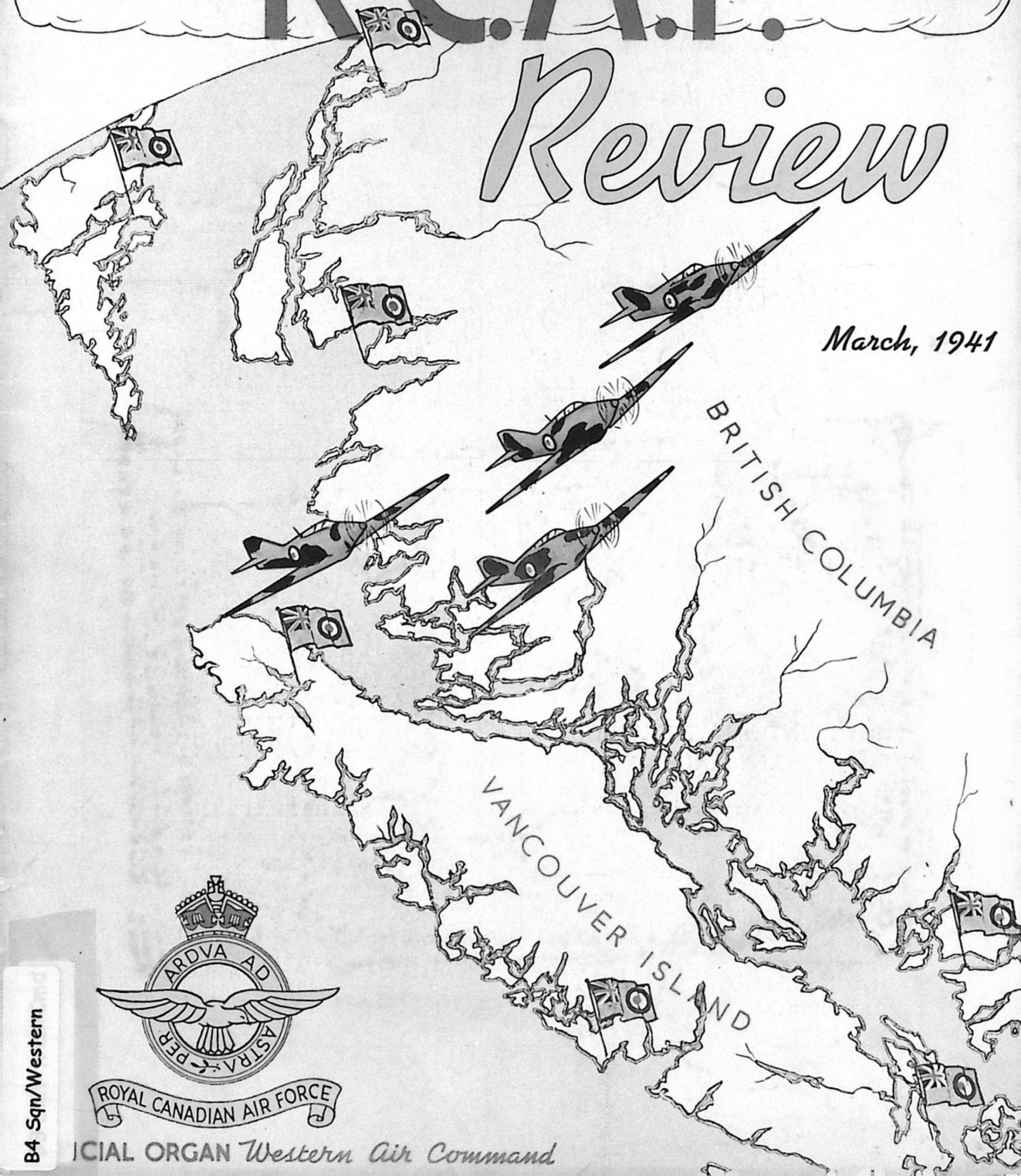


WESTERN AIR COMMAND

Review

March, 1941



Official Organ Western Air Command

Flight Frank Rogers
R 64931 Good News

R. C. A. F.
Western Air Command Review

Managing Editor,
A. M. THOMAS
 Publishing Office,
 234 Rogers Bldg.,
 Granville St.,
 Vancouver, B.C.



Associate Editors,
 Sq. Ldr. R. M. Wynd,
 Sq. Ldr. W. P. Dunphy,
 Flt. Lt. W. P. Murphy,
 P. L. J. S. Williamson,
 Flt. Lt. F. J. Ewart,
 Serg. F. R. L. Jarrott.

Registered at the Post Office as a Newspaper

No. 5, VOL. 1. MARCH, 1941

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R. C. A. F. WESTERN AIR COMMAND REVIEW
 470 GRANVILLE STREET VANCOUVER, B.C.
 Official Organ, R.C.A.F., Western Air Command, published under authority of Air Commodore A. E. Godfrey, A.O.C., Western Air Command, Victoria, B.C.

GENERAL ADVERTISING— Per Insertion	6 Ins.	12 Ins.
Full Page	\$100.00	\$95.00
Half Page	60.00	55.00
Quarter Page	35.00	32.50
Agency Commission, 15%.		30.00

Preferred Positions and Color by arrangement.
Contract Rates quoted above for consecutive insertions.
Issuance and Closing Dates—Published monthly, first week of the month. Last forms close 15th of month. Five days earlier if proof desired.

They were heartening words used by Lord Beaverbrook recently in describing Britain's vast reserves of aircraft. The knowledge that in the embattled Mother Country is the greatest air armada yet assembled will prove a spur to every man in uniform as well as to those civilians engaged in the war effort.

Particularly encouraging was Lord Beaverbrook's message when considered in the light of his earlier statement in praise of American planes received in Britain.

Cabling the British Purchasing Committee at Washington a few months ago the Minister of Aircraft Production wrote as follows:—

"The Ministry of Aircraft Production states that the flow of airplanes from the United States of America gives us renewed confidence in the triumphant conclusion of our long battle in the air. The Brewster Fighter squadron is now in use. It is earning the praise of our fine pilots. The Douglas DB-7 is also in action and the new Curtiss has arrived. These aircraft are equal to our best."

Lord Beaverbrook is not alone in his opinion of U.S. aircraft. "Flight" magazine describes the Lockheed-Hudson as a "... first-class aircraft job for reconnaissance ... the operational performance is exceptionally good. The fact that we use these land-planes so much for long reconnaissance over the sea speaks for itself. Nobody ever worries about engine-failure, which used to cause so much anxiety in the last war."

Another authority, "The Aeroplane," published in England, quotes an English pilot as saying the Douglas DB-7 bomber is excellent for handling and to have performance "about equal to that of the Bristol-Blenheim or a shade better." The Brewster fighter the same pilot reported as "exciting in appearance like a flying egg."

With the passage and speedy implementation of the famous Lease-Lend Bill by the U.S. Congress and President comes the knowledge that the flow of these superb U.S. aircraft will be greatly accelerated—a comforting thought to the thousands of airmen and trainees in Canada awaiting their turn to take a more immediate interest in the battle.

● **No Apology**

No apology should be necessary for the printing of an article on a subject that a few years ago was considered unprintable.

Even during the last war, the nearest the men of the forces got to adequate instruction or advice on venereal diseases was a lecture by some drill-sergeant, often in half-facetious vein, or by a few obscure notices posted up in public places.

The article on page 10 of this issue, the first of two, was prepared especially for the *Review* by leading authorities on the subject. It is commended to the notice of every reader without apology or explanation.

Famous Canadian Airmen . . .

● No. 2. Collishaw

Few naval airmen in the last Great War achieved the public recognition and distinction of those of their brothers in the Royal Flying Corps and the military squadrons of the R.A.F.

It came as a surprise, therefore, at the end of the 1914-1918 conflict to find that the pilot who stood next to Bishop in the whole British flying service in the total of enemy aircraft destroyed was one whose service for the most part had been with the naval squadrons.

This man was Collishaw, whose rank and decorations at the end of the war read: "Lieutenant-Colonel Raymond Collishaw, C.B.E., D.S.O. and Bar, D.S.C., D.F.C., Croix de Guerre (French)."

The world knows today of the high position held by this former Nanaimo, B.C., boy as Air Commodore with a Command of his own in what is currently the most active field of war, the Mediterranean.

His story surely is outstanding in the annals of modern adventure. It began long before the 1914 war, before he was 20 years of age, and continued adventurous, in peace and war, right up to the outbreak of the present conflict.

Born at Nanaimo, he grew close to the sea and from his early days spent much time on the water, sailing and studying navigation, and eventually shipped as second officer on the Alaska run from Victoria, at a time when the Alaska run was itself something of a romance.

Then came his great chance to take part in one of the greatest epics of heroism of all time, the ill-fated Robert Falcon Scott Expedition to the South Pole. Scott needed a young navigating officer, strong enough to stand up to the rigors of an Antarctic winter, and from thousands of applicants chose young Collishaw.

The Nanaimo boy was in the Far South while Scott and his five companions, on the dash to the Pole itself, lost their lives on the return trip. Collishaw returned safely by British Columbia and today wears the white ribbon awarded by the British Government to members of the Expedition, probably the only member of the Empire flying services to bear such a distinction.

When war broke out in 1914 he went immediately to England, intending to volunteer in the Navy, but changed his mind and in 1915 joined the Royal Naval Air Service. He qualified as a pilot in January, 1916, and promptly became one of those unsung heroes on patrol work along the English Channel, work of a most arduous nature in the heavy weather and of the utmost importance, but with little opportunity for spectacular action.

