WESTERN AIR COMMAND R.C.A.F.

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R. C. A. F. WESTERN AIR COMMAND REVIEW
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From England

By DRIFT INDICATOR

All my life I have been a frivolous man, and I propose to go on being frivolous when once the Teutonic scum of Sodom, the sweepings of Gomorrah, have been finally cured of their itch to rule me and mine. For the present I must need look reverently towards the Heavens.

I have just had my first week off in this war; a week of blazing sunshine spent in places where "alien moaning"—my sister-in-law's phrase for the song of the Heinkel and Messerschmitt—was fairly constant. For those birds I have no reverence. They cannot shoot straight. But among them there burst from time to time those fiery fractions of the R.A.F., always outnumbered, always gloriously pugnacious, who are fighting the battle of Mankind itself this day. In those moments, pride welled up and stopped the flow of congenial talk while we strained our eyes five miles up into the brilliant sky. We thought of the Prime Minister's words: that never in history have so many owed so much to so few.

"How beautiful they are, the lordly ones . . .", for this indeed is their immortal hour.

At work I move much among the men of the Royal Air Force, and as they are simple run-of-the-mill Empire products they are obviously to be depended upon. On holiday I went to London and the South, where civilians have been having the war dumped on their doorsteps in large and noisy chunks. For some time they have been the interesting factor, as the stamina of the Forces is not in any doubt. Have our "decadent" people enough fortitude?"

My youngest nephew, when the wing came off a Heinkel before his mother could herd him into shelter, was sorry for the "two poor men who had to jump out with parachutes." His four-year-old concern for the enemy was scornfully dealt with by his brother of seven, who was only stopped in time from explaining with glee that a Heinkel crew was more than two so there must still be men in the plunging wreck.

(Continued on Page 8)

• Drop Us a Line

Did it ever occur to you that others in the service might like to hear what are your views on various subjects? The same problems and topics of interest in your particular station arise in others.

One way in which your magazine can be of practical service to you is to become a clearing house for opinions on such matters.

Have you been transferred? If you have, obviously you cannot write to all your friends at your former station. Why not contact them by means of a letter to the Editor of *The Review?* Send it direct or hand it in through the usual channels to the Associate Editor of your station. His name appears at the masthead on the opposite column. But do it soon, please.

. . . Famous Canadian Airmen . . .

● No. 1. BISHOP.

COMBATS IN THE AIR

Squadron—No. 60.
Type and No. of Aeroplane—Nieuport Scout A-306.
Armament—1 Lewis Gun.
Date—35-3-17.
Time—5.00 p.m.
Duty—Defensive Patrol.
Pilot—Lieut. W. A. Bishop.
Observer—
Locality—Between St. Leger and Arras.
Height—9,000 feet.
REMARKS ON HOSTILE MACHINE—TYPE, ARMAMENT, SPEED, ETC.
Albatross Scout.

● Narrative

While on defensive patrol, 3 Albatross Scouts approached us. One separating from the rest lost height and attempted to come up behind our second from the rear machine. I dived and fired about 12 to 15 rounds. Tracers went all around his machine. He dived steeply for about 600 feet and flattened out. I followed him and opened fire from 40 to 50 yards range, firing 40 to 50 rounds. A group of tracers went into the fuselage and centre section, one being seen entering immediately behind the pilot's seat and one seemed to hit himself. The machine fell out of control in a spinning nose dive. I dived after him, firing. When I reached 1500 or 2000 feet my engine had oiled up and I glided just over the line. The Albatross Scout when last seen by me was going vertically downward at a height of 500 to 600 feet and appeared to crash at ———. (Signed) Lt. W. A. Bishop.

This cold, factual statement tells the official story of the first victory of the First World War's greatest combat pilot. It just tells so much; to the imagination is left the complete picture—the scene laid well over the German lines—the dead engine—only 2,000 feet up and the lines to cross before reaching safety—the trenches bristling with machine guns.

It was the first of many such reports, so many in fact that the whole story of the British Empire's leading air fighter can almost be told in them.

There was nothing in the early life of W. A. Bishop to suggest his later martial brilliance. Before the war his only contact with anything savoring of military life was his cadetship at the Royal Military College at Kingston. Actually, it was the trivial fact of a muddy training camp in England that led Bishop to decide to take his war in the air.

Soon after the outbreak of war he had enlisted in the Mississauga Horse and in due course proceeded to England. It was there, in 1915, that the gluey character of the terrain at his training camp worked its influence. Bishop saw the early training planes wheeling in the sky, far above the mud in which his feet were buried, and forthwith applied for a transfer to the Royal Flying Corps. A few months training followed and he qualified as an observer and was sent to France.

The next four months were spent in the usual routine of an observer, artillery spotting, photography and bombing; exciting enough, but tame compared with what was to follow. Then came his first and only serious injury due to flying, a damaged knee caused by his pilot's faulty landing, which laid him up in England for several months. There was compensation, however, in that fact that when he recovered, an opportunity arose for him to become a pilot.

It was in the early part of 1917 that Lieut. W. A. Bishop went to France wearing his wings, to be posted to Squadron 60.

They were busy days for the R.F.C. The Battle of Vimy was in the offing and Bishop was engaged in patrol work and escorting photographers and observers over the lines. He worked hard, sought combat and practised gunnery diligently, and in a few short weeks, while his record still looked small compared with many others', recognition came when on Saturday, April 7th, 1917, the youthful Canadian won his first decoration.

He was after a German observation balloon and was attacked by an enemy scout. He proceeded to drive it off and then turned his attention to the balloon again, setting it on fire while it was being hauled down. The citation of his award appeared in the London Gazette, May 26, 1917, the first of many such citations, as follows:

"His Majesty the King has been graciously pleased to confer the Military Cross on the undermentioned officers and Warrant Officers in recognition of their gallantry and devotion to duty on the field.

"Lieutenant W. A. Bishop, R.F.C.

"For conspicuous gallantry and devotion to duty. He attacked a hostile balloon, dispersed its crew on the ground and destroyed the balloon and also drove off a hostile machine which attacked him. He has on several other occasions brought down hostile machines."

Then, only six weeks after he had joined the famous squadron led by Captain Albert Ball, he was promoted to a Captaincy. Ball's leadership was to prove of great influence in Bishop's future career. The former was at this time the leading pilot in the British forces, and after April 29th, when Bishop destroyed three enemy aircraft

in a single battle, he began to see an opportunity to overtake his Squadron leader.

Historians of the First World War have noted how this personal rivalry was proving a tremendous incentive in the R.F.C.—soon to become the R.A.F.—and introduced a sporting element into the deadly business of air fighting. As Col. George A. Drew expressed it in his book "Canada's Fighting Airmen":—

"Twenty-five machines destroyed was more like a score in some wildly exciting game than the cold record of the death of probably 40 men killed in personal combat."

It was at this period that Bishop went in more and more for gunnery practise, devising a ground target he called the "petit Bosche" on which he could concentrate on vulnerable parts. His practise was rewarded with an ever-mounting score of victories. On April 30th he achieved a record for activity, engaging in nine combats in a single flight. On another occasion the young Canadian—he was 23 years old then—in one hour tackled 11 different enemy aircraft, five of them hostile scouts. Later in the same day he went up again and this time ran across and gave battle to four famous Albatrosses of Richthofen's squadron.

Another citation appeared in the London Gazette on June 18th, 1917, as follows:—

"Capt. W. A. Bishop, M.C., Canadian Cavalry and R.F.C.

"For conspicuous gallantry and devotion to duty. While in a single-seater he attacked three hostile machines, two of which he brought down although in the meantime he was himself attacked by four other hostile machines. His courage and determination have set a fine example to others."

The citation noted the award of the Distinguished Service Order.

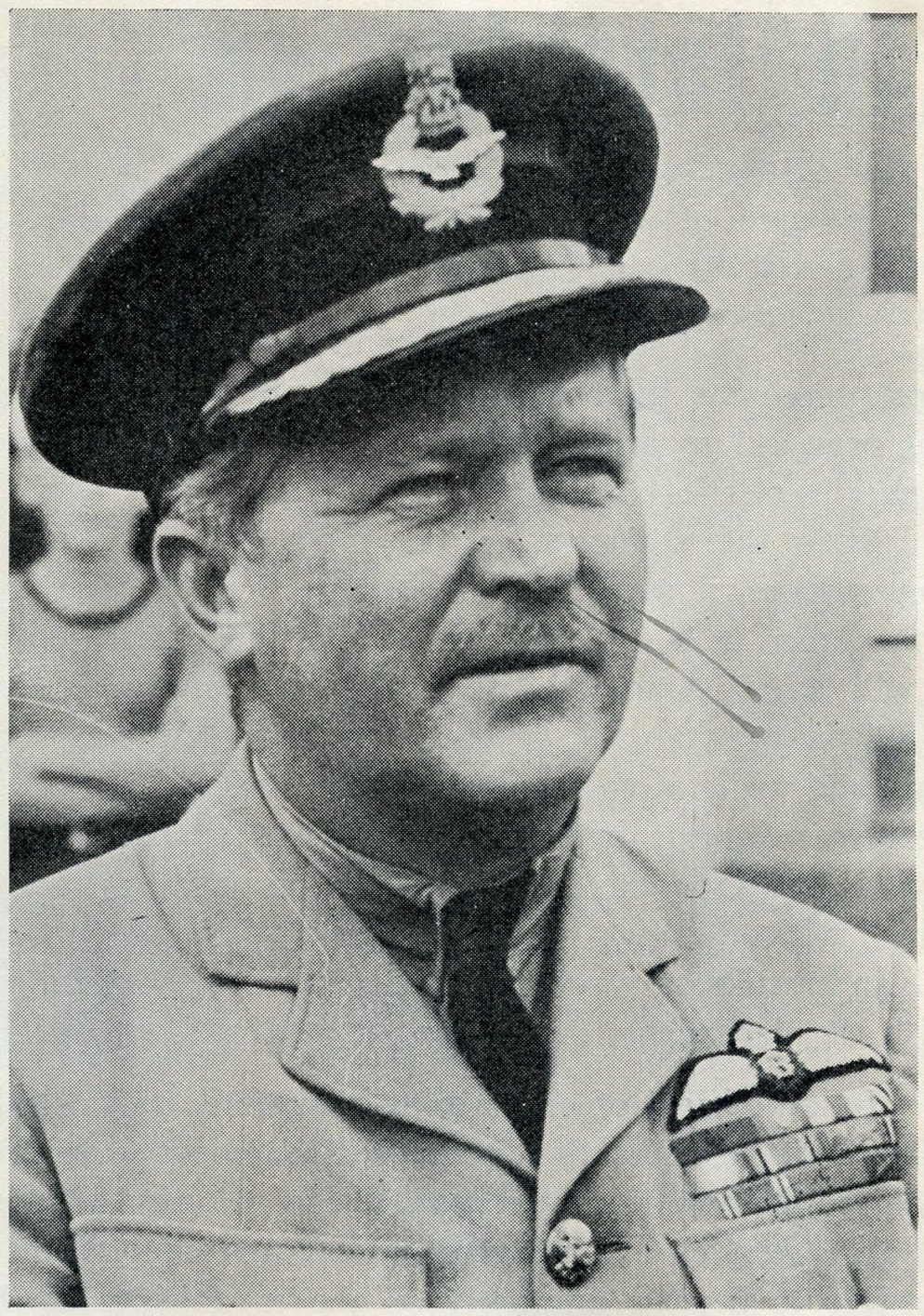
Meanwhile, however, Bishop had received notice of his award and had been granted six weeks' leave. Now, still only a matter of weeks since he had become a pilot, he had a staggering total of hostile aircraft to his credit.

