouettes*. Included were two of the four teams which still remained of the original twenty that were available for duty on the night of 5 October 1942. One consisted of Pilot Officers C. L. ("Court") Spooner, Jim Leigh, Flt. Sgts. "Scotty" MacKay, Ferdinand LeDressay, and Sgt. Stewart Black-

ert; the other of Pilot Officers R. A. Stutt, J. R. G. Dubé, H. R. Manning, E. C. Hodgson, and W. D. Pettit. The screened list also mentioned several who had joined the squadron only weeks, or, in some cases, days, after that first operation, among them being Flt. Lt. J. C. H. Delisle, with Pilot Officers L. M. Halladay and A. G. DeBeer, both R.A.F.; Pilot Officer J. J. P. Michaud, with Pilot Officers J. L. Lymburner, J. E. Lago, J. H. Woodrow, and J. M. D'Aoust; Pilot Officer D. J. Turenne, with Pilot Officers H. F. Williamson, J. A. F. Meilleur, and J. E. Stillings; Pilot Officer J. N. Brousseau, with Flying Officer D. B. Hodgetts, R.A.F.; and Pilot Officer J. H. Marcotte, D.F.C., with Pilot Officers W. R. Spackman, J. W. Hobson, and W. J. Young. Many of the above were soon to be decorated.

The bombing tempo was maintained throughout September, when

practically all of No. 425's raids were made for the direct or indirect benefit of our ground forces that stormed the Italian mainland on the 3rd. The squadron kept operating at full pace even while engaged in a move to another aerodrome, at Hani East, begun on the 29th.

Included in these tactical attacks were four in four nights on key junctions around Salerno, intended to help the Allies maintain their toe-hold on the strategic strip of beach recently acquired. Another was directed against the San Gius-to airfield at Pisa, terminus of the air evacuation of Corsica. The weight of the *Alouette* attack was apportioned among aircraft, hangars, buildings, and runways. Hangars and buildings took direct hits. Fires raged in that fierce, all-consuming way, giving off the heavy black smoke which typifies an oil

Left to right: Flt. Sgt. J. E. Lago, Pilot Officers J. L. Lymburner, J. B. J. P. Michaud, Sgt. J. M. D'Aoust, Pilot Officer J. H. Woodrow.







Left to right: Sgt. L. F. Roberge, Flt. Sgt. J. P. Goyette, Pilot Officer G. S. Hutton, Flt. Lt. C. M. Blakeney, Flying Officer G. Taschereau.

blaze. Estimates of aircraft blown to bits or seen burning on the ground ranged from ten to twenty. The latter figure was probably nearer the truth, for one crew saw their stick of h.e. straddle five, a second destroyed four, a third got one, and six other crews swore that their 500s and 250s had dropped among the Germans' poorly dispersed *Flugzeugen*. It was against

another airfield, at Grosseto, that the *Alouettes*, on 5/6 October, carried out their last offensive action in the Mediterranean. Less than 48 hours later, news was received that the unit was to cease operations and return to the U. K. The Middle East phase of No. 425's aerial saga was therewith ended.

\* \* \*

By truck to Tunis, by train to

Algiers, by the S.S. *Samaria* to Liverpool, the squadron returned to England, disembarking on 6 November. Thenceforth they were once more to come under the administrative and operational jurisdiction of No. 6 (R.C.A.F.) Group, Bomber Command. Wing Cdr. Joe St. Pierre, their leader for more than 15 months, was no longer one of them. Posted on 1 October, he was to be repatriated. His successor was Wing Cdr. J. A. D. B. (Baxter) Richer.

Followed a week of resettlement activity at Dishforth, then sixteen days' disembarkation leave. After leave, 59 screened personnel said their good-byes to No. 425 and proceeded to various training units to do their tours of instruction. Their departure reduced the squadron's aircrew strength by more than 50 per cent.