It was not until August, 1916, that he found the opportunity of meeting the enemy in the air, when he was transferred to No. 3 Wing, R.N.A.S., operating in France and located far to the South of the Western Front behind the French. Their work was essentially long-range bombing and their air-drome was situated at Ochey, nearly 250 miles from the Channel, the nearest possible point to the great munition and railway centres in enemy-held territory. Collishaw's duty, almost daily, was to act as one of the escort scouts accompanying the great bombing planes that flew hundreds of miles over the front line.

Although fighters of the Wing had frequent engagements with the enemy they could not wander off seeking him out for combat as could the fighting squadrons. Their job was to protect the bombers under all circumstances, engaging the Germans only when attacked.

It was on October 12th, 1916, that Collishaw's first decisive battle took place. The bombers of No. 3 Wing had crossed the line heavily loaded for an

attack on the Mauser Rifle Factory at Obendorf, about 140 miles from the front, Collishaw piloting a two-seater scout, one of the escorts.

They had almost reached their target, soon after dawn, when they were overtaken and attacked by six Fokkers. The ensuing fight is admirably described in Col. George A. Drew's great book, "Canada's Fighting Airmen," from which the following is quoted:—

"Collishaw picked out one of the enemy and flew underneath, giving his observer a perfect shot at the German machine. The tracers could be seen entering the fuselage and he was apparently slightly damaged. Banking sharply and gaining height, Collishaw then engaged him with his forward gun and, after a short burst, had the supreme satisfaction of knowing that he had won his first victory in the air. The Fokker dropped completely out of control and, after what seemed an age of waiting, although it was really only a few seconds, ended, a hopeless mass of wreckage, far below. To every pilot, the first victory was always the most important. Everyone had to confess feeling considerable anxiety while approaching an enemy machine, for no one ever knew how expert his particular opponent might be, and that was particularly so until a pilot had proved by actual fighting that he had the peculiar combined shooting and fighting sense which was required to operate the forward guns in the fighting machines. These guns were fixed to the fuselage and sighted by bringing the aeroplane itself in line with the target.

"The trigger was mounted upon the control stick, and as the pilot directed his machine he fired whenever he found his sights on the enemy.

"This first victory, therefore, brought Collishaw an absolutely new sense of confidence, and, no longer feeling himself an unproved fighter, he continued the flight with the assurance that he was able to meet the enemy in the air. Reaching Obendorf, the bombers

dipped low over the Mauser factory, one by one dropping their heavy bombs. Explosion followed explosion in quick succession and many hits were observed on the factory itself, considerable damage being done. They then turned for home and reached Ochey without losing a machine."

His next battle brought Collishaw his first decoration, when on October 25th he was sent to Luxeil, some 50 miles from the front, to bring up a new aircraft. On the way back to Ochey, after a short test, he was surprised by six fast enemy scouts, close to Luneville. Unprepared, his only chance was to dive away and down he went, the six enemy craft streaming after him in a mad dive, lead spurting from their twin Spandaus until they almost reached the level of the trees.

This was where Collishaw showed his opportunism and incidentally his courage. He realised that the enemy had lost their great advantage of height and immediately turned to attack the whole six. He crashed one of them into a tree out of control, downed another and drove the other four off. Thousands of French troops had witnessed the feat and a few months later it was announced that he had been awarded the Croix de Guerre.

Three more months of bombing escort followed and in February, 1917, he was transferred to No. 3 Naval Squadron, then operating more than 150 miles away, near Cambrai. Meanwhile he had one desperate battle with a Fokker in which his engine was put out of action and his machine completely wrecked in a crash near Nancy.

In his next spell of duty, Collishaw destroyed one of three German scouts who attacked him, and in April, 1917, was transferred to No. 10 Naval Squadron at Dunkirk, entering his 28th, destroying one of four German seaplanes attacking a British craft stranded offshore. His sixth victory followed three days later while on offensive patrol behind the lines, and his seventh when he flew up the coast as far as Ostend, then inland behind the German trenches to Dixmude, where he downed one of three Halberstadts. In



Air Commodore Raymond Collishaw, C.B.E., D.S.O. and Bar, D.S.C., D.F.C., Croix de Guerre. An official photograph taken during the First World War.

each case the fight was witnessed by his whole flight.

More victories came, interspersed with such dramatic and vital duties as escorting the Fleet in its bombardments of Zeebrugge, the great German submarine base, and in patrol and escort work over the trenches immediately before the battle of Messines Ridge. The next two months were the most active of his career, no less than 29 enemy aircraft being destroyed by him between May 30 and July 27th.

This period is dealt with by Col. Drew in "Canada's Fighting Airmen" in the following words:—

"Only Richthofen exceeded this number over the same period. True, in 12 days in 1918, Bishop shot down 25 enemy machines, a mark which was never approached by any other pilot; but the fact remains that in day-in-and-day-out fighting. Collishaw's record stands first among British airmen. And there was an important difference between his victories and those of the German idol. Richthofen only exceeded the Canadian's total by one, when in March and April of 1917 he was given credit for the destruction of 30 British planes, but of those 30 only eight were fighting scouts, while on the other hand 23 of Collishaw's victories were won against fast, well-armed fighting machines. As has already been pointed out, all of Richthofen's victories were won on his own side of the

line, whereas Collishaw won most of his far over enemy territory.

One waited like a bird of prey for the slow-moving observation and bombing machines; the other sought the fleet fighters wherever they could be found. It is, therefore, no exaggeration to say that Collishaw's 29 victories over that two months period represent a much more remarkable fighting record than the 30 for which Richthofen received credit. Yet, strangely enough, while the name of the one was ringing round the world and had become something of a legend in his own country, the name of the other was scarcely known even to the British army in France."

It was during this period that he won his second decoration, the Distinguished Service Cross. It was announced as follows in the *London Gazette* of June 20th, 1917:—

"The King has been graciously pleased to give orders for the following appointments to the Distinguished Service Cross:—

"Flt. Lieut. Raymond Collishaw, R.N.A.S.

"In recognition of his services on various occasions, especially the following:—

"On 1st June, 1917, this officer shot down an Albatross Scout in flames.

"On 3rd June, 1917, he shot down an Albatross Scout in flames.



North American Harvard Advanced trainers operating out of a flying school under the Joint Training Plan, in echelon formation over the Canadian countryside.

"On 5th June, 1917, he shot down a two-seater Albatross in flames.

"On 6th June, 1917, he shot down two Albatross Scouts in flames and killed the pilot in a third.

"He displayed great gallantry and skill in all his combats."

Towards the end of this period in discussion, the 210th Naval Squadron was becoming almost as famous on the German side of the line as Richthofen's all-red Albatrosses were on the British side. For one thing, their aircraft were distinctive Sopwith triplanes, while "B" flight, whose pilots were all Canadians, had painted them a dead black and had christened them with appropriate names.

His Distinguished Service Order was awarded Collishaw for his victories between June 10th and June 24th, being announced in the *London Gazette* on August 11th.

During this period the all-black flight of five suffered their first loss when Flight Sub-Lieut. J. E. Nash of Hamilton, Ont., fell before the bright green plane of Lieutenant Karl Allmenroeder, who then stood second to Richthofen in their squadron. Nash miraculously sustained only slight injuries in the crash and was lying in a

German cell next day awaiting removal to the rear when he heard bells tolling and discovered they were for Allmenroeder, who had been shot down that morning by Collishaw.

In all these battles it was, of course, impossible that the young Canadian and his aircraft should come through unscathed. We have already read how one new machine was shot from under him. On another occasion he was flying a new plane to his aerodrome in a heavy fog when he mistook his bearings and landed on a German-held aerodrome instead of his own. He actually touched his wheels to the ground before he recognized the black crosses of the ground planes there and saw grey-uniformed men rushing out to take him prisoner. He managed to get into the air before they arrived. Thousands of bullets has passed through his planes in the course of battle, once his goggles having been shot away, and once he came down completely out of control just inside the British lines. His fighting for the summer of 1917 ended on July 27th with a double victory.

On July 28th he was given leave to visit his homeland and came back to Nanaimo to his parents. Little was

heard in Canada at the time about the young Canadian and his exploits, due to the amazing secrecy which surrounded them.

He returned to the front and on November 21st, 1917, was appointed to command No. 13 Naval Squadron, then operating along the coast from Dunkirk, aiding the fleet. Familiar coastal duties were interspersed with occasional victories and on January 18th, 1918, he fought his last fight over the sea during the war and on January 23 was appointed to the command of No. 3 Naval Squadron, a fighting unit similar to the 210th. This squadron eventually became the 203rd of the R.A.F. when, in the summer of 1917, the R.F.C. and the R.N.A.S. became incorporated into the R.A.F. It ended the war with the second highest total of enemy machines to its credit.

The summer of 1918, with the tide of war on the turn after the fateful days of the German advance in March, were busy ones for the R.A.F., and on June 11 Collishaw added his 42nd and 43rd victims to his growing list. On this phase of his career Col. Drew remarks:—

"Of his 43 victories to that time it is remarkable to read in the records that so many of his victims broke up in the air. No more dramatic picture can be imagined than that of two machines circling about each other thousands of feet up, the rat-tat-tat of their guns bearing evidence of the deadly nature of their business, when suddenly a wing or some other vital part crumples up or falls away from one of the machines and it drops at frightful speed, crashing to the earth. The frequency with which this occurred in Collishaw's battles proves, above everything else, the amazing accuracy of his fire. When that steady eye lined the sights on a target, two vicious streams of lead literally tore his enemy to pieces. As with Bishop, Barker and all the other great Canadian fighters, it was an almost uncanny accuracy with his guns which brought him safely and successfully through so many furious encounters."

