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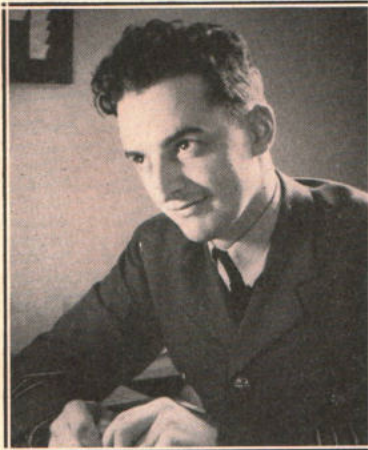
THE BEAM

VOL. 1, NUMBER 4.

MONTREAL, QUE.

MAY, 1942

CHIEF INSTRUCTOR



SQUADRON LEADER K. R. PATRICK

Squadron Leader K. R. Patrick, senior Squadron Leader Signals Officer of the R.C.A.F. is a dynamic proof of the principle that young men should be given high executive positions in this, the newest of the services. Though Squadron Leader Patrick has not yet reached his twenty-seventh birthday, he has crowded into his few adult years experiences and achievements that only a relatively few men are privileged to have.

Educated in the high schools and universities of the United States, S/L Patrick early began to concentrate on Radio. He studied under Lamb of the Noise Silencer and Single Signal fame, and was very nearly associated with Lamb in his later work, but instead became the consulting engineer for two reputable American firms as well as President and General Manager of one of his own.

In the period of unrest immediately preceding the declaration of war, Squadron Leader Patrick was in the Eastern Air Command area and was asked to give some of his time, on a voluntary basis, to the training of airmen in Radio. This he did. When the war broke out, he was commissioned as Signals Officer.

No. 117 C.A.C. Squadron was S/L Patrick's first posting. Later he went to No. 118 C.A.C. Squadron, also as Signals Officer. Following that he was posted to Trenton as one of the first Signals Instructors; and when No. 1 Wireless School was opened, he was the Officer in charge of the advance party posted here,—arriving before the building was evacuated by the Nuns and having to find accommodation for his party and himself elsewhere in the meantime.

For more than a year S/L Patrick was Chief Technical Officer here. In June, 1941, he was promoted to his present rank and two months later became Chief Instructor. S/L Patrick has three brothers in the R.C.A.F.—one is a WAG, one is a WOG, and one is a Pilot; two are Sergeants and one is a Flight Sergeant.

NO. 1 WIRELESS SCHOOL OFFICER WINS D.F.M.

Pilot Officer J. S. Banks, of No. 1 Wireless School, R.C.A.F., has been awarded the Distinguished Flying Medal for heroic devotion to duty on bombing raids over enemy-occupied country and Germany.

Pilot Officer Banks is very reticent about his many raiding expeditions which are reported to number over thirty. We were, however, by sheer weight of authority, able to drag a few facts about bombing raids from him. They seemed very ordinary things, the way he talked of them.—“We flew over the target, pulled the plug, and came home. Gee! it was good to get tea in the morning. You know, the English make the best tea in—”

“Yes, yes,” we interrupted, vaguely remembering the school day example of cryptic modesty, ‘I came, I saw, I conquered’; “but about this D.F.M., how did you earn it?”

“Oh, that?—well, you see, I suppose it's because I happened to be lucky enough to be on hand when they called for volunteers to do a low-level, bombing trip, so we loaded up and flew over the target, pulled the plug, and—

“Came home,” we finished with disgust.

After that we threw away our pencil, wadded up our notepaper, threw it in the basket, lolled back in our chair, offered P/O Banks a cigarette, and, after seeing him become properly drugged, we went to work on him with the psychological, if not the physical appeal, of a beautiful spy “hot” on the trail of the Norden Bomb Sight.

This is how the Distinguished Flying Medal was earned:



P/O Banks, then a F/Sgt. Air Gunner, volunteered for a particularly hazardous, low-level, night bombing raid. His large Wellington, in the nose of which F/Sgt. Banks himself froze, because he had not had enough sense to learn Wireless and get the Wireless Operator's more comfortable post in a bomber,—his Wellington, we repeat—headed over the Dutch coast at late dusk and weaved its way through the shadowy Dutch windmills toward Schiphol where the Germans had

(continued on page six, col. 4)

NAZIS DOING JIG-SAW PUZZLES

We give this story, which is going the rounds, a boost

Ever done a jig-saw? You start by emptying all the pieces out of the box and turning them right side up. What have you got? A hundred little bits of an unknown picture—each useless in itself, each by itself unintelligible. You can give every person you meet one of the pieces—and you'll be giving him something of no value at all.

Now forget your jig-saw pieces. Lots of other things—such as casual pieces of conversation—are of no value at all. In war-time, of course, certain bits of information are of value to the enemy, but you never give him those! Nor, we hope, do you ever give bits of information that are of value to the enemy to anyone, even to friends—because bits of information have a habit of getting round. They are overheard, and repeated; letters are left lying about and read by other people; and so on. No, if ever, by any chance, you do give any bits of information—just to make conversation, or because they may interest your friends, or because they show you in a good light, you take great care that such bits of information are quite valueless. Of course you know they can be of no possible use to the enemy, or you would never let a word pass your lips. Just harmless conversation.

So far, so good. Here are some harmless little conversations.

Mrs. A.—, the wife of an airman in a maintenance unit, chats to the milkman; “The milk rationing doesn't worry me so much now. My Tom is away from home three nights a week. Has to sleep on the Station as there's some rush job on, fitting a lot of aeroplanes with some new thing that protects them against cold. But of course he won't tell even me anything; he knows how to keep his mouth shut.”

Sergeant B.—, a pilot, is home on embarkation leave and to say goodbye to his fiancée. He says: “Can't tell you where I'm going, Kitty, but you might finish off that warm jersey you're knitting for me, if you can do it in the next few days. And anything else in that line. The Admin. Officer tipped me off that I'd do well to collect up a few things for really cold weather.”

Flying Officer C.—, having a drink at the Savritz with a friend from another Station says: “Mind you, old boy, I don't know anything officially, but the other day I just happened to see a signal on the Adjutant's desk, when he was out of the room, saying that the wing was to be ready to embark in the near future at Port Reavemouth up in Northumberland. So maybe this is our last drink together for some while. . . Well, not quite last, old man.

Young Mrs. D.— has a husband in the Navy and is talking to her mother in a teashop: “I know being a sailor's wife isn't easy, but Jack has only just seen baby for the first time and now he's been rushed North again on convoy escort. He

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AIR MARSHAL



WHEN AIR MARSHAL BISHOP VISITED OUR SCHOOL, APRIL 6TH, HE LEFT THIS MESSAGE:—

“When I was in Britain, I had the opportunity of visiting a secret “ops” room where the officers immediately directing the strategy and tactics of Britain's war in the air were in constant communication with their squadrons over France, over the Channel or swooping protectively over Britain itself. And I can tell you that I marvelled.

In my day of battle, we had little or nothing of such modern help. If a “Jerry” was on my tail, it was impossible for my comrades to shout through my earphones, “Look Out Behind.”

This is but one aspect of the terrific role wireless is playing in this war and in order that we may employ this new aid to its maximum efficiency, I urge every one of you not to relax for a moment in your effort to attain the greatest possible proficiency in the trade for which you have been selected.

Probably as a carry-over from the last war, a good deal of glamour seems to be attached to the pilot in this conflict. But every day it is becoming more apparent that it is not pilots alone who will win our war in the air but our teams of efficient aircrew. I can assure you that the Wireless Operator is certainly not the least important player on that team.

There will come a day when, upon your accuracy and skill will depend, not only your own safety but the lives of your team-mates and the success of your mission. So I suggest to you lads “swat away at your code. And don't forget that when you are in a jam, you can't send by remorse code.”

THE BEAM

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 Commanding Officer
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EDITORIAL

PRINCIPLES OF LEARNING

You can lead a horse to water but you cannot make him drink. This epigram has assumed in our minds some mystic and incomprehensible significance as though it were a Key phrase in an ancient ritual. It is used to justify our failure in dealings with others. It is used by mothers, by preachers, by teachers, and it is being used by instructors at No. 1 Wireless School.