In the meantime, those remaining in 425's decimated ranks had a war to fight. But they had to have new aircraft, and, since their soon-to-be-acquired four-engined bombers carried crews of seven or eight instead of five or six, their strength had to be brought up to and increased well beyond the former establishment. The aircraft (*Halifax IIIs*) were obtained, and conversion was begun early in December. Settling in at the same time was the complication of yet another move, to Tholthorpe, the unit's last overseas home. After Christmas, with the injection of new blood in the form of fresh seven-man crews, the squadron had swelled almost to operational size. Before regaining the status of operational readiness, however, the *Alouettes* had to complete the long process of conversion and do considerable training with their new battle-wagons and the new or modified equipment that they carried. Toward the end of the non-operational interlude the name of the Squadron Commander appeared in the London Gazette for the award of the D.F.C.

An *Alouette* crew on the way to its aircraft. Left to right: Pilot Officer H. F. Williamson, Flt. Sgt. J. E. Stillings, Sgt. R. S. Campsell, Flt. Sgt. J. A. F. Meilleur, Sgt. D. J. Turenne.





By 18 February the squadron announced itself ready to begin bombing Germany all over again, if only in partial strength. Now listed as high-priority targets were those centres of production connected with the German aircraft industry. Accordingly, ten crews were briefed the next evening to assist in the bombing of the "World Fair" city of Leipzig, a leading manufacture and repair centre of the Junkers organization. A comparatively rare occurrence prevented eight from even getting airborne. Three aircraft of No. 420 (Snowy Owl) Squadron became bogged in the mud in such a position that access to the runway was blocked. Before they could be hauled free it was long past time of "last possible take-off". Eight frustrated crews returned to dispersals, thence to crew-room, billets, and beds. Two other crews qualified for "Duty carried out" in the unit flying record. As was its wont, the weather over the continent that night was ten-tenths and troublesome. Nevertheless, the luxury of P.F.F. was once more available, and the target's position was well marked by sky-markers. The enemy was dropping decoy red markers, but all to no avail, as the attackers had been briefed for a different colour. A distinct red glow, visible 100 miles away, tinted the overcast as No. 425's twosome headed homeward, one extensively flak-damaged and with only three



Left to right: Flt. Sgt. P. G. Doucet, Pilot Officer A. T. Biech, Flt. Sgt. L. M. Halladay, Pilot Officers J. C. H. Delisle, A. G. DeBeer.

fans turning. Its pilot, Flt. Lt. J. Y. A. ("Pop") Côté, for whom this operation was the first with his crew, earned himself a D.F.C. The following December he was to become the first Alouette to win a second such decoration.

In the course of bombing Stuttgart the following night, No. 425 took its first operational loss in more than 6½ months. Five of the missing crew survived, however, and two of them, Flt. Sgt. E. A. Powell and Sgt. H. T. Gammon, earned the distinction of being the first Alouettes to evade. Evading independently, each contacted the Organization

very quickly and reached England via Gibraltar, Gammon early in May, Powell a month later.

Twice more within the next three weeks or so the Alouettes pounded Stuttgart without loss. Before the end of March they also hit the aircraft and aircraft-component centres of Schweinfurt, Augsburg, Frankfurt (twice), and Nuremberg, all of them tough targets deep in enemy territory.

*(To be continued)*

With the money spent in the Second World War (374 billions of gold dollars), the sum of 25,000 dollars as well as a house costing 20,000 dollars could have been given to every family in the United States, Canada, Australia, Great Britain, Ireland, France, Germany, Belgium, and the U.S.S.R. (*"The World Veteran."*)



# Pin-Points in the Past



THIS month's pin-point, procured for us by Squadron Leader W. E. Tuller, of A.F.H.Q., takes us south of the border to Wright-Patterson Air Force Base at Dayton, Ohio, where the beautiful memorial, shown in one of the two accompanying photographs, pays honour to the two Wright brothers, Wilbur and Orville, who, in a little bicycle shop in that city, did their research in aeronautics and built their gliders and "Flyers".

From a pasture outside the city they continued experimental flying after their first successful flight at Kittyhawk in December 1903, and at the Wright Brothers Field at Dayton many "Early Birdmen" learned to fly.

A plaque on the stone parapet by the memorial commemorates some of the pioneer flyers who trained at the Wright School. On the plaque are 119 names of men and

women who were pupils in the school up to February 1916, and it may surprise those who read the names to learn that more than a third of them were Canadians by birth or residence.