Four more victories followed and on August 3 the *London Gazette* carried
(Continued on Page 20)

Wrought Aluminum Alloys

By SQUADRON LEADER A. A. RABNETT

Corrosion Aluminum Alloy

Corrosion is that action which may take place as the result of exposure of the metal to varying climatic conditions, whether on land or water. Aluminum and many of its alloys rank high in their ability to resist corrosion. This ability varies with the alloy temper and the conditions of exposure. Considering aluminum of 99.9% purity, we find that the addition of any second metal causes a loss of corrosion resistance. One exception is 3 S, which possesses a corrosion resistance as good as 2 S. 3 S may be considered as 2 S to which 1.25% manganese has been added. The magnitude of this effect is not the same with each added metal, also the amount of loss of resistance to corrosion varies with the quantity of the added constituent. In addition to this, with a given alloy, the fabrication practices employed, such as heat treatment, will also influence corrosion resistance. One important fact to bear in mind is that for aluminum alloys to corrode, moisture must be present. Dry aluminum cannot corrode.

Effect of Section Thickness

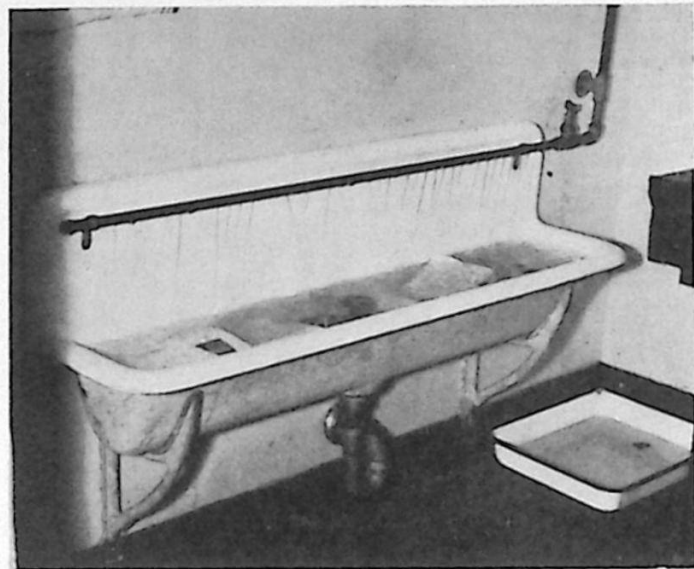
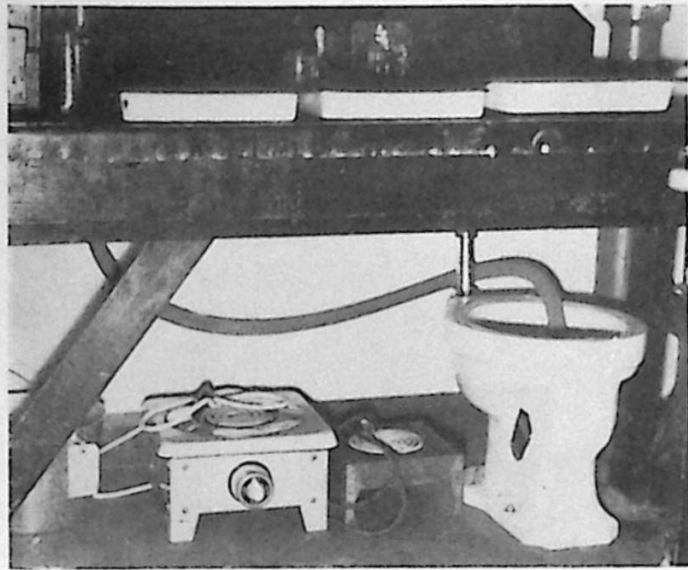
The effect of section thickness of the material has no effect upon its ability to resist corrosion. However, a given amount of attack will produce a relatively greater percentage effect upon the mechanical properties of the thinner sections.

Types of Corrosion in Heat Treatable Alloys

Corrosion in the Heat Treatable aluminum alloys may proceed in one or both of two different manners. The most common form of attack consists of loss of material. The second and less frequent type, known as intercrystalline embrittlement, consists of a disintegration along the grain boundaries. This latter type does not occur in alclad material, and can be largely prevented in other alloys by proper heat treatment.

Effect of Heat Treatment

Within reasonable limits, the rapidity with which the alloys are quenched after the solution heat treatment has no great effect upon its mechanical properties. They are the same whether the alloy is quenched in oil, air, hot or cold water. The rapidity of quenching has a very important effect, however, upon the corrosion resistance, and it is essential that a very rapid rate of heat extraction takes



ADAPTABILITY PLUS. A little ingenuity in making use of available resources and—presto!—you have a West Coast Advanced Base's Photographic Laboratory. Here are two views of the photographic establishment at the R.C.A.F. Base, Ucluelet, B.C. A three-piece affair, so to speak.

place during the quenching to ensure maximum resistance to corrosion.

● Effect of Dissimilar Metals

Every metal has an inherent electric potential; when set side by side with a metal of different potential and an electrolyte is present, such as moisture, an electric action is set up. This electric action causes pitting of the metal with the higher potential. When two metals of different potential is said to be anodic to the other. The anodic metal is then the one that is destroyed by electrolytic corrosion. When two metals have practically the same potential, there is very little interaction. Before serious electrolytic action can set in between any two metals, it is necessary for the electrolyte present to be a solution in which one of the metals is susceptible to corrosion. For aluminum and steel, moisture (particularly sea water or

(Continued on Pages 6 and 21)

spray) fulfils this condition. In aircraft work, aluminum alloys in particular should be kept away from steel, stainless steel, and copper bearing metals, precautions should be taken to prevent corrosion.

The following tabulation lists the commonly used metals and potentials in seawater, at 25° C.

MATERIAL	Potential against calomel electrode Volts
Aluminum and Aluminum alloys:	
Duralumin, heat treated and aged.....	0.65
RR alloys	0.73
L. 33	0.81
MG 7	0.81
MG 5	0.82
Aluminum	0.82
Brass, Bronze, etc.:	
Monel Metal	0.20
Gunmetal Tungum	0.21
Copper	0.22
Cupro-Nickel (70:30)	0.22
Phosphor Bronze	0.22
45% Nickel Alloy	0.23
Aluminum Brass	0.26
Aluminum Bronze	0.26
Brass	0.27
Steels:	
Stainless:	
Austenitic e.g. D.T.D.'s 166, 171, 176, 189, 207, 211	0.20
High Chromium e.g. S 80, D.T.D.'s 60, 146, 168, 185, 225	0.35
12% Chromium e.g. S 61, S 62, S 85, D.T.D.'s 161, 203, D.T.D. 46 A	0.58
Non-Stainless:	
S 88	0.62
S 65	0.71
S 4	0.72
D.T.D. 138	0.72
S 2	0.73
S 6	0.76
S 21	0.76
S 84	0.79
Magnesium Alloys	1.59
Miscellaneous:	
Cadmium (plating)	0.82
Non-Stainless:	
Zinc (plating)	1.13
Tin (tinned steel)	0.50
Tinman's solder	0.51
Zinc-cadmium solder	1.10



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Anyone can cure himself of indistinct speech by will power, says a scientist. A triumph of mind over matter.

* * *

"The parachute troops are the elite among Nazis," states a writer. The landed gentry, so to speak.

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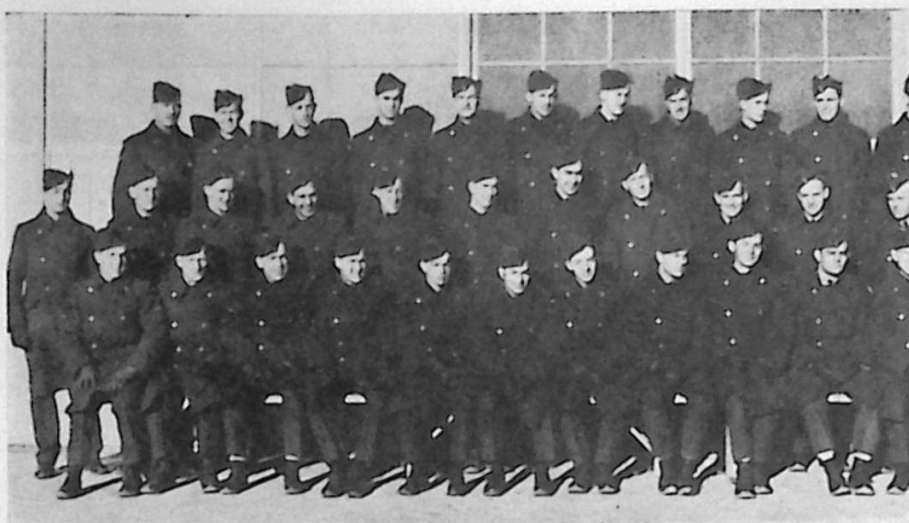
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Technical Information . . .

Editor's Note: Questions of an aeronautical character may be sent to Squadron Leader W. P. Dunphy, Technical Officer, No. 3 Repair Depot, R.C. A.F. Station, Vancouver, B.C. A selection considered to be of most interest will be answered in each issue of the *Review*. Questions should be kept as short as possible.