When our wishes come in direct conflict with the inclinations or the intellectual inertia of others, there is a clash of wills, and that, being a struggle between intangible forces, overwhelms us with our helplessness, and—more in explanation of the problem than in solution, we recall the old epigram and do not feel the shame of defeat. After we, as instructors, have threatened delinquencies with punishments and promised rewards to merit, we have exhausted our resourcefulness and we, then, shift the responsibility of our inability to achieve results to this hallowed English saying.

Even religion at once eases our mind and increases our feeling of helplessness, for does not religion show a Benevolent Providence temporarily thwarted in its Divine purposes by the Will of Man? Does not religion depict an otherwise Omnipotent Deity pleading with man to do something or, at least, to give his acquiescence to something? Does it not even show the threat of eternal damnation to those who fail in any essential feature? How, then, can we—mere mortals—feel the sting of defeat when someone fails to follow *our* wishes or be moved by *our* pleadings!

We say, in explanation, but not in solution of the problem, *You can lead a horse to water but you cannot make him drink!*

Happily, however, there is a solution! But it is not one of threats, of drive, of punishments; it is not one of pleading, of attracting, of rewarding, though all of these have their place and help to ease the problem.

(continued on page three, col. 1)

REVISITED SCOTLAND

By WING COMMANDER E. W. TYRRELL-BECK, D.S.O., M.C.

Last month we heard much of the pleasure of a visit to "Auld Scotland." As an English visitor I am inspired to mention a few further pleasures which you have to experience fully to appreciate.

First there is the Scottish Sabbath. If you have ever thought that "life was brief, and life was fleeting," you have never lived through one whole Scottish Sabbath. Time indeed stands still as you sit in a room with the blinds drawn, listening to the rain dripping outside. To laugh is a sin. To whistle is a crime. I was once with a party of Southerners at St. Andrew's, the famous golf course, on the Sabbath and in desperation we asked permission to play golf. As a great concession, this was permitted, but all the flags were removed from the holes! Well named are the bunkers, "HELL BUNKER" and "PURGATORY BUNKER."

Now what of the other fascinating sides of Scottish life? Their famous musical instruments, the bag-pipes, have an interesting and touching origin. The story is that in the days of long ago a Scottish Chieftain owned a cat to which he was devoted. During dinner a clumsy servitor trod on the cat's tail and the cat set up a terrible wail. The enraged chieftain adopted as his motto "Touch not the cat," and as a punishment ordered the servitor and his descendants in perpetuity to reproduce the doleful cries of the cat at dinner nightly.

This brings me next to the Scottish Poetry and songs all written by one man the famous Tommy Burns. Typical are those dedicated to the "Wee Flea" and to the "Mickle, Muckle Mouse." After writing these poems Burns was banished to Australia to be beaten by the negro Jack Johnston. (See Flight Lieutenant Grant's Review of Botany Bay for account.) I must mention also the haunting ballad called "Staggering Through the Rye," with which you are so familiar on Pay nights.

Briefly now I must notice the Scottish games such as "Tossing the Caper." It is played with a small tree which you carry until you drop it on your toes. You then cut a caper. The natives appear to enjoy this game for some obscure reason.

Another fascinating nature pursuit of the natives is gathering of the clans. These clans are dug up in odd corners in wild places, and when gathered a "Clan Bake" is arranged, served with "Tartan Sauce" they provided new experiences. Or you may have heard of the notorious Clan Chowder. The clans have different markings, and observing the strange marking of a clan called the "Campbells," a young American girl made the famous remark, "The Campbells are cunning, Hoorah, Hoorah."

As to their dances. In this publication I am afraid we cannot fully describe these, which are called reels after their whisky, and truly primitive. Their names are sufficiently suggestive, as for instance, "Stripping the Widow" or the "Hiccough Fling," and I must leave the rest to the imagination of the gentle reader.

A word, now as to the roads. It was Dr. Johnston who truly said "There is only one good road in Scotland, and it leads as quickly as possible out of the country into England." All good Scots will endorse this.

Finally it is explained why the Scots roll their "R's." This is caused by their teeth chattering. Happy landings! Beware of icing on your wings!

BRR!!!

A Book You Should Read

Reviewed by
 F/L G. M. GRANT

ATLANTIC FRONT

By BASIL WOON

S. J. Reginald Saunders. Price \$3.50.

I cannot understand why this important book has not been reviewed by leading American and Canadian periodicals. Certainly it merits widespread attention, for its theme is the Battle of the Atlantic and it gives a vivid and authoritative picture of the crucial struggle which is going on over half a million square miles of grey tossing water.

In securing material for *Atlantic Front*, Basil Woon was given every facility by the Admiralty, the Royal Air Force and the Ministry of Shipping. He travelled in a coastwise convoy from London to a Scottish port and had a first hand experience of the perils of Nazi dive bombers, E-boats and mines. Incidentally, he notes that dive bomber attacks are so frequent that seagulls no longer follow the convoys.

A good description is given of the methods used to defend our vessels against attack from the air. Not infrequently, enemy aircraft encountering the wires of the balloon barrage, have had their wings cut in two. Our escort planes fly overhead, maintaining a ceaseless vigil. And every Nazi bomber must face the concentrated ack ack fire of the convoy, in this instance four hundred guns, operated by experienced gunners. A Base Armaments Officer addressed this warning to a conference of merchant skippers: "See that your guns are manned every minute of every day. An attack only lasts a few seconds, and if you're not ready to fire at the enemy when you first see him, you won't get a second chance."

The author corrects the erroneous idea prevalent in Canada that the port facilities of London have been largely put out of commission. He asserts that every day during 1941 an average of fifty vessels entered and left the port of London. Had it been otherwise, it would have been necessary to evacuate two-thirds of the population, for the railways cannot begin to supply London's needs in food and fuel.

WAGS at No. 1 Wireless School will find the chapters entitled, "Coastal Command" right up their alley. Mr. Woon went out on convoy patrol in a Blenheim bomber with an Australian pilot. Operational tactics are described with simplicity and clearness. Of special interest is the description of the drift indicator, that useful little instrument for ocean navigation by air.

The romantic possibilities of life in the Coastal Command are indicated by the following story: "A Sunderland flying-boat of the R.A.-A.F. was on its way back to its base when, about 600 miles from land in one of the loneliest stretches of the North Atlantic, it spotted a lifeboat tossing on the waves far below. Swooping down, the thrilled crew saw that the lifeboat had in it nearly fifty persons. While they watched they saw a small boy, who had been a Boy Scout, begin to signal in Morse semaphore with a white shirt. With difficulty they made out the words *City-Benares* and thus knew they had with extraordinary luck, come upon some further survivors of the terrible disaster that had happened *eight days before*. The Sunderland signalled "Will get help," flew back to the convoy it had just left and gave the exact position of the lifeboat." All the survivors were rescued. One of

(continued on page seven, col. 2)

(continued from page two)

When the fear of eternal punishment and the love of God, based on some vague comprehension of the significance of the vicarious atonement, have both failed to move Man, a divinely implanted "hunger and thirst after righteousness" will consecrate his life to a new purpose. When both the threat of our severest punishments and the promise of our highest rewards fail to make *students* of our trainees, similarly we may, even then, solve our problem if we can implant in our trainees a hunger and thirst after knowledge.

Psychologists call this implanting, *motivation*. But call it what you will, it IS the secret of all achievements! If a man wants above ALL things to be good, he will be good; if he wants—REALLY wants—to learn some subject, he WILL learn it!

Our job—yours and mine—is to implant that thirst after Knowledge, that compelling necessity to learn that will not let a man alone until he has learned all he can, that fire that burns in the hearts of martyrs, or in the hearts of scientists who spurn all rewards less than their own approbation.

We must, ourselves, be completely won over to our subject. We must be preachers as well as teachers; we must convert as well as instruct! In fact if we should succeed in infecting our trainees with our enthusiasm—and ours must be evident,—our job is more than half completed.

A trainee who recognizes in his privilege to study here at No. 1 Wireless School an opportunity to be initiated into the secrets of one of the miracle industries of modern civilization will be unmoved by our threats and inducements alike, and will learn because of an inner compulsion that drives him on.

You need not lead a thirsty horse to water!

—The Editor.

HIGH FLIGHT

By PILOT OFFICER J. G. MAGEE, JR.

Oh! I have slipped the surly bonds of earth
And danced the skies on laughter-silvered wings;
Sunward I've climbed, and joined the tumbling mirth
Of sun-split clouds—and done a hundred things
You have not dreamed of—wheeled and soared and swung
High in the sunlit silence. Hov'ring there
I've chased the shouting wind along, and flung
My eager craft through footless hall of air.