Tre first of them was Lindop E. Brown, who received pilot's certificate No. 267, issued by the Aero Club of America on 1 October 1913, and who was the second recruit enlisted by the Royal Flying Corps in Canada after the Great War began. The other forty-one Canadians were all war-time trainees who enrolled in the Wright School to secure the pilot's certificate which was a prerequisite for admission into the Royal Flying Corps or the Royal Naval Air Service. In 1915 and 1916 the few flying schools in Canada were inadequate to handle the great number of applicants, and many of them went to the United States to enrol in the

schools there — the Wright School at Dayton (with a winter training-course at Augusta, Ga.), the Curtis Schools at San Diego and Newport News, the Thomas School at Ithaca, or the Stinson School at San Antonio. Some of the candidates, impatient to get overseas before the war ended, even enrolled in two or three schools when they found the progress of training at the overcrowded fields was too slow.

All but six of the Canadian trainees at the Wright Schools in Dayton and Augusta were candidates for the Royal Naval Air Service. For their services in the Great War they received one D.S.O., ten D.S.C.s, four Bars to the D.S.C., two D.F.C.s, and two A.F.C.s. Twelve of them gave their lives during the war; another was taken prisoner.

The Canadians whose names are included on the plaque are listed below in order of qualifying for

## PIONEER FLYERS WHO WERE TRAINED AT WRIGHT BROTHERS FIELD

MAJ GEN. HENRY H. ARNOLD, U.S.A.  
ADJUTANT CHIEF OF AIR CORPS, U.S.A., 1904

BRIG GEN. FRANK LAMM, U.S.A.  
FIRST MILITARY MAN TO GO UP IN AN AEROPLANE.  
ONE OF FIRST TWO MILITARY PILOTS IN AMERICA.

CAPT. JOHN RODGERS, U.S.N.  
FIRST ATTEMPTED FLIGHT FROM UNITED STATES ON NOVEMBER 1905.  
LONGEST MADE BY SEA-LAND TO THAT TIME - DISTANCE 19.4 MILES.

CAPT. KENNETH WHITING, U.S.N.  
U.S. NAVY FLYER - FIRST MAN TO BE SHOT FROM  
SUBMERGED TUBE OF SUBMARINE.

CAPT. A. ROY BROWN  
CANADIAN ROYAL AIR FORCE. HOLDER OF A DISTINGUISHED  
REWARD FOR OUTSTANDING MILITARY ACCOMPLISHMENT.



COL. CHARLES DEE CHANDLER, U.S.A.  
AIR CORPS OFFICER AND FORMER CHIEF OF LIGHTER-  
THAN-AIR DIVISION.

COL. THOMAS DEW MILLING, U.S.A.  
ONE OF THE FIRST MILITARY PILOTS.

GRIFFITH BREWER  
FIRST ENGLISHMAN TO FLY IN AN AEROPLANE.

CAL F. RODGERS  
FIRST TRANSCONTINENTAL FLIGHT FROM EAST  
TO WEST.

ROBERT C. FOWLER  
FIRST TRANSCONTINENTAL FLIGHT FROM WEST  
TO EAST.

