SGTS. MESS

# TEE EMM

Vol. 4. No. 11 February 1945

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# TEE EMM

February, 1945

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*Pilot Officer Prune says—*
*"Take* Tee Emm *regularly! Prevents that Thinking Feeling!"*


*"I hope that these Training Memoranda will continue to be as widely read and studied as they have been during the past three years. It is impossible to exaggerate the importance of constant training in ensuring the highest operational efficiency"*

*Marshal of the Royal Air Force,*
*Chief of the Air Staff*

# WHOSE FAULT REALLY?

ACCIDENTS caused by human error rather than by mechanical failure are not all due to those humans flying in the aircraft or even to those humans who service it. Much of the responsibility may rest with those higher up.

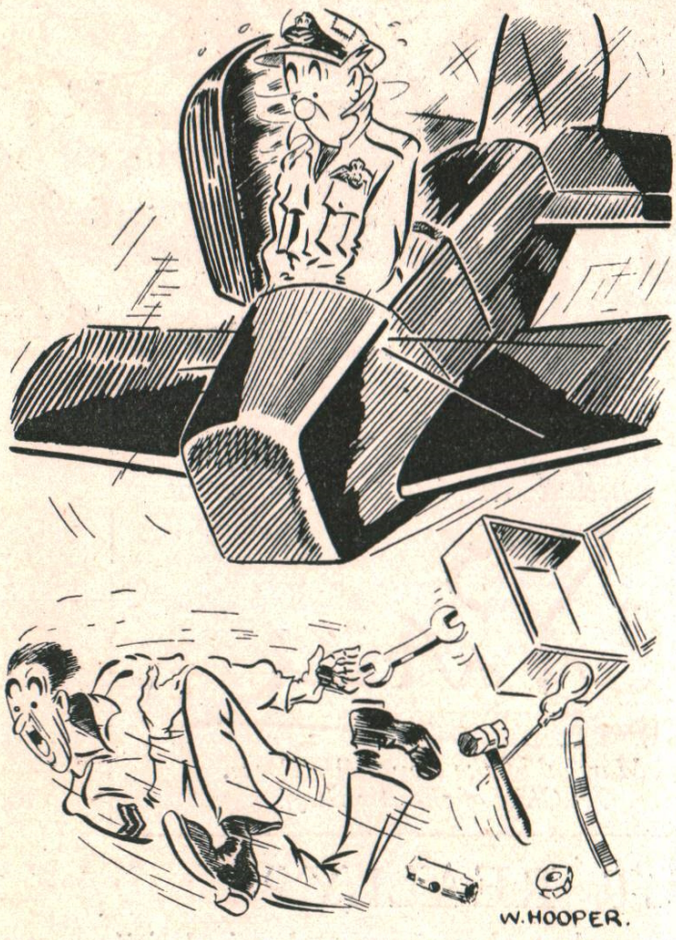
For instance, not so very long ago, four people were killed and others injured by what was definitely a pilot's error of judgment in landing at night. *But*, we ask ourselves, how exactly did he come to make it?

Well, we find it was simply because he was inexperienced in night flying. He had been with his squadron for 5 months, yet during that time he completed only 94 flying hours, 28 of them at night. His last night-flying practice had been $4\frac{1}{2}$ months previously. In short, lack of recent experience in night flying was an important contributory cause of the crash.

Now was that entirely the pilot's fault? Should not, we venture to ask, his Squadron Commander have avoided detailing him to fly operationally at night when he had not practised for $4\frac{1}{2}$ months? Should not the C.O. of his Wing have insisted that Squadron Commanders saw to it that all pilots who were wanted to do night flying had regular practice? Should not even, perhaps, the A.O.C. himself have checked up on all of them?

Maybe if they had, the accident would not have occurred. So watch it!

# IS YOUR I.F. UP TO SCRATCH?




*Prune never quite got the idea of the Link Trainer.*

WE saw a film the other evening, in which the tough guy was sent to a penal settlement, and since he took an actively poor view of the discipline there, he soon found himself in the " Sweat Box," a sort of darkened solitary confinement cell. This for obvious reasons made us think of the Link Trainer, that much maligned, but intensely useful, piece of machinery. We say " intensely useful," meaning as long as you have a good instructor, in which circumstances it can be of inestimable value to the pilot.

Of course, Prune doesn't like the Link, and never did. In his E.F.T.S. days, his instructors were reduced to nervous wrecks in trying to put him on the right road, and at S.F.T.S. a couple of them had to go into a nursing home for six months. And when (bearing his usual charmed life) he got his wings, Prune swore he would never again enter a Link voluntarily.

Unfortunately, however, he found himself posted to a Bomber Command O.T.U. where, to the amazement of all, he suddenly showed unusual keenness in wanting to get through the course.

But—and here is one point—Prune and others of his ilk found themselves staggered by the amount of Link Trainer practice that they had to undergo, and they didn't see the use of it, and why, and what the hell, and so on. To be precise, they had lost sight of the fact that to be an efficient pilot in Bomber Command your instrument flying must be of a high order. Indeed, it has become increasingly important; for the faster and more high-powered the aircraft, the faster the reaction needed, and the more reliance to be placed on the instruments rather than on that feeling in the seat of the pants.