Up, up the long delirious, burning blue
I've topped the wind-swept heights with easy grace
Where never lark, nor even eagle flew—
And, while with silent lifting mind I've trod
The high untrespassed sanctity of space,
Put out my hand and touched the face of God.

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STATION SGT. MAJOR



W.O.1 T. N. ALLAN

When you lads are on parade and our new Station Sergeant-Major gives you a "blast," take it in good spirit, boys, for you are being spoken to by a darned fine soldier and a MAN.

Warrant Officer, First Class, T. N. (Tommy) Allan has had a long and varied military career, and it is to his credit that when he sees some of our skittish WAGS cutting up on parade, that he keeps his temper.

Born in the Edinburgh district of Scotland, Sergeant-Major Allan joined, as a youth in 1905, the world famous Royal Scots Regiment, the oldest Regiment in the British Empire, and remained with them for four years.

He then joined the Royal Scots Greys in 1909 and served with them in England, India, and Africa, later going to France with them in August, 1914, as a unit of "That Contemptible Little Army." "The Greys" were pretty badly mashed up in France and so was Mr. Allan, having his jaw broken and his hand badly wounded. He finished four and a half years of war with the 6th Inniskillen Dragoons.

After the war he came to the United States for a rest, and liked the country well enough to remain there until 1932 at which time he came to Canada.

Prior to this War he was Drum Major with the "Essex Tank Corps," and, immediately upon declaration of War, he put in an application to the R.C.A.F., joining it on November 6th, 1939 as an AC2 Disciplinarian.

Since that time his promotions have been rapid. Last month he was promoted to Warrant Officer, 1st Class, and is now our Station Sergeant Major, replacing Warrant Officer Birchall, who has gone overseas.

Mr. Allan has served at Toronto Manning Depot, St. Thomas, Rockcliffe, Quebec City, and several stations in No. 3 Training Command, and came to No. 1 Wireless School some fifteen months ago.

A gleam comes to his eye and a smile, to his face as he talks of shooting in Inter-Regimental matches at Bisley, the mecca of all the crack shots of the Empire.

In addition to his 1914 ribbon and other Service ribbons, Mr. Allan wears the King George V Coronation Medal. He attended the Coronation in 1911 as groom to Admiral of the Fleet, Sir Colin Keppel. Mr. Allan tells an amusing story of an Admiral of the Fleet, in full regalia and cocked hat, riding a spirited cavalry charger that reared and plunged as the crowds cheered—much to the discomfiture of the Admiral and the amusement of Mr. Allan, who was responsible for his safety.

Congratulations Sergeant-Major Allan on your recent promotion! We, of No. 1 Wireless School hope that your many years of fine service to your country will be rewarded by many more.

WAG PERFORMS RESCUE

While LAC Knox, H., of WAG 32C was on leave during the Easter week-end, he witnessed a collision between a speeding car and one parked on the Lakeshore road. The parked car, its tank full of gasoline, burst into flames.

Before the fire department's equipment arrived, LAC Knox had pulled to safety Marion Williams who had been trapped in the burning car. Her unaided efforts to force open the car door which had been sprung by the collision proved unavailing, and had not LAC Knox been on hand, the demon, Fire, might have had another victim.

Well done, Knox.



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HEADS LECTURERS



FLIGHT LIEUTENANT E. STORR

Flight Lieutenant E. Storr probably owes his somewhat conservative attitude to his educational background. Having been enabled by scholarships to stay at one of the older English Grammar Schools until he was nineteen, he there won County Major, Sate and Hastings Scholarships worth a thousand dollars a year. These scholarships gave him four of his best years—at The Queen's College, Oxford, where he took Honours in Mathematics and Physics.

He then got his first teaching position and came to Canada to the Town of Mount Royal High School. After two pleasant years there, broken by an educational Psychology course at Toronto, he left to work in the Technical Department of the Northern Electric Company in Montreal for about a year and a half. Then the desire for long summer holidays and another visit to England must have come over him to make him return to teaching in the High School of Montreal and West Hill High School, where he was teaching Mathematics and Physics up to the time of his enlistment early in 1940. He holds a First Class High School Teacher's Diploma from McGill University.

He was posted to No. 1 Wireless School in May, 1940, and has since taught radio here. He is in charge of the radio lecturers and is Secretary of the Officers' Mess. His native, fluent English is familiar to all readers of the WOG handbook, which he edited and proof-read.

AROUND THE SERGEANTS' MESS

Sgt. Observer Pete Heaton from Vancouver chatting with friends here before entraining for the East Coast and overseas. Good luck, Pete.

Warrant Officer Charles Cuthbert telling a few of his old cronies about the intolerable weather and the poor accommodation down in Pensacola.

Sgt. Tucker and Sgt. Robinson taking four hours and twenty minutes in trying to finish a 100 game of billiards, and, giving up because of sheer exhaustion.

Sgt. Teasdale telling his "Dorothy" at our last dance how many enemy planes he expects to bring down when he is a Fighter Pilot.

Warrant Officer Allan, looking a fine figure of a soldier in his new uniform. Congratulations, Mr. Allan.

Sgt. Boucher giving Sgt. Jackson a good ribbing for sinking his opponents cue ball so frequently. Shame on you, Jackson!

Warrant Officer and Mrs. Northcote and Flight Sergeant May and Thelma (or Flight Sergeant Thelma and May), in deep conference at the last dance—probably discussing the advantages of married bliss.

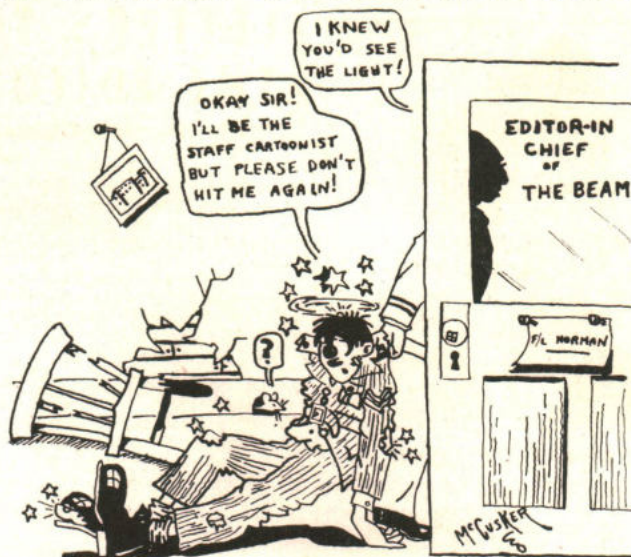
Sgt. Locking telling the boys that one of his WAGS, LAC Jimmy Hope, wants the Campbell's Soup Company to put barred P's in their vegetable soup. Be careful Hope, or Locking will steal your idea and sell it to Campbell's himself.

A few of our new Sergeants, not long off the farm, feeling very frightened and generally uncomfortable in the palatial surroundings of our new Mess. Never mind, lads, you'll get used to it in time!

Sgt. Brown telling some tall tales about how he took New York by storm during his Easter week-end visit there.

A few Sgt. WAGS back here from B. and G. monopolizing the billiard tables from early morning till late at night, or so it seems.

FLIGHT LIEUTENANT NORMAN SECURES CARTOONIST



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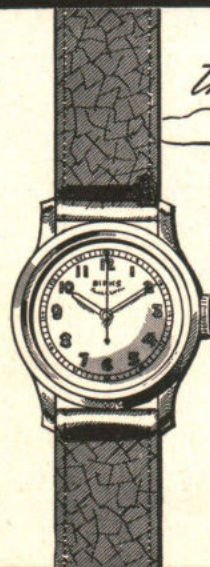
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ASSOCIATE EDITOR



SERGEANT JACK LONG

There are few men at No. 1 Wireless School who are as versatile or as useful to the Station as Sergeant Jack Long, Communications Instructor.

He has had a varied career which has given him wide experience in many fields of life. The son of Victor Long, A.R.A., a famous Canadian Artist, he was born in Winnipeg, in 1904, and finished his education in Mining Engineering and Geology at the University of Washington.

In 1921 he had the distinction of being selected for the Canadian Bisley Team but was unable to leave school to attend the British Empire Matches at Bisley, England.