WALTER BROOKING - RALPH SOMMOTONE - ARCH HOKSEY - DUVAL LACHAPPELLE - A. L. NELSON - FRANK T. COFFEY  
P. O. FARMLEE - J. C. TURPIN - HOWARD GILL - L. W. BONNEY - O. A. BRINDLEY - J. C. HENNING - HAROLD H. BROWN  
B. J. ARMOR - HARRY N. ATWOOD - H. V. HILLS - LOUIE MITCHELL - O. C. SIMMONS - C. L. WEBSTER - ALBERT ELTON  
ANDREW DREW - A. A. MERRILL - PHILIP W. PAGE - GEORGE A. GRAY - C. GOUTIER - WILHELM STEVENS - ARCH BREEMAN  
J. C. KLOCKER - HARNUM T. BISH - F. J. SOUTHAUD - GROVER C. BERGDOLL - CHARLES WALD - WILLIAM KAMITZKE  
M. R. PRIEST - JOHN A. SIXLER - BERNARD L. WHELAN - HOWARD M. RINEHART - A. A. FRESSMAN - M. E. SCHMERHORN  
R. M. WRIGHT - W. E. BOWERSOX - L. E. BROWN - A. B. GAINES, JR. - C. J. PETERSON - L. E. NORMAN - C. E. UTTER - C. A. TERRELL  
MRS. RICHARD MORSEY - C. L. Q. DAY - MARJORIE STINSON - G. ANDO - FRANK KITAHARA - O. A. DANIELSON - LYLE H. SCOTT  
FERDINAND EGGEN - ROBERT E. LEE - ROSE DOUGAN - J. M. ALEXANDER - J. A. MURRAY - GORONU MORO - VERNE CARTER  
E. P. BECKWITH - T. D. PEMBERTON - B. B. LEWIS - MAURICE COOMES - GEORGE H. SIMPSON - GORDON E. ROSS - K. G. MACDONALD  
PERCY E. BEASLEY - K. F. SAUNDERS - M. B. GALBRAITH - W. J. SUSSAN - C. J. GREERY - JOHN GALPIN - BASIL D. HOBBS - JAMES L. GORDON  
EDWARD A. STINSON - M. C. DUBUC - J. A. SHAW - P. S. KENNEDY - LLOYD S. BREADNER - W. H. CHISAM - ROBERT MCG. WEIR - G. A. MASON  
M. A. MASON - JR. - BERRY - G. S. BARROWER - GEORGE BREADNER - C. E. NEHRIG - A. W. BRIGGS - H. B. EVANS - A. C. WARLAND - HARLEY SMITH  
J. C. WATSON - S. T. EDWARDS - HARRY SWAN - A. G. WOODWARD - T. B. AULT - A. Y. WILKS - J. C. SIMPSON - PAUL GADBOIS  
E. MONTGOMERY - W. E. ABRINSON - M. S. DEAL - C. G. BRONSON - W. E. ORCHARD - J. A. HARMAN - E. C. WILKINSON - J. G. INGLAND





their pilot's certificate, with service and decorations:

Lindop E. Brown, R.F.C.—1 Oct. 1913.  
James M. Alexander, R.N.A.S. — 22 Jul. 1915 (killed in accident, 12 Oct. 1915).  
Alfred W. Briggs, R.F.C. — 30 Aug. 1915.  
Arthur C. Harland, R.N.A.S. — 7 Sep. 1915.  
George H. Simpson, R.N.A.S. — 2 Oct. 1915.  
Gordon F. Ross, R.N.A.S. — 6 Oct. 1915. (killed in action, 10 May 1918).  
Kenneth G. Macdonald, R.N.A.S. — 8 Oct. 1915.  
Percy E. Beasley, R.N.A.S. — 8 Oct. 1915.  
James C. Watson, R.N.A.S. — 9 Oct. 1915.

Stearne T. Edwards, D.S.C. and Bar; R.N.A.S. — 11 Oct. 1915 (died of wounds, 22 Nov. 1918).  
Kenneth F. Saunders, D.S.C., A.F.C.; R.N.A.S. — 19 Oct. 1915.  
D. Murray B. Galbraith, D.S.C. and Bar; R.N.A.S. — 3 Nov. 1915.  
Arthur G. Woodward, R.N.A.S. — 5 Nov. 1915.  
John C. Simpson, R.F.C. — 9 Nov. 1915 (killed in action, 1 July 1916).  
Walter J. Sussan, R.N.A.S. — Nov. 1915.  
A. Roy Brown, D.S.C. and Bar; R.N.A.S. — 13 Nov. 1915.  
Harley G. Smith, R.F.C. — 17 Nov. 1915 (reported killed with French air service, 18 July 1918).  
Cuthbert J. Creery, R.F.C. — 24 Nov. 1915 (killed in action, 20 Oct. 1916).  
John O. Galpin, D.S.C., D.F.C.; R.N.A.S. — 24 Nov. 1915.  
Basil D. Hobbs, D.S.O., D.S.C. and Bar; R.N.A.S. — 2 Dec. 1915.  
William E. Robinson, R.N.A.S. — 7 Dec. 1915 (prisoner of war, 8 July 1917).  
J. Lindsay Gordon, D.F.C.; R.N.A.S. — Dec. 1915 (later an Air Vice-Marshal in the R.C.A.F.).  
John A. Harman, R.N.A.S. — 9 Dec. 1915.  
Marcel C. Dubuc, R.N.A.S. — 18 Dec. 1915.  
James A. Shaw, R.N.A.S. — 25 Dec. 1915.  
Patrick S. Kennedy, R.N.A.S. — 26 Dec. 1915 (killed in accident, 26 Sep. 1916).  
Lloyd S. Breadner, D.S.C.; R.N.A.S. — 28 Dec. 1915 (later an R.C.A.F. Chief of the Air Staff).  
William H. Chisam, R.N.A.S.—30 Dec. 1915.  
Robert M. Weir, R.N.A.S. — 30 Dec. 1915.