Now our Link Trainer Instructors are pretty wideawake types and are extraordinarily keen on their job, so when a young Prune gets to their section and shoots a line about how he flies in cloud by the attitude of a bunch of keys hanging on the panel, they nod patiently and try not to grind their teeth. For they know that soon the young Prune will discover that he is assessed on his Link show, and that it is closely compared with his flying—at which certain doubts will seep into his mind. He will find that he is sadly out of practice and below

average generally, and that it is almost impossible to catch up in a week or two the years that the locust has eaten. And that discovery will be for the good of his soul—though it will not restore the years.

To any pilot who has conscientiously done half an hour per week on the Link Trainer, instrument flying of any sort presents no difficulty. For those who have neglected it, it naturally becomes a bind. The Link instructors do their best in such circumstances, and give you all assistance and all the gen possible, but don't, however, try to blind them with science plus a recital of what knowledge you think you possess. They know *all* the answers and most of them have many flying hours to their credit. With all this assistance, even the young Prunes find themselves improving, and discover that the Sweat Box of their past is not the instrument of mental torture that it used to be, nor are the instructors really gloating sadists.

So if you wish to be efficient with your I.F., don't neglect the Link, not even on the specious excuse that it doesn't handle like an aircraft. The instructors are fully aware of this and will explain that it is a minor point when one remembers that in I.F. " feel " must be ignored, for the Link's main purpose is to reproduce on a panel the same reactions that are found in actual flight. They may also point out that though practice at the nets is not like a game of cricket, nevertheless one cannot become a good player without regular net practice. In the same way, Link practice improves one's I.F. to a remarkable degree if taken in small regular doses.

So off to your Link Section, all to whom this applies, and have a go. Practise your I.F. with full bumps in order to build up the interval between fatigue periods, and soon you will see how during them your I.F. falls off less and less. Soon you will find that you are able to read the instrument panel as a whole rather than concentrating on single instruments in the manner of a child learning to read, who spells each word before its meaning becomes clear.

In fact, you may even learn to fly really well.

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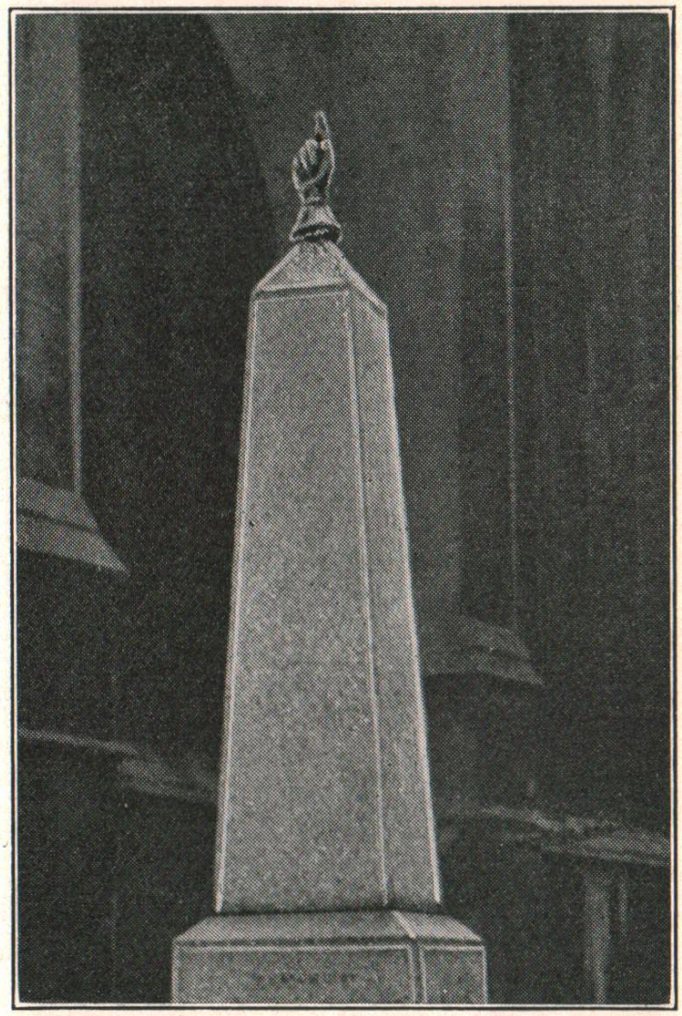
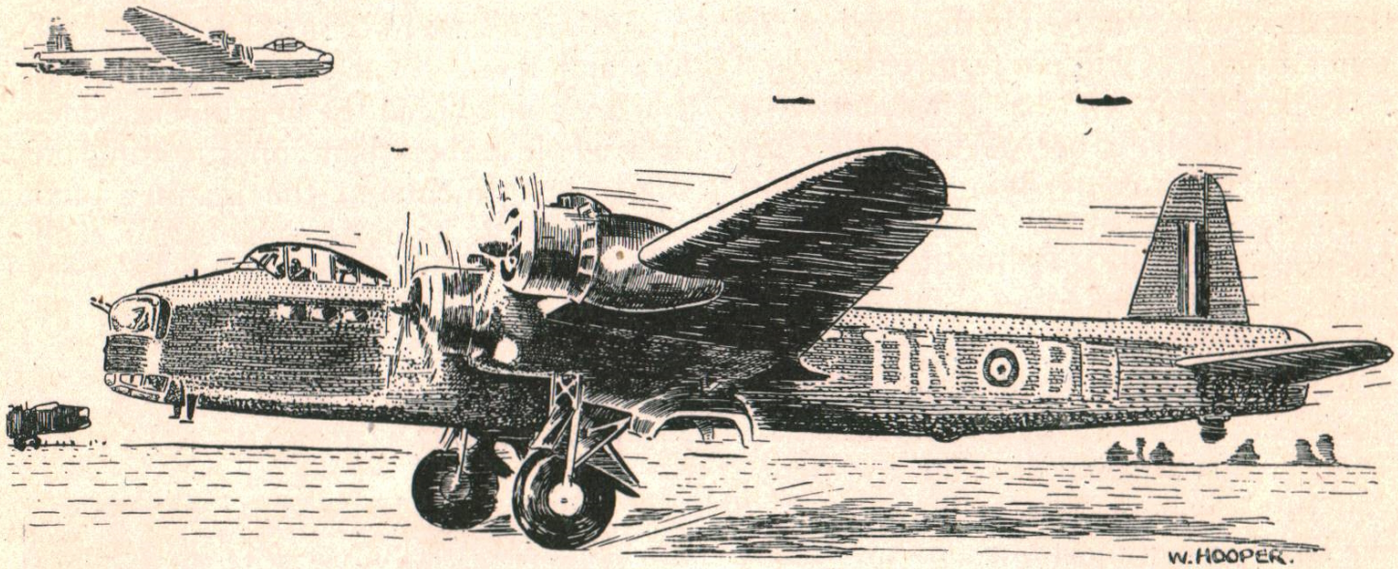
## BELIEVE IT OR NOT