After leaving college he was employed by the Guggenheim Mining interests and examined mining properties from a geological viewpoint all the way from Mexico to the Arctic Circle. Following the radium ore stampede at Great Bear Lake, he spent four months in the Coronation Gulf area.

Prior to the war he was editor and publisher of *Western Canada Mining News* and was vice-president of the North British Engineering Corporation. Acting on behalf of this California syndicate, he made an initial scouting trip over the route of the B.C.-Alaska highway now being completed by U.S. Army Engineers.

Sergeant Long joined the R.C.A.F. early in 1940 and has been a trainee and instructor at No. 1 Wireless School since then. His inherited artistic gifts found expression in a beautiful map of Canada which hangs in the Officers' Mess and illustrates the B.C.A.T. Plan. He has given generously of his time and talents to many Station activities. He has been Secretary of the Canteen Committee, the Entertainment Committee, and the Library Committee and is now Associate Editor of *The Beam* and, in that capacity, has been responsible for many of its excellent features, with at least one notable exception—this article. An efficient instructor, a soldierly airman, a tireless worker, Sgt. Jack Long is a valuable asset to No. 1 Wireless School. We wish him every success in the Service.

LETTERS TO THE EDITOR

Sir:—

During the two years I have been in the Air Force as a General Duties, it has been my privilege to serve on several stations from coast to coast.

Every one of these stations had a school publication in some shape or form—some were scruffy-looking, mimeographed sheets full of corny and very stale jokes, while others were printed papers or magazines, properly embellished with pictures and cartoons.

Having worked for a large printing firm in civil life, I feel that I am capable of passing an opinion on publications both as to the reading matter contained therein and as to the mechanical make-up of the publications.

In my opinion, *The Beam* is the finest station publication I have yet seen.

The cover design and general make-up are excellent and indicate the fact that the editors are professionals in this type of work. The editorials and reading matter are the work of an educated, analytical mind, and they lend a tone to the magazine which I have not seen in any other R.C.A.F. publication.

Credit should also be given to the printers of *The Beam* for the high quality of work in both typesetting and cut-making.

Summing up, I feel that *The Beam* is positively in a class by itself as far as station publications go, and while I am sure everyone at the No. 1 Wireless School appreciates the job you are doing for us in giving us this newsy, entertaining, and informative magazine, I for one, wish to express my appreciation in writing.

"A STAFF MEMBER."

REPLY

Thanks very much for the bouquet. We are very pleased that the magazine is so appreciated.

—THE EDITOR.

Dear Sir:—

There is Beauty on one of the pages of your last issue; in fact there are five beauties. But I think No. 1 Wireless School is an AIRMEN'S School—not a co-educational School—and I think we should NOT have any weakening of our war effort made by devoting space to girls unless they, too, are in uniform, such as the Nursing Sisters or R.C.A.F. (W.D.)

SERIOUS MINDED.

REPLY

Probably you are right. Our first object is to make better WAGS, WOGS and WEMS. After that, we want to provide interesting material for our trainees to read or to look at; but even then we wish to make this material, too, contribute to our first aim.

—THE EDITOR.



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IN THIS SIGN THOU SHALT CONQUER

BY F/L G. E. MULLIGAN

Almost 16 centuries have passed since Constantine saw those words emblazoned in Greek across a blood-red sky of an embattled country-side.

Embodying the Cross in his ensigns, Constantine triumphed; and Europe and the West found in the Cross a real protection in the waging of just war. Among the United Nations, happily, our empire, in championing what is right and good, fights under a triple cross: that of St. George, St. Andrew, and St. Patrick. It may not come amiss to ponder over this fact for a moment.

The simple fact that almost 500 millions of people honor and respect the Union Jack is probably the greatest proof and surest guarantee of ultimate victory. This Union Jack is the National flag of the British Empire, and is made up of the flag of St. George, a Red cross on a white ground. In 1606, James I added to it the banner of Scotland, which was a blue flag with a white St. Andrew's Cross diagonal—that is, from corner to corner. In 1801, the Cross of St. Patrick was added to the flag; St. Patrick's Cross was a red diagonal cross on a white ground; thus, the flag now means the union of England, Ireland and Scotland.

So, essentially, our banner is a Christian one and just as Christianity at its very outset triumphed over the most bloody persecutions of the greatest imperial force, then at its zenith of power, and emerged to see the downfall of that pagan tyranny with all its degrading immorality, so today, let us be sure that our banner shall ultimately triumph over the pagan symbols of those forces of evil against which we are pitted. No Christian in his right mind can believe for one moment that the superstitious-swas-tika allied with the cruel fasses and the rankly material sun-god, no one, be it repeated, can be convinced that they shall triumph over the Christian symbol of Faith in the Omnipotent, Triune God, Whose wise Providence governs all with an Infinite although patient Wisdom, Who shall rule surely, a mare usque ad mare—from one end of creation to the other.

Of ultimate Victory then we are certain. There but remains the question of time. Common sense reminds us that the battle ever goes to the valiant; cowardice and trickery may seem to gain the initial skirmishes but of purpose and true valor that alone accompanies real fortitude, shall eventually triumph.

This brings us to the grave necessity of building up the weak places in our national character. Few will deny that we have grown soft, still fewer will hesitate to acknowledge the need for very real and personal sacrifice. Perhaps the very colors of our banner may be used to suggest a workable program for improving our united effort and hastening the day of Victory!

The red of our banner stands for the blood of sacrifice, the white for purity, and the blue for honesty, integrity and sincerity. Whether or not you and I shall have to shed our blood remains to be seen, but this much is certain, we shall surely have to impose on ourselves very grave changes in our easy-going lives. The tears and sweat and blood of June, 1940, still remain our "mot d'ordre"; it's for you and me to determine how badly we have failed to pull our weight. Without real and personal suffering we shall never contribute that to which our Empire and its ideals stand now in very real need. Whether it be in the matter of training or study, whether it be curtailing our luxurious pleasures, we shall have to sacrifice if we are to hasten Victory by truly sharing the bloody night-mare of blacked-out Britain, in a way that will steel us to ever greater efforts.

You may well ask for specific direction. War time is a time of such universal sadness that many simply grab whatever pleasure they can as frequently as possible. In no realm of human nature is this more apparent than that of sex. The great Empires of antiquity fell largely because of the sexual impurity of their citizens and soldiers. If we are wise we shall learn from their errors, The God Whose aid and protection our sovereigns and statesmen so often beseech is the all-holy God whose law against personal sexual indulgence demands respect. Let the white purity of our banner ever



remind us to respect our human dignity and place all woman-kind on a pedestal so high that our eyes need never falter with shame when we focus them with true love and affection on Mother, Sister or Sweetheart.

Finally as we regard the blue of our banner let us ever remember that the success of our effort will largely depend on our own sense of justice. If we are sincere in our own lives, if we really place first things first, giving to God that service to which He has every right then we shall surely be men of honesty and integrity with others. We salute the triple cross on our banner, is it not a mark of insanity then to insult Him Who died thereon by blasphemy, cursing and swearing?—surely our tongues were given us to honor God in praise and prayer and not to insult Him with profanity and muck.

A Washington date-line of April 6th reports that President Roosevelt read to the correspondents assembled for one of his press conferences that week excerpts from a letter which declared that Calvary's Cross "is the only sign" by which we can conquer the "powers of black paganism" now threatening everything which we hold dear. The President . . . said that since it was Holy Week, he thought it appropriate to read the passage to the newspapermen. "No matter what may be the religious faith of individuals," the letter said, "Most Americans see in Calvary's Cross the eternal symbol that light will conquer darkness, truth prove stronger than error, and life greater than death."

WINS D.F.M.

(continued from page one)

gathered some nice, brand-new quarter-million-dollar bombers, Dornier 217's.

As the big Wellington neared its objective, the crew got ready to crowd an hour's action into a couple of minutes. The Wellington swept low over the field, and—the landing light and flare paths came on!

A huge Dornier, on the port side, came in abreast to land, and F/Sgt. Banks decided to assist the big bomber to come down. A burst of machine gun fire seemed to do the trick. Then hell broke loose!—searchlights stabbed the sky and tracer and explosive anti-aircraft fire seared the space around the Wellington! The pilot was blinded by a searchlight, but F/Sgt. Banks, looking out the side, saw his own aircraft headed for the ground but 50 feet below, and, not knowing the intercom, was still on, breathed a prayer, "For God's sake, pull up, Skipper!" As the great bomber pulled up, F/Sgt. Banks was "Converted." All the "sticks" were laid on the hangars of the airport. Millions of dollars worth of new planes went up in the thirty-odd, separate fires started on the target. F/Sgt. Banks himself accounted for a couple of searchlights and two anti-aircraft guns.

