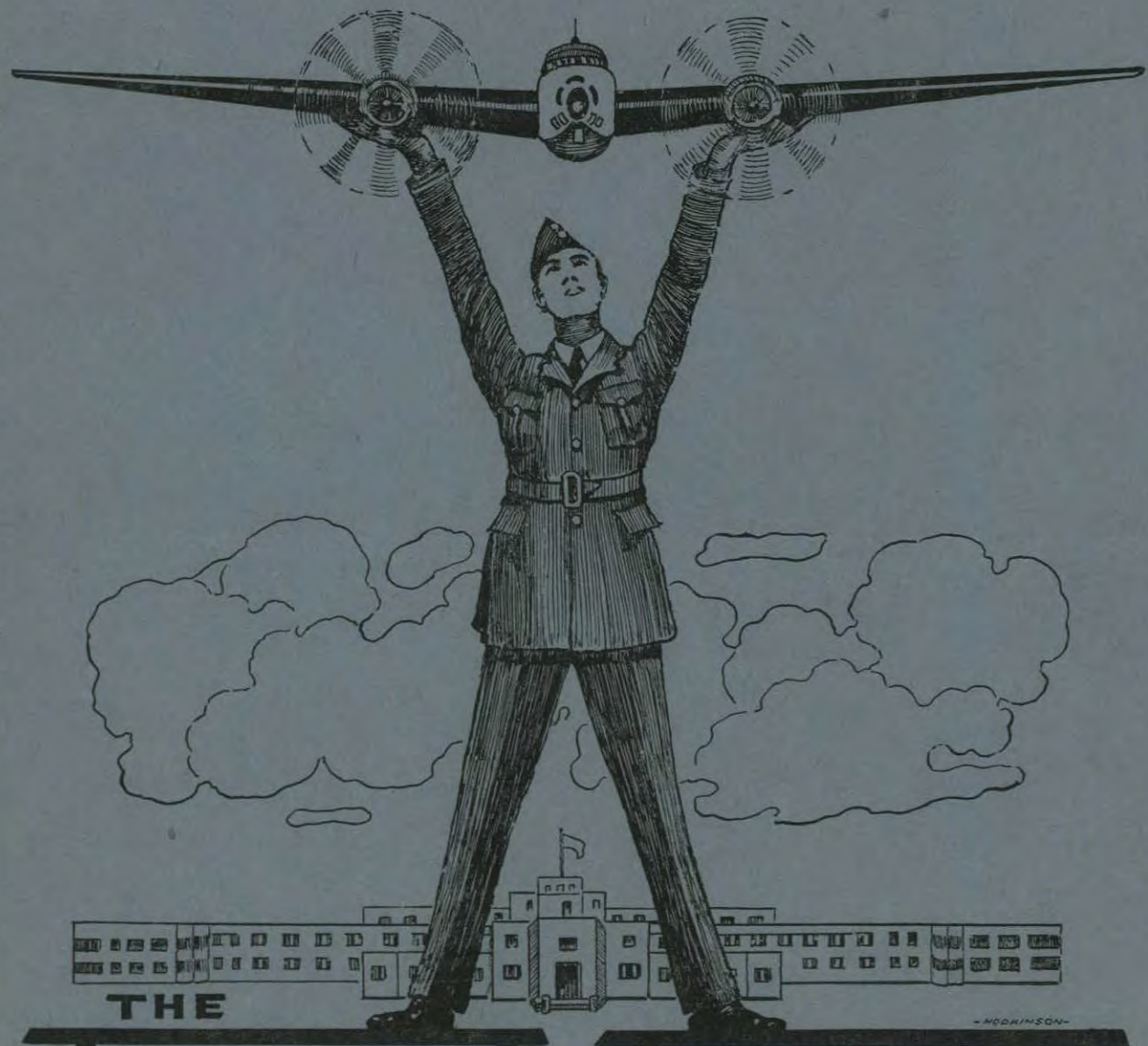


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THE *Aircraftman*



THE

TECHNICAL TRAINING SCHOOL

ST. THOMAS ONTARIO

-HODKINSON-



THE AIRCRAFTMAN

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TABLE OF CONTENTS

- | | |
|-------------------------|-------------------------|
| I. EDITORIALS | V. AMONG THE SQUADRONS |
| II. SPORTS | VI. RECREATION CALENDAR |
| III. STATION ACTIVITIES | VII. DO YOU KNOW? |
| IV. STATION STATIC | VIII. TECHNICAL TOPICS |

Subscription Rates for Airmen who leave the Station is \$1.50 a Year. This covers cost of printing and postage.



"Unless the enemy is defeated and the enslaved countries of Europe restored to freedom, there will be no prospect of improving or even of maintaining the standards of Canadian life which Canadian energy and Canadian skill have won, no hope of enlarging the opportunities for the happiness of our own or succeeding generations. Free labor will have to compete with slave labor. Men who have hitherto had the right to choose where they would work, and at what they would work will find themselves in hopeless competition with conscript labor, automatic, soulless, driven by the merciless lash of a ruthless state."

—THE RT. HON. W. L. MACKENZIE KING,
in a broadcast to the men and women of Canada.

« « EDITORIALS » »

THE WEALTH OF THE NATION

The wealth of the nation is not to be found only in lists of its forests, mines and factories, nor is it confined to the balance sheet of its international trade. It is to be found in the health of its people. The greatest natural resource of any nation is the mental and physical fitness of its citizens.

The health of the individual should be regarded as a part of the nation's natural resources given to the care of the individual and if he does not treat it as such, he is betraying his nation's trust. Unfortunately, there are many people who are unconsciously betraying this trust.

There would seem to be two main reasons for this state of affairs. First, the popular conception of health is far from satisfactory. A good percentage of our people maintain that they are healthy as long as they do not need the attention of a physician or psychiatrist. They have the negative approach to the problem. No man is healthy unless he is in such a state of well-being that he is eager to function efficiently in all departments of life. The second reason, most people fail to realize that health is a matter of forming a controlled pattern of habits. They form their habits in a haphazard fashion, and allow themselves to be influenced by the high-pressure advertising of commercial concerns whose main object is to sell their products regardless of the effect on the health of the consumer.

There is no short-cut to health. The panaceas of ancient and modern medicine men are no substitute for a well-disciplined way of living. Habits must be formed with a regard for their effect on the health of the individual.

We have to practise this discipline. Our health is not only a personal concern, but is also a matter of national importance. If by laxity or ignorance we are not achieving the efficiency of which we are capable, then we are not doing our part. We are betraying the trust which has been placed in us.

* * *

MORE MARTIAL MUSINGS

By Flight Lieut. W. S. Lighthall, D.F.C.

There has been little change in the actual military situation since December and it is questionable if much will happen before the later days of February, but much of the back-

ground has clarified and it appears easier to guess at Hitler's next move. Whether such guess will be correct, time alone will tell.

The Libyan situation is much as it was, with the Italian forces being rolled up in the British advance and delivered in fairly large bundles of prisoners to the Egyptian concentration camps after each battle. The important thing to be observed is the complete mastery of the African air by the British. This is worthy of some thought as it is not too far for Italy to fly over large numbers of planes at a moment's notice if she had them to spare. Either she has none to spare or considers that they would be wasted if sent against the British fighters in Libya and could be used to better advantage on the home front. Certainly there has been no mention of German planes appearing in Africa as yet. Where is that vast Axis superiority we have heard so much about? If it exists it would be used now as Italian forces cannot hope for continued existence with complete aerial control in the hands of the R.A.F. The writer witnessed that condition in the Allenby campaign and appreciates the vast advantage gained by such mastery.

The Greek advance has been slowed up by weather which can be appalling in the mountains of Albania, and by the resistance provided by reinforcements thrown into the lines by the desperate Italians. However, the fall of Kalsura and Tepeleni shows that the drive has by no means bogged down and with the fall of Berati the pipeline will be cut from the oil fields to Valona and Italy will be deprived of a much-needed source of fuel.

The mountains fall away to the west of the oil fields of Petrolia and the broad basin of the Devoll River would allow an unobstructed drive to the sea. This would cut the Italian army in two and cause their retirement on Valona and Durazzo where, no doubt, the British navy would await with joy any attempts to provide an Italian Dunkirk.

The appearance of German dive bombers in an attack on British naval vessels near Sicily may mean anything but most likely indicates that Hitler has sent some planes with the troops who have been sent into Italy more to keep her in the war than to aid her in her time of need, an old German custom used in Turkey during the last war.

Cut off from all supplies from home, the Italian forces in Ethiopia are, no doubt, trem-

THE AIRCRAFTMAN

bling every time they hear a native drum in the hills, knowing as they do the vengeance awaiting them at the hands of the Ethiopians who have not forgotten the massacre of their women and children by the Italian bombers. Soon it will be a case of outposts cut off and forts falling, their garrisons wiped out to a man, no quarter given by the infuriated natives. The last will be a desperate attempt at retreat to the coast, constantly attacked and sniped at, with the columns growing smaller day by day until overrun by the hordes which surround them, a fitting end for those who rule by fear alone.

The outstanding event of the year-end was the virtual declaration of war made by President Roosevelt and its enthusiastic reception by the American nation. Even though he did not commit the nation to actual and immediate physical combat, his nation is at war and the supplies being sent to Britain will, without doubt, be the deciding factor in the long run. Further, the U. S. army and navy are being rapidly brought to vast strength and before long will relieve the British Empire of much guard duty throughout the East and thus free troops required elsewhere.

Hitler is apparently preparing to do several things at once and it would appear that he has decided to risk the displeasure of Russia by embarking on an eastern adventure whether Stalin likes it or not. Undoubtedly Stalin does not like the idea of German control of the outlet to the Black Sea but one thing that the Georgian brigand is frightened of is the German army and Hitler has concentrated it in force on the Russian border so that at least the start of his drive to the south will not be interfered with by the U.S.S.R. Hitler knows that he cannot win the war by anything short of invasion of Britain, so that without doubt he will try this at the time he hopes to have Britain deeply involved in the Mediterranean. This may be as soon as the mud of Bulgaria either freezes or dries enough for his transport to pass through towards Greece or it may not be until after the equinoctial gales have blown themselves out in the Atlantic and North Sea, perhaps about April next.

This attempt will come soon before the R.A.F. have complete supremacy of the air and it may be considered as the gambler's great effort and may well lose him the cream of the German army in the attempt. Britain is ready and eager for this test of strength and unless Hitler can spring some surprise weapon of an unheard-of nature his chances of a successful landing are very small indeed.

The constant bombings of the invasion ports have and will make preparations for such a stroke most difficult but the Hun is persistent

and unless something unforeseen arises to disturb his plans, Hitler will make the attempt very soon now.

Another move which may be expected from him is a drive at Gibraltar. While he has little chance of taking the Rock, he might make the Straits unusable for the time being by planting long-range guns to the west of Gibraltar and perhaps on the African shore.

However, any drive through Spain might prove very dangerous with its long and vulnerable lines of communication and hostile communities through which they must pass. Napoleon found the Iberian peninsula the deathbed of many a hope and it might well prove to be the case if Hitler moves in this direction.