*This tombstone, in Melton Mowbray Churchyard, does not, as it happens, belong to the Prune family.*

# LANDING IN BOMBER COMMAND




WE'VE been requested from various sources to print a short article on B.C. Standard Landing Procedure from the aircraft's point of view, as being of general interest to those not in B.C.—and incidentally perhaps to those in B.C. as well !

So here goes.

Aircraft should approach the airfield at 2,000 feet, or below cloud—whichever is lower—if not directed otherwise by W/T broadcast. On reaching the circuit, defined by the outer circuit lighting, they should normally be showing navigation lights.

At the point of entry into the circuit, *i.e.*, at the first lead-in lights of the runway in use—and after identifying the airfield by its illuminated letters—the aircraft should make its first R/T call, giving petrol endurance in minutes to the nearest fifteen minutes, if the endurance is one hour or less. Station aircraft call signs are to be used at all times.

The aircraft will then be given either " Prepare to land," in which case it at once comes down to the landing circuit ; or it will be given a height to fly, above or below 2,000 feet ; for the 2,000 feet circuit is only the entry height and is kept free of stacked aircraft. The actual landing circuit is generally established at 1,000 feet, though it may vary according to weather or the situation of the airfield. Aircraft should always circle to port, with the circuit lighting on the port side.

As each aircraft lands, an aircraft from the next higher circuit is given the order " Prepare to land," on which it switches on upward and downward identification lights and acknowledges. It then loses height down to the landing circuit, taking up position at the correct distance behind the preceding aircraft on that circuit. On reaching a point on the downwind leg of the circuit, opposite the middle of the runway, the aircraft will switch on its nose light.

When an aircraft actually in the landing circuit receives the order " Prepare to land," it again acknowledges (repeating the order) and proceeds to lose height round the circuit so as to arrive at the Funnels at about 800 feet. On reaching the downwind position the aircraft will broadcast " Downwind," and, on reaching a position in the outer circuit at the main Funnel, on its final approach with trim all ready for landing, it will broadcast " Funnels."

If the runway is clear, or the previous aircraft is rolling properly and about to turn off, Control will order " Pancake." The aircraft does not acknowledge, but lands and taxies clear as soon as possible. When clear it reports " Clear."

Now some further points about the above :

First, remember that R/T messages must be short and to the point and must conform to the standard phraseology and correct phonetic alphabet. (This has been introduced for use with all Allied Forces—land, sea or air—and while on the subject we advise you to re-read our piece, " Get Up to Date," in December, 1944, TEE EMM.) Here is a typical message : At a Station with call-sign " Lobster " aircraft C of a Squadron with call-sign " Tadpole " will, on entering the circuit, make its first R/T call, reporting petrol endurance, thus : " Lobster from Tadpole Charlie Seven Five Over." Control will then reply with its instructions ; and note here that the orders " Prepare to land," " Height to fly " as well as " Overshoot " are all—for safety reasons—*repeated* by the aircraft and not acknowledged by " Wilco " only.

Next, it is important that aircraft in the landing circuit fly at the correct distance apart. This is the object of the broadcasts " Downwind " and " Funnels " from the aircraft actually about to land—to enable the others to check on position. (When one aircraft is at the downwind position the following one should be at the upwind end of the runway.) Pilots should, therefore, listen out for these broadcasts, and at the first opportunity, *i.e.*, when approaching the 2,000 feet circuit, should also ascertain (for future checking on their position) the call-sign and letter of the aircraft ahead, as it calls up on entering.