This was good! We grabbed our pencil, got paper ready, and exclaimed, "Let's get the facts, now! Start from the beginning!"

"Oh? Well, we loaded up, flew over the target and pulled . . ."

"Oh, heck!"



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The "Y's Corner



By Johnnie Walker

April was a busy month at No. 1 Wireless School. Three Concert Parties were presented for the enjoyment of the boys. Patsy Marazza brought along his Accordion Band augmented by some very smart solo numbers. The Band played just the type of music that was appreciated by the airmen, from the Gay Nineties up to the present. Two clowns went through their astonishing act and nearly brought the house down with their acrobatic contortions. On Monday, April 13th, the North branch "Y" "Thumbs Up Review" played before a large "pre-pay" day audience and made a big hit. On Tuesday, April 28th, after this issue had gone to press, the Canadian Legion Monk Concert Party was presented to a good audience.

The movies presented during the month of April were quite good. The outside social functions were many and good with the various Y.M.C.A.'s and church groups around the city doing their utmost to entertain the airmen of No. 1 Wireless School. The Saturday night dances and the Sunday afternoon suppers given by the Westmount "Y" are favourite attractions.

The school dance held March 28th came too late to be reported in the March issue of *The Beam*. It was a successful affair and was acclaimed by the happy throng in attendance. The "Ferguson Serenaders" are improving with every appearance and produced some very fine music. A special word of commendation is passed along to the Messing staff for their excellent handling of the catering. It went very smoothly indeed.

On April 15th, one hundred airmen who had signed up for dancing lessons attended the Marjorie-Davis school of graceful dancing and were initiated into the arts of tripping the "light fantastic." It was realized that the need for this type of instruction was great but the overwhelming response to the request for names was a real surprise. These classes will be held from time to time as the need arises. A hearty vote of thanks is extended to Marjorie-Davis and Mr. Livinson for their great efforts on the airmen's behalf.

TOC H CLUB

Toc H is a fraternity of service men in the Army, Navy and Air Force. It was founded in 1915 at Ypres by a British padre, Captain Philip Clayton, and since that time it has grown to include 55,000 members. Recommended by the Air

Council, there are 150 stations of the R.A.F. which have Toc H Groups. The Group at No. 1 Wireless School meets in Room 115 each Tuesday night at 1900 Hours. Discussions are held on subjects of general interest and newcomers are cordially welcomed. The Officers are: Chairman, AC2 Ernest King; Vice-Chairman, LAC Malcom-Cole; Secretary, AC2 Cliff Allan; Padre, F/Lt. Grant.

MUSIC APPRECIATION GROUP

A new and interesting regular event taking place in the school is the meeting of the Music Appreciation Group. Under the guidance of AC1 Reg. Would, an ardent music lover, and the co-operation of the Y.M.C.A., this group meets each Friday evening. Every week different volumes of classical music are chosen with brief notes on the lives of the various composers being read before the music itself is played. The patrons of this newly formed group are: S/L K. R. Patrick; F/L G. M. Grant, and Johnnie Walker. The meetings are held in the Civilians Recreation room No. 115 at 1900 Hours each Friday. A cordial invitation is extended to all music lovers to spend a pleasant hour listening to the works of the masters.

CAMERA CLUB

To date, Camera Club enthusiasts have not been showing up in any great numbers. Nevertheless, Room 209 which is allotted for this purpose and is fitted with a dark-room and basic equipment, is put to good use by the few that have joined the club.

BOOK REVIEW

(continued from page two)

them said: "The bravest people in our boat were the children. During the entire eight days there was never a cry from one of them. I take my hat off to the boys of Britain."

I suspect that Mr. Woon has been a newspaper reporter for he has the journalist's flair for a dramatic tale. The book contains about two dozen exciting narratives of adventure on the high seas, most of which have been barely mentioned in the Press. The epic voyage of the two survivors of the "Anglo-Saxon" is of particular interest. In 70 days, they travelled 2,500 miles, across the hottest and most desolate part of the Atlantic, in a lifeboat.

The strange case of William Colquhoun is also recorded. This man grew up on the island of Barra in the outer Hebrides, and when a boy, used to play on its rocky beaches. On July 3, 1940, he sailed for Canada as a soldier guard with 1,500 enemy internees. An August 23rd, William Colquhoun came home to Barra, but not as he had anticipated. His body was washed up on the beach.

Atlantic Front is a good antidote for pessimism. It does not minimize the difficulties of the present situation but it gives such a convincing picture of the courage and competence of British seamen that the reader lays it down with the firm conviction that Britannia will continue to rule the waves.

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PERSONALITIES

AT NO. 1 WIRELESS SCHOOL

CPL. A. F. LEARD



Born and raised in Saskatoon, Sask., attended Wayne University at Detroit where he specialized in instruction of the deaf. Prior to the war was Acting Superintendent of the Provincial School for the Deaf at Saskatoon.

His wife and two-year-old boy are in Montreal. He has been a Procedure Instructor here since last June (and this was an Institute for the Blind! Not so dumb eh?).

SGT. K. L. SPARK



"Sparky" is an Australian, having been born and educated in Sydney. He served for years as a "crack" operator with Cable and Wireless Ltd. at various posts including Southport, Queensland; Sydney, Australia;

Suva, Fiji Islands; and Bamfield, B.C. For thirteen years prior to enlisting, he was with Marconi of Montreal. He came to No. 1 Wireless School in February, 1940. His wife and 11-year-old daughter live here in Montreal. He is N.C.O. in charge of the Examination Board.

SGT. H. STAFFORD



"Staff" is N.C.O. in charge of our Service Police and is the biggest man on the station... 6 ft. 3 in. and 250 pounds—in prime condition. He served for 14 years with the C. P. R., Quebec Provincial, and Town of Mount

Royal Police, and stirred Montrealers in 1938 with his heroic capture of one of the murderers of Constable Pigeon. "Staff" is also a wrestler of note, having trained with Yvon Robert, the present World's Heavyweight Champion.

SGT. J. E. MARCOTTE



Born and educated in Saskatchewan, "Buster" was in the hotel business in Northern Saskatchewan for six years prior to enlisting. He is N.C.O. in charge of sports, is a great sports organizer and a fine disciplinarian.

"Buster" is married to the daughter of Squadron Leader D. Thompson of Brandon, and Mrs. Marcotte resides here in Montreal. His brother, F/Sgt. Clarence Marcotte, was recently reported missing after operational flights on the Renault plant and the St. Nazaire docks, and everyone is hoping that "Buster's" brother is safe and sound.

SGT. H. D. JACKSON



"Don" was born and educated in Ontario and was known as the "Killer" when he played for *Enterprise Blackouts*. Prior to enlistment he served with the Canadian National Express and C.P.R. Telegraphs, following

in the footsteps of his father who operated for C.N.R. for 21 years. Mrs. Jackson and young "Michael" live in Montreal, where "papa" Jackson is N.C.O. in charge of Outstations at No. 1 Wireless.

SGT. D. A. LOCKING



"Dave" Locking is of the professional type. Born and educated in Ontario, he is a graduate of North Bay Normal School and Western University where he received his Bachelor of Arts Degree. Prior to joining up he

taught at Emo High School in Ontario but is still taking several night courses at Sir George Williams College in order to get his M.A. His wife and one month old daughter, Sandra, are both doing well in Montreal. He has been a Procedure Instructor since January, 1941.

CPL. W. J. RYAN



"Pat" Ryan is the fastest Morse man at No. 1 Wireless, if not in Canada. He modestly admits that he can take 50 words per minute on typewriter, but he can carry on an animated conversation at the same time, so we

think 60 wpm would be a cinch for him. He has been telegraph operator for the old Canadian Northern, Grand Trunk Pacific and C.P.R. Railways and in latter years a teletype operator for several large brokerage firms. He served with the Canadian Engineers in the last war. Two grown daughters and a son are in Vancouver, while Mrs. Ryan is here where "Pat" has been a Morse Instructor for several months.