Paul O. Gadbois, R.N.A.S. — Jan. 1916.  
Arthur Y. Wilks, R.N.A.S. — 9 Jan. 1916.  
Gordon S. Harrower, R.N.A.S.—9 Jan. 1916.  
Gerald A. Magor, R.N.A.S. — 10 Jan. 1916. (killed in action, 22 Apr. 1918).  
Charles McNicoll, D.S.C.; R.N.A.S. — 21 Jan. 1916.  
Cecil G. Bronson, D.S.C.; R.N.A.S. — 22 Jan. 1916.  
Norman A. Magor, D.S.C.; R.N.A.S. — 28 Jan. 1916 (killed in accident, 25 Apr. 1918).  
John R. Bibby, R.N.A.S. — 28 Jan. 1916 (killed in accident, 11 Jan. 1917).  
Wallace E. Orchard, R.N.A.S. — Jan. 1916 (died of wounds, 2 Jun. 1917).  
Thomas C. Wilkinson, R.N.A.S. — 5 Feb. 1916.  
John G. Ireland, A.F.C., R.N.A.S. — 5 Feb. 1916.  
George Breadner, R.N.A.S. — 6 Feb. 1916.

It is understood that Capt. Frederick D. Pemberton, R.F.C. (killed in action, 21 August 1917) trained at the Wright School in the summer of 1915; it is probable that he is the T. D. Pemberton shown on the plaque.

For the photographs, taken specially for "The Roundel", thanks are due to Captain Dennis E. McClendon, Information Services Officer at Wright-Patterson A.F.B.

## PATROL OVER EGYPT

One of No. 115 Communications Flight's *Otters*, attached to the U.N. Emergency Force, flies low above a bombed-out theatre at Abu-Suweir.





## The Suggestion Box



Sgt. M. C. Marquet, of Station Comox, suggested converting the recall light used in *Canco* aircraft into a communication light whereby the pilot can signal to the engineer for carburettor heat. The conversion brings into use a circuit which is very rarely employed at present and avoids possibility of any confusion between pilot and engineer during prevalence of icing conditions.



Sergeant J. W. McMillan, of No. 2 (F.) Wing, developed a gauge for adjusting the overfeed microswitch on the ammunition booster motor assemblies of *Sabre V* and *VI* aircraft.



Corporal H. A. Jenkinson, of Station Greenwood, designed a tool which simplifies the packing of seat-pack parachutes. Use of the tool enables one person to close the pack.