It was while he was on leave that Capt. Albert Ball, his leader, was killed in a battle with Lothar von Richthofen's circus.

Ball's death was a great personal loss to Bishop and to the whole Corps. He had compiled a record of more than 50 victoms and his entire career had been a fine example to others.

Bishop returned from leave and then achieved his greatest single exploit, described by Col. George A. Drew as follows:—

"When not attacking artillery observation machines, Bishop was as busy as ever over the line and destroyed three more of the enemy before the end of May. He was now planning an expedition which he had contemplated for some time, having decided to make a single-handed



AIR VICE MARSHAL W. A. BISHOP
V.C., D.S.O., D.F.C., M.C.

attack on a German aerodrome at dawn in the hope of surprising the enemy as they were taking off for the morning's work. He finally chose June 2nd for this extremely hazardous operation.

"He rose before sunrise and just as the first light of dawn was brightening the sky he was speeding over the enemy lines.

"He flew straight to the aerodrome he had decided to attack, but when he reached it he was disappointed to find no sign of life. He had, however, come too far to give up without an effort and he turned his nose southeast in the hope of finding a target.

"About three miles from the first aerodrome he came to another but this time the scene was very different. Passing over at about 300 feet he saw seven aircraft out of their hangars with groups of mechanics getting them ready for flight. Several had their engines running.

"He swooped, raking the length of the aerodrome with his bullets as he passed over. When he turned, he saw that one of the enemy was 'taxi-ing' along the ground and about to take off. This was the very chance for which he had waited and often imagined while planning the flight. With his greater speed he was soon immediately above and behind the rising plane and a short burst of 15 rounds was enough to send it crashing back to ground.

(Continued on Page 10)

An Introduction to Aero Engine Principles

By Squadron Leader W. P. Dunphy

Part III

It has been said of the human body that it is the most unreliable piece of machinery ever devised. It is not proposed to argue that here, though with unhappy memories of efforts made to urge into life a stubborn old tin lizzie the statement leaves room for debatement. Nevertheless, it must be admitted, the human body has often failed at a critical moment with disastrous results. It will do one thing one day yet that is no guarantee that it will be even capable of doing the same thing the next day, and while of course the same can be said of the tin lizzie there is at least always a reason for its actions. The human body, on the other hand, is the only mechanism which will do things—or not do them—for no reason at all, and results have proved the advisability of dispensing with the dependence on human effort whenever possible.

In all phases of engineering, therefore, particularly when added complication increases the amount of control required, automatic controls are always regarded as more reliable than the tfforts of human attention. Were it possible to depend implicitly on the capabilities of the human body it would not be necessary to use automatic engine controls, but modern aircraft have become extremely complicated and experience has proved that the pilot is no longer capable of performing the many actions necessary to keep the aircraft under perfect control.

The first article in these series described in some detail the need for superchargers and the effect they had on the power developed by an aero engine. Unless these fundamental principles are thoroughly understood there would be little gained by attempting to understand the functions of automatic engine controls with which this article is chiefly concerned. A brief summary of these principles will not be wasted, therefore.

The power developed by an internal combustion engine depends on the amount of oxygen available in the combustion chamber, and this oxygen is, of course, contained in the air which is drawn in during the suction stroke. Consequently the greater the atmospheric pressure at the air intake the greater will be the weight of air drawn into the cylinders at any given throttle position and vice versa. It follows that unless some device is incorporated in the engine, which will compensate the smaller weight of air which would otherwise be drawn in, the power developed by an aero engine will decrease with increase of altitude.

A certain amout of compensation can be obtained by increasing the compression ratio, thus getting more work from the same weight of charge, and this method is quite satisfactory provided no great heights are aimed at. Unfortunately the higher compression and explosion pressures and greater ratio of expansion which follows the increase of compression ratio result in excessive stresses in the engine together with a tendncy on th part of the fuel to detonate.

A more favorable method is to boost up the induction pipe pressure with the aid of a supercharger and so force into th ecombustion chamber a mixture of greater density than would be taken in if the engine were normally asirated. An increase of power is thus obtained through the combustion of a greater weight of charge but without the momentary high explosion pressures experienced in the high compression engine.

The type of supercharger which is almost universally used on British and American aero engines is the mechanically driven centrifugal compressor, the efficiency of which depends to a large extent on the speed of rotation of the rotor. As in the case of high compression engines special precautions are necessary to curtail the power that would be developed by a supercharged engine when run at full throttle at sea level and it is general practice to limit the throttle opening at sea level or at any time when flying below a specified minimum alitude.

Unfortunately at these low altitudes the pilot has many other things to occupy his attention and he cannot afford to give the throttle the attention it requires.

In he early days of superchargers—before the introduction of automatic throttle controls—it was cusomary to incorporate a gate in the throttle quadrant. With this attachment the throttle was so adjusted that at ground level the maximum boost allowable for take off would be produced when the throttle was opened to the position of the gate. If the throttle was opened beyond this position while in low altitudes dangerously high induction pipe pressures would be produced and the engine would suffer in consequence. The pilot would not move his throttle through the gate, therefore, unless he was flying above a certain specified altitude, at which height the maximum boost could not be exceeded even at full throttle owing to the decreased atmospheric pressure. In this way the pilot would know without watching his boost gauge that he was not overstressing the engine.

Useful though this gate was it did not completely produce the results which would follow if the pilot was able to give the throttle and boost gauge his unbiased attention. Also there were many pilots who either did not know the harm they were doing or had no regard for the consequences and continually overstressed the engine by going through the gate while still in low altitudes, thereby

running the engine with the excess power thus produced. It was to guard against such maltreatment either through ignorance or otherwise, as well as to obtain more efficient engine control, that the automatic throttle control was developed.

This control is sometimes called a boost control, since by its manipulation of the throttle it maintains a constant induction pipe pressure or boost. Any change in the altitude of the aircraft which would otherwise result in a change in engine speed and consequent change in boost pressure will cause the control to function and return the boost pressure to whatever value the control had previously been set to maintain. It will not necessarily maintain a constant engine speed but the power developed in the cylinder head will remain constant. The speed of the engine will drop, for instance, if the aircraft takes a climbing attitude although the power developed remains constant. Likewise the engine speed will increase in a dive but the automatic control will still maintain a constant power output. It does this by direct manipulation of the throttle. Should he induction pipe pressure rise above its set limit the automatic control would immediately decrease the throttle opening through the medium of suitable mechanical connections and so return the induction pipe pressure to its previous value. On the other hand, if the induction pipe pressure were to drop, as would happen when the aircraft reached a higher altitude, the automatic control would open the throttle wider and so maintain the power output even though operating in a decreased atmospheric pressure. In other words, a predetermined induction pipe pressure usually set at "rated boost" can be maintained automatically even though the atmospheric pressure or flying altitude of the aircraft varies.

Disregarding for a moment the increase of power available at the airscrew due to the decrease in exhaust back pressure, and thinking only in terms of the actual power developed in the cylinder head, it will follow that

SQDR. LDR. W. P. DUNPHY

a constant power can be maintained from ground level up to a certain maximum altitude without any attention to the throttle from the pilot. If, as is customary, the automatic control is set to maintain rated boost, this maximum altitude will be rated altitude. At this height the automatic control will have reached the limit of its travel. If the aircraft continues to rise the induction pressure will fall, with a consequent fall in engine power, and the throttle, being already full open, will be unable to supply any further compensation.

When flying normally above the rated altitude it will of course be impossible to exceed the rated boost owing to the decreased atmospheric pressure, and the automatic control has no effect on the engine. If the aircraft is put into a sufficiently steep dive and the resultant increase in engine speed is such as to produce an excess boost, then the automatic control will again safeguard the engine by reducing the throttle opening and consequently the boost just as it did at lower altitudes.

Having realized the need for automatic throttle controls and the advantage they have over manually operated throttles, it is opportune to study the principles of construction.

The control consists of an airtight chamber which is connected by means of a balance pipe to the pressure side of the supercharger. The air pressure in the chamber is thus always the same as in the induction pipes. Inside the chamber is an aneroid or balanced metallic bellows similar to the aneroid of a barometer. The upper end of this aneroid is held rigidly while the lower end is coupled to a small slide valve. This valve controls a flow of oil from the main engine lubricating system which in turn controls the movement of a small piston known as a servo piston. The valve is so accurately made that a longitudinal movement of only two thousandths parts of an inch is sufficient to change the direction of the oil flow to the piston. The piston is coupled by suitable links to the throttle, which it can move, within limits independently of the throttle lever in the cockpit.

Should the induction pipe pressure rise above the set point, which as explained earlier is usually rated boost, the anemoid will be compressed and so lift the slide valve and allow oil to flow under pressure from the main engine system to the top side of the servo piston. At the same time the valve will have opened a passage for escape of the oil on the underside of the piston. The piston will then be forced downwards and in so doing reduce the throttle opening until the boost returns to its rated pressure and the slide valve can return to neutral. Should the induction pipe pressure fall below rated boost, on the other hand, the aneroid will expand and push the slide valve down. In this case the oil will flow in the reverse direction to that described above and cause a widening of the throttle. The control will again return to neutral when the throttle has been opened wdie enough to produce rated boost.