F/SGT. R. G. FAIRCLOUGH



"Bob" is a Winnipegger by birth, education, and civilian life experience and was with the Winnipeg Grain Exchange for sixteen years prior to joining up. He came to No. 1 Wireless School in March of 1940 and

established the pay and accounts office here the day the school opened. As N.C.O. in charge of Pay and Accounts, Bob straightens out all the snarls that arise in our Pay Department and is one of the most popular N.C.O.s on the Station. "Curly" as he is often called can draw a lot of harmony out of a piano, but his vocal accompaniment usually drives all lovers of music from the Mess.

Behind the Hospital Curtain

AC2 Hyslop, who, one month ago, was a Sergeant in our Orderly Room, and who now is a potential P. or O. misses our food more than anything else. Ever watched Scotty putting it away! We're wondering if it's true that the local Airmen's Mess breathed a sigh of relief when he became Victoriaville's grief.

Nursing Sisters Archambault and Labreque have taken the sting out of sickness, and, 'Tis said, that all too many patients try to prolong their periods of hospitalization. Any truth in those reports? Maybe they couldn't be blamed either, what?

LAC Seguin is S.O.S. to Trenton, where our former S.M.O., S/L Sinclair holds sway. Make sure that you don't make that moustache bob up and down Roger. That spells T-R-O-U-B-L-E or did you know?

Albert Lamontagne and Yves Coursol speak but little English, but from the way they get around with the fair sex they don't seem to need the knowledge of the language.

S/L Tauer, our new S.M.O. will never go down in history as being the meek, docile, low-voiced type of medico. Far from it. When he shouts "Corporal Young" in our corridors, many a man has trembled with the vibration and it can only be compared to the explosion of a sixteen incher. It's true on the parade ground too and were he not such a good S.M.O. we'd bet that he'd make a fine S.W.O. Is there anyone on the station who forgets his Sick Parade.

Pearl Germaise one of our two pulchritudinous stenographers really has a fine voice as was exemplified in the recent Amateur Show. When are you going to be using that voice to be saying, "I do," Pearl? We've been hearing things of late.

Why is Flight Pierpoint so proud of his billiard prowess? We think that he should be prouder still of his addition. You know... four plus six makes eighteen. In the future we're going to tote along an official scorekeeper with 20/20 eyes R & L (also night vision) so...

RULES FOR AIRCRAFT RECOGNITION CONTEST ON PAGE TWELVE

- Contest is open to all trainees of No. 1 Wireless School.
- The three contestants with largest number of correct answers will have their pictures published in *The Beam*, and honourable mention will be made of the next seventeen contestants.
- Neatness may be a deciding factor in case of ties.
- Judges will be The Editor-in-Chief, F/L R. O. Norman, Associate Editor, Sgt. J. A. Long, and the Armament Officer F/O Irving.
- All entries must be in the Dry Canteen, in a special box prepared there, or in the hands of one of the judges by 1200 hours, April 7th.
- Answers should be made on a sheet of paper, one side only, 8 inches by 10 inches with the number, rank, name, and class of the contestant across the top.
- Answers should be given in detail similar to the answers printed in the March issue.

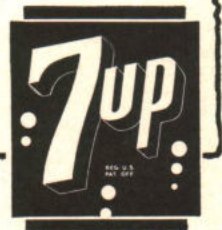


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GRATEFUL

The Editor of *The Beam* has received this month, many contributions from The Flying Squadron and elsewhere. When these have been sorted out and channels of information have been put on a regular contributing basis, we hope to include more names among the published list of Reporters.

In the meantime, may we here and now thank everyone who is trying to help us make our school magazine an efficient, worthwhile, interesting, and widely circulated war-effort.



**FLYING SQUADRON
PILOT PERSONNEL**

We could begin our column in the usual "social-column" manner by saying, as likewise would the society columns of the prominent Montreal newspapers read, "We are very pleased to announce the recent marriage of F/Sgt. Green to a noted New York model. The newlyweds have taken up their abode in Chambly."

No explanation is needed when we say that such entries are far too formal for an airman's paper, so we will proceed in the schoolboy manner and touch lightly on a few highlight happenings of our noble Mothmen. Let us drop the primary subject of flying and enter into a more serious vein.

Mrs. Green has told us that, although it took her four train tickets, a trolley transfer, one boat fare and two airline tickets to get here; she was very much surprised when she did not have to make that last twenty miles by dog sled. She was also amazed when she did not take up housekeeping in a tent or an igloo with Indians and Eskimos as her neighbours.

P/O Naldrett, Sports Officer excellence, showed us the other day, the prizes he obtained for the winners of the enthusiastically-contested bowling matches. . . one vanity case, a pair of patent leather work boots, two bee-bee guns, one set of jacks, three skipping ropes and a pair of running shoes for the champion. And as P/O Naldrett stood last, need we mention that he ordered one solid gold cigarette case for the booby prize.

Last week orchids went to F/O Griffiths for the way he so capably handled the operational officer's duties. Wednesday, the eighth, he directed an all time high in flying hours. The sixth was still blue, however, even if it was Easter Monday.

Good luck to F/O Bill Maxwell on his new exploits. It is lucky for him that he shaved off his moustache or he would have been pestered by a great number of autograph hounds — or has Doug Fairbanks left the Mount Royal yet?

The ceiling was actually low when F/O Bob Meyersburg set down at the Fairchild plant but we are very dubious as to whether Sybil works there or not.

Little seems to have been heard from the Flying Squadron in recent numbers of *The Beam*. This phantom appendage of No. 1 Wireless School, nevertheless, has continued to attempt to function throughout the fogs and snow of winter and spring. Recently an all-time daily record for flying was broken. The record now stands at 98 hours. A sudden burst of notoriety was achieved by a recent informal visit paid by a Flying Squadron plane to the School and the Flying Squadron is back on the map again. Look for this column next month.

To describe incidents concerning a certain Flight Commander would take quires of foolscap. So, to his friends, (to those who do not know him, it won't make any sense

either). We will attempt to personify him. "As the War Chief" was eating his "Oysters" his "blue tie" fell in the soup.

We wonder if F/O Mackenzie has yet arranged for a lecture to be given to the trainees on "etiquette in an aircraft" for "the handling of the WAG bag." Incidentally F/O Mackenzie has just been appointed Sanitation Officer.

The other day on parade we laughed very heartily when F/Sgt. Fryer did an about turn and scraped his nose on F/O Webb's belt buckle.

F/O and Mrs. John Moores returned from a brief sojourn in the Laurentians to take up their duties as Orderly Officers. The Officers in the Mess were quite peeved when they found, at odd intervals that the elevator was shut down and they were forced to use the stairs.

Some day the bus is going to take a wrong turn and P/O Eric Morse will find there is a long walk ahead. On admiring his Sylphlike figure, we suggest that F/L March could get rid of that avoirdupois by garaging his car and hiking it from Chambly each morning.

**OFFICER COMMANDING
FLYING SQUADRON**



S/L W. R. POLLOCK



The Magic Carpet

AIR OPERATIONS NEWS

At the time of going to press, Flying Squadron Personnel are anxiously looking forward to another of the Famous Flying Squadron Floating Dance Smokers (some combination, eh). This time we believe the Bowling Champs will receive a little publicity when prizes will be presented to reward strenuous efforts made by the bowling gang.

Prize Winners:
Cpl. Ulyot, D. E. High Average—129.9
F/S Mawson, N. M. below 175 —173.0
Sgt. Turner, J. W. below 160 —159.0
Cpl. Telfer, T. D. Consolation —126.0

We are sorry to lose P/O Krueger and P/O Hendricks to No. 9 B. & G., but if we know our Americans, fresh fields to conquer are always welcome. We owe much to P/O Krueger for his very able organization of the recent stags and dances.

EXECUTIVE OFFICERS OF FLYING SQUADRON



LEFT TO RIGHT: Flying Officer Griffiths, O.C. No. 1 Flight. Flight Lieutenant March, O.C. No. 2 Flight; Squadron Leader W. R. Pollock, Commanding Officer, Flying Squadron; Flight Lieutenant Champoux, O.C. No. 3 Flight, and Pilot Officer Morse, Adjutant of Flying Squadron.