In the meantime, Britain is hurrying with the mopping up of Graziani's remaining forces so that her Mediterranean army will be free to meet the German move wherever it may develop.

* * *

THREE OPTIMISTS

Are you an optimist? If you are an optimist, why are you one? What makes you look hopefully on the future? Is it physical exuberance, mental prejudice, wishful thinking or intelligent conviction? Let us distinguish between optimism that are fruitful and optimism that are futile.

There is the optimism of "Beer Barrel" Tony Galento who, some moons ago, climbed swaggeringly into the ring against Champion Joe Louis—climbed in to learn too late that the Champ had a lethal punch. Everybody knew where Tony's mistake lay. He wrote Louis down as a bum and built himself up as a big shot. He wilfully underestimated his opponent to excuse his own lack of serious training. He was optimistic. He persuaded a good number of his friends to put their money on him. But his big talk did not conquer the Champ. His optimism was prejudice and wishful thinking. Likewise, he who argues that half a war effort is more than good enough to beat that bad man, Hitler, may be a cheery, good-natured, hopeful soul, but his optimism is more futile than fruitful.

The optimistic glow can also be induced by an arbitrary reading of history and wrong deductions therefrom. Mussolini's entrance into the war and his present undoing is due largely to a false expectation about the outcome of events. He and Hitler have encouraged each other to believe that the democracies are fat and aging and tired. The Fascist powers they hold are young, eager and virile. The totalitarian strongholds are inviolable. The democratic ramparts are falling apart with inner

decay. The evidence was not all in, but on Musso's summary of the international situation he believed that the Mediterranean and the countries bordering thereon were his for the taking. He shouted and boasted and went to war. The great bubble of his hopes was exploded by the counter thrust of the freedom-loving Greeks and the victories of British arms around Sidi Barrani and Bardia. Duped by his prejudiced approach to events, Il Duce's optimism has been forced and premature and futile.

Range now the optimism of Winston Churchill, England's Prime Minister and chief war strategist, against that of Tony and Benito. Mr. Churchill frequently may have a

long black cigar in his mouth, but he never has a pair of rose-colored spectacles on his nose. He has a cheery and cherubic person, but he does not give people a sense of easy well-being about themselves and the war. With a fine eye he appraises the power of the enemy and then says to his countrymen, with blood, toil, tears and sweat we'll beat them. The inspiration for his optimism goes beyond the power of Britain's right arm, or the industrial strength of her friends. The springs of his hope rise from faith in the inspiring nature of the cause and in the God who makes for righteousness in the world. This is the optimism which, we venture to predict, will bear the fruit of victory. —P. P.

* * *

« « SPORTS » »

HOCKEY

By A/C Dalzell, O.

Well, I see by the League standing that our Senior Hockey Team is running neck and neck with the Kitchener outfit for the top rung of the ladder. We have a pretty nifty bunch of stick wielders and should not be far from the top when the final game of the schedule has been played. Our "London Line" of Fink-Andress-Robertson seems to be the one line that is functioning well together; our "Speed-Ball Line" of Underwood-Trudel-Bonneau was just starting to click nicely when a shoulder injury to Bonneau and leave to Underwood broke them up. However, Bonneau has just returned and Underwood will be back in a few days, so that they will be in there battling again. Our other line of Feldman-Gordon-Gutteridge was just becoming the scoring threat when a badly sprained ankle to Gutteridge broke them up, so now another right winger has to be groomed to replace him. Now that "Porky" Levine has got his "hockey legs" he is turning out to be one of the outstanding members of the Club. Andy Anderson, out for a time with a sprained shoulder, is strutting his big stuff again. Dick Coss has slipped a little from his early season showing, but after a ten-day layoff ought to hit his old stride soon. Jim Borland has also returned from sick leave. His elbow is completely healed, and he has recovered his rare old form. Ken Robertson, in goal, keeps turning in a sterling effort every game. Robbie has a very smart understudy in the nets in the personage of Bud Ray, who,

incidentally, turned in a good performance the other night in Kitchener.

So now, look here, you hockey fans on the Station! How about some whole-hearted support in the future? Here we have a first class Senior Hockey Team, which was formed for the purpose of entertaining you, and you don't even come out to see what you think of them. Come on along and support them to the title.

And while we are on the subject of hockey, let's not forget our St. Thomas City League Team, which also has a bunch of winners. We have not told the other teams what they're in for; we'll just let them find out for themselves later on.

* * *

STATION BASKETBALL

We have another good team representing our Station now; the crack team that we had before Christmas was badly broken up by postings. However, a goodly band of basketeers turned out for the first practice of the new year with a lot of promising material in it. We have been trying to get a spot in one of the local leagues, but have not had much success so far. However, we hope that we can get something soon, and when we do, just watch us go. We are still in need of some good basketball players, so you chaps who know the game and have played it, get in touch with Al Diehl, in the Station Y.M.C.A. Office, or Padre Porter, in Wing 2 Headquarters.

THE AIRCRAFTMAN

2 SQUADRON, 2 WING PULLS THE "HAT TRICK"

Wins Commanding Officer's Trophy for Third Month in a Row

After the famine came the feast. 2 Squad, after several months of occupying the cellar in the C.O's series, hit the jack-pot for the third straight month. Giving another all-round dis-

play, they finished the month with a total of 14 points. 3 Squad 2 Wing were knocking at the door with a total of 11 points, and we're going to hear from this squad in later months.

Last month we prophesied keen competition for January. There is no need to prophesy for February the way the things are shaping up. Every Squad on the Station have their eyes on that coveted trophy.

* * *

STATION ACTIVITIES

THANKS

By A/C Willows, C. F.

Three rousing cheers must be given for the wonderful entertainment given to us over the Yuletide season. We, the trainees, sincerely give a vote of thanks for a well-turned-out job. We feel that the entertainers were "tops" and we thoroughly enjoyed their efforts.

The Airmen's Entertainment Committee can take a bow for the manner in which they put on the Christmas and New Year's dances. We appreciate their thoughtfulness in decorating the Station and giving it a homey atmosphere.

And last, but by no means the least, there were those meals at Christmas and the New Year. The Mess Committee gets our unqualified applause.

Not many of us will be here for the celebrations next Christmas but if we have another two weeks then with something on every night as we did this year, we'll be satisfied.

* * *

THE STATION ORCHESTRA

There is one organization, at least, on the Station which always gets a big hand whenever and wherever it makes its appearance. That organization is the Station dance orchestra. Under the leadership of Ft/Sgt. Green and the god-fathering of Ft/Lt. Jones, this orchestra is achieving the popularity and support which it deserves.

It is only fitting that this band should have a setting to match its excellence and that setting is provided in the new stage. The erection of this stage fills a long-felt need and the men on the Station may be sure that full and good use will be made of it.

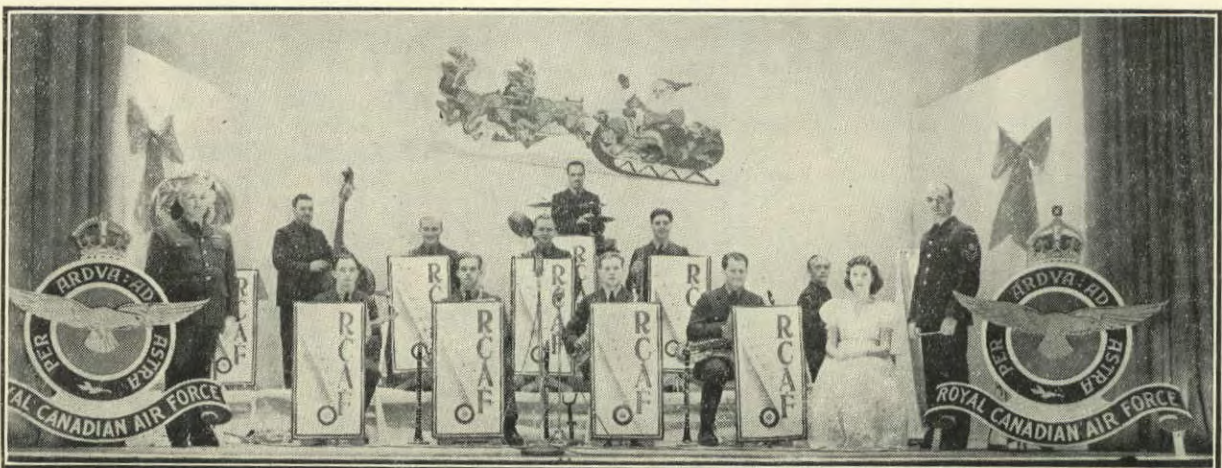
* * *

GYMNASTICS

By A/C Willows, C. F.

What better exercise can you find than gymnastics? It certainly develops the co-ordination of mind and muscle which we need.

THE STATION ORCHESTRA AT THE NEW YEAR'S EVE FROLIC



THE AIRCRAFTMAN

The Y.M.C.A. and the Station are getting together all their available equipment and are ordering more. In the near future, it is hoped that the Drill Hall will blossom forth with a complete gymnasium.

There must be quite a number of experienced gymnasts on this Station. To date, only a few men have turned out to the classes at the Y.M.C.A. in St. Thomas. The workouts are held every Thursday evening in the Drill Hall at 1900 hours.

Now you gymnasts, are you going to let the Station down? Come out and meet your coach, Sgt. Pearce. He is just the man for the job. He is a top-notch with years of experience.

So bring your pals along and set a Station record for excellent gym teams.

* * *

AND NOW FOR THE DRILL HALL

By Cpl. G. Deschamps

Some of you may not know a great deal about our Drill Hall, but those who do know much about it realize that it is a place where everything happens "on the double." This is the place where mind must take precedence over matter. The boys who have galloped around the gym for failing to remember what O'Grady said are well aware of this fact.

Yes, boys, the Drill Hall is quite a place, and with W/O Stubbs as instructor, it can't be beaten. This is the place where muscles become supple; where unwanted bay windows are soon "Gone with the Wind"; where heads are up, chins in and chests out, and indigestion is a thing of the past.

The "Y" men, Diehl and Stuart, are always on the go to keep you going, or if you prefer boxing, then Bowen is willing to trade punches. Then, there are the movies. Three nights a week the boys get exercise and entertainment, twice a week the Y.M.C.A. shows its own films, and on Saturdays the Legion provides the films. But the exercise comes before and after the shows when the boys have to handle the benches.

The boxing ring has been stream-lined. There was a time when moving the ring was a matter of might and main, but now it is a case of flip-it and push-it. Many thanks to the Technical Department. Is it too much to hope that we may soon have a motor attached?

You must not forget that we are open on Sunday. Padres Howard, Davies and Porter take over for the day, and their welcome is most hearty.

So there is the Drill Hall. Use it. To some of us P. T. may seem a part of our training which could easily be omitted, but never forget,

"Idleness is a robber. Neglect to use a muscle and it shrivels and perishes. The man that exercises that muscle not only wins his own portion, but in the long run wins what would have belonged to the man who stays idle."