As explained in an earlier article it is usually permissible to use a boost in excess of rated boost for short periods such as take off, and means are

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Believe It Or Not

By Ripley

—*From The Vancouver Sun.*

Do You Skid ?

"To skid, or not to skid?"

That is a question which aroused such vociferous argument in the officers' mess at Pat. Bay at few days ago as to give rise to the most fantastic bets—even to quadruple double-scotches.

It's all Ripley's fault. The guy of "believe it or not" fame sure threw a monkey wrench into the austere calm of the officers' sanctum.

One of his cartoons appeared in the January 21st issue of the *Vancouver Sun*. F/O McCaghey's Irish eyes lit on it, and then the argument started. The cartoon showed four wheels, on a common axle, running on straight rails. The two outer wheels had a perimeter of six inches, the two inner of three inches. The rails on which the inner wheels ran were higher than the rails on which the outer wheels ran. Despite the difference in the size of the wheels, they all arrived at a given point at the same time. The cartoon was titled "How Come?"

Two camps immediately formed. One group claimed the inner three-inch wheels must skid if they were to cover the six inches rolled by the bigger wheels on the common axle. The other group claimed there was no skidding.

(Continued on Page 19)

Sport at Patricia Bay

● General

Patricia Bay being a new Station, little or no organization or equipment was available here until last fall, when a general sports meeting was arranged and a committee selected. Up until this time No. 111 (Fighter) Squadron was the owner of all the existing sports equipment, and unselfishly allowed all and sundry to use it.

As a result of the above meeting officers were assessed $1 a month, N.C.O.'s 50c and airmen 25c, 25% of the amount collected going to the Station. The remaining 75% goes to the sport coffers of the Squadron concerned.

Recently, much needed sports equipment has been provided. Badminton is now flourishing in the 120 (BR) and 111 (F) hangars, where courts have been marked out.

● Bowling

As there are no facilities on the Station or nearby, a progressive Bowling League has been in operation for some time in Victoria. With permission of our Commanding Officer, the big station bus is figuratively loaded to the gunwale by enthusiastic bowlers every Monday and Thursday nights. There are about a dozen teams in the Patricia Bay League. Officers and men forming mixed teams. All teams are named after an outstanding aircraft.

Each bowler pays a small amount over the regular alley fee; this is kept in a separate fund to provide prizes for the lucky winners at the end of the season.

Initial success of the bowling league is largely due to the organization and the spade work of 120 (BR)'s energetic sports representative, Sergeant Fallows, who still continues his active interest.

● Soccer

The situation before Christmas was that the local soccer team were well up in the League standing, having clearly shown their superiority in all their later games.

Partially due to an influenza epidemic before the holidays ,and enlistment of the Inter-Service League organized from the Victoria District, the soccer loop has ceased to run, with no particular explanation from any quarter. The local sports officer has been endeavoring to have a general meeting called in order to try and get the League again running.

To date our soccer players have been long-suffering in order to further their favorite game. They have often forsaken 48-hour passes, in anticipation of a game Sunday, only to have some prospective opponent calling the game off at the last moment. We can only hope this state of affairs is finished.

● Basketball

The Patricia Bay basketball team to date had a good record. In spite of disadvantages our basketball team has come home all smiles and on the winning side of the

Above, English Rugby XV. Left to right, back row: A.C.1 Watson; A.C.1 Konzuk; A.C.2 Gibbon; L.A.C. Lewis; F. O. McNeil; L.A.C. Collins; L.A.C. Nicholson; Cpl. Allsopp; Cpl. Lee (Coach). Centre: L.A.C. Charmon; Cpl. Tuttle; L.A.C. Parrott (Capt.); L.A.C. Carrie; L.A.C. Topp. Front: A.C.1 Carr; Cpl. Prittie; L.A.C. Rogers; L.A.C. Mackay; A.C.I. Gegear
Below: Soccer XI. Left to right, back row: Sgt. Riding; L.A.C. Fallows; L.A.C. Ashworth; F/Sgt. Campbell; P/O McNeil; Cpl. Charlton; A.C. Seath; Cpl. Insley; Sgt. Fallows. Front: L.A.C. Hastings; L.A.C. Allard; A.C.1 Britland; A.C.1 Norridge; L.A.C. Charmon

score. They lost their opener to the Navy by a close score, and the game following, but have managed to win their last games 5 straight. One exhibition game was played which resulted in a close win for our quintet. This game was against the West Saanich Road aggregation, played on their floor at the Community Hall on the road intersection to Brentwood.

A further exhibition game between the same two teams is arranged in the same Hall in the near future. Time alone can determine the eventual winner.

● English Rugby

By P/O A. S. McNeil

The Patricia Bay R.C.A.F. Station English Rugby team, in spite of constantly changing personnel, only a few of which had any previous ideas of the game or its rules, put on a fairly good show all season. After the New Year, it was discovered that the Senior "B" loop, of which we were members, was forced to break up. The only league game that our team participated in we were

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• FROM ENGLAND

(Continued from Page 1)

That is a rather horrifying example of the adaptation to total war of this island, man, woman and child. There is fear, and must be, but nothing remotely like panic. The tendency to stay in bed rather than take shelter is spreading rather too fast but is inevitable. In the far-off days of a year ago motorists drove regardless of the dreadful tool of road deaths—except for a few miles after passing a messy crash. So the citizens will continue to take their chance except for a day or two after seeing bomb casualties close to home.

It is one of the most vivid object lessons in the incredible adaptability of Humankind that I have ever seen; for in the last war one assumed that the comrades who went through hell in the trenches were soldiers, and therefore a race apart. They were not. They were just people, and now one sees that uniform, age or sex makes very little difference.

By the time this is read Hitler's present question: to invade or not to invade, will be answered for this year. At least he will have less chance than ever if he leaves it so late, and we feel decidedly that the next fortnight will be crucial in the war. A cousin of mine, captain in a Canadian unit here now, voiced the general sentiment of the Army when he said he was desperately afraid the Hun wouldn't home.

• On the Invasion

We shall have turned the corner in this war when the world at large realizes who is going to win. So far we seem almost alone in that knowledge, but after the few weeks of hell which an invasion would loose upon both sides the final result would be plain for all to see and the Axis would begin to creak really dismally in its bearings.

One man's guess is as good as another in this mix-up, but I am sure the invasion was planned for some weeks ago. The dictation of "peace" terms by the Boche, in London, is already long overdue. Why the hold-up?

He could hardly have counted on an easier victory over France. Was he not a day ahead of schedule in Paris? The answer is that he probably counted on three things which have not happened: 1. Full use and enjoyment of the French Navy. 2. Destruction of the British Expeditionary Force, so narrowly saved at Dunkirk. 3. Supremacy of the Luftwaffe against the numerically inferior Royal Air Force.

As things are at present he must depend on redeeming Failure No. 3, for the others are past curing.

• Why the Germans Are Unsuccessful

He is trying hard, and might have succeeded by sheer weight of numbers but for the unearthly magnificence of the Empire's R.A.F. Nobody forgets what we owe to the Navy, the merchant service, the factory folk who defy Goering's "noises without" and all the staunch people who carry on our island business with a high contempt for German ways of war. But for the moment at least the R.A.F. holds the pass which might turn our battle line.

There are other reasons why the German effort has not been more successful, besides good British aeroplanes and incredible men in them. The Luftwaffe was built largely and hastily as a sort of extra mobile long-range artillery to help the Army. Independent air war requires different and longer training. Shortage of good night-bomber pilots is shown by the indiscriminate bombing which, with rare exceptions, is all the Luftwaffe have been able to do at night.

Their day bombing is accurate, except when the huge formations, probably led by special navigators, are broken up by A.A. fire and fighter attacks. This happens so often, and with such loss, that he is sending swarms of fighters with every raid.

The frantic effort to knock out the R.A.F. will get still more frantic, for the German people await the early vicory which will spare it another such winter as the last. For this the Luftwaffe must also subdue the Navy and turn the tables in the blockade.

By recent antics the Hun shows some inkling of the size of the job. A try-on, a bleat and a fairy tale have added to the general gaiety.

• Red Cross a Practice Target

He lately asked us to let him operate 60-odd "Red Cross" motor boats in the Channel to save pilots who drop into it. I suppose we have deserved our reputation as complete suckers, but even so the impudence of it makes one gasp. The Nazi attitude towards the Red Cross is severely practical. They have made it a practice target, being less dangerous than some others, and have been caught using it on their reconnaissance aircraft. And they *have* been losing a lot of men in "their" Channel who might not be too second-hand to send over again if salvaged quickly.

Our rescue boats are quite adequate in spite of German air attacks on them, and are not deterred thereby from saving Germans even though they do not run the extra risk of showing a Red Cross when doing so. The cream of the jest is that the proposed "mercy fleet" is big enough to rescue from the Channel in one trip all the airmen whom Germany admits losing anywhere for months past.

These humanitarians are also terribly indignant about our Home Guard; "licensed murders," and other names which make us feel very wicked to resist the Hun arriving by parachute to "protect" us. He intimates that if the H.G. shoots his perfectly legal paratroops he will be very angry, and that a nation conscripted into the business of ravaging other people's homes looks with righteous horror on volunteers who are merely ready to die in defence of their own.

—From *Commercial Aviation.*

The Padre's Corner

A Sunday School teacher was questioning his class on the subject of prayer, anxious to discover the intentions for which the children prayed. One boy claimed that he prayed for the King and Queen; another for victory; still another for the R.C.A.F. Finally, one little girl boasted that she asked God every day to make her small brother a good boy.

"Very fine," said the teacher, "I'm sure God will be pleased with your prayer."

"Maybe," replied the young lady regretfully, "but He ain't done it yet."