Graduating Class, Elementary Flying Training School, Lethbridge, Alberta.

Q. What are Medullary rays?

A. Medullary rays, sometimes called pith rays, are found in all woods, though they vary in size and are sometimes important factors in the identification of wood. They are the rays, for instance, which produce the large silvery patches so characteristic of quarter-sawn oak. The rays consist of rows of cells which extend radially from the centre of the tree, their function being to conduct sap and to store excess food.

Q. With what solution must aluminium alloy parts be treated after submersion in salt water?

A. According to R.C.A.F. regulations a 3% nitric acid solution should be used. A stronger solution is sometimes used but in view of its effect on steel and the difficulty in removing some steel parts, its use is not advised.

Q. Is there any means of assuring that a rich mixture is used when the override control is brought into operation on the Bristol Pegasus engine?

A. Yes. The override and mixture controls are both operated by the same lever, which follows standard British practise as regards direction of movements—forward for rich mixture. For the majority of its travel the lever acts as an ordinary mixture control and has no effect on the override. The last few degrees of its backward movement,

however—when the mixture control valve is in full rich position—it operates the override and at the same time operates the enrichment jet, ensuring an extra rich mixture. It is therefore impossible to operate the override without first putting the mixture control into full rich position.

Q. Why are safety gaps not used in magnetoes of high altitude aircraft?

A. In some modern magnetoes the insulation of the secondary winding has improved to such an extent that safety gaps are no longer considered necessary. This is a feature which has nothing to do with the altitude at which the aircraft flies.

Q. It is possible to heat treat a welded joint in order to make it stronger?

A. Yes. Welded tubular assemblies such as engine mounts are often heat treated after construction.

Q. What is the difference between absolute and service ceilings?

A. Absolute ceiling is the maximum altitude at which an aeroplane can maintain horizontal flight. Service ceiling is the altitude at which an aeroplane ceases to be able to rise at a rate greater than 100 feet per minute. Standard atmospheric conditions are assumed in both cases.

Q. What is meant by decalage?

A. Decalage is the difference in angles of incidence between the upper and lower wings of a bi-plane. When the upper wing has a greater incidence than the lower wing the decalage is said to be negative and assists longitudinal stability at low angle of attack.

Q. What is ductility as applied to metals?

A. Ductility is the property of a metal which permits rolling or drawing out into smaller section. A metal must be very ductile, for instance, to allow drawing into wire sizes, though it becomes hardened and crystallized in the process and must be repeatedly annealed.

Q. What are "penny" nails?

A. The size of common wire nails, finishing nails and box nails are designated by "penny" sizes, the abbreviation for which is "D". This system originated from the cost of the nails but has since undergone standardization until each "penny" size is now an arbitrary method of designating the sizes. A different system is used for other nails.

Coal Harbour Here I Come . . .

By: "LOU" J. ENGLEHART

(Illustrated by the Author.)

First, with sincere frankness of a full-fledged airman with considerable experience with the Airmen's pet term of "shooting the bull," I wish to say that what literary effort follows is as truthful as I possibly can relate. So help me!

COAL HARBOUR! That name means very little to most of you. Meant very little to me too as I embarked S.S. *Cardena* on the night of September 3rd, 1940, with fifty of my fellows from Jericho Beach . . . all doomed say because I cannot find a better word that can suffice for that dreaded place called Coal Harbour. Dreaded I for the impressionistic version that all Airmen in Vancouver had, at that time, for our designated place named Coal Harbour . . . Coal Harbour, B.C., on Vancouver Island. Why, there's even an airman told me, that afternoon of my leaving, that Wild Indians were living there. In my "school days" I had read something about scalping, and honest-to-goodness I had a foolish notion of buying a couple o' dollars worth of trinkets before leaving "down-town." A ten-cent bracelet and a half dozen or so of diamond rings in one's pocket may come very handy, me-thought.

Really, though, we were a down-hearted lot (the ones that were sober) when the *Cardena* blew her warning whistle of departure at 0230 hours, 4-9-40. I bid farewell to a sweet little number that I had chanced to meet an hour or less before sailing and then I went to my berth and retired for a bit of "shut-eye." This cabin I shared with two of my fellow airmen.

Truthfully speaking, the voyage was enjoyed by all during that day. The civilian passengers aboard were



A HAPPY EVENING AT CALGARY. Above photograph was taken at the Smoker given for Nos. 2 and 11 Equipment Depots, R.C.A.F., at Calgary recently. Sitting, left to right: F/O. S. J. McDonald; F/O. L. K. Scott; Wing Commander N. E. Sharpe, M.C.; A.C.2 J. Simpson; Sqdr. Ldr. H. C. Adams; F/O. R. H. Matthews and W.O.1 F. E. Dawkins. Standing, left to right: L.A.C.'s J. A. Longpre; R. D. Hammond; J. W. A. Dolan; Cpl. R. A. Wales; F/Sgt. F. Bogden; Cpl. M. A. George; A.C.1 F. Stratford; Cpl. F. R. G. Ouimet and Cpl. O. G. Murley.

very sociable and they helped in giving us a swell time. Some of us played shuffleboard, others walked on deck. Some had their cameras in action and still others played camouflaged bridge . . . great game this bridge and believe me you, the bids were high; but I'm not a "shark" at bridge so I'll drop the subject. (A shark is a fish.) A greater number of the boys gave all their devoted attention during that day to a young lady passenger, but her initiative attention, to my amusement, was given to the beautiful land-plus-water effect aspects and to a school of porpoises that was sighted after lunch. She was a cute little thing, though, I'll admit. A score of airmen can't be wrong!

As nightfall approached, the journey commenced to be monotonous. No doubt, the realization of getting nearer to Coal Harbour was given more thought. Most of the fellows made themselves scarce after dinner, and by midnight, the whole of the upper deck was deserted. Deserted except for an airman and a young woman who found enjoyment looking at the star-spangled skies and coyly holding hands by the large cosy funnel. We talked about these and those and this and that and finally, at 0330 hours 5-9-40, the boat docked at Hardy Bay.

This little seaport was our last stop and a turmoil ensued as we all rushed to and fro with kitbags, suitcases, boxes and what-not. An R.C.A.F. covered truck and two dump trucks were on the dock to receive us. We still had eleven miles of rough mountain road, rain and mud to cover before reaching Coal Harbour. Flying Officer E. G. Symonds was in charge and he made us fall in line for Roll Call. Fortunately we were all present, and from then on it was every man for himself. I attended to my luggage and then joined some of my fellow airmen in one of the dump trucks. A small number were fortunate in fighting their way into the canvas-covered vehicle. By now the skies were cloudy and a heavy cold mist penetrated our very bones. Heavy planks stretched across the dump box provided seats. I sat up front near the cab and as we left the dock I pulled up the collar of my greatcoat and with a sleeve wiped a cold damp cheek. The heavy trucks, with their human cargo of heavier hearts, slowly tore their way along the mud-covered path that wound its way into deep and wild forest. We were on our last lap and every man cursed aloud his opinion of the situation as we covered trying miles of puddles, forest, darkness, and muck.

As I sat there fighting down discouraging thoughts and trying to shiver myself warm, I noticed that the fellow next to me wore nothing but his tunic. "How are you doing, old chap?" I ventured. "Christ, I'm froze!" he answered. Then somebody at the back of the dump yelled, "Close your big mouth, McBride . . . I feel a draft." Believe me you, we were quite chilled to the marrow by the time we got to Coal Harbour; my watch indicated 0430 hours when our truck sank to its axle at the main entrance of our new Base. The rain was coming down in torrents by this time and slimy muck covered every inch of the road which was under construction. It took us half an hour to cover the distance of about thirty yards from entrance to the Barracks. Reaching this building, we found comfort in shape of bunks and blankets. These were ready and inviting. Flying Officer Symonds told us to sleep in 'till noon and no sooner had I slipped between the snowy-white sheets than I was in deep slumber.

At ten o'clock on September 5th, 1940, I awakened from my first sleep in Coal Harbour. After a shower, shave and a bit o' polishing I took a stroll to look the place over. Old Sol was approaching zenith and its great warmth was fastly drying the mud. A deep breath of fresh air wits its salty tank made me feel a hundred per. By now, most of the fellows were up and a group of us walked down to the dock. We got material for a corner sign and on it we printed in block letters the words "Granville and Broadway"—that we placed at the Base entrance. We met the handful of airmen that had been sent here a couple of months before our arrival. They told us how they were "BUSHED" and in a short while we, too, would be in that category. They also told us, to my satisfaction, that the nearest Indian Reservation was at Quatsino about six miles away and hese weren't wild . . . they were quite civilized. These bushed airmen had been here since the former part of summer and they were sure glad to see us all.

The next day we all put our shoulder to the wheel and commenced the great task of completing the Base and making it more comfortable. The Northern Construction Company crew were building new quarters, hospital, and other buildings, and day by day the place began to take shape . . . began to look like something. Began to grow into what it is today and it is still growing. Growing into a modern and up-to-date Air Base.

The weather was very enjoyable for the first three weeks and during this time, in our leisure moments, we partook in the vast field of piscatorial art in potention fishing waters par excellent. Salmon fishing was in full swing and these were found in schools of hundreds near the shores of Quatsino Sound and all along Coal Harbour. The Creek at the Northeast end of the harbour teemed with husky silvery forty pounders of the deep. These babies sure put up a stiff fight when they take the hook. Honest-to-goodness, at this season of year the surrounding district is a fisherman's paradise. Wide expanse of calm waters surround the many virgin islands in the Sound and



A merry crowd at the smoker given for Nos. 2 and 11 Equipment Depot.