During all landings one member of the crew must stand by with a red Verey light. This is to be fired without delay, if for any reason the pilot is unable to clear the runway.

A variation on the procedure, which we have not yet mentioned, may be introduced if the cloud base is lower than 1,000 feet. In that case Control will broadcast on W/T the following information : (*a*) Height to join the circuit and make first call ; (*b*) barometric pressure above airfield level ; (*c*) height of base of low cloud ; and (*d*) surface visibility. All of these will be for the least fit airfield in the Bomber Command base concerned.

Another variation is for overshooting. If an aircraft overshoots or has to go round again, it at once broadcasts " Overshoot." It then rejoins the circuit and, on reaching the first lead-in light, calls up as on first joining the circuit. An aircraft may also be ordered to overshoot by Control should the runway still be obstructed at the time it broadcasts " Funnels."

In conclusion, we repeat : Do use only

the correct standard phrases over the R/T—*and* the *correct* standard phonetic alphabet. This was introduced well over a year and a half ago, and, as we said, is now in use amongst all Allied Forces. Or *should* be. Unfortunately we've just been along the passage and asked three different air-crew members what the phonetic " A " was. We got the out-of-date reply " Apple." So we'll end up by reproducing the alphabet here.

*Standard Phonetic Alphabet*

| | | | | | |
|---|---|---|---|---|---|
| A | . | ABLE | N | . | NAN |
| B | . | BAKER | O | . | OBOE |
| C | . | CHARLIE | P | . | PETER |
| D | . | DOG | Q | . | QUEEN |
| E | . | EASY | R | . | ROGER |
| F | . | FOX | S | . | SUGAR |
| G | . | GEORGE | T | . | TARE |
| H | . | HOW | U | . | UNCLE |
| I | . | ITEM | V | . | VICTOR |
| J | . | JIG or JOHNNIE | W | . | WILLIAM |
| K | . | KING | X | . | XRAY |
| L | . | LOVE | Y | . | YOKE |
| M | . | MIKE | Z | . | ZEBRA |

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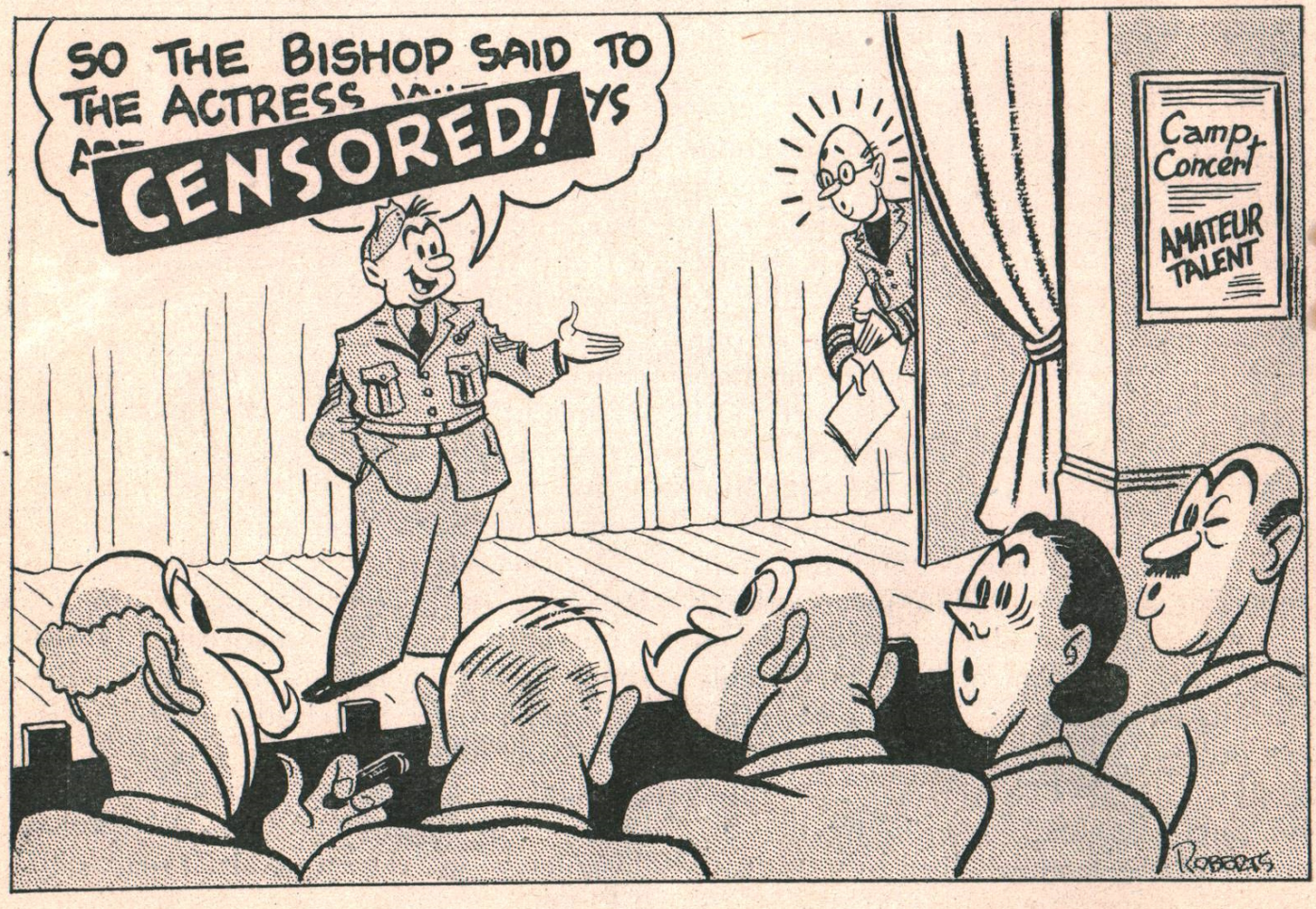
# THE SEVEN DEADLY SINS OF A.G's. No. 2.