★ ★ ★

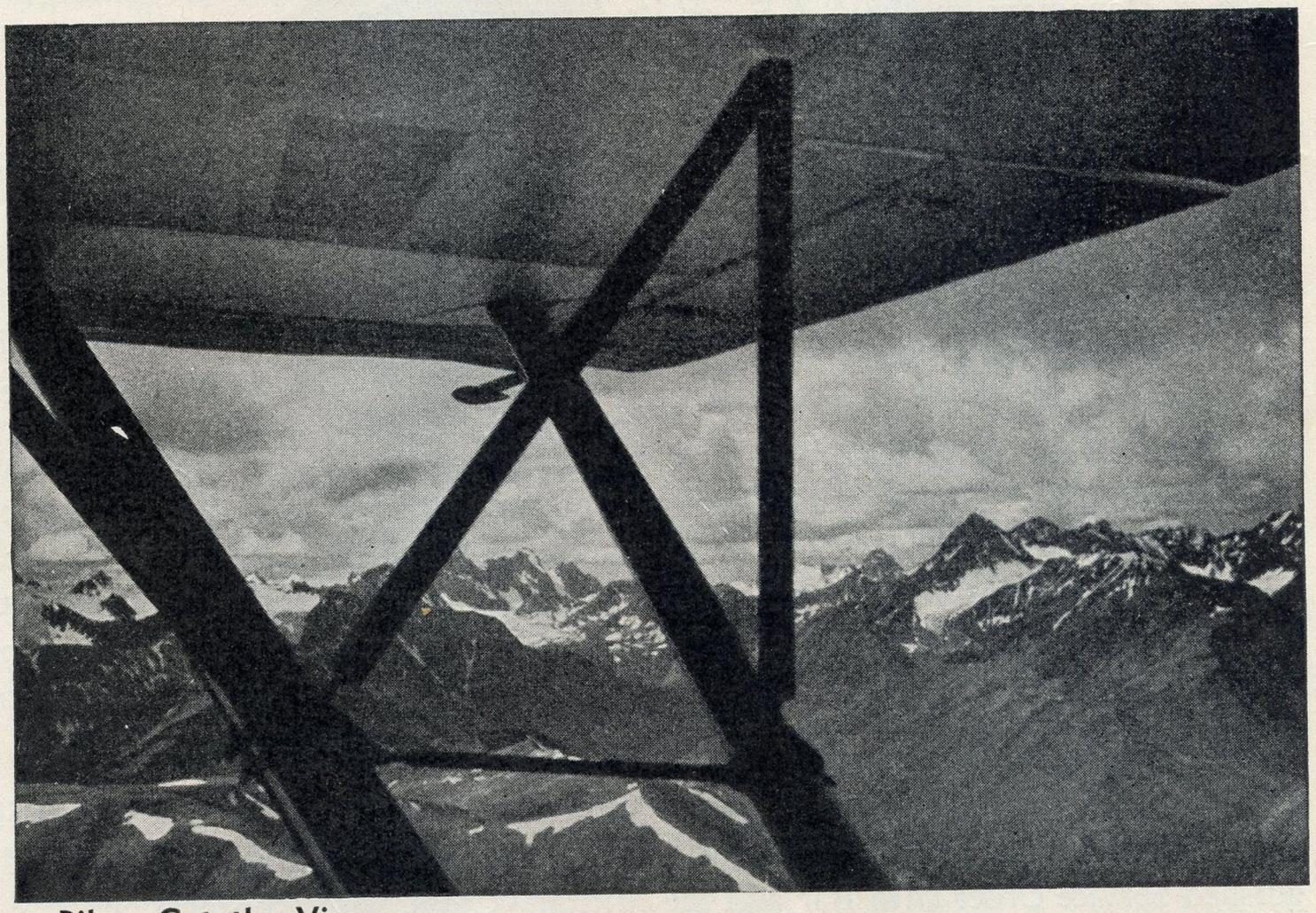
This story has an application extending far beyond the realm of children's prayers. The Padre is often asked this question—"Why does not God end this terrible war of destruction? If He loves mankind, why does He permit such atrocities—the suffering of innocent people, trapped in bombed cities — starvation — all the cruelty existing in countries overrun by Hitlerism?"

★ ★ ★

We answer by another question—In view of the general decline of religion throughout the whole world, why have not the new man-made gods of modernism put an end to this bitter struggle? Rationalists have tried for a century to destroy the idea of the spiritual life of man and have erected an altar to the human reason. Why have they not alleviated suffering and distress among nations?

Humanists have substituted man with a capital M for God as an object of worship. Why have not they brought peace to the world? Some scientists, pseudo in quality, have discredited the personal God of mankind and His relationship with creatures of His own making. Why have they not prevented this holocaust of blood and enduring sorrow?

Can you supply the answer?



• Pilots Get the Views

Two pictures of the R.C.A.F. Fairchild FCW 2, primarily used for aerial photography. In the large picture an FCW 2 is seen coming in to harbor in a port "somewhere in Canada" while the smaller picture shows a view of the Northern Alberta Rockies from the same aircraft.

God does not pour little boys into moulds of goodness—neither does He force man to worship Him, to obey His Commandments, to lead a Christian life. We are all free to accept or reject all that He is and stands for. However, when man fails to fulfill these

(Continued on Page 18)

• FAMOUS CANADIAN AIRMEN

(Continued from Page 3)

"As he turned back he found another aircraft had just taken off. This time he fired 30 rounds at a range of 130 yards and the enemy aircraft crashed into a tree. As he turned back he found two others in the air. He had now lost the advantage of height but he did not hesitate to continue the fight. He attacked one of these at a height of 1,000 feet, finishing his drum of ammunition before it crashed close to its aerodrome. He then placed a fresh drum of ammunition in his gun and attacked the fourth hostile aircraft, again finishing his drum before he flew away.

"During all the time Bishop had been flying back and forth over the aerodrome he had been subjected to terrific fire from machine guns on the ground in addition to that which he faced from enemy aircraft in the air and his faithful Nieuport was literally riddled with bullets. When he finally turned for home he was still far from safety, for his own aerodrome was a good 20 miles away and his machine and engine had been under a severe strain. For some time he was followed by four enemy scouts which flew directly over him, but to his surprise they did not attack him and he landed without further incident."

It was for this exploit that Captain Bishop was awarded the Victoria Cross. The significance of this can be appreciated when it is realized that there were thousands of Canadians in the R.A.F., or its forerunners the R.F.C. or the R.N.A.S., and only two others had been so decorated, Barker and McLeod. Bishop was the first to wear the dull crimson ribbon, token of the Empire's highest award for bravery. For once, even the staid official London Gazette introduced a human note in citing the award.

In August, 1917, Bishop was sent back to London to the School of Aircraft Gunnery. He had at this time a record of 47 enemy aircraft destroyed by definite proof, probably many others of which there was no unmistakeable evidence, and many enemy balloons. He had filled a lifetime of adventure in a few weeks, including many hairbreadth escapes and a fall of 4,000 feet in a flaming plane.

In London he was called to Buckingham Palace for an investiture by the late King George V and received his three decorations at once, The Victoria Cross, the Distinguished Service Order with Bar and the Military Cross.

Canada was by this time clamoring for a sight of her hero and he was granted leave to the Dominion, being tumultuously received in Toronto on September 27th, 1917. Here in Canada he continued his work for the War, launching a great Red Cross drive for funds. He took time out to be married to Miss Margaret Burden, a niece of Sir John Eaton.

His leave in Canada ended, Bishop returned to instruction work in the Gunnery School in England and in May, 1918, went back to France for the third time. The great German and Allied armies at this time were locked in the decisive struggle that started on March 21st, 1918, with the German all-out offensive.

Then followed a carnival of destruction without parallel in the annals of aviation. As a result Bishop was made the recipient of a new award, the Distinguished Flying Cross, created for the flying services, now consolidated into the Royal Air Force. The Gazette on August 3rd, 1918, carried the following:—

"Capt. (temporary Major) W. A. Bishop, V.C., D.S.O., M.C. (former Canadian Cavalry).

"A most successful and fearless fighter in the air whose acts of outstanding bravery have already been recognized by the awards of the Victoria Cross, the D.S.O. and Bar and the M.C.

"For the award of the D.C.F. now conferred upon him, he has rendered signally valuable services in personally destroying 25 enemy machines in 12 days, five of them on the last day of his service at the front.

"The total number of machines destroyed by this distinguished officer is 72 and his value as a moral factor in the Royal Air Force cannot be over-estimated."

The significance of this citation can be seen in the fact that in 12 days Bishop had brought down four more enemy aircraft than had Rickenbacker, the U.S. "Ace," in the whole of his five months at the front.

Bishop's actual fighting days were now over. He was sent back to England to the Staff of the Air Ministry, and in June, 1918, a special branch of the R.A.F. was formed, composed of Canadians in the Force, with Bishop in charge. Before the war ended a grateful France had bestowed upon him the Croix de Chevalier, Legion of Honour, and the Croix de Guerre with Palms.

His career since the end of the First World War and in his present high rank with the R.C.A.F. is too well known to be recapitulated here. Suffice it to say that he never lost his interest in aviation and, in fact, formed one of the first commercial aviation companies in Canada, going into partnership with another famous Canadian aviator, Lt.-Col. W. G. Barker, V.C., D.S.O., M.C.

His career is a shining example to every member of the R.C.A.F. today and his presence in the Force a great inspiration.

REGINA—(BUP) — Transfers in the Royal Canadian Air Force have been tough on the Regina R.C.A.F. basketball squad. Undefeated for more than two months, the Regina flyers finally dropped a game—the reason—the y had only one player of their original all-star "melon-chasers" who started the season.

Wrought Aluminum Alloys

• Theory of Heat Treatment

In aluminum alloys which respond to heat treatment, the alloying constituents which give the increased strength and hardness are substances which are more soluble in solid aluminum at high temperatures than at low temperatures.

The first step in heat treatment, frequently called the "solution heat treatment," consists in heating the alloy to a high temperature, below the melting point, to put as much as possible of the allowing constituent into solid solution, then quenching to retain this condition. When in solid solution the alloying constituent is so finely dispersed that it is not visible with the microscope, even at high magnification. In effect, the alloying constituent has been dissolved in the aluminum and dispersed as completely as when sugar is dissolved in water.

After quenching the alloy undergoes an ageing process, which if carried out at elevated temperatures, is called a "precipitation heat treatment" because during this stage some of th ealloying constituent which is held in solid solution precipitates from the solid solution in the form of extremely fine particles. This precipitation may occur spontaneously at room temperature, as is the case in the so-called "natural ageing" of the alloys 17 S and 24 S, or it may require a "precipitation heat treatment" or "artificial" ageing at about 300 degrees Fahrenheit, as in the case of 51 S or 53 S.

The particles of precipitated constituent may be so fine as to be invisible even under the most powerful microscopes, but their presence and effects are quite real even though they cannot be seen. By continued heating they may, however, be caused to grow to sufficient size so that they become visible under microscopic examination. The size and distribution of the precipitated constituent are highly important in determining the mechanical and physical properties of the heat treated alloy. There is an optimum condition, which gives the best combination of properties, and a detailed knowledge of the heat treatment process is necessary to produce the best results with each alloy.