"good fishing spots" are plentiful. We also did extensive swimming when we weren't on duty and also a lot of rowing was had by all.

Then the rains came and we had to find new sports. Hunting then became a very popular sport around Coal Harbour. Mostly duck and geese shooting, and these feathered friends were found by flocks . . . Bang! Bang! Bang! and you bagged three . . . sometimes four (with a little practice, of course), and, as in most cases, nary a one. Hunter's Luck the call it! Allow me to relate this little incident: One rainy morning Corporal Follis and myself decided on a little hunting before breakfast, so, with guns and ammunition to make Adolph of Germany green with envy, we strolled down to the Creek. No sooner had we arrived than we apprehended a flock of seven or more mallards browsing near the opposite shore, a distance of about twenty yards. There was a lot o' shooting for a short while and, as much as I'm ashamed to say, we came back to the barracks empty handed. Just hunter's luck, you know!

All during this time at Coal Harbour Base, every airman did his share of the Station chores: kitchen, barracks, rations and guard detail . . . some of us handled pick and shovel, others axes and grub-hoes, still others, with less intelligence, built sidewalks, and the lesser "gray mattered members" handled Administration.

Really, fellows, I can write a volume depicting incidents from the previous paragraph till this present day, but being that you've read thus far, I'll give you a break by skipping five months of my story and expose to you the stride in progress we've accomplished during that time.

This present day finds Coal Harbour has gone Modern. Instead of its muddy and jungle-like road to Port Hardy (the real name is Hardy Bay), it has a gravelled surface highway with meeting places every half mile. Of course, in heavy rainy periods the surface breaks in mud puddles but these are being taken care of in dry weather and gradually the gravel is overcoming the muck. This road improvement is still in its early stages and by next autumn

(Continued on Page 14)

A WORD to the wise . . .

By EDGAR N. BROWN,
Director, Greater Vancouver Health League,
in consultation with
DR. DONALD H. WILLIAMS,
Director, Division of Venereal Disease Control,
Provincial Board of Health.

ARTICLE I.

It is unfortunate that syphilis and gonorrhea have been confused with sin. The association has led to a great deal of muddy thinking. The rational approach is to deal with these diseases as problems in public health and to attempt to bring them under control in much the same way that tuberculosis is being brought under control.

During the years when Sweden was reducing the incidence of the venereal diseases to a very low point, there was no evidence that promiscuity was any less common. Promiscuity and the venereal diseases need not and should not go together.

We cannot wait for the moral regeneration of mankind, nor can we wait for social and economic reforms to wipe out poverty, delinquency and crime. These vast problems are separate entirely from the immediate public health job of controlling the venereal diseases, a job which needs to be done and can be done—now.

It is a simple matter to say how these diseases can be controlled but not so simple to carry out a control programme. The methods, tested and found sound, are three: (1) good medical treatment freely available, including a system for finding cases and following up treatment; (2) honest and fearless law enforcement; and (3) popular education to make the simple facts known to everyone.

To deal first with the third point, everyone should know what syphilis and gonorrhea are, how they are contracted, how they may be treated and how they affect society. The balance of this article will discuss some of these points in the form of questions and an-

swers. A second article will deal with prostitution, pimps, keepers of bawdy houses and other aspects of law enforcement in relation to the problem.

1. What is syphilis?

Syphilis is an infectious disease caused by a specific germ, the spirocheta pallida, which looks something like a corkscrew under the microscope. The spirochete is an extremely fragile organism and dies quickly when removed from a warm, moist environment.

2. What is gonorrhoea?

Gonorrhoea is an infectious disease caused by a specific germ, the gonococcus, which is usually described as "biscuit-shaped" under the microscope.

3. Are syphilis and gonorrhoea the same?

No, they are distinct and separate diseases, caused by different organisms, with different symptoms, and different treatment. However, it is possible for a person to have both syphilis and gonorrhoea at the same time in the same way that a person may have tuberculosis and heart disease at the same time.

4. How are syphilis and gonorrhoea contracted?

Syphilis is usually contracted either by intimate bodily contact, such as in kissing or sexual intercourse. An unborn baby may contract the disease during pregnancy when the mother is infected. Infections by means of toilet seats, drinking cups and so forth are very rare. Gonorrhoea is likewise usually contracted by intimate bodily contact, usually through sexual intercourse. There is evidence that gonorrhoea may also be contracted by the

common use of such instruments as enema and douche apparatus.

5. What are the symptoms of syphilis?

Syphilis is a treacherous disease because early symptoms very and may be almost completely absent. The normal course is for a sore or chancre to develop at the point where the spirochetes entered the body about two to six weeks after infection. Usually the sore appears on the sexual organs but it may appear on the lips or tongue. This is the primary stage of the disease, the period when the patient is most infectious to others and when he is most easily cured.

Unfortunately the primary sore is often so slight or so concealed that the patient either does not know of it or pays no attention to it. Usually the sore disappears without treatment in a short time. Then the unsuspecting patient, thinking his difficulty is over, passes into the phase of secondary syphilis.

The symptoms of secondary syphilis may be violent or they may be so mild that they pass unnoticed. They may include a generalized rash or eruption on the body, sore throat, fever, severe headaches and loss of weight, or they may be nothing more than an "out of sorts" feeling. Here again the danger is that the patient will not seek competent medical treatment. He is highly infectious and liable to infect his wife and children. More than that, each week in which proper treatment is delayed will increase the seriousness of the disease.

The symptoms of the secondary stage may pass away and the patient, who may still be unaware that he has syphilis, enters the third and final phase of the disease. This is the period when the spirochetes turn inward. It may last for months or for years. There probably will be no symptoms at first except a positive blood test. But meanwhile the spirochetes are working in some part of the body. The blood stream and heart may be affected, causing a particularly fatal kind of heart disease. The nervous system and brain may be attacked,

causing locomotor ataxia or insanity. The eyes or ears may be attacked, causing blindness or deafness. And so on. Almost any organ of the body may be damaged or ruined by syphilis. It is for this reason that syphilis is known as "the great killer."

6. *What are the symptoms of gonorrhoea?*

The symptoms usually begin to appear three to five days after exposure. In the male the first signs are a tickling feeling at the end of the penis, followed by sensations of burning on urination. Then come inflammation and the discharge of yellowish pus. At this time the man is highly infectious and his personal hygiene becomes of the utmost importance. Even without treatment, the painful and obvious symptoms may subside, but this merely means that the disease has passed from the acute to the chronic stage and that the patient is still infectious.

In women the symptoms of gonorrhoea are similar to those in man except that they are frequently so mild as to be mistaken for some innocent local discharge. Many women have suffered from chronic gonorrhoea for years—enduring invalidism, operations and sterility—without knowing what was the matter with them.

7. *What are the effects of gonorrhoea?*

Unlike syphilis, which may spread throughout the body, gonorrhoea is usually localized to the sexual organs and their vicinity. In man, the great danger is that the infection will spread back and upward into the posterior urethra, the bladder, the prostate gland and possibly the kidneys. Sterility may be one result. A number of other serious and chronic disorders, some of them requiring surgery, are other after-effects of chronic infection.

In woman gonorrhoea is more serious than in man. It is regarded as the most common cause of sterility. It is the reason for countless operations passed off as due to "appendicitis." It can and frequently does cause chronic invalidism.

8. *How are syphilis and gonorrhoea treated?*

Treatment of syphilis is a lengthy and complicated medical procedure, involving expert diagnosis and the use of drugs evaluated to the stage of the disease. Normally, a cure requires steady treatment for a year or more. It is entirely a matter for a medical doctor. To permit treatment by a quack, a druggist or any non-medical practitioner is to invite disaster. The insanity, paralysis, heart disease and blindness which result from syphilis occur either because there was no treatment or the treatment was ineffective. The fact that the early symptoms of syphilis often disappear even without treatment has enabled quacks to claim "cures" and has led thousands of persons to a premature death.

Gonorrhoea is treated by quite different drugs and methods. Usually the treatment period is shorter. But the same warning against non-medical practitioners applies with equal emphasis. Gonorrhoea is difficult enough to manage for the most highly qualified physician without inviting the grave consequences of chronic gonorrhoea by seeking advice from a quack.