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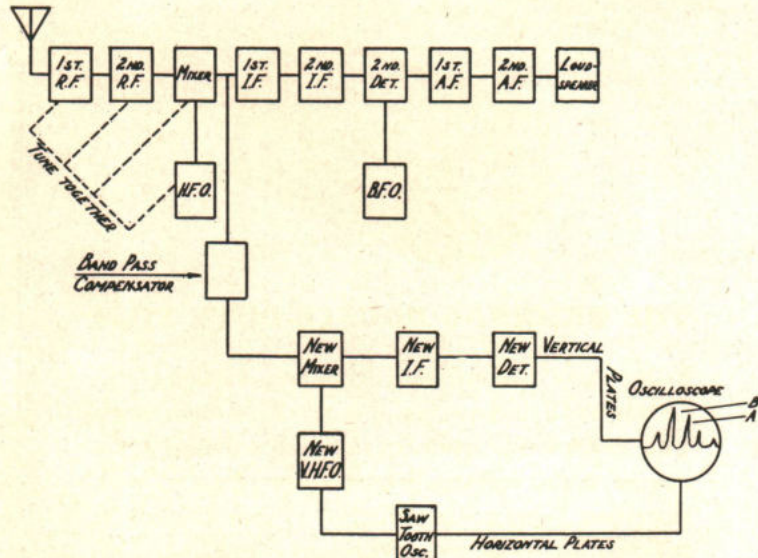
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PANORAMIC RADIO SPECTROSCOPE



BLOCK DIAGRAM OF ACTION OF PANORAMIC RADIO SPECTROSCOPE

Several persistent enquiries have reached the Editor as to what he meant by the expression "Panoramic Radio Spectroscope" in one of his Editorials. It was hinted that the Editor was coining an expression to stand for something fabulously incredible.

The Panoramic Radio Spectroscope is a device which, fitted to an ordinary communication receiver will afford the radio operator an opportunity to SEE signals, and that, over a fairly wide band of frequencies. The ground operator of an ordinary radio receiver can only HEAR the signals, and, further, can hear only ONE signal at a time. He does not know if an aircraft operator is calling him on a slightly higher or slightly lower frequency unless he actually turns the main tuning control and listens—by which time the aircraft operator may have paused, only to resume when the ground operator, having heard nothing, tunes to another frequency. This little game of "find me if you can" is responsible for wasting about 25 per cent. of the possible, useful operating time of stations not equipped with crystal-controlled transmitters and well-calibrated receivers.

The panoramic radio spectroscope device eliminates this waste of time. The ground operator LOOKS at the screen of an oscilloscope and SEES signals, not only the one that is being HEARD on the ear-phones or loudspeaker, but also signals that are within, say, 150 kilocycles above or below that signal. He can SEE at a glance if anyone in that 300 kilocycle band is calling him, and he can tune instantly and accurately to such a signal.

A reference to the block diagram will show the principle of operation. An ordinary superheterodyne such as the H.R.O. is shown. From the plate of the mixer a frequency of 456 K.C. is taken. There will be other frequencies on either side, with increasingly less amplitude as the deviation from 456 K.C. increases. With only one stage of R.F. these other frequencies will be closer in amplitude to the 456 K.C. signal. However, a whole band of frequencies will be present at the plate of the mixer of the H.R.O. (the ordinary receiver I.F. stages will give the required selectivity and will eliminate all but the 456 K.C. signal for loud speaker operation.) These frequencies are passed through a "compensating band-pass" stage to make the frequencies

on either side of 456 K.C. have the same amplitude as the 456 K.C. signal has. This band of frequencies say from 306 K.C. to 606 K.C., now having uniform amplitude, is applied to the grid of the new mixer stage and is combined with the output of a VARIABLE high frequency oscillator whose frequency is controlled by a reactance tube (similar to that in the ATR5), which, in turn, is controlled by a saw-tooth oscillator. The saw-tooth oscillator also provides the synchronizing voltage for the horizontal sweep of the oscilloscope.

The net result is that a new I.F. signal is produced by combining the variable high frequency oscillator's output and the "compensating bandpass" stage's output. This new I.F. is detected and applied to the vertical deflection plates of the oscilloscope. Due to the fact that the horizontal sweep is synchronized with the variable high frequency oscillator sweep (both being saw-tooth oscillator controlled) signals in the band of frequencies show up as vertical humps on the oscilloscope, and each signal appears in its own relative place.

The signal that the receiver is actually tuned to, is a vertical deflection in the MIDDLE of the scope ("A" in the diagram). A stronger signal appears, in the diagram, about 100 K.C. lower in frequency (B). Another signal on the diagram shows up lower in frequency and of about one-quarter the strength. Two signals appear above the signal being HEARD, one about 50 K.C. higher and the other about 150 K.C. higher.

When a signal goes off the air, the bump disappears. It appears again only when the signal comes back on. In fact an operator might even read what is being sent, for the bump appears for an instant only for a dot, and for a slightly longer time for a dash. If the speed of transmission is not too great, visual reading of code is possible. A radiotelephone signal would appear as a hump of constant amplitude but bulging and contracting to show the presence and absence of side bands with modulation. A frequency-modulated transmitter would be of constant amplitude but rapidly oscillating slightly to the right and to the left.

The panoramic radio spectroscope is really a very wonderful device and can undoubtedly add tremendously to the usefulness of communication receivers.

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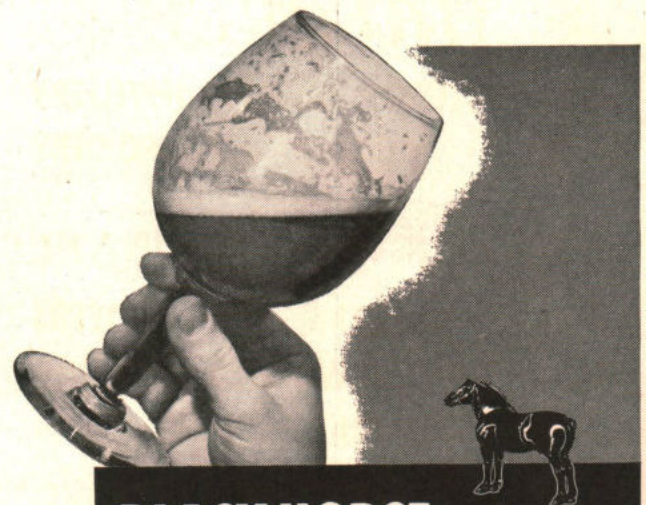
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CANADA'S FINEST ALE

JIG-SAW PUZZLES

(continued from page one)

won't tell me anything but you know what his ship is so it looks like an important job."

Mr. E.— a clothing manufacturer, over lunch in his club says to his companion: "Say what you like, this war has made our workers put their backs into it. They're a good lot and they get down to things. Why, only the other day I had a rush order—3,000 special thick R.A.F. greatcoats to leave the works by 20th at latest. And those lads with very little experience got down to it like Trojans. We finished the lot today with a day and a half in hand. Damned good effort."

A.C.W.2 F.— on the phone to the boy friend says: "Do you know we had four Russian Officers in the Mess and I was waiting on their table. Ever so handsome one of them was. . . Now don't be jealous. . . Usual place tomorrow."

And G.— a merchant seaman, holding forth in the Sailors' Rest, says: "I don't know where I'm going this time and I don't ruddy well care. Since September, 1939, I've been to Rio, Shanghai, Singapore, Sydney, The Dunkirk Regatter and Gawd knows where else. But any time I can get near enough to have a crack at the perishers I'm 'appy. And mebbe I will this time. 'Mac,' says the old man, 'I'm saying nothing, but if you like vodka maybe you'll soon be able to get some.' So long, then, old cock; after Thursday you'll 'ave to expect me when you see me."

Just harmless little conversations, all of them. But enemy ears are

everywhere. Who knows that each conversation did not come to an enemy ear and an enemy mouth tell them to a controlling enemy mind. So here, then, is our last conversation:

Herr Commandant H—says to a colleague: "So what do we know now from all these agents reports? Aircraft at Z . . . station are being fitted with some special protection or other against excessive cold, and it's a rush job. Aircrews on embarkation leave have been advised to provide against a very cold climate. A whole Wing is shortly to be embarked at Port Reaviemouth and that's in N.E. England. A strong escort is also wanted up north for an important convoy—probably the Wing. A large consignment of thick winter clothes for the R.A.F. is to be ready by the 20th. Four Russian Officers are at Y— station, on liaison duties. And lastly, a merchant seaman, who is going on convoy to a place where vodka is available is leaving on . . . the 23rd Right! An R.A.F. wing heavily escorted is leaving Port Reaviemouth for service in Russia on the 23rd. If they take the direct route they should be here by the 25th. If they go North they should be here by the 26th. So, if we have a strong Air Force and U-boats patrolling between these points from the 24th onwards—well, we may be able to thank all our kind informants very much."