**Failing to give Correct Patter.**

# LOW FLYING

YOU read our serious piece last month about low flying. We wrote it from the Service point of view entirely, explaining that apart from disobedience and showing off, it was also damn bad manners and only done by the dimmer and poorer types.

Well, just by way of ramming home the lesson here's a letter that has come into our possession. It's a " round robin " to the Chief Constable of a certain North England town from the civilian inhabitants of a certain road. They say, in effect, that they don't like the diving and low flying, and crashing in gardens, with which they are afflicted by the R.A.F.—unless it's necessary to the war. They wonder tentatively whether, if it *is* necessary, it couldn't be done a quarter of a mile away over the fields. They put it nicely, very nicely, indeed—too nicely, in fact, for some of the show-offs who think it funny to dive on roads and watch the traffic crash or let that best girl see " how well they can fly."

Here's the letter. Just try and call it to mind next time you fly deliberately low over a town and think that the people are admiring you.

" To The Chief Constable.

" DEAR SIR,

" On behalf of the residents of ———— Road and District, we wish to protest against the practice of aircraft diving and low flying in this area. About three weeks ago, owing to an unfortunate accident, an aircraft crashed in our gardens.

" Owing, we believe, to the splendid self-sacrifice of the crew, there were no civilians killed, or even seriously hurt, but many received severe shock. A number of people in the vicinity have been ill for some time, three especially close to the crash are heart cases. Since the accident every aircraft flying low is a renewal of the shock and is causing much distress to the patients, and anxiety to their relatives. Unfortunately, in the last three weeks the number of low-flying craft in daylight has been much more frequent, many fast-flying planes just skimming the house tops.

" We do not ask that the war shall be held up, or even training interfered with, for the convenience of the people of one district, but we do feel that low flying and diving would be just as effective if carried out over the fields just a quarter of a mile away. We would like to send our sympathy to the relatives of the lads who lost their lives so near to our homes, and we believe saved the lives of others. We shall always be glad to welcome any R.A.F. boys and give any help we can if they will come *walking* to our doors.

" We hope you will forward our request to those in authority and feel assured of their consideration."

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**Careless Flying Costs Lives**

# WHAT ARE PILOT'S NOTES?


IN spite of many A.M.O's. letters, explanatory leaflets, visits by Handling Squadron pilots to various units, and even advertisements on the back of TEE EMM, we are informed by the Pilot's Notabilities here—the blokes responsible for getting Pilot's Notes out—that there is still considerable and widespread ignorance on the subject.

On receiving this information we looked into our own soul and discovered that we were pretty hazy on P.N. ourselves. So taking a pencil and paper and wearing an alert look we went off and interviewed a Pilot's Notability. And in case any of our readers are in any way hazy, too, we're publishing the result of our interview here.

We opened the ball with the simple and direct question :

*What are Pilot's Notes?*

Pilot's Notes are Air Publications. They contain all the essential information about each type of aircraft which a pilot should know, *e.g.*, aircraft and engine limitations, recommended handling speeds and any special handling technique. Handling information, however, which is common to all or a number of types, is collected up in Pilot's Notes General (A.P. 2095) and A.P's. 1732A and B. All pilots should have read these before reading the Pilot's Notes for their own particular aircraft.

*What do they look like—Pilot's Notes, we mean, not all pilots?*

The earlier issues are loose-leaf publications with buff covers, and the text, which is in two sections, is in imitation type-written style. But since the beginning of 1943, nearly all the new issues and new editions of Pilot's Notes have been printed and bound in blue covers in handy pocket size, and the text in these is in five parts. All Provisional Pilot's Notes, which are issued to cover the initial introduction of the aircraft into the Service, are produced in the loose-leaf style with buff covers.

*How does one get them?*

By asking your Station Publications Officer to demand them through your Command, in accordance with A.M.O. A.1114/44, from Air Publications and Forms Stores, 81 Fulham Road, S.W.3. The demand should be made on Form 294A in duplicate, and the number and title of the publication must be quoted in full. *Don't* forget to fill in your full address ; you'd be surprised how many people fail to do this—and then are

quite indignant at not getting them by return.

*Supposing there is no answer to this demand?*

If you get no satisfaction within twenty-one days, ask your Station Publications Officer to write to Command, giving full particulars, *and enclosing a copy of the demand.*

*How does a pilot know if there are any Pilot's Notes for his aircraft?*

Ask your Station Publications Officer to demand them as above (unless you are flying an elementary trainer only, for which there are no Pilot's Notes) and see what happens. Either (i) you will get your Pilot's Notes; or (ii) you will get copies of Provisional Pilot's Notes, to be replaced by Pilot's Notes when available; or (iii) you may not get Pilot's Notes, but all the essential information will be made available.