● Pastoral for an Equipment Officer

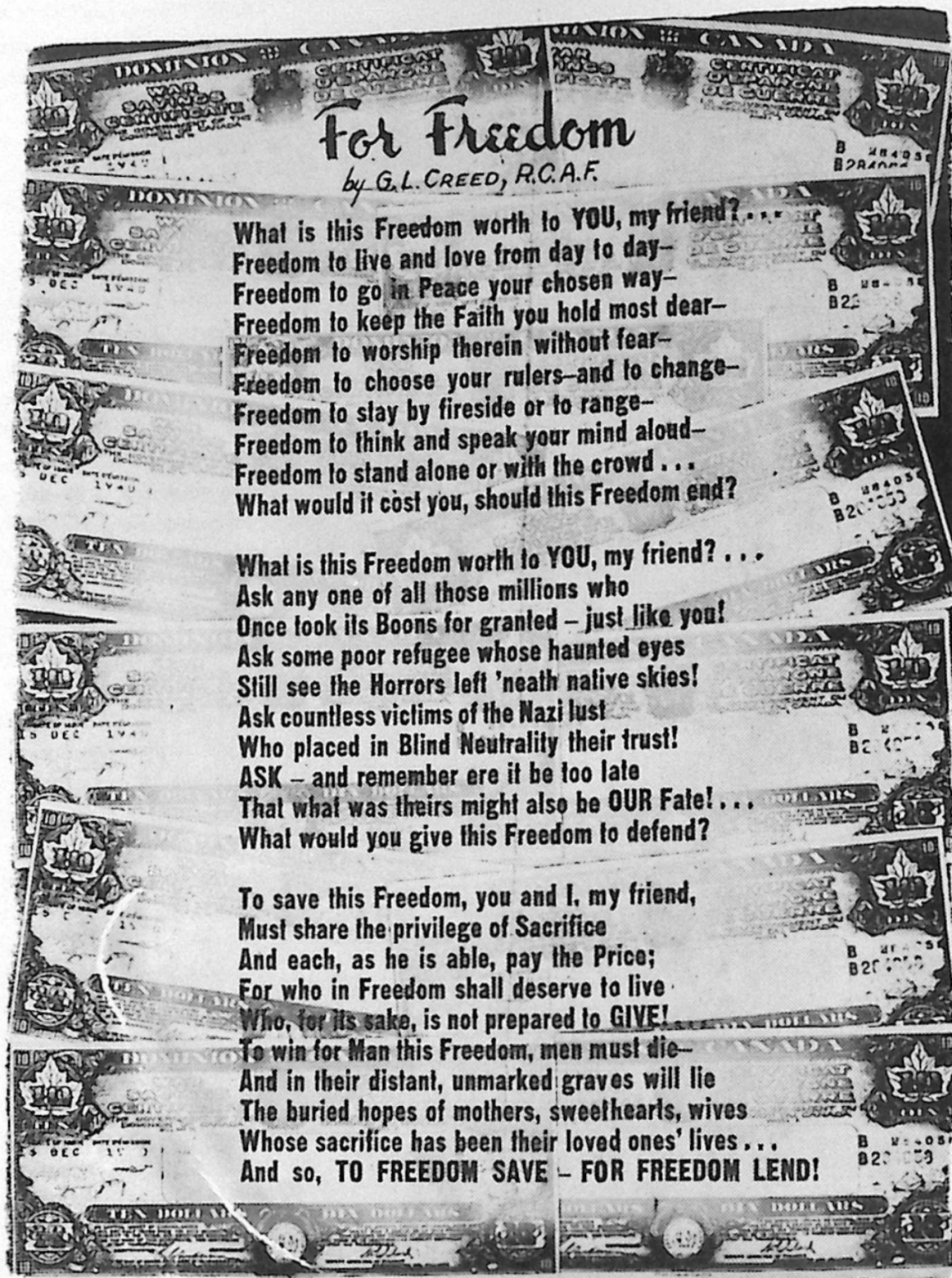
Birds, Little, in the Sky, Azure,
Trill forth their Melodies, Serene.
Lambs, literally dozens of,
Play gaily in the Meadows, Green.
Yonder a Cow, Belated, One,
Wanders to Milking through the
Dew;
Late for parade, untroubled by
Form, Air Force, Number 252.
Fair Phyllis, on thy lovely Brow,
Frowns, Shadows of, I loathe to see;
Swift as a Fighter, Hurricane,
May Rapture, Joyful, wing to thee!
Hearts, Tender, Ever-loving, Two,
Arms, Squeezing, Interlocking, Four,
With these sufficiently Equipped
We need Indent for nothing more.
M.I.K.
Extract from Air Ministry News Letter.

Lament

By Fl./Sgt. M. W. EMMOTT

* * *

*Though I know can't have meant it,
Yet, just once before I die,
I'd like one day untormented
By the ever-present cry—
"Have you any stripes or eagles?
Are our workshop tool-kits through?
We've just found we need some sea-
gulls—
Will you see what you can do?
What about that roller bearing
For our Delta's airscrew race—
See this uniform I'm wearing?
It's a shame and a disgrace.
What about that air compressor
That we ordered weeks ago?
Our new barracks needs a dresser—
Can we get one L.P.O.?
We all know of your collections
Sitting up there on the shelf—
Which you won't give out to sections,
Though you use the stuff yourself."
It's a lovely way of living
As you hear each airman swear
At the service you are giving,
And your job's made still more fair.
As you struggle to unravel
All the trouble there's in store
By the knowledge you can't travel
Down dark alleys any more.
Brothers, take these wise words out to
All the airmen in the land,
And to all those who're about to
Join and give the war a hand;
Spread it round to all and sundry.
To each civvie that you see
Who desires to serve his country,
Give this kind advice from me:
"Be a fitter, an observer,
Motor transport man, or cook,
Be an airframe man with fervor,
Learn your aircraft like a book;
Know the whole bright Air Force story,
But stay out of storehouse doors;
Choose some other path to glory—
Brother, stay away from stores."*



For Freedom

by G.L. CREED, R.C.A.F.

What is this Freedom worth to YOU, my friend?
Freedom to live and love from day to day—
Freedom to go in Peace your chosen way—
Freedom to keep the Faith you hold most dear—
Freedom to worship therein without fear—
Freedom to choose your rulers—and to change—
Freedom to stay by fireside or to range—
Freedom to think and speak your mind aloud—
Freedom to stand alone or with the crowd . . .
What would it cost you, should this Freedom end?

What is this Freedom worth to YOU, my friend? . . .
Ask any one of all those millions who
Once took its Boons for granted — just like you!
Ask some poor refugee whose haunted eyes
Still see the Horrors left 'neath native skies!
Ask countless victims of the Nazi lust
Who placed in Blind Neutrality their trust!
ASK — and remember ere it be too late
That what was theirs might also be OUR Fate! . . .
What would you give this Freedom to defend?

To save this Freedom, you and I, my friend,
Must share the privilege of Sacrifice
And each, as he is able, pay the Price;
For who in Freedom shall deserve to live
Who, for its sake, is not prepared to GIVE!
To win for Man this Freedom, men must die—
And in their distant, unmarked graves will lie
The buried hopes of mothers, sweethearts, wives
Whose sacrifice has been their loved ones' lives . . .
And so, TO FREEDOM SAVE — FOR FREEDOM LEND!

"The Italian soldiers are not enthusiastic about the war," says a writer. The ycan't understand why Mussolini hasn't arranged for their opponents to have bare feet and no aeroplanes.

* * *

British machines recently raided an Italian aerodrome and set it on fire. Smoking out a Wops' nest.

Of course you heard about the dear old lady who said she wouldn't like to live at Random. They seemed to have dropped an awful lot of bombs there.

* * *

Goering was recently seen in Paris wearing only five medals. This made the Field-Marshal practically *incognito*.

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● **Coal Harbor Here I Come**
(Continued from Page 9)

there'll be a much greater change in road conditions. Also we have, instead of a heart-jolting, bone-dislocating vehicle to accommodate passengers to and from Coal Harbour, there is a large second-hand autobus available. Instead of the usual "scrummy" fishing smacks accosting the dock, it now moors steamships as large as Princess Maquinna and now and again the Marines break the calm of the Sound. Instead of liquid sunshine pouring from its clouds, now quite often drops the Goose, the Stranraer, Gruman, and sometimes the Shark. Instead of its lonesome and dreary week-ends at home, it now has boat excursions to dances in Port Alice or mightbe Quatsino. If not, then we take the bus to Port Hardy and spring a party in the Community Hall. Coal Harbour knew not of entertainment until the Y.M.C.A. sent us a moving picture machine. We have two shows per week, and although some of the films have nurtured time, and moths, we derive great enjoyment from its showing. We airmen in Coal Harbour are proud of our own orchestra with Corporal "Paul Whiteman" Smith, S.L., brandishing the baton. We're proud of our modern Canteen (it even has a fireplace and for this we are thankful to the Ladies of the I.O.D.E. Above all we are proud of the present Officer Personnel. Captain Marshall, our first Medical Officer, is not with us anymore . . . neither is Flying Officer Symonds; but we airmen who have helped to open this Air Base with 'em will never forget their physical and moral help during the first trying months at Coal Harbour.

I conclude this bit of true adventure with a message to all airmen and officers who now know little about Coal Harbour. Some day perhaps you'll be posted to this Base, and although it now has modern accommodations, you may become very lonesome at times; lonesome for your family, your sweetheart, your dear friends; in short, lonesome for civilization. However, you will be here to fill our shoes, to take up where we left o: . . . keep your chins up and carry on as we did. The people of Port Hardy,

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Coal Harbour, Quatsino and Port Alice are very congenial and we have built a lasting friendship with all of them . . . we depend upon YOU to keep it up.

● **America's Foster Children**

An English father wanted to get th enews quickly to his little son in America that a baby sister had come into the family and cabled the American host of his son, ending, "The little fellow is a solemn owl, so break the news gradually."

The American called in the little English boy and told him he had just heard from his father of a wonderful thing that had happened. His father had noticed a large stork circling around the house. "It went around and around," he said, "with its big feet dangling and its big wings flapping. Around and around—"

"Jove!" exclaimed the little English boy. "I hope Mother didn't see it. She's pregnant, you know."

* * *

A philanthropic New York matron who wanted to do her bit for England offered to take care of two boys, provided they were not little gentlemen. She said she wanted under-privileged youngsters on whom she could really do a job, and the adoption centre took her at her word.