* * *

FROM THE LIBRARY CORNER

By the Librarian

If some of you lads will persist in getting C.B., why not turn your confinement to good advantage? Come down to the Library and browse around. We have books for almost every taste. W. Somerset Maugham's "Cakes and Ale" will enliven many an evening.

Here are a few titles picked out at random: Duranty's "I Write As I Please," concerning the author's experiences during and immediately after the Russian Revolution, is well worth reading. The "Beachcomber" is particularly interesting. If your stomach is strong and you like a good deal of "realism" in your stories, read "Turning Wheels," a story of the Boer treks by Cloete. A lighter book of something nearer home is "La Cloche" by Cowan, a tale of the Georgian Bay district.

* * *

RED HEADS' NIGHT

On Sunday evening, January 12th, forty red- near red- and would-be red-headed airmen were the guests of the Tonti Chapter of the I.O.D.E. at a supper in the St. Thomas Y.M.C.A.

After the supper, the reds showed that they could really handle a dish towel and then proved that brains went with their brawn by indulging in a "Quiz" contest. Al Diehl of the Station Y.M.C.A. had to hand out several special prizes, so smart were the boys.

Then the boys demonstrated the fact that golden voices accompanied their golden tresses and made merry in a sing-song. But the happiest lads of the evening were those who won the carrot-eating contest and were given Ann Sheridan — or at least her picture — to take home with them.

* * *

A man who went fishing in the Columbia River met a friend on his return and told him of the 300-lb. salmon he had caught. His friend was skeptical but he insisted he had caught a 300-pounder. Then the friend related he had been fishing one time and caught a lantern on the bottom of which was written, "This lantern was put here by Captain Kidd in 1710." And furthermore, the lantern was still burning. That brought an impasse, so the first man said, "Well, I'll take 100 lbs. off my salmon if you'll blow out the light in the lantern!"

« STATION STATIC »

AN OLD NURSERY RHYME

In a New Dress

TEN little nations, all doing fine;
Hitler swallowed up the Czechs, and then there were nine.
NINE little nations, anxious for their fate;
Hitler gobbled Poland, and then there were eight.
EIGHT little nations, looking unto heaven;
Norway fell beneath the Huns, and then there were seven.
SEVEN little nations, in an awful fix;
Austria was the next to go, and then there were six.
SIX little nations, glad to be alive;
Albania felt the iron heel, and then there were five.
FIVE little nations, quaking more and more;
Hitler ravaged Denmark, and then there were four.
FOUR little nations, hoping to be free;
The Germans swept through Holland, and then there were three.
THREE little nations, feeling very blue;
Belgium was invaded, and then there were two.
TWO little nations—such a gallant pair!
Greece—would you believe it—gave Italy the air!
ONE little nation, waiting, unafraid;
The Turks will meet defiantly the tyrant's every raid!

* * *

But there's still another nation—an Empire,
boundless, free,
Battling for faith and honor and world-wide liberty;

* * *

Determined, in its blazing zeal, that things of sterling worth shall take the place of savagery throughout a bleeding earth; And millions to this British pledge devoutly say "Amen. The curfew bell of serfdom shall never ring again!"

* * *

THE TROPHY CASE

Some of the Squadrons seem a little concerned about the whereabouts of some of the trophies which they have won. Now it can be told. Under the skillful touch of Gordon Graham of 3 Squadron, 2 Wing, a trophy case has been taking shape which will hold the "mugs" so that the winners may point in pride and the others may gaze in envy.

* * *

APPRECIATION OF THE TECHNICAL NOTES

By a Trainee

Numerous airmen are carrying the Technical Notes from the "Aircraftman" in their note books.

The work entailed in the composition of these notes is greatly appreciated and we extend hearty thanks to the officers responsible. We suggest that the only improvement which could be made would be the more frequent publication of these articles. Perhaps it would be possible to have monthly articles from both the A. E. M. and A. F. M. sections.

In any case, thanks a lot.

AMONG THE SQUADRONS

Squadron 1, Wing 1

SPORTS

By A/C2 Tutton

By the time this magazine is published, the sports schedule for January will be over, but

as we go to press we have only reached the half-way mark, and right now, we feel that we are not doing too badly.

Our teams have not yet reached their peak. With so many good men to choose from, it is difficult to make the final choice for the Squadron teams. However, this matter is in the hands of Hilton-Sargent, who, if we remember cor-

rectly, was the man who helped No. 2 Squadron, 2 Wing to gain such a hold on the Commanding Officer's Trophy. It's nice to have him on our side—thanks very much.

Each game that the various teams play shows an improvement in the combination, and as the boys get better acquainted with each other's style, the combinations should be something to talk about.

There are only two players on the Basketball team who have played together before, but the splendid support of the team is evident in the chances given Strickland, Thomas and Howe to do their sharp-shooting.

In our Volleyball efforts, it is hard to pick out the outstanding players. Staines is a tower of strength and Cpl. Brooks should be a help, but the strength of the whole team is well attested by the recorded scores.

Cormies and Hall have been our Badminton representatives to date, and have won three out of four starts.

Our Boxing team looks good to us. In the first round of the knockout competition, we eliminated Headquarters Squadron. We promise that the road is going to be rougher for future opponents.

Some time, if you feel in need of a smile, watch the boys weigh in with W/O Stubbs and Sgt. Hilton-Sargent, arguing each ounce. After all, a pound is a pound when the boys get in the ring.

* * *

IN APPRECIATION

By A/C2 Ollivier, S. J.

The Fighting Forty-fourth Entry, composed of good-natured Westerners, tolerant Easterners and happy Northerners, were christened the New Year's Resolution.

During the Yuletide holiday season many of our lads were unable to take the long trip home over Christmas but, resigned to understand the circumstances, we endeavored to make ourselves as happy as possible.

And we did because through the kindness of the Y.M.C.A. many were invited out to parties, dinners, dances and other fine entertainments.

So, on behalf of Wing 1, Squadron 1, may we convey our sincere thanks and appreciation to all who made our holidays so much like home, and gay. We really did appreciate it.

* * *

ODE TO THE INSTRUCTORS

By A/C2 Tutton

I'm just a school instructor—
A foreigner, I guess;

In fact, I come from England
To help this awful mess.
I did not think I'd like it,
But now it ain't so bad;
It would have saved some worry
To have brought old Mum and Dad.

It sometimes gets monotonous
To teach the same old stuff,
So I hope the lads will pardon us
When we're sometimes in a huff.
"What's to do," I asks the boys,
"If you were out of gas?"
Up jumps some blokz and brightly says,
"Use petrol! Silly ass."

We've 'ad some awful arguments
About the gudgeon pin,
Whether it is made of brass
Or fashioned out of tin.
Then suddenly I finds it out;
They don't know what I mean;
It seems they call it something else,
And think I'm off my bean.

I say it ain't all honey,
With Merlin, Wasp and Lynx,
To teach the lads a brand new trade,
With all its ways and kinks.
But there's one consolation,
Come Friday and the test:
However dumb they seem to be,
They always do their best.

So when the training's finished,
And instructors' work is done,
We'll really have a bunch of lads
That's fit to meet the Hun.
So it does not really matter
Whate'er we call the pin;
The main idea of everyone
Is to see Old England win.

* * *

"DEAR MOTHER"

By A/C2 1/8 Ollivier, S. J.

January 12, 1941.

Dear Mother:—

Now that you have asked me to, I will try to depict in writing one day's procedure at St. Thomas.

Early in the morning, on towards 9 o'clock, there is a most beautiful sound in each of our individual rooms, arousing us from our quiet slumber. Following arising, of course always at our leisure, we meander to the dining-room, where are located nice tables, individually prepared. On sitting down, smartly attired waitresses take our orders, which may be chosen from a wide and varied menu. After consum-

THE AIRCRAFTMAN

ing a good-morning glass of tomato juice, nice warm toast, hot creamed coffee, eggs, bacon or whatever you may desire, topped off with griddle cakes and real syrup, you then proceed to the rest room for one hour's smoke period.

While you rest, in leatherette chesterfields amid an atmosphere of complete composure and restfulness, the officers come around and personally see that you are comfortable, and in a whisper ask you your name, in order that they may complete their bothersome pay records.

Should you be tired and fall asleep, nurses place blankets over you and make you comfortable—otherwise the officers call for you in luxurious cars, to take you to your hangars. Really, it is too bad there is such a rush about because sometimes we have to try and concentrate, but not for long, because dinner hour begins at 11 o'clock.

Dinner is somewhat like breakfast only that it is more elaborate, with an orchestra always in attendance. Hot consomme, caviar, chicken, turkey, ham—almost any of the better foods are yours for the asking, and a full choice and range of vegetables, desserts and drinks. There are no afternoon roll calls, as they trust our honesty to be there.

The afternoon is rather boring, because after the rest period, which ends at 3 p.m., we have to go back to the amusement hall and fill in an hour and a half. Of course, since they arranged for beautiful escorts we do not find it so boring. We play games, swim and enjoy ourselves.

At four-thirty we have dismissal—an awful tiresome procedure, as we have to line up for two minutes. However, the boys are good about it, and as it is the only parade of the day, they all refrain from becoming restless.

After supper, we are free to do as we wish, till whatever time is most convenient for us to come back to the barracks.

As the girls are such swell sports and the people really like us, we do have a great time, entertainment being provided free to all in uniforms.

Another nice feature is that if in the morning you do not wish to be disturbed, you just leave the card reversed on the door, which reads, "Please do not disturb."

Well, Mother dear, I must say I am lonesome for the loving care which I got at home—say, just a second—what is it, the fourth of July?—I hear lots of noise—perhaps it is a fire—no a whistle—loud—shrill—maybe it's Christmas—what—er Sir—no Sir—I'll get up right away, Sir—gee, Mom, it was our Sergeant, and that means I will have to get up now and commence a day of filing, meaning

reducing iron to atoms, so will quit—but it was a grand *dream*.

Love,

JACK.

* * *

Squadron 2, Wing 1

THE THIRTY-SECOND ENTRY

I am not a literary giant—let the confession be noted. But I have been asked to write a sketch of the Thirty-second Entry and "England Expects . . . etc."

The Thirty-second Entry does not differ greatly from most entries. We have men from all over the country: men who came in with varying ideas of their own ability. Some felt that the R.C.A.F. was doing them a favor by enlisting them, while others—well, 'nough said.

After a period of from one week to four months at Manning Pool—living on their special diet and on our time—ambition may have been dampened. However, twenty of us had a chance to be on the Exhibition Squadron, and the honor of being on this outstanding drill team was very acceptable.

Like most entries, the Thirty-second has its departments. We have the Scroungers, the Lazy Ones, the Comedians, the Ladies' Men and Those Who Take One Too Many. The latter are usually cured of their raucous ways by a trip to the cold showers.

Perhaps our star Comedian is that Irishman, Murphy. His figure may not be perfect, but he's right in the thick of any fun with the other half of the "Gold Dust Twins," McLeod.