The increase in hardness of the alloy, as a result of heat treatment, is pictured as being due to the "Keying" action of the precipitated particles of the alloying constituent, which prevents slip along the crystal planes of the metal. These changes, with the corresponding increase in tensile properties, tend to take place at ordinary room temperatures. In the case of 17 S and 24 S, the age hardening is practically complete in about four days. The alloys 51 S and 53 S also show some increase in strength and hardness on standing at room temperature after quencing, but after several days the rate of change becomes very slow. If, however, the temperature is raised, the rate of precipitation and particle growth is materially increased, with the result that much higher tensile and yield strengths and hardness can be developed in these alloys in a few hours that would be possible at room temperature over an indefinite period.

Some of the alloys show practically no change in properties on ageing at room temperature after quenching. At higher temperatures, precipitation occurs with the consequent improvement in tensile properties. This second heating operation is called the "precipitation heat treatment." When the change occurs at ordinary temperatures it is known as "ageing."

• Heat Treatment

The operation of heat treating consists of heating to the prescribed temperature and quenching. The rate of heat extraction must be very rapid to ensure satisfactory properties.

It is advisable to form aluminum alloys within one hour after Solution Heat Treatment, before age hardening has progressed too far. During this period the metal may be worked with ease and without danger of cracking.

Ageing of 17 S and 24 S may be retarded for as much as 24 hours, if it is kept at or below a temperature of 32 degrees Fahrenheit, or for longer periods if lower temperature is maintained. An ice box containing a piece of solid carbon dioxide (dry ice) is used to hold rivets or small pieces of sheet until the shop is ready to use them.

(Continued on Page 16)

New Hostess House Opened...

The sixteenth of a series of Hostess Houses operated for the services by the Y.W.C.A. was formally opened for the airmen of Patricia Bay Station, R.C.A.F., by His Honor Lieut.-Governor E. W. Hamber, January 23.

The new Hostess House is situated on Second Street, Sidney, a couple of miles from the camp, and is already proving a popular rendezvous for the lads in Air Force blue. Following the opening ceremonies in the afternoon, a dance was held that evening, when it seemed as if the major portion of the camp attended. Music, of course, was provided by Pat. Bay's own hand-picked orchestra, lads who long ago made a name for themselves in Canadian dance orchestras.

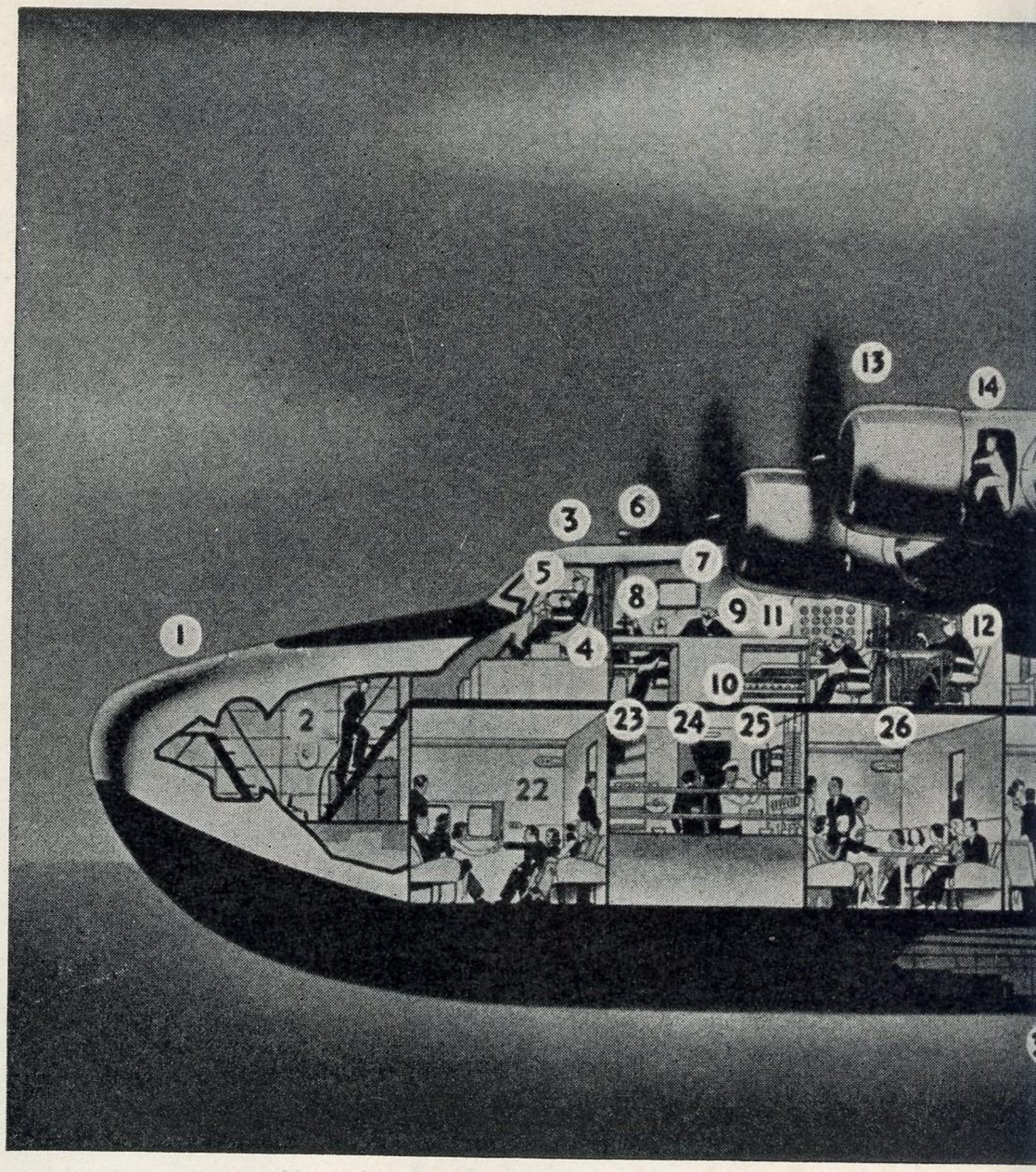
Dr. Olga Jardine, president of the Victoria Y.W.C.A., with fellow-directors of the Board, Mrs. F. J. Baker, co-hairman, and Wing Commnader L. E. Wray, officer commanding Patricia Bay Station, and Miss Kathleen Exham, the official hostess, received the guests in the afternoon.

• Lieutenant-Governor

His Honor spoke of the value of such recreational centres, and paid a tribute to Air Commodore A. E. Godfrey and the officers and men of the R.C.A.F. for their assistance in promoting the project and giving their full co-operation to the women who had done so much towards furnishing and arranging the clubhouse.

Air Commodore Godfrey, M.C., A.F.C., V.D., A.D.C., commanding Western Air Command, in thanking His Honor, the Y.W., the many Sidney friends, and the hostesses on behalf of the Air Force, said that the centre would fill a long-felt need at Patricia Bay. He spoke of the proposed changing of the personnel of the West Coast air stations every six months, involving a constant stream of new personnel who, with the families, would welcome the opportunity offered by the Hostess Club for making friends quickly. Commodore Godfrey promised the club the utmost support of the Western Air Command.

Wing-Commander Wray spoke on behalf of Patricia Bay station, expressing admiration of the splendid work of the "Y" and those who had contributed to the undertaking. Some of the airmen might be somewhat diffident in showing their appreciation of the effort made on their behalf, but he assured the large audience that, deep down in their hearts, the men hoped for an opportunity of showing their appreciation by being sent overseas, to repay in the way they knew best.



• THREE OF THESE FOR BRITAIN

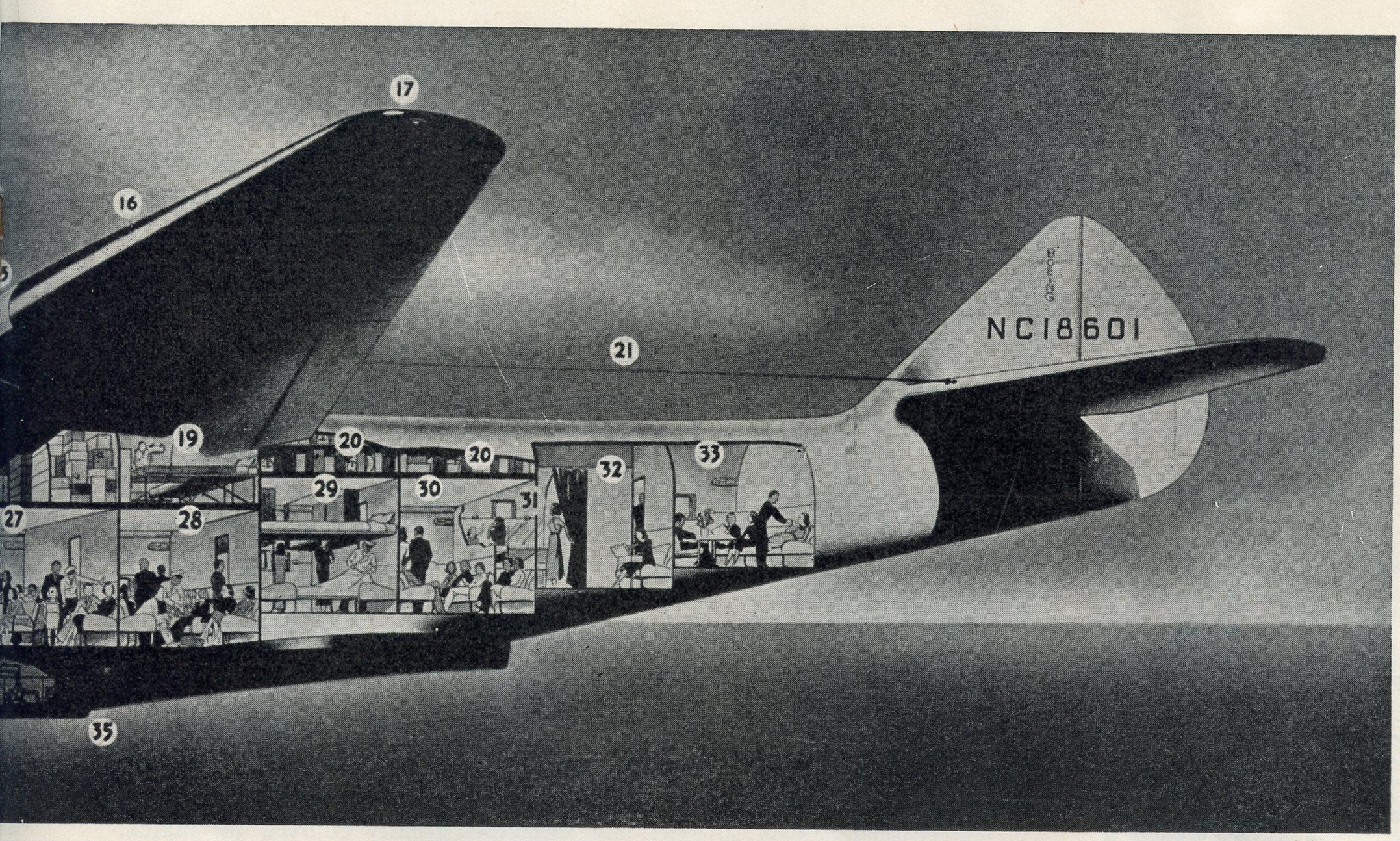
Here are two views of the huge Boeing 347, the famo "Clipper,' used on the regular trans-Atlantic route. ture are shown all the luxurious fittings, most of been ripped out to provide greater space for mai ments. Three of six of these aircraft now on order to Great Britain.