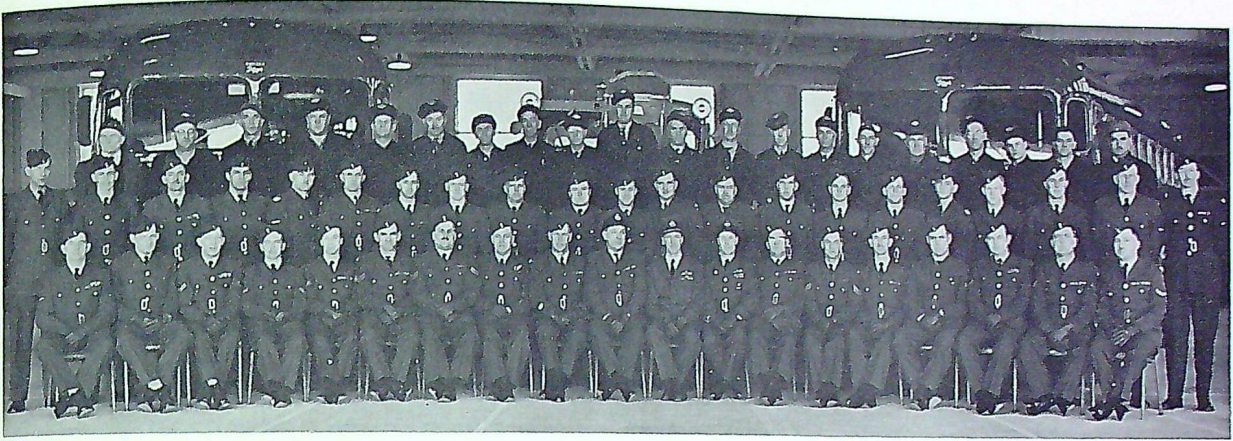
## THE FINISHING TOUCH

Four graduating students of the 160th Supply Technicians' Course at Aylmer receive a little final instruction on the issue of technical equipment from stores. Left to right: Corporal C. Grace (instructor), Leading Aircraftmen L. H. Simpson, W. R. Lee, Airwoman 2nd Class C. A. Keighan, and L.A.C. M. B. Watson.





## Greenwood's Safe-Driving Record



THE remarkable record for safe driving established during 1956 by the Vehicle Marine Section of R.C.A.F. Station Greenwood drew letters of congratulation from both the Chief of the Air Staff and the A.O.C. Maritime Air Command.

In 1955 the unit's vehicle mileage was 491,794, with an accident rate of 2.20 per 100,000 miles driven. This was very good in comparison with the performance of other units in the R.C.A.F. In 1956, however, the mileage rose to 533,886 while the ac-

Back row (l. to r.): S. P. Colvin, H. H. Hamilton, C. L. England, W. S. Nichols, K. A. Clark, G. M. Kinsman, M. C. Spinney, A. Zinck, H. J. Richardson, R. Thompson, M. R. Little, S. W. Burbridge, K. B. Prall, E. A. Woodbury, S. G. Gates, C. B. Nichols, R. P. Boates, J. G. Lightizer, J. Lightizer, H. V. McGill. Middle row (l. to r.): Leading Aircraftmen L. A. Baxter, R. G. Shackleton, R. H. Ditchfield, J. L. Pineau, C. L. Kennedy, R. M. Mawhinney, I. S. Mackay, H. A. C. Geddes, H. O. Laughton, L. W. Russell, J. R. C. G. Dion, E. V. Fleming, C. B. Shuttleworth, B. E. Colborne, R. O. Kidson, A. T. MacIsaac, Aircraftman 1st Class G. D. Conn, A.C.2 G. H. Black, L.A.C.s J. A. Robichaud, W. R. Dalton, W. F. Meige, Front row (l. to r.): L.A.C.s R. Y. Fairley, G. H. Taylor, Corporals C. S. O'Leary, R. C. Demone, J. L. Surette, Sergeants J. A. LeBlanc, J. A. V. M. Fortin, C. T. Stewart, Warrant Officer 2nd Class G. D. Gates, Wing Commander G. P. Bradley (C. Tech. O.), Group Captain C. G. W. Chapman, D.S.O., (C.O.), Flight Lieutenant J. A. Crouch, Sgts. C. J. McDougall, R. L. Lafortune, Cpls. A. H. Cousins, E. F. Smith, D. B. Lewis, E. M. Aalders, J. H. Gallant.

cident rate dropped to .56 per 100,000 miles, thus establishing a record in the R.C.A.F. for a unit of this type.

A high percentage of the record-making miles was driven over winding and hilly highways, crowded in summer and icy in winter.