*How many copies may one have?*

The scale laid down in A.M.O. A.93/43 is one copy per pilot and flight engineer on temporary loan, but demands for reasonable quantities in excess of this will be met. Temporary loan means you cannot take it with you on posting.

*Are these Pilot's Notes up to date?*

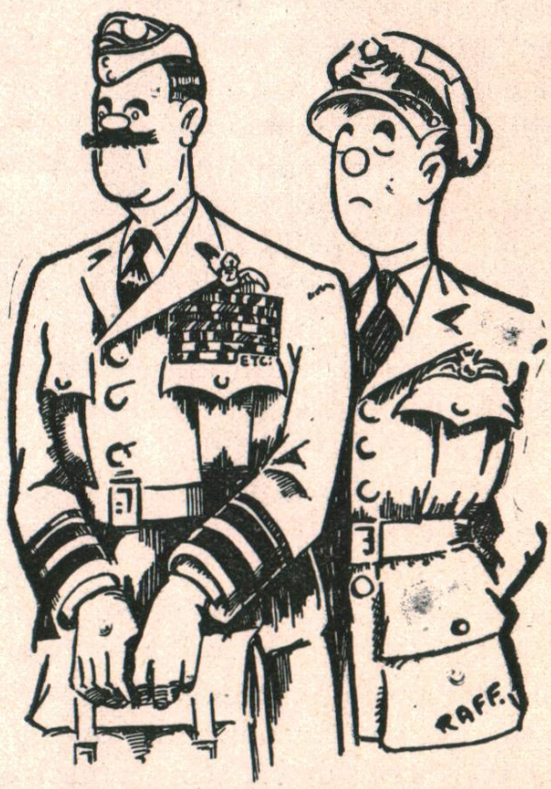
You may find your Pilot's Notes are not always right up to date, but you must realise that aircraft are constantly being modified, not only in production, but in the Service. All subsequent information is included in Amendment Lists, which are issued when necessary to all holders of the relevant Pilot's Notes. Advance information on important amendments, however, is issued to all Commands from Air Ministry by means of T.F. Special Flying Instructions. The Amendment Lists consist almost entirely of small gummed slips, which makes amending child's play—if you have a child. Notification of Amendment Lists are listed periodically in "N" Series A.M.O's.

*Are these Pilot's Notes any good?*

Confidentially we think they are, and the majority of the reports from the Service are very favourable. If pilots have any comments or suggestions, however, do let us know. These should be forwarded through the usual channels, but, as already agreed by Commands, to avoid any delay you should send a copy direct to Air Ministry, T.F.2.

*Do you know it's past six o'clock and time for a noggin?*

(No verbal answer was given.)




*P.O. Prune says that guy's been in the Air Force so long that he remembers Dardalus as a Squadron Commander. His Squadron was known as the "Icarus All-sorts."*

# ORIENTAL MET-ICISM

P.O. PRUNE : *Don't you mean mysticism, old boy—you know, snakes and climbing up ropes and that?*

TEE EMM : *No, Prune, you haven't got the score. We said met-icism on purpose, because we're going to talk about met. in India and the Indian Ocean. We've had the dope from our experts out in India.*

P.O. PRUNE : *Ah, I get it. A joke, sort of.*

TEE EMM : *Sort of. We try to lighten our pages, and this looks like being a serious subject.*

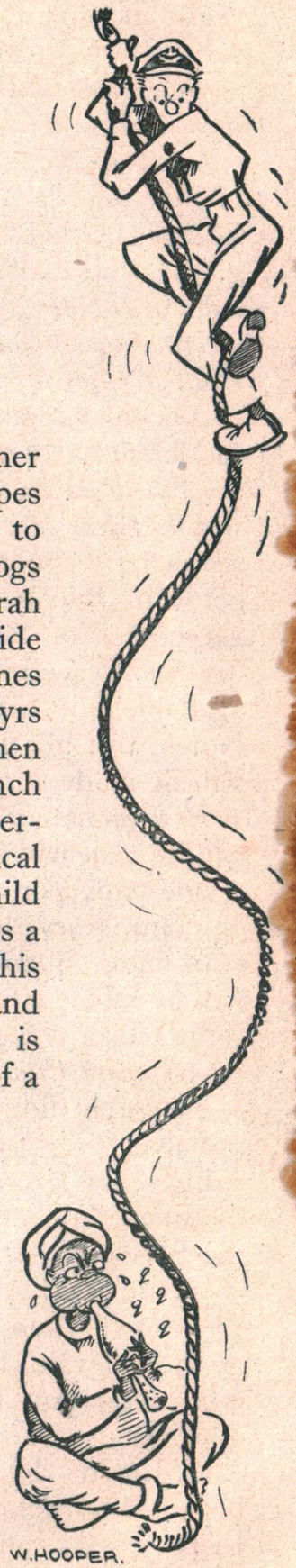
P.O. PRUNE : *Har! Har! Har! Well, get cracking!*