They sent her two little Cockneys whose first and most obvious need was a bath. While the maid filled the tub, she had the boys stripped, and as soon as the tub was filled popped one of them into it. Then she instructed the maid to take the pile of flthy clothes away and burn them. The poor youngster in the tub looked big-eyed at his trembling, naked companion and wailed, "Blimey, the old bitch is going to drown us."

* * *

"I'm going to that masquerade party as Eve."
"Swell, I'll come as Adam."
"Will you be alone?"
"No, I'll bring a snake and an apple with me."

When a man says his car is out of gas he's usually full of oil.

"Gee! Married five years and no children. Say, how do you avoid the stork?"
"We live in a trailer."

When a girl admits she likes a good mixer, she means one that stirs her up.

According to a pal, the drummer complained, "My gal says STOP every two minutes." To which the pianist replied, "Well, you can do a lot in two minutes."

Have you heard the automobile version: Two rides make a wrong.

Davies Funeral Home

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Apprentice Trained In New Plan

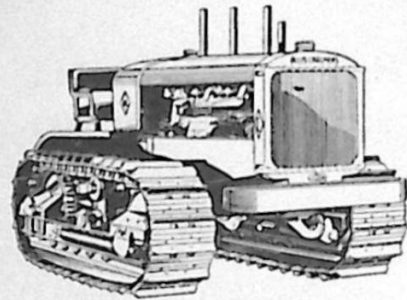
The broadly skilled craftsman is the backbone of any industry. When that backbone does not grow in strength proportionate to the development of the body itself, the industry finds itself faced by a problem.

The aircraft industry in the United States suddenly found itself faced with an acute shortage of highly skilled craftsmen, tool designers and production engineers. Due to the almost impossible demands made of the materials it uses, the aircraft manufacturing industry has been compelled to make tremendous strides in new developments and processes. These demanded the presence, on the job, of trained, capable, all-round craftsmen. It was found that the operator trained in only one or two specialized fields was limited in ability to so great an extent that he was a handicap not only in the matter of personal progress but also to the industry itself.

As a result of the concern of the war and navy departments and the Civil Aeronautics Authority over the possible shortage of highly skilled men to meet the needs of a national emergency, the President of the United States appointed an Interdepartmental Committee on Mechanics Training in the Aircraft Industry. That committee urged the aircraft industry to adopt a programme of apprentice training.

● Wisdom of Training

As long as two years ago Lockheed Aircraft Corporation recognized the wisdom of training craftsmen and conferred with federal committees. The result was development of an apprenticeship programme directed toward employment of young men between the ages of 18 and 23 and with a view to providing a long-range source of skilled employees for the industry.



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Many employees of this company attend trade classes in their spare time; as many as 50 per cent of the day shift in some departments of the factory go to night trade schools.

In contrast to this programme, which lacks systematic selection and a long-range objective, the company has now established an apprentice programme for the highly selective few, carefully scheduled to give a thorough background not in a single occupation but in a broad trade.

In pursuit of this programme, the company recently has been accepting applications from prospective apprentices interested in a four-year "earn-as-you learn" plan. The first class of 40 apprentices began training February 1. Young men from the ages of 18 to 23, high school graduates, in good health.

The apprentice must sign an indenture or agreement between himself and the company, in which the terms and conditions of his employment as an apprentice are clearly set forth. If he is a minor, his parents or guardian must sign with him. The indenture is signed, also, by an official of the company.

The apprenticeship covers a period of four years and the work experience to be accomplished in the shop is outlined in a schedule contained in the indenture. In addition, the agreement requires that a minimum of 144 hours per year to be spent in school during the term of the indenture. The subjects taught in school include trade mathematics, shop drafting, blueprint reading, materials and processes, technical English, operations and planning, safety methods and hygiene.

The work week will consist of 36 hours in the factory and four hours of classroom instruction, a total of 40 hours, for which the apprentice will receive full wages at his regular rate.

This article on Apprenticeship training in the aircraft industry, taken from *Canadian Aviation*, will be concluded in the next issue of *The Review*.

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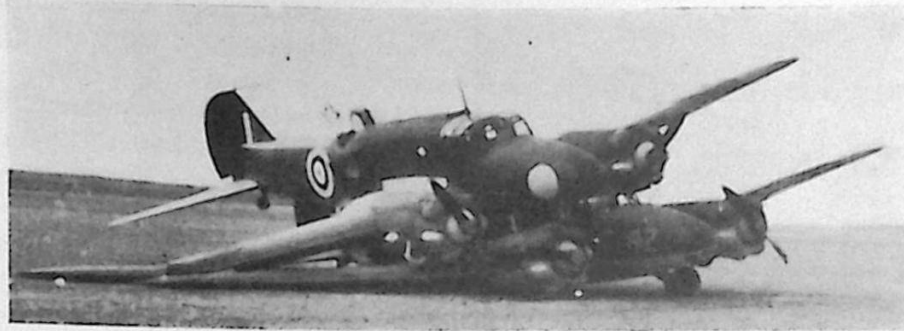
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News From Calgary

● New Library

The Nos. 2 and 11 Equipment Depots in East Calgary will have a library and reading room in the near future, Wing Commander N. E. Sharpe, officer commanding the No. 2 Depot, announced at the smoker held by the corporals, aircraftsmen and leading aircraftsmen of the two depots recently. The reading room will have an open fireplace and a coffee bar, and in time dances may be put on by the units, the commanding officer said.



MIRACLES STILL HAPPEN. This one happened at the No. 7 Service Flying Training School, MacLeod, recently, when one training plane landed on top of another in mid-air, both landing together as you see in the picture above. Both pilots, who did not know just what happened until they climbed out of their aircraft, were back at their regular training duties almost immediately.

For more than two hours, members of the unit entertained their fellow-airmen and officers, about 150 strong, with skits, songs, costume acts and music. Aircraftsmen Fred Stratford and John Simpson staged a female impersonation and "toff" act, and Stratford put on card tricks and other sleight of hand tricks.

Leading Aircraftsman Ernie Churchill as a tipsy sentry and Churchill with Aircraftsman Art Buller and two Boy Scouts brought loud applause and laughter. A. C. Simpson acted as chairman and Flight Sergeant Fred Bogden was master of ceremonies.

Members of the orchestra were Leading Aircraftsmen S. Repa and W. Anklwicz, Aircraftsman C. A. Howe and Corporal D. G. Murley. Instruments were loaned by Matthews Music House.

Guests of the airmen were the commanding officers and adjutants of the two depots: Wing Commanded Sharpe, Squadron Leader H. C. Adams, Flying Officer L. K. Scott, Flying Officer S. J. Macdonald, W.O.1 F. C. Dawkins and Squadron Leader S. J. Wickens, senior chaplain of the Western Air Command; D. J. Lucy and James Campbell.

● From Kentucky

Aircraftsman Fred Stratford would move heaven and earth to get overseas. He has been trying to do almost that ever since about six weeks ago.

That was when his brother, Flying Officer Arthur Stratford, died as a result of action with the R.A.F. against the Nazis over Britain.

Stratford is an American. For some time now he has been stationed at the No. 11 Equipment Depot in East Calgary, and he's getting pretty impatient.

Fred joined the air force for a particular job, and he hasn't been able to do that job yet. He wants the job of camouflaging British airdromes so they will be invisible from the sky. There's lots of room for that kind of work in England, but so far Canada hasn't needed to have her airdromes hidden from an enemy in the air. He's praying they'll let him get overseas in the spring.

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Fred has several abilities which should make him well fitted for that particular line of work. For one thing he's a professional decorator. And he's also particularly skilled at making things disappear—a professional magician.

He has a varied background. His father was British and served 17 years in the Imperial Army, was a wireless instructor in India. Now he's a professional decorator at Cincinnati, Ohio.

Fred was born at Covington, Kentucky (the other boys at the depot call him "Kentuck"). While he was studying commerce and finance at the University of Rochester he discovered a talent for card tricks and disappearing acts.

When he graduated he chose sleight of hand instead of commerce for his life's work and took a job as card expert with the New York police. Exposing "card sharps" on passenger boats was Fred's specialty. He operated between New York and Bermuda and at the coronation of the King and Queen he traveled over to England with the crows of American sightseers.

Since he came to Calgary in October, Fred has made himself very popular with his fellow airmen by his varied abilities. His decoration of the canteen at Christmas-time took first prize in the city. And he's a sure hit for any entertainment.

Recently, at the depot smoker, he kept his audience in fits of laughter; first as a female impersonator; then with a disappearing act; then with a clever rope trick; then setting fire to the adjutant's handkerchief, dramatically producing it once more unharmed; then with a series of clever card tricks, smiling blandly and keeping up a running line of patter.

Fred likes Calgary and he likes the Air Force. But his brother did his bit with the R.A.F. coastal command, until he died of wounds in a Somerset hospital. And Fred's only real ambition is get over there too.

● **A Good Game**

If all reports of the broom ball game between members of the Royal Canadian Mounted Police and Airforcemen

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from No. 2 and 11 equipment depots are correct, it is small wonder that city police were not called out to take a hand in the proceedings.

A usual six-man a side game was what began, but before the fray had ended the ice was crowded with players and when a halt was called at one stage for a count it was found that no less than 17 airmen and 11 policemen were taking part in the affair.