Flight-Lieutenant Rev. H. S. McDonald, R.C.A.F. chaplain, dedicated the hostess club in a short prayer.

Outside, the 40-piece band of the Patricia Bay Station, under the direction of Bandmaster A. E. Tutte, played musical selections, the National Anthem being played as His Honor the Lieutenant-Governor and Mrs. Hamber arrived, accompanied by Mrs. Mae Rice, Mr. Hew Paterson, A.D.C., and King's Scout Edward Peck, son of Col. Cy Peck, V.C., and Mrs. Peck.

After the formal opening tea was served in the main recreation room, Mrs. L. W. Wray presiding at the guest table, which was centred with a silver bowl of snowdrops.

Other special guests welcomed were: Mrs. A. E. Godfrey, Mrs. W. J. R. Beech, Rev. T. R. and Mrs. Lancaster, Rev. D. M. and Mrs. Perley, Rev. J. J Cyr, Mr. and Mrs. F. E. Winslow, Mr. and Mrs. J. W. Spencer, Mrs. Alan Morkill, Mrs. Lennox Irving, Mrs. R. P. Butchart, Adjutant Stratton, Adjutant Charles Watt, Miss Blythe, Mrs. A. E. Hopkins, Mr. and Mrs. Paulding,



Pan-American
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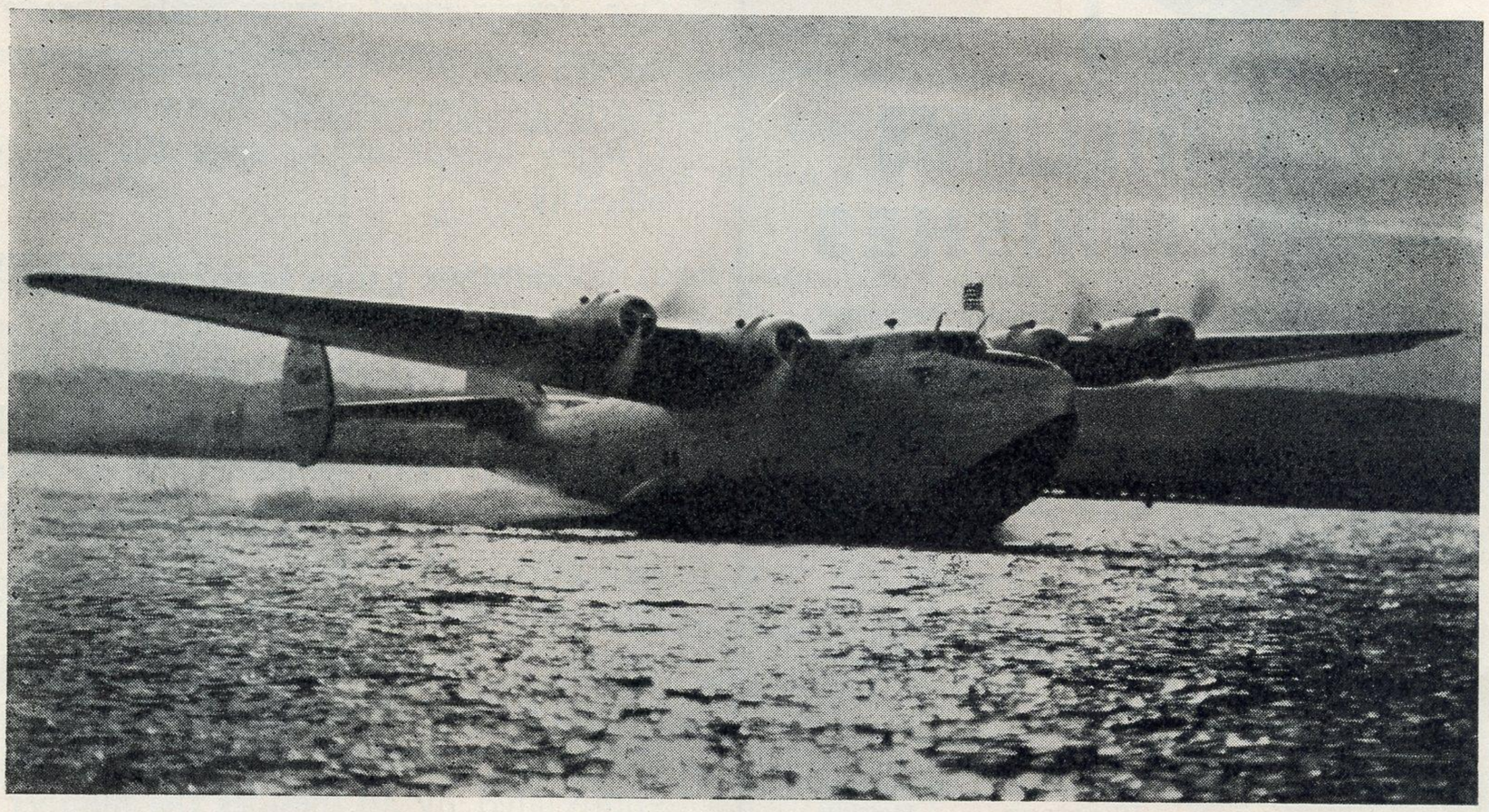

Mayor and Mrs. Andrew McGavin, Mr. and Mrs. D. J. Angus, Miss Violet Wilson, Miss Margaret Clay, Capt. Lightbody, Capt. Walker and Capt. W. H. Molson.

The former parish hall has undergone an amazing metamorphosis. New ceilings and walls and other structural alterations were carried out, and attractive velour hangings and great bowls of flowers in the main hall make it an ideal place for dances and concerts. Adjoining it is the very cosy library and writing room, with gay carpet and hangings, pictures on the wall, comfortable chesterfields and chairs, and a huge open fireplace.

The bright, well-equipped kitchen will make an excellent canteen. An additional facility which will be much appreciated by both the men and their families is the installation of shower baths on the club premises.

Bus Haugh's Air Force hoopers from the Community League battled to a 24-22 win over New Westminster Regiment in the Normal Gym recently. The lads from the Regiment, although not as experienced as the Community League boys, forced their opponents to play their best brand of basketball.

I'm afraid the arson suspect has a fever.
Yes, he's burning all over.

The girl who does everything under the sun always has shadows under her eyes.

"Joe tells the swellest stories with double meanings. One meaning is naughty and one is nice."

"Huh, Tom's stories are twice that good."

"How come?"

"Both meanings are naughty."

Give a girl a free hand and she's liable to slap you with it.

• Sports at Patricia Bay

(Continued from Page 7)

fortunate enough to wind handily 30-0. Exceptionally fine play by our members, due to clever team work in this instance, helped. Our opposition, Oak Bay Wanderers, were able to nose us out in a close match a couple of weeks previously on their home grounds.

Numerous exhibition matches have been played with the Army Garrison. They fielded a very strong team, carrying two members of the unbeaten Victoria Representative English rugby team. Also two from the Revellers, the B. C. Champion Canadian Rugby team. We were able to hold this able squad to one tie match and beat them once 6-3. They won the rest by close scores after hard-fought bitter matches, but good sportsmanship prevailed throughout, to the benefit of both branches of the service.

In our first game of the season with the R. C. Navy we did not fare so well, being soundly whitewashed. However, players and spectators greatly enjoyed the match. Our inexperienced players made a brave and plucky show against our championship opponents. The game was played on the well-kept Navy grounds. Movie star Pat O'Brien kicked off to open the match and the season officially.

Exhibition games have been played against nearly all the local private schools, Brentwood College, University Schools and Victoria College. We have found the former school team the stronger to date. They have whitewashed our squad in both the games played. We did much better against the other two teams, although the schools eventually proved the winner. All the school games played on their own ground proved most enjoyable to our players, outside of the chance of playing on such fine grounds and having the use of all the fine facilities. The much appreciated refreshments that followed in the school were much appreciated by all, besides the number of feminine fans who were interested spectators.

A Page for Poets . . .

"Blimey's Christmas Leave"

Th' air was short an' snappy, th' temperature twenty below,
As Blimey got his Christmas Leave, th' land was white with snow.
E'd 'ad a 'ard time, 'ad Blimey, a makin' 'is Christmas Leave,
From th' L.A.C. t' our W.O.I., said things that made 'im grieve.
They pradled 'im 'ere, an' p'raded there, until he was ready to yell,
In fact 'e was in state of mind, to tell 'em to go t' Hell.
"'Ow long 'ave you been in Service?" one of 'em wanted t' know,
"Just a short time," says Blimey, "Ever since last bleedin' Show."
"Where are you goin' an' the railway?" another one asked him in turn,
"I'm goin' back 'ome t' Toronto, (I wish the blighter would burn)."