## Summerside's

### Curling

The accompanying photograph reached us too late for seasonable publication. It was taken at the opening of R.C.A.F. Station Summerside's two-rink curling club last February. The enterprise was financed entirely by profits from non-public institutes.

### Club







## SALUTING

FROM R.C.A.F. Station Macdonald's "Rocketeer" comes the following classification of the types of salute encountered during an average day on a station:

**The Apologetic Type.** This salute is accompanied by a wistful smile. The saluter bends forward slightly from the waist and gives forth an appearance of abject subservience.

**The Individualist.** This salute is generally smart, but unfortunately the hand becomes diverted to the remoter regions of the head, usually culminating somewhere near the peak of the wedge hat. The arm develops a sinuous configuration reminiscent of the second movement of the shot-put.

**The Lethargic Type.** Long before

this man reaches you, you will have become aware of him by his long shambling gait, vaguely reminiscent of the rudimentary progress of something mesozoic. The hand begins to describe a gentle arc as the creature's brain makes the preliminary decision to salute. The apogee of the arc is reached sometime after he has passed, so it becomes an assumption that the salute was completed.

**The Casual Type.** The salute approximates a familiar wave, as to a distant friend. The motion of the hand is one of partially concealed annoyance, as though a fly had settled on the brow. The hand articulates aimlessly from the wrist, the head is bent forward with eyes

downcast.

**The Surprised Type.** This salute is rendered in a moment of panic as the saluter suddenly becomes aware of his surroundings. The hand, in its abrupt motion to the head, is accompanied by a cigarette (near the canteen), the page of a letter (near the post office), or miscellaneous tools (near the hangars). The quicker-witted usually manages to place the cigarette in his mouth before saluting.

**The Ideal.** Herein falls the minority of the salutes. The salute is commenced with a check pace, the right arm is brought up smartly, the upper arm parallel to the ground, wrist and forearm straight, the head and eyes turned smartly to the right. The left arm is checked rigidly at the side. An air of pride and self-confidence is apparent.

SERVICE writing, we are told, should be clear, concise and convincing. This letter from a Fijian Ministry of Works employee at R.N.Z.A.F. Lauthala Bay might well serve as a model:

### Application for extension of leave.

To the Executive Engineer:  
Respected Sir,

When I got to the building (job No. 824) I found that the hurricane had knocked some of the bricks off the top. So I rigged up a beam with a pulley at the top of the building and hoisted a couple of barrels of bricks to the top. When I got through fixing the building there was a lot of bricks left over. I hoisted the barrel back up again, secured the line at the bottom and

then went up and filled the barrel with extra bricks. Then I went down to the bottom and cast off the line. Unfortunately the line was heavier than I was, and before I knew what was happening the barrel started down and jerked me off the ground. I decided to hang on, and half way up I met the barrel coming down and received a severe blow on the shoulder. I then continued on up to the top, banging my head, against the beam and getting my fingers jammed in the pulley. When the barrel hit the ground it busted the bottom, allowing the bricks to spill out. I was now heavier than the barrel and so

started down again at high speed. Half way down I again met the barrel and received severe injuries to my shins. When I hit the ground I landed on the bricks, getting numerous painful cuts from the sharp edges.

At this point I must have lost my presence of mind, because I let go the rope. The barrel then came down and struck me a heavy blow on the head, putting me in hospital for three days.

Respectfully request for five days extension of leave.

You remember,  
(Sgd.) Viliame.  
("Air Power": U.K.)

## SERVICE WRITING

A hen is only an egg's way of making another egg. (Samuel Butler.)



## THE R.C.A.F. BENEVOLENT FUND

The Royal Canadian Air Force Benevolent Fund was established in order to assist serving and former members of the R.C.A.F. and their dependents in time of financial distress.

SERVING PERSONNEL can obtain full information from their units' Orderly Rooms.  
FORMER MEMBERS can obtain it from:

- The local Benevolent Fund Committee.\*
- Any Wing of the R.C.A.F. Association.
- Any District Office of D.V.A.
- Royal Canadian Air Force Benevolent Fund (Inc.), 424 Metcalfe St., Ottawa, Ont.

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\*This address is obtainable from any of the other three sources.