Bay A2 has two outstanding Ladies' Men in Parker and Finch, but Rod McInnes makes conquests wherever he lands (London is the latest conquest). Then there is this chap Kassich. His heart is as big as his feet, but the ladies like both his heart and his feet. The way he struts his stuff at the Masonic dance is a revelation. In fact, the Thirty-second shows remarkably good judgment when it comes to picking the ladies. Frankly, we can't quite understand how they get away with it—but love is funny that way.

We regret that we haven't time to mention all the boys. They have their faults, but they have their virtues, too. They are a mighty good sample of Canada's best, and when the pressure is on, they'll show up to good advantage.

* * *

SPORTS

By C. P. T.

L.A/C McNulty and A/C Galloway of our

THE AIRCRAFTMAN

Badminton team are doing very well; in fact, they are hot.

The Volleyball team is one of the best and have to be reckoned with. Basketball team is coming along well, but it needs more support, so get in and do your bit, fellows.

Great things are expected of our up-and-coming Boxing team and we have no doubt they will be bringing home the bacon. Our present team is as follows: A/C McGee, A/C Saunders, A/C Bond, A/C Jensen, A/C Lewis, A/C Kelly, A/C Corothers, A/C Simpson.

Come on, you sideliners, get into the swing with our sports section. If we work in sport half as hard as we play, we can take the various sport events in our stride.

* * *

OUR AIM

By A/C Duddridge, L.

43rd Entry, Squadron 2, Wing 1

They lust for power, blood and loot,
As for quick victory they shoot.
Roaring and tearing o'er peaceful lands
That once were tilled by plowmen's hands.
No, they think not of happy towns,
As black-crossed planes come diving down.
For 'tis too much to think that they
Could from their evil manners stray.
But there is another story there,
Of tender love of homes to care.
'Tis things like these that send our men
To fight the beastly hoarde again.
A God-given land is ours to save;
We'll fight to victory or the grave.
Thus living or dead when strife doth cease,
We'll have signed our final lease on peace.

* * *

Squadron 3, Wing 1

GOOD LUCK C. O.

As we go to press we are saying good-bye to our squadron commander, F/O Davidson. We wish him the best of luck at his new posting and if he has the same regard from his men there as he had here, we know that he will be happy.

We are afraid that the presentation which we made does not adequately express our appreciation but, at any rate, we are for him all the time.

* * *

SPORTS

By A/C Werier, G.

No. 3 Squadron has aroused itself. We have formed a basketball team, but some how or

other we seem to have all the "shorties" on the Station on our team. We lost more games than we won but, win or lose, we have had plenty of fun.

But the worm has turned. Since the beginning of January we have won all our games. It seems only fair to give the credit where credit is due; the following boys, helped by Cpl. Maxfield and Sgt. Mayne, are the boys who have achieved the change:

Forwards—Rutherford, Eshow, Crowder, E., Adams, Fisher (Vice-Captain), Crowder, F., McGraw, Houston, Frick, Hill, Hughes, Massey.

Defence—Werier (Captain), Seratin, Lozanski, Stewart, Stibbard, Toby.

* * *

WITHIN THESE WALLS

By Cpl. Stanley, W. S.

"Stone grey walls do not a prison make,
Nor iron bars a cage."

Someone else wrote the above quotation; but it does very well here in St. Thomas.

If these walls could speak we might hear strange things. LISTEN! I think I can hear them now!

"I was taken from the quarry, hewn and placed by expert hands to form these massive, spacious buildings. I wonder why!"

"They said it was a hospital. Somehow I doubted it. Was I right?"

"A few patients were brought to me, then taken away. I wondered why!"

"Soon an army of 'Men in Blue' came, and my name was changed to 'The Royal Canadian Air Force Technical Training School.' I liked the change!"

"Because now I can hear happy voices, shouting, singing and laughing. I am happy!"

"Soon I was not alone, for new buildings took their places beside me. No longer was I lonely!"

"Each week sees old faces leave and new ones take their place—to keep me full of life!"

"I can watch life come and go; still I remain firm and constant. I'll not complain!"

"I shelter those who train for things to come, so I guess I do my part!"

"I shall end my mutterings and settle down to my duty of sheltering those stalwart 'Lads in Blue'; and I'll be happy!"

"Until I speak again, 'God bless you, Gentlemen of the King'."

* * *

JUST RAMBLING

By "Tex" Pearce

Well, boys, this is one issue of "THE AIRCRAFTMAN" for which I didn't expect to be writing. As luck (no cracks, please) would

THE AIRCRAFTMAN

have it, I am still here. But since this is my last appearance on the Station as a scribe, I want to say that I have really enjoyed trying to make the odd wise-crack and trying to get a few laughs from you lads. I know that there will be someone right behind me who can do a better job, and I truly wish him luck.

* * *

One of the older lads from "South of the Border," while visiting in Detroit, was accosted by a rookie in a U. S. uniform.

"Hey, Pop, what military school are you going to?"

Our even-tempered Yank replied: "My boy, I am a member of the Royal Canadian Air Force."

The rookie retreated in confusion.

* * *

Your writer once had a similar experience. He drove up to a "drive-in" in a truck one evening. The waitress hailed him with: "Say! What truck line issues those nice uniforms?"

* * *

The good old 27th finally made the grade. It has representatives all over Canada. The 40th is now champion noisemaker here. It is doubtful whether the noise will equal that of the 27th. However, the 27th made quite a record for itself by having the highest average of any entry going out of this School. That is something to ponder upon. It was also the smallest entry to graduate.

* * *



* * *

IT REALLY HAPPENED

By B. M. Hanson

The other day a certain lad from the 30th Entry encountered a new trainee on the hall.

The youngster was obviously a rookie because his overalls were spotless. The veteran saw a chance for a little fun. "I say, old chappie, could you by any chance show me the way to No. 3 Squadron?"

The new trainee was proud to have a chance to show his newly acquired knowledge. With calm confidence he led the way through the halls and gently deposited the taunter in his proper bay with these comforting words.

"After you have been here a while, Pal, you will be able to find your way around."

* * *

Squadron 1, Wing 2

ACTIVE SERVICE CLUB, LONDON

Airmen who have not visited the Active Service Club in London don't know what they are missing. This Club is a fine example of the esteem in which the boys of His Majesty's Service are held by the general public and in particular the people of London.

The Clubrooms are housed in the building adjoining the Y.M.C.A. The place is fitted out with a lounge and reading room. Bridge and ping pong facilities, a well-stocked canteen and a number of delightful girls are there to make a foursome at bridge or play partners at table tennis.

The writer is one who, through the Station Y.M.C.A. Office, has gone to the Club and from there was sent to a London home for dinner. I had one of the finest Sunday evenings of my life.

So take a tip from me. Go to the Station Y.M.C.A. Office for your slip to London, and let the Active Service Club in London do the rest.

* * *

STATICS AND STATISTICS OF E. 4

(Nesters Angels)

By A/C Patterson, S.

In last month's edition of "THE AIRCRAFT-MAN" I noticed an article by one of the boys of the A. E. M. under the heading of "Identification for Mechanics." This suggestion, of some distinguished mechanic, in my estimation, expresses the feelings of most of us at the E. & I. School. Of course, as the rest of the boys point out, we don't profess to be the mechanics responsible for keeping the fliers flying, but we as Electricians and Instrument Mechanics feel we should share in this credit. After all, how could they start the motors without the perfect functioning of the ignition system and

THE AIRCRAFTMAN

the generators, etc. Then, after the pilot gets her up in the clouds on a frosty, dark night, how could he carry on without the perfect functioning of his instruments. Again, the bomber can't drop a single bomb or "Sparky," send or receive a single message without the services of the E. & I. men. A few electrons and some molecules (those important little particles which are the foundation of our profession and of everything in the universe) to fasten on our arms in plain view would be welcome.

* * *

An Instrument Maker wants to know:

If it is true that:

Electricians are given a knowledge of oxygen so that they may carry the cylinders for the I.M.S., and do the

A.E.M.'s maintain the ENGINE INSTRUMENTS,

A.F.M.'s maintain the AIRFRAME INSTRUMENTS,

Electricians maintain the ELECTRICAL INSTRUMENTS,

Observers maintain the NAVIGATIONAL INSTRUMENTS? ? ? ? ?

And where do the Technical Storekeepers spend their time between meals.

* * *

Joe wants to know why a rotor should be diabolically balanced.

And if—Willy will save 90 bucks, or if Main-law will still walk.

—Sammy will EVER get paid.

—I.5 are posted to TTS and attached to the Tea Gardens, or Vice-Versa.

—A Descrip. must be in the service six months before he can be a Flt/Sgt.

—Cpl. Scanlon will be so enthusiastic the next time "Sarge," Station canine mascot, has a happy event.

—There was once a majority of Cpls. in the Cpl. Mess.

* * *

Who was nearest the switch in the Drill Hall when the lights went off on New Year's Eve?

What did Cpl. Nestor say when someone hollered "Bring my pants back?"

* * *

Technically speaking, would Sperry's Auto Control acknowledge Mk. IA.?

* * *

If Col. Watts will be allowed to skate THIS winter?

* * *

How many more times is the same Electric

Razor going to be raffled on B Floor before it has finally given out?

* * *

A FEW BRIGHT ONES

Postal to wife from vacationing husband: "Having wonderful time. Wish you were her."

* * *

A studious student named Joe
Studied eight nights in a row;
Came the day of the test,
He passed with the rest,
Which just goes to show.

* * *

A farmer once called his cow "Zephyr,"
She seemed such an amiable hephyr;
But when he drew near
She bit off his ear,
And now he is very much dephyr.

* * *

"You in the back of the room, what was the date of the first aeroplane flight?"

"I dunno."

"Well then, can you tell me when the first parachute jump was made?"

"I dunno."

"You don't! I assigned this stuff last Friday. What were you doing last night?"

"I was out drinking beer with some friends."

"You were! What audacity to stand there and tell me a thing like that! How do you ever expect to pass this course?"

"Well, I don't, mister. Ye see, I just came in to fix the radiator. I'M the janitor."

* * *

This month's absent-minded contest was won by a salesman who was asked if he had a wife and replied, "No, but I have something just as good."

* * *

Comparison: If an Orange and an Electron, side by side, were magnified until the Orange's size was as great as that of the earth's, the Electron similarly magnified would still be invisible to the naked eye.

* * *

SPORTS

Squadron 1, Wing 2, certainly came to life in January in a sporting way.

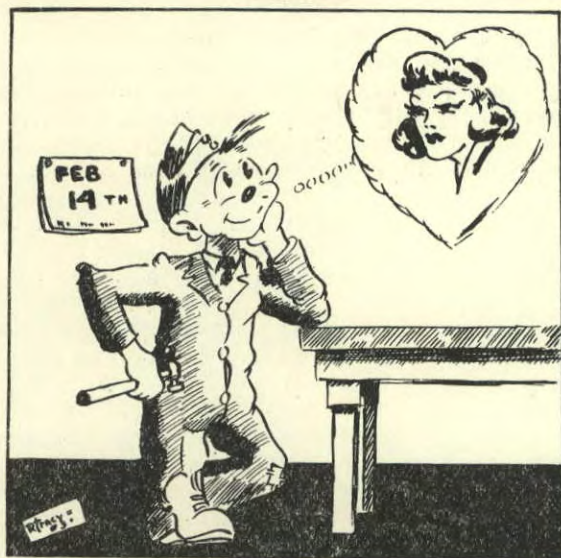
A basketball team that was in there fighting all the way.