FLT. SGT. C. C. JOSEPH

"Are you travellin' by bus or by railway?" another one asked with a beam,
"I'm drivin' me own bloody aeroplane, if you ask me another, I'll scream."
"Your number, your name and initials, your next o' kin and th' address,
Your medical sheet, your 229, I want all th' lot, none th' less."
An' so they bothered Old Blimey, until 'e was ready t' die,
All 'cause 'e wanted a Christmas Leave, an' Get back 'ome on t' fly.
At last someone said t' old Blimey, "Sergeant Major's lookin' for 'eee,
Best go an' see 'i mat office, 'e wants thee t' 'ave some tea."
"Ah will an' all," says Blimey," 'e might 'ave somewat I need,"
Then takin' a hitch in 'is pants like, 'e doubles right over with speed.
"Brrrr," says t' old Sergeant Major, "Brrrr, you want t' see me?
Go over an' see Corporal Blotchett, 'e might 'ave somewat for thee."
So Blimey went over t' Blotchett, an' there was th' General, all smiles,
Th' Corporal was thinkin', now 'ere's a big drink, but 'e was out miles upon miles.
"You've summitt for me Corp," says Blimey, th' Corp. smacked his lips with glee,
Then winkin' 'is eye, 'e looked kinda sly, "Got a Christmas Leave, lad, for thee."
Blimey 'e looked real surprised like, an' says, "Let's see it—do tell?"
Then snatchin' it out of th' Corporal's 'end, dashed out of the room with a yell.

(Continued on Page 21)

• Wrought Aluminum Alloys

(Continued from Page 11)

In the Solution Heat Treatment of aluminum alloys, it is extremely important to hold the temperature within narrow limits, usually about 20 degrees Fahrenheit, as in the case of 17 S material when the range is 913-933 degrees Fahrenheit (485°C to 505°C). Exceeding the upper temperature limit may cause incipient melting and result in serious blistering. If the temperature is low, complete solution will not take place and the full properties of the material will not be developed.

Heating to the necessary temperatures may be carried out by hot air furnace or Salt Bath.

The Salt Bath is composed of sodium nitrate, or a mixture of 50% sodium nitrate and 50% potassium nitrate. Sodium nitrate of a commercial grade is probably cheaper and is satisfactory, but requires changing more often.

All parts of the work being treated must be subjected to the same temperature, local heat treatment is not permitted.

The load may be moved around to obtain circulation of the liquid to assure a uniform temperature. The length of time the material must be soaked at the proper temperature depends upon the nature of the material, the thickness, and the type of heat treating equipment. Heavier material requires a longer soaking period. When various thicknesses are treated at one time, the soaking period necessary for the heaviest material should be used. The lighter material will not be injured by moderately long soaking. Standard alloys can be reheat treated any number of times without affecting them.

Alclad material must be heated as quickly as possible and soaked for the shortest possible time. If this is not done, the alloying elements of the base material will diffuse through the pure aluminum coating and destroy the corrosion resistance. For this reason Alclad should not be reheat treated. Table 3 gives the recommended time of soaking materials; these may vary slightly for different heating equipment.

The heat treatment required to develop the full physical properties of various types of aluminum alloys is summarized in Table No. 1.

(To Be Continued)

TABLE 1

HEAT TREATMENT OF ALUMINUM ALLOYS

Alloy	Solution Heat Treatment			Precipitation Heat Treatment		
	Temperature	Quench	Temper	Temperature	Ageing Time	Temper
17 S	913-933° F.	Cold Water		Room	4 days	17 ST
24 S	913-933° F.	Cold Water		Room	4 days	24 ST
25 S	960-980° F.	Cold Water	25 SW	285-295° F.	12 hours	25 ST
A. 51 S	960-980° F.	Cold Water	A 51 SW	315-325° F.	18 hours	A. 51 ST
53 S	960-980° F.	Cold Water	53 SW	315-325° F.	18 hours	53 ST

TABLE 3

SALT BATH

Soaking Period of 913° F. to 933° F. (485° C. to 505° C.)

	17-S L-3 Alclad L-38	24 S DTD 270 Alclad DTD 275
Up to ⅛ inch	5 minutes	30 minutes
Over ⅛ inch to ¼ inch	10 minutes	45 minutes
Over ¼ inch to ½ inch	15 minutes	50 minutes
Over ½ inch to 1 inch	20 minutes	60 minutes
Over 1 inch	30 minutes	----------

AIR FURNACE

Up to 1/32 inch	10 minutes	30 minutes
Over 1/32 inch to 1/16 inch	10 minutes	30 minutes
Over 1/16 inch to ⅛ inch	25 minutes	30 minutes
Over ⅛ inch to 3/16 inch	35 minutes	45 mniutes
Over 3/16 inch to ¼ inch	50 minutes	60 minutes
Over ¼ inch to ½ inch	90 minutes	90 minutes
Over ½ inch	120 minutes	120 minutes

● Aero Engine Principles

(Continued from Page 5)

therefore provided whereby this excess boost can be obtained. The excess boost or take off boost as it is usually called is obtained by the use of a suitable control which will cause a downward movement of the top aneroid anchorage. This will also cause a downward movement of the slide valve and before the valve can return to neutral a boost in excess of rated boost must be reached in order to sufficiently compress the aneroid.

In the early type of automatic controls such as described above, inconvenience was caused by the small throttle lever travel necessary to reach rated boost at low altitudes. Any further throttle lever travel would be lost movement, because no matter how much the pilot advanced his throttle lever the automatic control, working independently of the pilot, would always maintain the throttle valve in such a position as to produce rated boost—forgetting for the moment the action of the excess boost control, of course. It also resulted in an indefinite point for the introduction of petrol from the power jet.

A modified type of control known as the variable datum control overcomes these deficiencies and permits a progressive throttle response under all conditions.

The modification consists of an operating cam carried in bearings and positioned above the aneroid top anchorage; its operating lever being connected to the throttle control levers from the cockpit. As the throttle is opened from the cockpit the cam gradually depresses the aneroid, virtually resetting it until rated boost is obtained. The throttle lever is then in the fully forward position.

The variable datum control is in effect very similar to the excess boost control. The main difference being that while the excess boost control resets the aneroid to maintain take-off boost and is brought into action by an independent lever to the throttle lever, the variable datum controls resets the unit to maintain a maximum induction pipe pressure of rated boost and is operated automatically from the throttle lever.

With the variable datum type of control, therefore, there is no lost movement to the throttle lever and there is a more definite point at which the power jet is opened.

In the above description reference has been made to a type of control which is in general use on all British supercharged radial engines such as the Bristol and Armstrong Siddely engines. The control as used in the Rolls Royce engines works on the same principles, but instead of using engine oil pressure for operation of the servo piston the induction pipe pressure is used. In the Merlin installation there is no excess boost control such as referred to above. There is a control which completely cuts out the action of the automatic control and allows an undeterminable boost to be obtained. This control is, however, only for a strict emergency and is usually sealed.

• The Padre's Corner

(Continued from Page 9)

divinely appointed duties, he suffers the consequences — nationalism — economic injustice — greed — lust. These are the fruits, bitter to the taste, to be eaten by those who divorce God from their public and private life.

★ ★ ★

Peace without God is no peace —it is only an armistice.

Peace based on His law will endure. It is worthy of our prayers and best efforts.

What do you think?

★ ★ ★

"Why were you absent from Church Parade last Sunday?" asked the Padre of an airman.

"Well, Sir, I've only been to church twice in my life and both times I was treated rather roughly."

"How did that happen?" queried the Padre.

"Well, the first time somebody threw a cup of water into my face, and the second time they married me to a woman for life."

"That's a pity," enjoined the Padre, "the next time you come we shall probably throw a shovelful of dirt in your face."

Moral—Don't wait until this happens.

★ ★ ★

May God always bless and protect you from all harm whether of body or soul. This is the earnest prayer of

Your Padre of the R.C.A.F.

"Ha, me proud beauty," chortled the slicker, "Now I have you in my power."

The cutie cracked, "Swell! More power to you."

• Stick Around

"Say, what's the idea of putting all that marshmallow and syrup on my sundae?"

"Well, pal, when you gotta goo, you gotta goo!"

• Do You Skid?

(Continued from Page 6)

Pretty soon the carpet in the anteroom was a mass of officers down on their knees with bottles, glasses, gramaphone records, water hose couplings, or anything round they could grab to prove their point. Bets flew and supper was forgotten, and still the argument continued.

One sceptic quietly stole away after supper and had one of the fitters turn up, on a lathe, a similar wooden gadget to the cartoon. He fiddled with it the best part of the night, while the rest of the argifiers took in a show at Victoria. He gave it up and went to bed. Unfortunately, he left the contraption on the mantlepiece.

Shortly after midnight the theare-goers landed home, and spotted the damned thing. Immediately a roar broke out, and bedlam reigned again. The row woke the chap to whom the bedevilled thing belonged, and he cursed himself for being silly ass enough to leave it lying round at that time of the morning.

The argument's still going on, and bets are as high as $25.

"Are you a "skidder" or a "non-skidder"?

Joe — What happened when you called on that little school teacher last night?"

Jim—Why, didn't you hear? She made me stay an extra hour for being naughty.

When a detective is hot on the trail, all the girls want to park with him.

A bachelor is a man who makes mistakes but doesn't marry them.

Fireman — Are you insured against fire?

Smith—Well, yes. I go to church every Sunday and try to live a good life.

• New Westminster

New Westminster, the bustling little city where trainees and staff from Boundary Bay take their recreation, was founded by Royal Engineers in 1859, named by Queen Victoria, first capital of British Columbia, destroyed by fire in 1898—rebuilt, pioneer sawmill centre, home of the famous Fraser River salmon, famous in sports—This is yesterday in brief.

Today! Third among Canada's great seaports (in volume of exports), New Westminster is the fastest growing port of all. Now the leading lumber manufacturing centre of British Columbia, industrialists and engineers agree New Westminster is destined to be the industrial centre of British Columbia.

• Prospers By Its Varied Industries

Because its industries are many and varied New Westminster enjoys unusual commercial stability.

There are 15 sawmills and shingle mills within or adjacent to the city. One of these huge plants is the greatest in the British Empire.

Apart from the sawmills, shingle mills, box factories, veneer plants, sash and door factories, New Westminster has some 40 other industries. Prominent among them are: vegetable, fruit and fish canneries, paper mill, cordage, chemical, fertilizer and gypsum products plants; distillery, brewery, tannery, cold storage plants, timber preserving plants, meat packing and products plants. Other industries range from the Canadian National Railway's Pacific Coast shops to shipyards and from flour and cereal mill to machine shops and engineering works.