Actually there's no mystery about it ; there is no *special* weather in India and the Indian Ocean. Just weather of all the existing types hotted up a trifle, and shuffled so that you never quite know what to expect anywhere. At Jiwani (Baluchistan), for instance, there are fogs so realistic that Glaswegians come over all nostalgic. At Masirah clouds are sometimes so low that you can stand up and look inside them. At Diego Garcia (1,000 miles south of Ceylon) cyclones occasionally remind sweating boatguards of those nice cool zephyrs which used to be troublesome in the Shetlands and Iceland. Then there is that intriguing little family of convectionists which the French so glibly call "*Instabilites*." These vary from monstrous thunderstorms, which contain almost solid water, as well as turbulent vertical currents of 60 m.p.h., to small puffs of cumulus which induce a mild hiccough in the aircraft each time they are negotiated. Also there is a rather formidable obstacle known as the Inter-Tropical Front. This is a narrow band of corruption lying approximately east and west and girdling the earth near the equator. This semi-permanent front is understood to move north or south behind the sun and to consist of a chain of enormous thunderstorms disposed in fluid depth.

Lastly, just to confuse the whole issue, there are Monsoons. There is the north-east monsoon which bats quietly from October to May ; and the south-west monsoon which knocks everything for a Burton from May to September. Both monsoons pause breathlessly for a week or two during the change-over period, and they then cause tricky flying weather.

In case you're coming all over garbled, we'll try to elucidate in the words of our experts themselves. They say :

A permanent area of relatively low pressure exists around the equator. Air is therefore drawn towards the equator from areas to the north and south of it. On its way the air north of the equator is deflected to the right and takes the form, in the northern Indian



Ocean, of a north-easterly wind from the land masses of Northern India and China. Similarly, air from south of the equator is deflected to the left and is drawn northwards to form the south-east trade-winds. If it were not for the fact that the sun moves northwards to give northern latitudes their summer, and southwards to give them their winter, these north-east and south-east trade winds would blow peacefully all the year round. Unfortunately, when the sun moves north in the Indian Ocean, it ultimately comes directly above the great land mass of North India and starts to heat it up. As a result, an area of low pressure is set up which draws air in towards it from the Indian Ocean and Arabian Sea. This air is drawn in very powerfully, and as it is moist sea air it is relatively cooler than the air over the land masses, so it undercuts as well as opposes the north-east wind. (We hope you've followed all that !) Thus, from May to October the north-east wind fades from the picture, except at great altitudes, and the moist south-west monsoon appears and brings heavy rain to the westerly coasts of India and Ceylon. Generally, wind-speeds in the south-west monsoon are not often above thirty-five miles an hour, but severe storms are frequently encountered in coastal areas.

When, on the other hand, the sun moves south, the land masses start to cool off and an area of high pressure (anti-cyclonic) develops over North India. Air ceases to be drawn in from the sea, and relatively cold continental air flows out of the anti-cyclone in a clockwise direction towards the lower pressure which exists over the sea. The wind thus begins to reappear in the Indian Ocean from the north-east, and this period—that is until the south-west monsoon appears again—is known as the north-east monsoon. This produces good flying conditions in Burma and Northern India, but where the north-easterly wind has crossed the whole length of the Bay of Bengal, moisture is absorbed and deposited in heavy rainfall on the east coast of Ceylon and Southern India. Because both monsoons deposit rain on windward coasts, it is almost always possible in Ceylon to land at airfields in the north-east of the island during the south-west monsoon and at airfields in the south-west of the island during the north-east monsoon.

Cloud ceilings in both monsoons are seldom below 1,300 feet over the sea, but in thunder-storms or heavy showers, which are frequent in both monsoons, especially near windward coasts, the ceilings are frequently at 500/600 feet, and all hilly ground inland is completely covered. Over hills, flying conditions in heavy monsoon showers and thunderstorms are violent, and it is therefore wise to avoid entering clouds of marked vertical structure in such areas. Over the sea it is very unwise to enter such clouds at night ; the best technique is to pass under them at 500/700 feet.

*Avoid entering monsoon clouds.*

Very often the worst weather to be found is in coastal areas during the change-over of the

monsoons. During such periods the normal monsoon wind gradients have not been fully established and consequently winds are light, with local land sea breezes as the rule rather than the exception. As a result, air inland is comparatively stationary all day and becomes very much heated due to the action of the sun, culminating in well-developed thunderstorms about four o'clock in the afternoon. When the sun loses its power during the late afternoon these thunderstorms tend to move out towards the sea under the influence of the land and sea breezes.

Thunderstorms of all kinds in the Far East are seldom larger than eighty miles by fifty, and can frequently be circumnavigated. In any case they do not obscure the aircraft's base for more than a few hours.

Passing on to other phenomena, we come to the inter-tropical front. This is the boundary at the solar equator between air from the north-east trades and air from the south-east trades. As the sun moves north the inter-tropical front moves with it, but some distance behind. Because the north-east trades in the Indian Ocean consist of air of land origin, and therefore relatively dry, a certain amount of violent activity is to be expected at the inter-tropical front when it encounters the moister maritime air of the south-east trades. The front itself consists of a battery of thunderstorms disposed in depth. It varies, however, in its degree of activity. It is unwise to endeavour to pass through it on a dark night in areas where it is very active, and in any case should only be negotiated on the deck.