A volleyball team that fiercely contested every point in every game all month.

A badminton team that gave everything they had all month.

No, we haven't won the Trophy, but we have had activity aplenty. We have had fun and good sport, which is exactly why we go to the Drill Hall Monday and Tuesday nights.

THE AIRCRAFTMAN



Squadron 2, Wing 2

HERE AND THERE

By Sgt. Carroll, A. W. J.

Having been editor in two of the squadrons, during which time it was my privilege to congratulate Squadron 2, Wing 2 on winning the Commanding Officer's Trophy, it is now my privilege to write for this Squadron. It was interesting to find that, while many members of the Squadron were proud of their record of holding the Trophy for three consecutive months, many felt that it would be in the interest of keener competition if some other Squadron could win the Trophy for this month. However, we have no intention of giving the Trophy away and the winners of the Trophy, whoever they may be, will have to overcome the determined efforts of our Squadron.

The question of some form of identification for the various trades to wear has created sufficient interest to bring about several hot discussions. Since it was the A.E.M. that brought up the question, it is suggested that Gliders are known to fly without engines and that an A.F.M. would feel more at home around one than an A.E.M., or would they like to discuss the point?

It is noted that the smallest airman in Entry No. 000 is seriously thinking of remustering to motor crew. We wonder why.

We would also like to know if there is such a unit in the Foreign Legion and if so, why.

The height of futility, says the Sidewalk Cynic, is the German's use of screaming bombs on their invasions over Scotland, as if such tactics would frighten a people who have been used to listening to the bagpipes for centuries.

Dad criticized the sermon, mother thought the organist made a lot of mistakes, sister didn't like the choir's singing, but what took the wind out of their sails was the remark that little brother made: "I think it was a darn good show for the nickle."

The whistling 38 entry have dry mouths from whistling rusty tunes—aren't there any new numbers in the gang?

Some say we'll never file again, but we are wondering if we'll ever splice again or will our fingers last that long.

At least the lads on the third floor are that much closer to Heaven. Better keep out of the tunnels or you'll have the devil to pay.

BOXING

Another month and more honors for 2 Squadron, 2 Wing Boxing Team.

They took 5 points out of 11 to win the C.O.'s Trophy for the Squadron this month.

The team has proven themselves to be the best on the Station since W/O1 Stubbs organized boxing here.

Helping to set up this record is one outstanding boxer, Jerry Despres, who has 208 professional fights tucked under his belt; none with whom he has been matched on the Station has stayed more than one and a half rounds in the ring with him.

Harpell is another lad who fears no one in the middle or light-heavy class and has a fine amateur record in civil life.

Hamilton is the most outstanding beginner and should go far with dynamite he packs in both fists. Another classy beginner is Fletcher, who stacks up against anyone in his class.

Mezies is a good welterweight and has given several fine performances, including that of winning the Welter Championship.

Fleurie has done a fine job in carrying the lightweight flag for the Squadron.

Honorable mention to Yaeger, Basinski, MacIntosh, Desparrois, Weymark, Le Deau, Gleig, Dickinson and Howard have all helped by hard training and fighting to win the Trophy for our team.

"Dickie" Dean, the team captain, has done more than anyone to whip this game of leather

THE AIRCRAFTMAN

pushers into shape and his leaving will be surely missed by all the lads. But the reins are being handed over to Norm Grayson who, with plenty of experience as manager and boxer, will assure a winning team for the months to come.

We would like to know who the dark horse in 3 Squadron, 1 Wing is, since he asks a tryout with Jerry. Who the team captain is who would give his stripes away to beat our team. When will we see some of the new men out and at it—such as Goss, Kaufman, Maddess, Hughes, Games and a number of others. Come along, lads, it's great sport and a healthy one.

* * *

LOCAL PILOTS

Back a couple of issues of "THE AIRCRAFT-MAN" we read about who's who in continental flying. However, perhaps it would be of more local interest to know about some of our own boys. Many of our famed and not quite so famed flyers and instructors in the Service now have seen service in Commercial life as bush pilots.

Some of these lads have been flying since the last Great War and have flown hundreds of hours in the north and western wilderness under conditions found nowhere else in the world. This experience has not only made them some of the best flyers in the world but make them of great value to the Service.

One famed forestry pilot rushed to Ottawa at the outbreak of the war and is now instructing on Lynk Trainers at Trenton. Another, a younger chap, holding a half dozen licenses, left his freighter's craft to give instructions at Borden; still another wealthy commercial operator rushed to the colors to serve on patrol duty out of Jerrico Beach. From the ice-bound shores of the Arctic, from the green wilderness of the north, these sturdy flyers made their way, and today their aircraft lie idle, beached or dismantled until this war is over, mute evidence of a once colorful and flourishing business which made Canada the greatest freighting country in the world. They have helped to open up thousands of miles of country, served its peoples faithfully through thick or thin, good and bad weather, and have always come out on top. I have seen these lads leave on mercy flights and return successfully, through weather that would stump a homing pigeon.

I have seen these unassuming pilots take the place of doctors, midwives, padre and policeman, serve as explorers, hunters, photographers and writers and never did they stop to wonder if what they did was just the right thing to do; an emergency had arisen and they met it.

Combatting all odds, these intrepid flyers carried on, and some of them still do, bringing civilization to the wilderness and resources and wealth to the cities. Work, great work; research, crime, governmental business, mercy, trapping, lumbering and tourist flying has been their daily lot. This is the experience they bring to the service. This is what makes the Royal Canadian Air Force, in part, what it is today, and every Canadian and Britisher is proud of them.

* * *



* * *

Squadron 3, Wing 2

EDITORIAL A DIVINE RIGHT

By A/C McCaskill

It has been said that one of the divine rights of the Englishmen is the right to grumble. If this is true, most airmen must be English in spirit if not in origin. The airman grumbles if he does not get his meals; he grumbles when he does get them. He grumbles when he has to get up early and he grumbles when he's called too late. He grumbles before pay day and he grumbles afterwards.

But in all this grouching, there is no ill-feeling. For the most part, it is merely a matter of finding something to talk about. Just ask the grumbler if he would like a discharge and after some evasion he will admit that he likes the service and is not anxious for the day when he will leave it.

Let's keep it this way—grouch and let off steam. We know that there is no bitterness behind our grumbling, but outsiders might get the wrong impression of our attitude towards

THE AIRCRAFTMAN

the service. It is all very well "to say it with a smile" but it is a lot better to leave it unsaid. If you must grouch, grouch amongst yourselves *within the school*, not outside.

* * *

STATION RAMBLINGS VIA SQUADRON 3, WING 2

By G. Jorgenson

In accepting the challenge of Squadron 2, the boys of Squadron 3 were no slackers, and to date are a formidable threat towards dethroning the cupholders.

According to the "Sarg.", the volleyball team is the crack team of the Station, while badminton and basketball players, as well as boxers, are turning in a good round of points.

We think we have some first-rate hockey material among the boys, and are looking forward to the inter-squad. competitions with the keenest interest. "Support your team, fellows, by turning out to games and practices."

One of the boys from our squadron, representing the Senior Station team, has suffered a severely sprained ankle in a game with Brantford. "Our sympathies and good wishes to you, Bill."

What's this current rumour about the 35th being such a crack drill team? For further information, watch them on parade.

An interesting feature in squadron activities was a discussion held in 7B Bay during the Christmas holidays. The topic was: "Can a Nation at War Celebrate Christmas?" The very spirit in the Bay should have overwhelmed the "cons," but nevertheless, it took a few of the boys with clear-cut ideas to bring in the affirmative.

If we did not take the opportunity of driving home the ideal behind the old phrase, "Peace on earth and goodwill towards all men," we may lose the basis of our war aims.

That's what we're fighting for, boys, and woe betide us if we forget it—especially the day Peace is declared.

FLASH!! All members of the original 35th are asked to watch for date set for wind-up party. We're going away soon, fellows, so let's all get together on this bang-up farewell.

* * *

32nd ENTRY

By "Herbie" Brailsford

A/C2 Brown (in a babyish tone): "Has anyone a stamp for an A/C2?" He keeps it up for hours.

A/C2 Bishop (with a far-away look in his eyes and in a mournful voice, singing): "I

wonder who's kissing her now."

A/C2 Browser will take on all comers. He feels very, very tough with his newly acquired black eye. (Did he get it from a door? No.)

A/C2 Coderre: "If zey evaire tie my hands I could nevaire pass my exams, because I need them to talk with."

6 foot 4 inches "Kid" McLeod can always be depended upon to say: "Now, back in Regina . . ." You'll know the "Kid"—he plays the pipes, drat him.

* * *

The picture of the pretty blonde in 9A. Who is she?

* * *

Famous Sayings

Bill Murray: "I've lost my teeth."

Lordy Thompson: "I'll do no such thing."

Ben Rieves: "I'm going out and get me a job."

Tim O'Brien: "I'll break every bone in your body."

G. S.: "Lend me a dime."

Percy: "She's nuts about me."

Every noon from Everybody: "Who's got a smoke?"

* * *

Headquarters Squadron

Move over, you guys, and let a Real Squadron in! Yes, we mean H.Q. and if you don't think we are so hot, meet us in the ring, meet us on the ice—meet us in the Soda Bar? And speaking of Soda Bars, we are promoting a tradition in the Air Force calling for other members of a unit to treat the H.Q. boys when they see them downtown. So here's a chance to meet our obligations? ? ? When you spot a H.Q. man downtown just say: "Have one on me!" Surely you wish to repay the nice, excellent cooks who so painstakingly prepare that luscious grub for you, and the mailman who toils, unhonoured and unsung, trying to read ditto French when he can only speak English. And don't forget the pay boys: the boys who dish out a measly half of that forty or fifty bucks a week you say you earned when you were outside. The pay boys should rate two or three. And, oh yes! there's the clothing lads, who so ungrudgingly and so lavishly hand out socks, shirts, underwear and even new uniforms. They get thirsty too—the clothing staff, not the uniforms. So there you are. If you want to behave in the best tradition of the Air Force, and at the same time keep in good with the boys of H.Q. don't forget to say "Have one on me!" And hey! don't forget to pay for it.

THE AIRCRAFTMAN

But, getting back to business, here we are. Equipment, Cooks, Pay and Accounts, M. T., Canteen, Security Guards, Clerks, Firemen and others. And last, but by no means least, the Service Police. We hope you'll like us.

* * *

MUTTERINGS FROM THE ACCOUNT SECTION

Congratulations to the "Melancholy Dane" but what does he mean going around mumbling, "To be (paid) or not to be (paid), that is the question?"

* * *

Heard at the dance last Friday:

L.A/C Grondin: The girls tell me I dance like a zephyr.

Betty: Yes, a Lincoln Zephyr.