—Inserted by the City of New Westminster.

● A Page for Poets

(Continued from Page 15)

So that's 'ow Old Blimey got Furlough, an' toddled off 'ome to 'is wife,
To put up th' tree an' play with th' kids, an' 'ave th' best time of 'is life.

—AL PAT.

The Irish Airman Poet of the R.C.A.F.
Author of "Rhymes of an Old War Horse."
December, 1940.
Regina, Sask.

● MIS-NOMENCLATURE

A long, long time ago, at Pat. Bay, the seat covers of Goose 924 were sent to be laundered.

They dropped from sight. The laundry disclaimed all knowledge of having received them. Stores were mystified, but swore they'd sent them. Soon the covers were forgotten.

About a week ago there was an auction, in the canteen, of unclaimed laundry. Quite a number of chaps had been posted away and their new stations were forgotten, and some had left laundry behind them.

Some good prices were obtained for the goods bought sight unseen—only the missing owner's name appearing on the laundry label.

One of the mystery parcels proved to contain the missing seat covers.

It was labelled as owned by "A.C. 1 GRUMMAN."

Prince Rupert . . .

By G. A. HUNTER, *News Editor, Prince Rupert Daily News*

Development of Prince Rupert as the principal centre of coastal defence by land, sea and air for Northern British Columbia marks the commencement of another phase of the interesting history of the strategic and up and coming port. Prince Rupert has long stressed its claim to a place in the sun as far as word trade is concerned by reason of the fact that it is the terminus of a transcontinental railway, the possessor of a spacious and commodious harbor second to none in the world, the centre of a district the natural resources of which in minerals, timber, fisheries and agricultural lands have scarcely been touched although they are widely potential. Prince Rupert had hoped since its conception something over thirty years ago to be recognized and developed by virtue of its position in relation to the peaceful pursuits of trade and commerce. The fact that it is five hundred miles nearer the great Oriental lands than any other Canadian or United States port on the Pacific slope had been expected to bring it recognition. It has, however, taken war and the threat of war to bring about that recognition. It is to guard this key port together with its facilities, potentialities and resources for a large area around that the navy, the army and the air force have arrived and have been establishing themselves in a big way. Many aspects of the community life are, as a result, being changed but Prince Rupert citizens are doing what they can to adjust themselves to changde conditions and to assist and welcome the great influx of ne wpopulation which development of the city and port as a military seat has bruoght.

The origin of the port of Prince Rupert is due to the conception of the Grand Trunk Pacific Railway, now a part of the transcontinental Canadian National Railways system. The first survey party landed and commenced operations in 1906. Townsite clearing continued during 1907 and 1908 when the first inhabitants of the future city, full of enthusiasm, full of vision, commenced arriving from all parts. Those first few years it was a community of squatters' shacks huddle das closely as possible around the first wharf which was the centre of things. Then came the original sale of townsite lots in 1909 and the incorporation of the budding city the year following. Prince Rupert was definitely and permanently on the map, destined in the dreams of all to be within the space of a decade at least a great metropolis on the world's trade lanes.

Other than railroad construction work, which brought a large and floating population to undertake the great task of building the line eastward from Prince Rupert up the Skeena River valley, there was no support for the community but it flourished and grew in hope and stature. Notwithstanding some trials and some hardships, there was a large measure of prosperity. In addition to the railway terminal facilities, notable among the early establishments of Prince Rupert was the great drydock and ship-building plant, the use of which has been an important function in two Empire wars.

Came 1914 and the first Great War to bring about a major disruption in world affairs and the development of Prince Rupert just as the transcontinental railway was about to be completed. The railway was finished but it did not fulfill the great function which was planned for it except for the carrying of the important fisheries products which since that time have constituted the major resource of the port, timber and mining sharing in a lesser degree.

The end of the first Great War brought conditions whcih vastly affected and retarded the realization of Prince Rupert's aspirations. Nevertheless, the development of the port

proceeded, bringing such important facilities as huge ocean shipping dock, grain elevator, cold storage plants, sawmills, oil depots — even pulp mill dreams. There were the ups and downs with the downs possibly eclipsing the ups since the hopes had been so large. However, Prince Rupert struggled along, building and improving, possessed of a community spirit that often held it in good stead. The rugged shacktown of thirty odd years ago is now an attractive city possessed of all the facilities, functions and conveniences, making of it a pleasant and modern place in which to live. Built out of the rocks, it is on a firm foundation, still full of hope and ambition, ready to keep pace with anything the future may bring and, even in these days of war and uncertainty, signs are not lacking that ample realization of the aspirations of its builders are not frustrated, merely deferred, and will be fully realized as time goes on.

Appropriate enough to this article may be mentioned the air base development at present under way in Prince Rupert. Undoubtedly, it will play an important part not only in the development and protection of the port and the coast but in the local community life. But it may also be foreseen that Prince Rupert, situated as it is, will in more normal times be a flying centre from a commercial and civilian as well as a military and defence standpoint. The recognition now being given in the one way may be expected to result in a similar recognition in the other.

Transportation by ship and by rail have played an important part in the conception an ddevelopment of Prince Rupert in its comparatively short and checkered past. Aviation will, no doubt, be a factor of great importance from its many aspects in the future.

The Royal Canadian Air Force, now establishing itself here, is very welcome at Prince Rupert and may be expected to play and important part henceforth.

Some facts of general interest in regard to the present-day Prince Rupert have been summarized as follows:

It is the principal city in Northern British Columbia with handsome fed-

eral and provincial administrative buildings, including its brand new $250,000 post office.

It has a fine brand new $150,000 modern hospital of permanent construction and military authorities may assist in duplicating the building.

Naval and military units, as well as the Air Force, hav ebeen provided with suitable buildings.

Strong fortifications guard the harbor's entrance and the air base is another important defence project.

The Northern British Columbia Power Company has a $2,500,000 power development.

The municipality owns and operates its own telephone and waterworks systems.

Since incorporation $500,000 has been invested in roads, sidewalks, sewers, etc.

A highway leads some ten miles out of the city and is ultimately designed to connect with the main highways of the continent.

The port has five thousand feet of wharves, drydock, grain elevator and ample rail and shipping facilities for the efficient use of which adequate modern apparatus is installed.

The city has beautiful parks and picturesque playground spots.

There is good hotel accommodation, a fine theatre, churches of all denominations, excellent school buildings, libraries, museum.

The latest estimate of population is upwards of 8,000 persons.

There is sport fishing and big and small game hunting in abundance in the immediate vicinity of Prince Rupert.

He—Could a fellow with a hundred dollars in his pocket take you out and have a big evening?

Blonde—Say, a fellow with a hundred dollars in his pocket wouldn't have to take me out!

You can bank on

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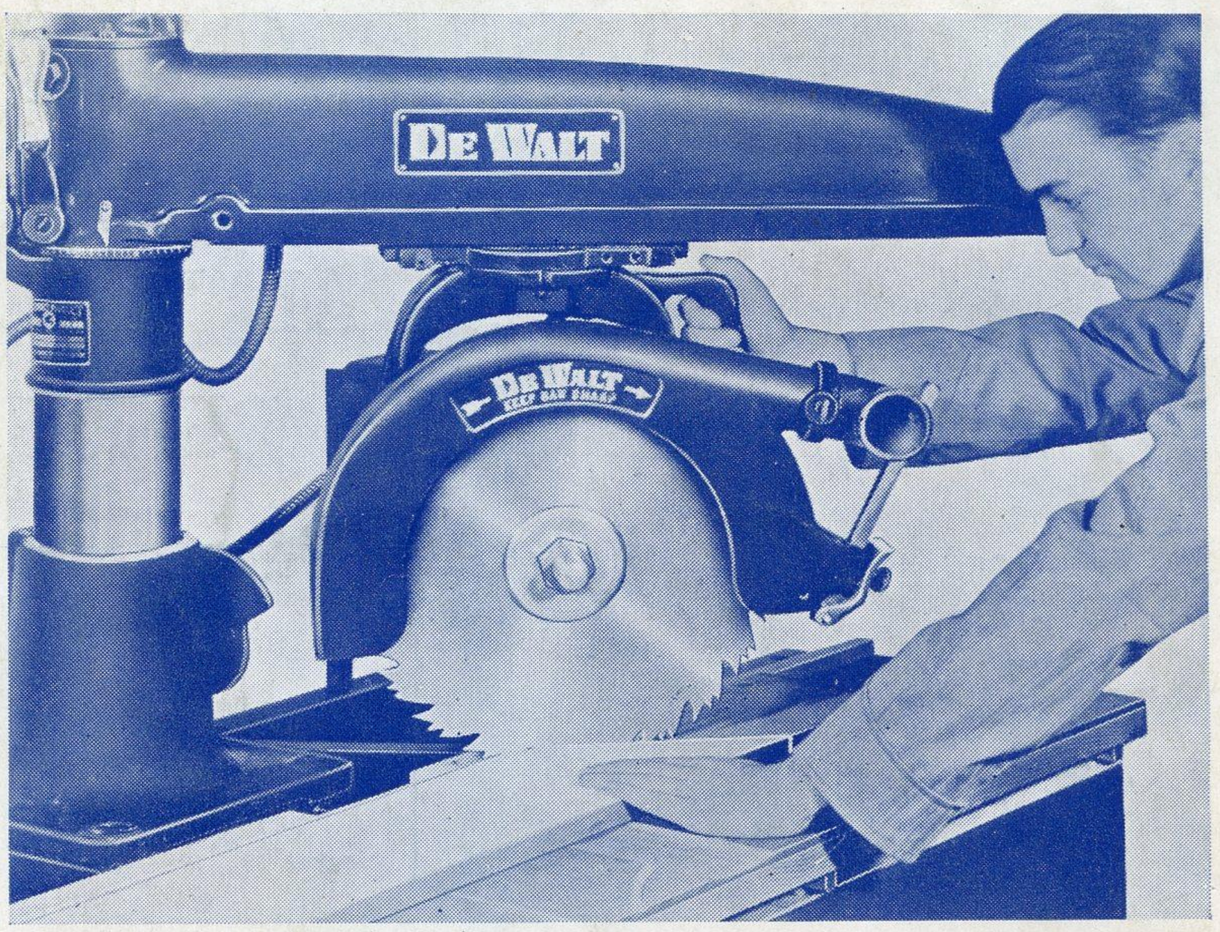

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