The Airforcemen, it is reported, tried vainly to get into "V" formation to enlarge the police goal but their efforts were always broken up and the police emerged victors by a 3-0 count. Added to the results of the battle were bruises and stiff muscles suffered by players on both sides.

**The Chosen Few**

By A.CI L. H. SPECHT

R.C.A.F. Station, Patricia Bay, B.C.  
*I have watched that look of dread and  
fear  
Creep over the hardened men,  
I have seen them cringe and tug their  
ear,  
And ask for their judgement then.  
I have heard them scream for mercy  
Till repentance shook the air.  
I had thought it once just hearsay—  
That they really didn't care.  
I believed that the stories told to me  
Were the objects of lost discretion,  
I didn't believe that the Western sea  
Could contain such a misconception.  
I didn't even dare the thought  
That some day it might strike at me,  
That the cast might overnight be  
wrought  
To fashion the deadly key.  
To this object of fear I have lost my  
friends,  
I have seem them hustled away,  
I have seem them hurry to make  
amends  
Before the appointed day.  
Then on to the ship which sped them  
north  
To the Land of The Midnight Sun,  
To the Hell where epithets stream forth  
Like the hail from a Lewis gun.  
The vision must now be clear to you,  
As the light of the dawning day,  
Why of course you lucky chosen few,  
It's the story of Aliford Bay.*

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## ● Famous Canadian Flyers

(Continued from Page 4)

the citation of his award of the Distinguished Flying Cross. It read:—

"This officer is an exceptionally capable and efficient squadron commander, under whose leadership the squadron has maintained a high place in the Army wing. He has carried out numerous solo patrols and led many offensive patrols, on all occasions engaging the enemy with great bravery and fearlessness. Up to date he has accounted for 47 enemy machines, 22 in the last 12 months."

His fifty-first victory brought his fifth decoration, a bar to the Distinguished Service Order, gazetted September 21st, 1918, after a new phase of the war had started, the final Allied offensive. The new German Fokker had appeared, considered much the best fighter the enemy had produced. Sopwith Dolphins and Camels, however, were ready to meet it and in one of the latter Collishaw led his squadron in a massed attack on one of the largest German aerodromes, that at Lieu St. Armand. The attack was highly successful, hangars being set ablaze, many casualties among ground staff inflicted, two Fokkers crashed and an oil tank burned.

Two more victories followed, bringing his total for the war to 60. Then he returned to take part in the organization of the Royal Canadian Air Force and was still in England when, a few weeks later, the Armistice was signed.

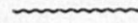
That should have been enough adventure for any life, but Collishaw after a visit to Canada returned to England and subsequently took part in the British attempt to aid Denikin, the White Russian general, and later, with the 47th Squadron, went to Egypt, across Iraq to India and thence to Mesopotamia.

That winter, 1920, he was given full command of operations in Persia and saw more heavy fighting. Then in the New Year's Honors List for 1921 was published his creation as a Commander

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of the British Empire for his services in the East.

Finally, after three years of fighting in the east, which, added to his service in the Great War, gave him a total of more than six years of almost continuous active service, he returned to England, where he continued his work in the Royal Air Force with the rank of Wing Commander.

The present conflict finds the B. C. man in a vitally important post, with the record of having most probably brought down more enemy aircraft than any other pilot, living or dead.

### ● Wrought Aluminum Alloys (Continued from Page 6)

#### ● Protection Against Corrosion

Protection against corrosion of aluminum alloys is obtained by a combination of the following:—

##### (a) Proper Heat Treatment.

The effect of proper heat treatment on the corrosive resistance of aluminum alloys has already been stressed in other sections of this publication.

##### (b) Surface Preparation of Metal for Application of the Priming Coat, or Joint Seal.

The surface preparation of metal, before applying the priming coat, is a most important phase of the subject; unfortunately, it is probably the one that receives the least attention. The effect of proper surface preparation is so great that inferior coatings with properly prepared surfaces will likely give better service than the best protective coatings, when applied on an improperly prepared surface. Paint will not adhere to an oily or dirty surface. Solvents function by dissolving the oil or grease which may be present. Varsol, Alcohol or Deoxidine may be used. It is necessary to lightly rub the surfaces to be cleaned with a rag, or brush, soaked in the solvents and afterwards with a dry cloth. If solvents are permitted to evaporate, grease and dirt would still be left on the surface. Paint will not adhere to a wet or damp surface. If touched with bare hands after

cleaning, sufficient moisture may be left to prevent adherence of the paint, and result in the formation of blisters. Materials that have been anodically treated give an ideal surface for the application of paints.

##### (c) Protective Coatings and Joint Seals.

Priming coats used are Zinc Chromate, or Red Oxide; aluminum powder mixed in varnish will also give good protection. These are followed by one or two coats of aluminum, or oil base paints. Bituminous and Asphalt paints have proved satisfactory and are probably superior for under-water surfaces. It is desirable that the paints be a trifle soft and pliable to minimize the danger of chipping. For emergency repair of the surface protective coating, grease is most efficient and corrosion will not occur so long as the grease remains on the metal. The following have proved satisfactory for joint sealing:—

Bostic cements, marine glue, rubber cements, bituminous or asphalt paints—Sealing Compounds.

Linen, Canvas, Friction Tape—Fabric well soaked in any one sealing compound.

Neoprene and P.W.A. Tapes, rubber sheet or tape—Gaskets and lap joint seals.

On the contact surfaces of dissimilar metals a long oil paste or paint, pigmented with barium chromate, may be used.

##### (d) Correct Assembly Methods.

Consideration must be given to proper protective measures being taken during assembly. A joint which is assembled, prior to painting, will remain free from corrosion only when water does not penetrate the joints. All parts should be painted at least one coat and allowed to dry before assembly, an additional coat may be applied after all parts are together. The practice of applying paint to the rivet holes, or to the rivets during the riveting process, is sound, especially in float construction and repair. Lap joints or other joints that are required to be leak proof must be sealed with a



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compound or by means of gaskets: these should be applied on a clean surface. Fabrics must be well soaked in whichever sealing compound is used. Sealing compound should be present in such quantity as to exude at least a small amount all along the joint when it is drawn up. For some aircraft, it is standard practice anodically treat aluminum alloys and then to apply one coat of primer, and one or two coats of paint.

(e) *Materials in Contact with Each Other.*

Joints between dissimilar metals must receive careful consideration. In most instances the metals should be separated by an insulating material. With steel and aluminum alloy joints, the steel surface should be cadmium plated (metalizing with aluminum spray is a later process), one or two coats of primer are then given before assembly. After anodic treatment, the aluminum faying surface should also be given one or two coats of primer. All coats of primer should dry thoroughly before assembly. The faying surfaces should be insulated from each other by fabric impregnated with a sealing compound; good results are also obtained by the use of Bostic cement without the fabric. Pure aluminum sheet that has been anodically treated and primed may also be used for non-watertight joints. The fabric, or aluminum insulator, should extend slightly beyond the edge of the faying surfaces; it will not look very neat, but if trimmed close to the edge, it will not do its job of insulating.

Typical examples which have caused trouble in the past, and which must, therefore, be avoided in future, are as follows:

(i) Stainless steel end sockets in aluminum alloy tubes. Cadmium-plated sockets, pins, rivets, etc., should be used, if not of aluminum alloy.

(ii) Copper, brass, Tungum, etc., pipe lines running along aluminum alloy spars. Contact between the pipes and the aluminum alloy should be avoided; this refers both to direct con-

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tact or through the medium of entrapped water.

(iii) Brass and fittings of flexible pipes mating up with aluminum alloy threaded parts, and vice-versa. The end fittings and threaded parts should be made of the same materials.

(iv) Stainless steel, brass, monel, Tungum, 45% nickel alloy, etc., rivets in aluminum and aluminum alloy structures. The rivets should be cadmium plated.

(v) Brass wood screws passing through aluminum or aluminum alloy. The screws should be cadmium plated, but cadmium plated steel screws are to be preferred.

(vi) Copper terminals in contact with aluminum or aluminum alloy for bending purposes. Material used for bending must not introduce the possibility of electrolytic action.

(vii) Cadmium plated bolts, rivets, etc., in contact with magnesium alloy parts. The bolts, rivets, etc., should be zinc plated.

(viii) Wherever practical, bolts, screws, and rivets should be inserted with paint or marine glue, particularly when an aluminum bolt or screw passes through, or into, wood, or where bolts or rivets pass through tubing.

(ix) When washers are used, especially in underwater locations, they should be composed of the same material as the bolts.

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The Orderly Officer was making his rounds one dark and extremely wet night. When approaching one of the shivering Trainee Guard he was challenged, thus:—

"Halt!"—a gasp, a splutter—"Who—Who—Whooo am I?" Before the astonished Officer could reply, he was ordered to:—

"Advance one and be reorganized."

\* \* \*

Then there is the tale of a Technical Officer who, while working in overalls one night, was challenged by the guard, advanced, was recognized (?) and then told, "The Orderly Officer is about, brother, or I would not have bothered you."

\* \* \*

The guard had challenged the Orderly Officer correctly. He had saluted correctly when the Orderly Officer approached and on reply to the latter's question had stated that everything was in order. The O.O. was still not satisfied and asked the guard how he knew that he—the O.O., was all right. It is not recorded whether the O.O. was satisfied, flattered or merely surprised when he received the reply, "Well, you look honest, Sir."

\* \* \*

This time the guard did not challenge him and the O.O. wanted to know why. To his surprise, the guard answered, "Oh, I didn't know it was you, Sir."

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