* * *

The boys in the Account Section, under the leadership of Corporal Symes, have challenged the Clothing Section to a game of hockey, hoping to get even for that day last summer when they had that famous baseball game.

* * *

L.A/C Lundy: Who was that lady I saw you with last night, Jack?

A/C Taylor: That was no lady; that was a friend of Symington's.

* * *

Is Corporal Jones really going to publish a book to be called: "The Diary of a Duty Cat Man," or "How I Kept Kitty So Pretty?"

* * *

Can it be true that L.A/C Olliver was seen buying a paper?

* * *

We nominate A/C Stafford for the snoring championship of the Station; he is in a class by himself. "Should be in a room by himself," mumbles "Larry."

* * *

OUR SQUADRON SPORTS

Now that we have been able to talk some of the members of our Squadron into taking that "spare tire" off their waistline we are faring very well in our quest for the C.O's Trophy. Our basketball could stand a little improvement, but when the Security Guard is reinforced we won't have to worry about that. If our Badminton and Volleyball teams keep going at their present gait we should cop both of these. Our Drill Squad, which will be composed of 20 Trainee Cooks and 20 Security Guard under the very able drill experts, Sgts. Bernie and Whitehead, should do very well. So, what do you say, boys; let's go out and win that Trophy just to see what it feels like to be

champs and show the other Squadrons how good we are.

* * *

L.A/C "Robbie" Robertson hates to hear anyone say the word "move."

L.A/C "Ted" Clark was spending a lot of time looking in the snow on the evening of 10-1-41.

All the noon our "wood-cutters" jump when they hear those booming words, "Down the basement."

* * *

GENERAL ITEMS

The hospital is doing a rushing business. Old Man Weather or something has got a lot of the boys off their feet. Current hospital population is about 250. The medical staff has its hands full, therefore ask the co-operation of all personnel in keeping things running smoothly. Keep to the specified visiting hours, etc.

Our medical staff is not now the R.C.A.M.C. Henceforth it will be known as R.C.A.F.M.S. Welcome into the R.C.A.F., R.C.A.F.M.S.

* * *

There has been much favorable comment about the cheerful, co-operative and industrious spirit of Headquarters personnel. Keep up the good work, boys!

* * *

Congratulations to Corporal C. Tellen, L.A/C Stimson, L.A/C Villeneuve and L.A/C Barkworth, who have just lost their bachelor standing. May all their troubles be little ones.

* * *

Whatta Life

The second entry of trainee cooks were getting their uniforms the other day and, of course, there were only two sizes—too small and too big. One tiny trainee happened to get one of the latter. When Sgt. Acton paraded us he remarked, rather sarcastically: "I fear that the little fellow was supposed to be 'At Attention'." The little fellow replied in a hurt tone: "Please, sir, I'm 'At Attention,' but the uniform is still 'At Ease'."

* * *

FIRE DEPARTMENT

By Sgt. F. G. Gould

Firemen are fundamentalists. When there is a fire they go and put it out. They never call a council to decide whether there is a fire, and if so, whether it should be extinguished. They hose it first, and do their talking later. They never sit in the fire station while the bells clang and pretend there is no fire, or discuss the political effect of putting out a fire in any certain man's house.

Oh, for the life of a fireman!

THE AIRCRAFTMAN

In case of fire—call the telephone exchange.

* * *

HUMOUR

Bill Harland says: "How about calling a party for forty baldheads? They need a party more than forty redheads."

* * *

Definition of Love: Love is like a piece of apple pie—a little bit of crust and a lot of applesauce.

* * *

Higher Mathematics: A kiss is nothing divided by two.

* * *

Moans and Groans from the Dental Clinic

Airman to Dental Officer: "Sir, you must get tired standing there working all day putting in fillings."

Dental Officer: "Yes, we do get down in the mouth once in a while."

* * *

Pte. Harold Earle, an outstanding figure in the T.T.S. Dental Clinic, is quoted as saying, "Never have so few worked so hard for so many for so little."

* * *

The highlight of the Y.W.C.A. dance last Friday night was the pleasing presence of the Dental Corps personnel. At least, the girls thought so.

* * *

A moonlight rabbit hunt was staged this month in Barday "Gus Angus' back 50." An armed party, commanded by Capt. R. A. Gilbert, drove the rabbits out of the bush into an open field. There stood "Marksman" Capt. H. A. McIntyre ready for the kill. No more than 20 big "Jacks" bounded toward the amazed officer. He raised his trusty shotgun, took careful aim, and let loose with both barrels. Result—a load of rabbit meat to the Red Cross.

* * *

1st Officer (inspecting hole dug by defaulters): "I wonder how they will get all that dirt back into the hole?"

2nd Officer: "I don't know; I hardly think they have it deep enough yet."

* * *

Equipment and Accountant Training School

Editor A/C Bricker, J.

By the time this publication reaches you the 13th Equipment Class and the 5th Clerks Accountant Class will have departed. The 14th

and 6th classes will be in. May we wish them all luck.

* * *

We Wonder

If the banquet committee really took all that time allotted to work out the program and arrangements—or if they really like a game of ping pong—and refreshments?

* * *

What 6 certain E.A's were doing on a certain Sunday in the London Hotel. Could it be?

* * *

Who starts all the D.R.R. (Daily Routine Rumors)?

* * *

SPORTS

Mention should be made of the E. & A.T.S contribution to Sports activities on the Station. While our activities have not been in quantity, they have been in quality without a doubt.

A/C2 Gordon, W. J., of Sherbrooke has made quite a name for himself on the hockey team during his short stay here. He has played in 6 out of 8 games and scored a total of 13 goals with a standing of 3rd for total goals scored. Not bad for a pen pusher and only one bruise on the jaw to show for it.

* * *

BANQUET AND DANCE

Our farewell banquet was held on January 14th in the Grand Central Hotel. Following the banquet we all assembled at the Masonic Temple for our dance.

It was an affair never to be forgotten and one we will all treasure. We must not tarry long upon the food, and we must not tarry long upon the entertainment, but the pay-off of the evening was our acting flight sergeant from the West and his awkward squad. With all due apologies to Flt/Sgt Sisk, it was a grand presentation and without him it could never have been presented.

The Station Band supplied grand music, the girls danced beautifully and all in all "Any complaints?" and our answer "None."

* * *

What some Clerk Accountant would like to know:

To what airman shouldn't one mention "glasses"?

Whether a certain Pupil N.C.O. wasn't just a little bit sleepy one afternoon?

Who really is responsible when WALKER gets the blame?

What did happen to the hat badge?

Is Mary a Hoax?

THE AIRCRAFTMAN

Whether their Corporal can beat our Corporal?

Who the h— can use 156 Equipment Assistants, anyway?

* * *

FOREVER, AMEN

(Tune: "Tipperary")

By A/C2 Clarke

It's a good gang has got together,
It's like the old gang once more,
And the Air Force will forever
Be known on the other shores.

Last time they held their name up,
And they'll do it once again,
For the R.C.A.F. will last forever,
Forever, Amen.

And when they meet up with old man Hitler,
In a place called Berlin,
With Mussolini there beside him,
They'll have forgotten how to grin.
And they'll be sorry that they started
A war they couldn't win,
For the R.C.A.F. will last forever,
Forever, Amen.

* * *

RECREATION CALENDAR

CALENDAR FOR FEBRUARY

SATURDAY, FEB. 1

1930-2130 Hrs.—Cinema film supplied by Canadian Legion.

SUNDAY, FEB. 2

0910 Hrs.—R. C. Church Parade.
1000 Hrs.—Protestant Church Parade.

MONDAY, FEB. 3

1900-2230 Hrs.—Scheduled inter-Squadron games in the Commanding Officer's Trophy Series.

TUESDAY, FEB. 4

1900-2030 Hrs.—Scheduled inter-Squadron games in the Commanding Officer's Trophy Series.
2100-2300 Hrs.—Cinema supplied by the Y.M.C.A.

WEDNESDAY, FEB. 5

Program to be arranged.

THURSDAY, FEB. 6

1900-2000 Hrs.—Volunteer Gym Class.
2000-2200 Hrs.—Inter-Unit Boxing: R. C. A.F. T.T.S. vs. M.D. 1, London, Ontario.

FRIDAY, FEB. 7

2000-2200 Hrs.—Cinema supplied by the Y.M.C.A.

SATURDAY, FEB. 8

1930-2130 Hrs.—Cinema film supplied by the Canadian Legion.

SUNDAY, FEB. 9

0910 Hrs.—R. C. Church Parade.
1000 Hrs.—Protestant Church Parade.

MONDAY, FEB. 10

1900-2230 Hrs.—Scheduled inter-Squadron games in the Commanding Officer's Trophy Series.

TUESDAY, FEB. 11

1900-2030 Hrs.—Scheduled inter-Squadron games in the Commanding Officer's Trophy Series.
2100-2300 Hrs.—Cinema provided by the Y.M.C.A.

WEDNESDAY, FEB. 12

2030-2230 Hrs.—Variety Concert, London Troupe.

THURSDAY, FEB. 13

1900-2000 Hrs.—Volunteer Gym Class.
2000-2230 Hrs.—Inter-Squadron Boxing in the Commanding Officer's Trophy Series.

FRIDAY, FEB. 14

2000-2200 Hrs.—Cinema provided by the Y.M.C.A.

SATURDAY, FEB. 15

1930-2100 Hrs.—Cinema film supplied by the Canadian Legion.

SUNDAY, FEB. 16

0910 Hrs.—R. C. Church Parade.
1000 Hrs.—Protestant Church Parade.

MONDAY, FEB. 17

1900-2230 Hrs.—Scheduled inter-Squadron games in the Commanding Officer's Trophy Series.

TUESDAY, FEB. 18

1900-2030 Hrs.—Scheduled inter-Squadron games in the Commanding Officer's Trophy Series.
2100-2300 Hrs.—Cinema provided by the Y.M.C.A.

WEDNESDAY, FEB. 19

Program to be arranged.

THURSDAY, FEB. 20

1900-2000 Hrs.—Volunteer Gym Class.

THE AIRCRAFTMAN

2000-2200 Hrs.—Inter-Squadron Boxing in the Commanding Officer's Trophy Series.

FRIDAY, FEB. 21

2000-2200 Hrs.—Cinema provided by the Y.M.C.A.

SATURDAY, FEB. 22

1930-2200 Hrs.—Cinema film provided by Canadian Legion.

SUNDAY, FEB. 23

0910 Hrs.—R. C. Church Parade.

1000 Hrs.—Protestant Church Parade.

MONDAY, FEB. 24

1900-2230 Hrs.—Scheduled inter-Squadron games in the Commanding Officer's Trophy Series.

TUESDAY, FEB. 25

1900-2030 Hrs.—Scheduled inter-Squadron games in the Commanding Officer's Trophy Series.

2100-2300 Hrs.—Cinema provided by the Y.M.C.A.

WEDNESDAY, FEB. 26

2030 Hrs.—Variety Concert, London Troupe.

THURSDAY, FEB. 27

1900-2000 Hrs.—Volunteer Gym Class.

2000-2200 Hrs.—Inter-Squadron Boxing in the Commanding Officer's Trophy Series.