Back to our jigsaw. Every little bit is still valueless by itself. But —ever done a jigsaw? You do it by fitting every little bit into a complete picture!

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MARCH & APRIL CONTEST WINNERS

The winners of the March contest are:

First place, LAC Anderson, Donald, of WAG 34B. Second place, LAC Houlihan, D.F., of WAG 32A. Third place, LAC Bristow, L., of WAG 28B. Honorable mention go to LAC Campbell, S. G., WAG 28C. LAC Harkness, R., of WAG 32A, and LAC Scott, R. G., of WAG 32B. The pictures of the winners appear in this issue.

It will be recalled that the announcement of the winners of the March contest should have appeared in the April issue, but was postponed because F/O G. H. Irving was on leave and F/L R. O. Norman and Sgt. J. A. Long, the other two judges, "deadlocked" on the first silhouette. The former judged it to be a Richshaw, Reconnaissance Unterseeboote Q12, and the latter, a Super-Pretzel 24-F. F/O Irving the Armament Officer, has assured his two fellow judges that these two models have not yet been put into production by the enemy. While it became apparent that F/O Irving was deprived, by the incident, of some of his respect for his two associates, he would not go so far as to say that they were definitely wrong in their beliefs, but he did categorically pronounce their decisions as obviously anachronistic.

F/L Norman and Sgt. Long are taking time out to make up their minds as to what their reactions to this should be.

The above is an account of the winners of the March contest. The winners of the April contest are: First place, LAC Rainger, P., of WAG 34A. Second place, LAC Houghton, K. E., of WAG 34A; and third place, LAC Piper, E. E., also of WAG 34A.

Honorable mention goes to the following (in order of merit):

Matheson, V. R., Knowles, C. W., Pritchard, J. S., Dawson, K. K., Roy, F., Draper, G., Murphy, E. J., Coughlin, F., Beattie, H., Wozny, W., Reid, S. M., McLennan, P. W. A., Longtin, J. E. A. A., O'Donnell, F. P., Routson, M., Chiswell, D. R., Yarnold, O., Camire, E., Lamoureux, J. L. G., Appel, R., Sexton, W., Harrington, E. J. A., Migillozzi, J. A., MacLaughlan, R., Ross, G. G., Anderson, D., McLaren, D. A., Heppleston, J., Milligan, T. A., Brunet, E. C., Hathaway, J., MacMillan, J. F., Wortman, K. L., Bennett, J. G., Gudz, H., Philpott, H. R., Smillie, P. A., Gray, G., Calder, J. R., Nice, F. M., Williams, E. J., Mann, R. W., Houston, J. Y., Speller, R. H., Rackham, C. R., Butler, H. G., Cameron, R. M., Delo, S., MacPherson, J. D., Allen, R. W., Fenton, J. C., Schnobb, P. A., Ramsay, R. G.



D. ANDERSON



P. RAINGER



K. E. HOUGHTON



E. E. PIPER

AIRCRAFT RECOGNITION CONTEST

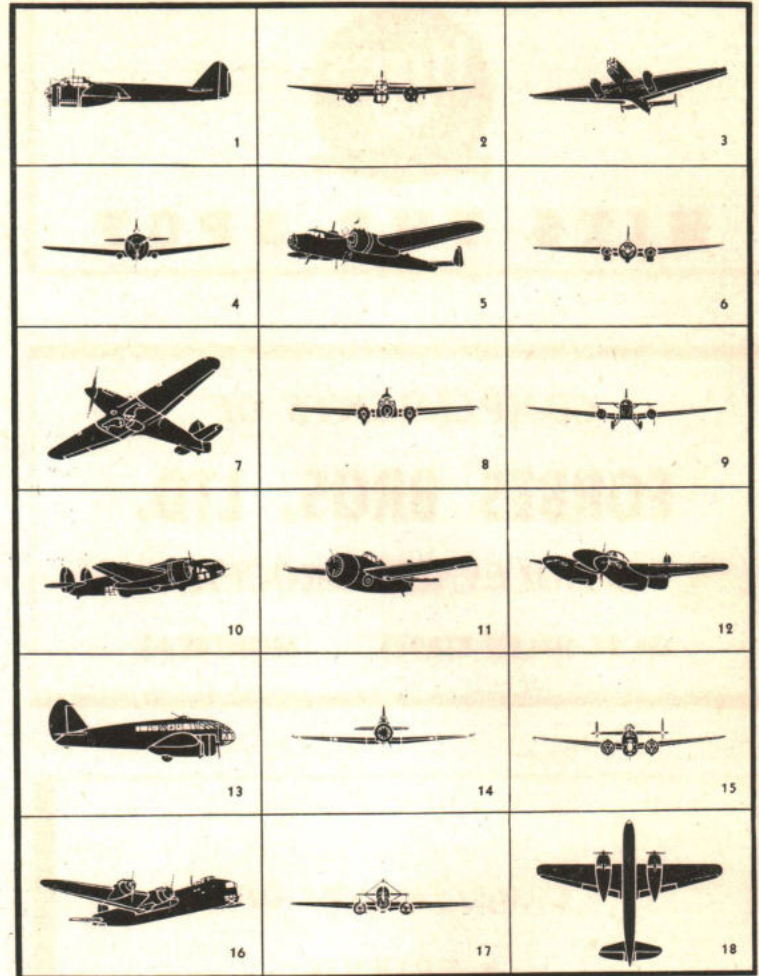
(Answers to Contest for Month of MARCH).

- Halifax I**
Long Range heavy bomber.
Span 99' Length 69' 9".
- Messerschmitt—ME. 110.**
Twin engine fighter.
Span 52'. Length 40'.
- Caproni CA. 135.**
Twin engine bomber.
Span 61' 8". Length 45'.
- Junkers JU. 86.**
Twin engine bomber.
Span 73' 8". Length 57' 4".
- Dornier DO. 17.**
Twin engine bomber.
Span 59'. Length 55' 4".
- Hudson.**
Reconnaissance bomber.
Span 65' 6". Length 44' 4".
- Focke-Wulf Condor.**
Bomber, Transport and Mine Layer.
Span 108'. Length 78'.
- Henschel HS. 126.**
Army Co-operation.
Span 47' 7". Length 35' 7".
- Junkers JU. 52.**
Parachute troop transport.
Span 96'. Length 62'.
- Whitley IV and V.**
Twin engine bomber.
Span 84'. Length 70' 6".
- Manchester I.**
Twin engine bomber.
Span 80' 2". Length 69' 4 1/2".
- Junkers JU. 87B.**
Dive bomber.
Span 45' 3". Length 35' 4".

(Answers to Contest of LAST Month)

- Beaufighter.**
Multi-seat Fighter.
Span 58'. Length 40' 11".
- Anson.**
Reconnaissance.
Span 56' 6". Length 42' 3".
- Fiat B.R. 20.**
Heavy Bomber.
Span 70' 8". Length 52' 10".
- Breda 65.**
Ground Attack Fighter.
Span 39' 6". Length 31' 6".
- Halifax I.**
Bomber.
Span 99'. Length 69' 9".
- Heinkel HE. 113.**
Single-seat fighter.
Span 30' 11". Length 26' 7".
- Beaufort.**
Torpedo Bomber Reconnaissance.
Span 57' 10". Length 44' 1 1/2".
- Skua.**
Dive Bomber Fighter.
Span 46' 2". Length 35' 7".
- Maryland.**
Bomber.
Span 61' 4". Length 46' 8".
- Breda 88.**
Multi-seat escort fighter.
Span 50' 10". Length 37' 9".
- Junkers JU. 86.**
Bomber.
Span 73' 8". Length 57' 4".
- Heinkel HE. 11K mk. V.**
Bomber.
Span 74'. Length 56'.
- Fiat BR20.**
Heavy Bomber.
Span 70' 8". Length 52' 10".
- Buffalo.**
Single seat fighter.
Span 35'. Length 25' 6".
- Falco I.**
Single seat fighter.
Span 36' 9". Length 26'.
- Defiant.**
Fighter.
Span 39' 4". Length 35' 4".
- Focke-Wulf Condor.**
Bomber Transport and Mine Layer.
Span 108'. Length 78'.
- Boston.**
Bomber.
Span 61' 4". Length 47'.

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