FRIDAY, FEB. 28

2000-2200 Hrs.—Cinema provided by the Y.M.C.A.

* * *

ACTIVITIES ORGANIZED BY Y. M. C. A.

Not Mentioned in "Recreational Activities in the Drill Hall"

MONDAY—1930 Hrs.

Maths. Class in E. & A.T.S. Lecture Room
These classes are organized to give aid to Airmen having difficulty with their technical courses because of lack of understanding of the fundamentals of arithmetic and constructive geometry. There are two sections: one deals with elementary work and the other with advanced work. The instructors, A/C2 Bailey and A/C2 Jorgenson, both qualified teachers, donate their services.

TUESDAY—1830-2030 Hrs.

Cinema in Hospital

1930 Hrs.

Camera Club in No. 1 Wing Headquarters
The weekly meeting of the Camera Club is held on Tuesday evening of each week, but the Club Room is open to the thirty to forty members every night in the week. Equipment is available for developing, finishing, enlarging, etc., and members can purchase materials at reduced rates.

English Class in E. & A.T.S. Lecture Room
Especially designed to help the French-Canadian Airmen in mastering the English language. This class, which has an enrolment at present of twelve members, meets weekly under the direction of Miss Helen Thompson of the Alma College staff.

WEDNESDAY—1930-2100 Hrs.

Public Speaking and Discussion Group in E. & A. T. S. Lecture Room

There are about thirty members in this group. This number is much larger on those evenings when a guest speaker is present. The typical program has place for:

- (a) Study of the art of speech,
- (b) Discussion of topics on citizenship as outlined by the Adult Educational movement.

1930 Hrs.

Stamp Club in Y.M.C.A. Station Office

The Stamp Club has only a small active membership, but is supported by officers and men who make contributions of stamps. The Club is organized to help collectors to find a clearing house for exchange, to build up a Station collection and to collect stamps which may be given to the Red Cross for sale. Meetings are held every second Wednesday.

THURSDAY—1930 Hrs.

Maths. Class in E. & A.T.S. Lecture Room
(as above)

1930-2030 Hrs.

Press Club in E. & A.T.S. Lecture Room
(West)

This Club is designed to stimulate interest in all branches of journalism, and to aid in the improvement of the Station magazine, "THE AIRCRAFTMAN."

FRIDAY—2100-2400 Hrs.

Y.M.C.A. Dance, held in the Y.W.C.A., St. Thomas

These weekly dances are held for 110 bachelor Airmen, and are arranged by a committee composed of the Station stenographers, the Y.M.C.A. staff and two Airmen. The floor is rented by the Station Y.M.C.A., and the Station Band provides the music. A charge of 25 cents a ticket is made to meet these expenses. Partners and refreshments are provided.

SATURDAY

Home Hospitality

The main emphasis of this day is registering Airmen for "Home Hospitality." Approximately 80 to 100 Airmen are registered in the Y.M.C.A. Office each week to go to London for Sunday dinner and entertainment in homes. A smaller number are invited to St. Thomas homes.

SUNDAY

Sunday Dinner and Quiz Program

This function is held at the Y.M.C.A. in St. Thomas. The dinner is provided by a group of young ladies each week. The registration of Airmen and the arrangement of programs is carried out by the Station Y.M.C.A. representatives.

* * *

ALLEGED HUMOUR

Sergeant: "That burglar got away, did he? Did you guard all the entrances?"

Policeman: "Yes, but we think he must have left by one of the exits."

* * *

"My dear," called a wife to her husband in the next room, "what are you opening that can with?"

"Why," he said, "with a can-opener. What did you think I was doing it with?"

"Well," replied his wife, "I thought from your remarks that you were opening it with a prayer."

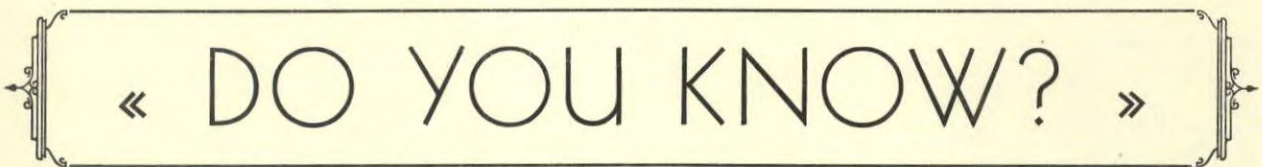
* * *

"Have any of your family connections ever been traced?"

"No; they all got clean away."

* * *

"Eavesdropping again," said Adam, as his playmate fell out of the apple tree.



That the Station padres, Padres Howard and Davies, in Wing One, and Padre Porter, in Wing Two, are glad to lend a helping hand whenever they can.

* * * *

That there is still room in the Station Concert Party for performers and for stage hands.

* * * *

That the Baptist Church invites the Airmen to attend their Fireside Hour held Sunday evening following the service.

* * * *

That it takes more muscular effort to frown than it does to smile.

* * * *

That it is possible to send telegrams from the Station Y.M.C.A. Office.

* * * *

That approximately nine dollars are spent to cure disease to every dollar spent to prevent disease.

* * * *

That Airmen desiring accommodation for their wives and families in St. Thomas may secure a list of rooms for light house-keeping, apartments and houses from Padre Howard, Padre Porter or from the Y.M.C.A. Station Office.

* * * *

That Major Keith Caldwell, crashing after an air battle in the last war, casually, as if getting off a street car, stepped from his plane when it neared the ground, rolled

over a couple of times, got up and walked away unharmed.

* * * *

That the late King George V, in the midst of the fury of the last war, said to Ira Jones, D.S.O., M.C., D.F.S., M.M.: "For goodness sake look after yourself, and don't be reckless."

* * * *

That Wiley Post, famous around-the-world flyer, was an American Indian, as was Will Rogers, his companion on a flight to Moscow, which ended fatally for both.

* * * *

That a good pilot ought to be able to sight another aircraft at least eight miles away.

* * * *

That the Duke of Windsor started training to be a pilot when he was thirty-six years old.

* * * *

That J. I. T. Jones, D.S.O., M.C., D.F.S., M.M., had a special formula for protecting himself when crashing: Taking his legs away from the rudder bar, he tucked them under the seat. Letting go of the joy stick, he grabbed with the left hand the front of the cockpit, and with the right hand took a tight grip under the pilot's seat. In this manner he survived twenty-eight crashes, suffering only a broken arm.

* * * *

That Winston Churchill said about the British Air Force: "Never in the field of human

THE AIRCRAFTMAN

conflict was so much owed by so many to so few.”

* * * *

That General Henry M. Arnold, Deputy chief of staff of the United States Air Force said about the British Air Force: “The battle of Britain, thank God, is not over, due to the speed, energy, tenacity and daring work of the R.A.F.”

* * * *

That Air Marshal W. A. Bishop told a Toronto audience this: “There is no question in my mind that Germany will not be able to produce the quality of air personnel capable of meeting such as we will send forth.”

* * * *

That Joseph P. Kennedy, American Ambassador to England, said: “I saw a bunch of boys in the R.A.F. keeping a very cocky German army where it belonged. I see no hope of a successful invasion of England until the R.A.F. has been defeated.”

* * * *

That J. S. Duncan, Canadian Deputy Minister for Air, told the R.C.A.F. men at Trenton: “It’s up to you young men of today to finish the job we undertook in 1914. . . . I know you, the young men of 1940, will be equal to the task.”

* * * *

That an Italian paper paid tribute to the R.A.F.: “In accordance with our custom not to underestimate the enemy, we must acknowledge that the British Air Force is still notably efficient. . . . Unless the British Air Force is destroyed, any attempt to invade Britain is most difficult and its success dubious.”

* * * *

“PLANE FACTS”

By L/AC Harland, M. W.

A resident of St. Thomas is an air pioneer. Frank Stewart Stirton, Michigan Central fireman, who has an honorary commission in the R.A.F., in 1915, when he was only twenty years old, applied for a basic patent on an entire aircraft. U. S. patent number 1297032 was granted him in July, 1919. Fundamentally, the design of his aircraft is much like those now in use. Mr. Stirton lost money on the venture.

* * *

Major Elmer Haslett, executive of LaGuardia Field, this continent’s largest airport, is lucky to be alive. While on combat duty in

the last war an anti-aircraft shell exploded near his plane, blasting him right out of it. As he hung in mid-air the plane flashed by him. Grabbing the edge of the cockpit, he climbed back in.

* * *

There are 29,600 parts in a Boeing Flying Fortress.

* * *

Bernarr McFadden, publisher of Liberty and Physical Culture magazines, took up flying when he was nearly 70. Then he started hopping about the country on solo distance flights.

* * *

The new German Air Force is only five years old.

* * *

Georges Guynemer, a French pilot, and Major McCudden, V.C., a British pilot, two of the world’s greatest air fighters, were expert mechanics. Both attended to their own machines, examining every detail, and often making necessary repairs.

* * *

Commercial flying in 1939 was 4200 per cent safer than private flying.

* * *

Harry Hawker, famous British airman, made the first attempt to fly the Atlantic, in May, 1919. To give himself a better chance, he deliberately detached his undercarriage after he was in the air. Thus he was the first to fly without landing gear.

* * *

Honorable C. S. Rolls of the Rolls-Royce, Ltd., was the second man to hold a Royal Aero Club pilot’s certificate.

* * *

Squadron Leader Bader, minus both legs, is doing a great aerial job in this war. There was a one-legged British fighting pilot in the last war, who conducted himself with great gallantry. He was Lieutenant Carlin, M.C., D.C.M., otherwise known as “Timber Toes.” The Germans found him hopping around No Man’s Land minus his artificial leg, after being forced down, and took him prisoner.

* * *

More than 50% of fatal private flying accidents result from spins and stalls. The industry is now concentrating on the development of spin-proof aircraft.

* * *

The Wright brothers’ first airplane had an engine of 12 horsepower and a speed in still air of about 30 miles per hour.

* * *

Up until the beginning of this year allied aircraft and guns had shot down more than 500 Italian planes; Britain’s loss was estimated at 80.



TECHNICAL TOPICS

COLD WEATHER STARTING

* * *

The following article, reproduced by the courtesy of "Canadian Aviation," describes a revolutionary method of starting aero engines operating under conditions of extreme cold. While this article will be of general interest to all mechanics, it cannot be too strongly stressed that this method is not at present used by the R. C. A. F. and that no experimental work of any kind is permitted on R. C. A. F. aircraft without the authority of the appropriate Command H.-Q.

* * *

The ingenuity of North American people is well known and evidences of this characteristic may be found in historical records dealing with the lives of the earliest settlers in the country. The Pilgrim Fathers soon learned that they had to combat extremely cold weather and out of this period came the Daniel Boone hat and the bundling bed, which latter had the advantage of conserving heat and salving the New England conscience. Little evidence has been produced to show that modern winters are any less severe than those of three hundred years ago and the problem of maintaining aeroplanes became yet another challenge to a people well used to difficulties provided by Mother Nature.

It appears that the problem of winter flying confronted our own Service in the early 1920's and, at High River, Alberta, certain experiments with anti-freezing solutions were made under the direction of Professor Robb, of the University of Alberta. A DH-9A aeroplane was used for the tests and considerable general engine frosting was experienced.

The introduction of the cabin aeroplane permitted a moderate degree of comfort to pilots and crews operating in sub-Arctic latitudes, and it is believed that the snow hangar came into development while an R. C. A. F. crew operated in the Hudson Straits on a survey of bay ice and fog conditions preparatory to the opening of Port Churchill, which Port was optimistically built as a shipping point for a tremendous annual flood of prairie grain. Possibly the term "snow hangar" is rather misleading as the affair was actually a small hut open at both ends to accommodate the noses of two aeroplanes, over the engines of which canvas curtains could be drawn to shut out the worst of the weather — inside was just sufficient room for a small stove and a work bench.

The reader may well imagine the great fire hazard such conditions presented and it speaks

well for the alertness of maintenance crews that aeroplanes survived with comparatively little damage. On return of an aeroplane to a detachment sub-base, the entire crew would have to manhandle the arrival so that ski-shoes would rest on wooden slats to prevent their freezing to the ice. With curtains drawn about the engine, it was necessary to drain all oil from tanks and place the containers close enough to the fire to absorb heat but not so close as to cause the crew man to awaken during the night in a sweat of apprehension with that awful compelling urge to visit the mooring "just in case."

These operational conditions of course did not obtain when for any reason an aeroplane was away from its base. Then the preheating of oil became largely dependent upon the disposition of the cook at whichever camp it happened to be. To warm the engine before flight, an all-enveloping shroud was drawn over the forepart of the aeroplane and through an aperture in its nether folds the mechanic drew one or perhaps two firepots which with luck were to warm without singeing. The writer recalls an occasion on which two firepots were used for this purpose and when one of those two accursed devices of the Devil temporarily gave up the ghost it gave off sufficient combustible vapor to almost fill the canopy before the lighted firepot ignited the contents. Fortunately the damage was slight but the consequences could have been most unhappy.

It was the gasoline blow-torch about which Mr. Tommy Siers of Canadian Airways wrote in an article published in "Canadian Aviation" magazine for March, 1940. Mr. Siers condemned blow-torches, wood stoves and electric heaters as being not only dangerous but inefficient and a waste of the commercial operator's time. As an alternative to their use he outlined a radical change in flight preparation. The idea is interesting, and with the permission of "Canadian Aviation" the writer quotes sufficient of the article to give the reader a description of the idea which is in common use among commercial companies at the present time.

"In December, 1936, it was brought to my attention that the U. S. Army Air Corps was thinning engine oil with gasoline to bring about a low viscosity oil in all sub-zero temperatures, which would do away with the draining of oil

and applying heat to engines previous to starting them. I must admit, when I first heard of this theory it did appear to be extremely impractical, in that gasoline mixed with oil gave one the impression fire was bound to result. However, in January, 1937, I was fortunate in attending a maintenance meeting at Wright Field, Dayton, O., and in talking this matter over with the engineers attached to the U. S. Army Air Corps. The oil dilution system, as developed by the U. S. Army was far from the wild idea I first thought it to be.

"According to the U. S. Army Air Corps, 'cold oil when diluted to proper viscosity by the addition of gasoline will provide satisfactory lubrication.' This oil dilution or thinning of oil occurs prior to stopping and allows engines to be turned over quite freely, even when exposed to sub-zero temperatures for long periods of time. In addition, the oil dilution system provides proper lubrication immediately after starting and does away with the usual long warm-up periods considered necessary in conventional engine and oil systems."

Essential parts of the oil dilution system:

1. An oil tank in which an internal tank or hopper has been incorporated having a capacity of approximately 1½ gallons. The design of the hopper tank is such that oil circulating through the engine is kept from the main supply which surrounds the hopper. As the oil in the hopper is used up, oil from the main supply creeps or flows in at the bottom of the hopper and, theoretically at least, keeps the main supply of oil and hopper oil at a constant level. The upper end of the hopper is open and connected with the expansion space of the main oil tank.

2. The oil return from the engine either goes through or by-passes an oil radiator, after which it enters the upper end of the hopper in such a manner that the oil flow not only has a downward but also a circular path which assists in separating air from the scavenged oil.

3. From the bottom or lower end of the hopper, oil is piped to the engine and in this pipe is connected a line from the fuel pressure line through which gasoline flows to dilute the oil entering the engine. In the line from the fuel pressure line is a jet or metering device and a shut-off valve which is operated from the cockpit. The shut-off valve has an internal spring which holds the valve closed and fuel can only flow through the valve and line when the knob of the valve is pulled sufficiently to overcome the spring load. This valve is the only control or movable part in the oil dilution system. When diluting oil, the valve is usually held open for approximately four minutes.

4. As the heat from the engine distills the gasoline from the oil as it circulates, it is necessary to extend the engine breather beyond the engine cowl line and away from exhaust pipes or manifolds. According to the U. S. Army Air Corps, this distillation is completed after thirty minutes' engine operation, and in fact most of the dilution is eliminated in the first ten minutes.

* * *

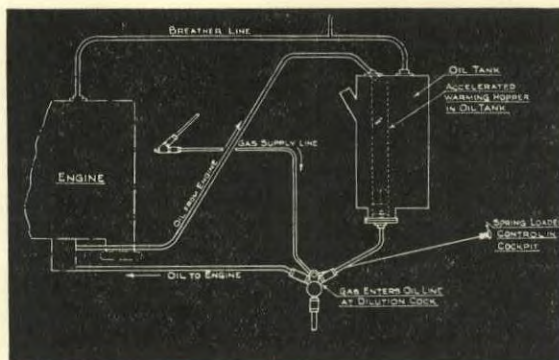


Diagram illustrating installation of the old dilution system. It shows the tank within a tank, the hopper within the main oil tank. When the engine is started, gasoline-diluted oil from this hopper flows through it until it warms up. The gasoline evaporates and oil flows from the main tank as the engine becomes warmer.

* * *

Our tests proved that a little experience is required and certain changes have to be made in order to start engines in temperatures below minus 20 deg. Fahr. This, of course, has nothing to do with the oil dilution proper.

In our tests during the past two years we have found the following changes and additions to be of decided advantage.

Starters.—The direct electric starter is more positive and efficient than the electric inertia starter and we found that whichever one is used, it must first be dismantled, thoroughly cleaned and lightly lubricated with a small amount of 50-50 mixture of utility oil and kerosene. This low viscosity oil allows the direct electric starter to be turned over easily at the lowest temperatures experienced.

Starting Magneto.—When hand starting magnetos are installed, these should be carefully cleaned and lubricated with very light oil previous to the machine being sent out on sub-zero operations and, if strict attention is paid to such details, it will be found that this piece of mechanism is practically trouble-free.

Booster Coils.—If booster coils are installed, they will be found to have certain advantages

THE AIRCRAFTMAN

but must be tuned up in such a manner as to give off high voltage in sub-zero temperatures.

Batteries.—It is well known that batteries lose a considerable amount of their electrical efficiency at sub-zero temperatures and in order to have sufficient electrical energy to start on cold mornings, batteries should be removed from aircraft on the previous night and kept in a shack or warm place until required the next morning. If a good generating system is installed in machines, batteries will not require charging except once in a while.

Priming.—In order to be sure of the engine starting in sub-zero temperatures, a larger primer, having three times the capacity of the standard type, should be installed and priming lines should be attached to five cylinders instead of the usual three. The nozzles in the primer ends installed in the cylinders should have such small apertures that a fine spray or mist will result when the primer is pushed. Such priming nozzles can be obtained from the Lunkenheimer Company.

Starting.—There may be several methods used in starting engines in sub-zero temperatures but the following has proved quite successful: With the switches in the "off" position and gasoline cocks in the "on" position, the engine should be turned over a few revolutions, either by hand or with the electric starter, in order to rid the lower cylinders of any oil seepage; then, with the engine still turning over, push the primer and at the same time put on the ignition switch and turn the booster magnet handle. In the majority of cases the engine will commence to fire by the time the second shot of prime has been given and will be operating smoother by the time the third shot has been given. If the throttle is gradually opened up the oil temperature and pressure will gradually normalize and, in four to five minutes' time, with the engine running smoothly, the machine is ready to take to the air.

There is nothing out of the ordinary in this method of starting, but a certain amount of skill in handling the primer is required, which can only be gained by experience, if the engine is to run satisfactorily in such a short time. Each machine's crew usually run into trouble if they try to hurry the engine and over-prime.

Oil Dilution.—All the improvements in starters, priming and starting methods will be of little use if the crews do not dilute oil according to instructions issued by the originator of the idea, but, on the instrument board of each aircraft is a notice which clearly points out, under the head of "Shutting Off Engine," "Before stopping, pull out and hold oil dilution

control valve handle for four minutes at engine speed of 800 r.p.m. Switch off engine before releasing handle."

The instructions are satisfactory for temperatures from plus 32 deg. Fahr. down to sub-zero temperatures and, as no one can very well estimate tomorrow's weather, it pays to over-dilute rather than under-dilute. By this it is meant that if the air temperature happens to be plus 10 deg. Fahr. when the engine is shut off, it is far better to dilute four and a half or five minutes, as the air temperature next morning may be minus 20 deg. Fahr. and a loose engine has a better chance of starting than one which is stiff due to insufficiently diluted oil.

The oil dilution system has numerous advantages. One of the important considerations is reduction of the fire hazard which exists when blow-torch heating is used. There is a saving of oil, draining not being necessary; this also means that the danger of foreign matter entering the oil is reduced.

Using this system, the aircraft is ready for service in five minutes after starting. This point alone represents a distinct saving in bad weather as it is not necessary to prepare the aircraft for flight until the weather is satisfactory. By the old method it often happened that one would heat up and draw oil several times before the flight actually started.

There are many other advantages which are obvious, such as the elimination of extra equipment (blow-torches, etc.) and saving on the engine because of immediate lubrication.

To date we have examined and overhauled two engines which have been operating with the oil dilution system for 671 and 725 hours respectively and the condition of the parts was very good, in fact it was better than that of engines which had not been run with oil dilution. The 725-hour engine was the cleanest we have seen, in that there was practically no carbon on the pistons or cylinders and the varnish on the master and articulating rods was just about non-existent. The 671-hour engine did not have an oil change from the time the engine was installed in the machine to the time it was removed for overhaul. This may be difficult to believe but we now have proof that with the oil dilution system, in which a hopper oil tank is incorporated, oil changes are a thing of the past."

In conclusion, it is felt that it would be superfluous to add to Mr. Siers' remarks. It is pointed out, however, that the material quoted represents the findings of engineers operating in out-of-the-way places for commercial com-

THE AIRCRAFTMAN

panies and is not intended as a guide for the experimentally inclined mechanic who feels that his engine performance might be improved by the incorporation of an unauthorized modification.

May I express my appreciation of the kindly co-operation of Mr. Ronald A. Keith, Editor of "Canadian Aviation," in the preparation of this article.

* * *

NOTES