To generalise, monsoon flying conditions over the sea are far less exacting than conditions encountered in the North Sea and Atlantic. The south-west monsoon produces considerable heavy showers and thunderstorms, while the north-east monsoon produces fewer. Over land the north-east monsoon gives reliable flying weather, but the south-west monsoon can produce worse flying weather than the Scottish highlands. Lack of ice below 15,000 feet is amply made up for by impossible turbulence.

P.O. PRUNE : *Is that all?*

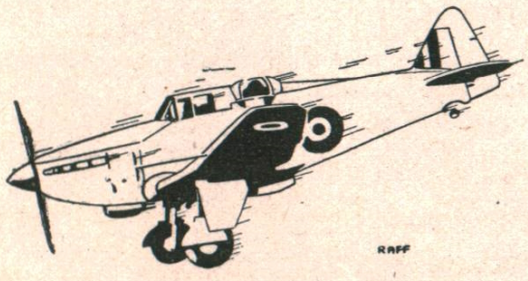
TEE EMM : *Yes, that's all the experts have for to-day.*

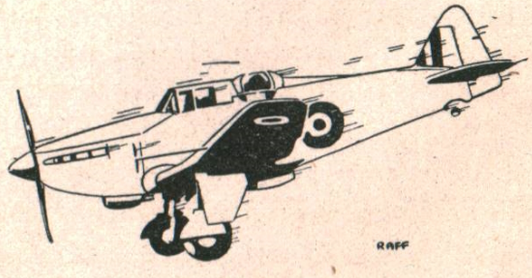
P.O. PRUNE : *Cor! I don't get a word of it.*

TEE EMM : *We didn't expect* you *would. But other types will no doubt read it over again and will then probably have a fair idea of the whys and wherefores of the weather they're likely to encounter in India.*

P.O. PRUNE : *Let 'em. I'm going out for a quickie.*

[*Exit* P.O PRUNE *at speed.*]



# THIS MONTH'S PRUNERY


**THE MOST HIGHLY DEROGATORY ORDER OF THE IRREMOVABLE FINGER** (Patron : Pilot Officer Prune) has this month been awarded to Flying Officer —— for a Highly Original Method of Balancing his Aircraft.

After two hours flying on a cross-country he noticed that the starboard tank gauges registered about 50 gallons more than the port ones. In order to even up the amount in each tank, he opened the petrol jettison cock and promptly drained all his main tanks. He was luckily able to reach an airfield by flying on his nacelle tanks.

The M.H.D.O.I.F. has also been awarded to Pilot Officer —— for Conspicuous Weather Consciousness.

On being reported for low flying, he having flown through some telephone wires, he stated that he was flying low " to avoid the strong winds at a higher altitude."

The M.H.D.O.I.F. has also been awarded to Pupil Pilot —— for Refusing to be Fooled by a Dud Altimeter.

After flying through 10/10 cloud for half an hour, over country containing peaks from 5,000 feet to 8,000 feet high, he decided to come down and see where he was. Having descended to 6,000 feet he flew around a bit, but being still in cloud was unable to ascertain his position and so climbed again to 10,000 and was homed on Q.D.M.'s. Questioned later as to the risk he took, he stated that he was quite O.K. as he knew his altimeter was u/s.

The M.H.D.O.I.F. has also been awarded to Flight Lieutenant ——, Station Armament Officer, for At Any Rate Coming Clean.

In a written report to the Station Adjutant on a certain incident he began thus : " All approximate times are correct to within plus or minus 30 minutes which is the limit of accuracy of my watch."

The M.H.D.O.I.F. has also been awarded to Sergeant —— for Commendable Adherence to Orders.

This pilot of a Station in Cumberland was on a navigation detail which took him down to the Midlands. While there he was told to return at once, but to come *via* Stafford. (This was to keep him clear of deteriorating weather at Liverpool.) Sergeant —— however only read the first part of the message and immediately set course for Base. When only fifteen minutes away from Base he read the message again and realised he had been ordered to return *via* Stafford.

He at once flew right back to Stafford (some 120 miles) and then returned again to Base.


## THE AIR INTELLIGENCE OFFICER

IT has been necessary during the last five years, with the enormous increase in all manner of scientific and mechanised aids to waging war, to introduce to the Naval Air Arm various specialist officers, such as the Air Radio Officer, Air Gunnery Officer, Air Signals Officer, Safety Equipment Officer and others. Now a new breed will shortly make his bow to air crews afloat—the Air Intelligence Officer. Some air crews may have met him already in his embryo state at various Naval Air Stations.

All our recent and future carriers now have a special room known as the Air Intelligence Room, where this latest addition to the ship's company will be found. In the Air Intelligence Room your A.I.O. will have on show maps of your theatre of operations, photographs of terrain, illustrations of Japanese ships, aircraft and other equipment, together with Intelligence Summaries, reports, and reference books giving all the latest gen on the enemy and his equipment, and also that of the Allies.

You can never know too much about your enemy and his power to wage war. Any fighter feels more confident when meeting his opponent, if he knows his character, his strength and his weaknesses and has a knowledge of the relative merits of his own and the enemy's equipment and tactics. The Air Intelligence Officer is ready to help you to this knowledge, so all air crews should get to know him.

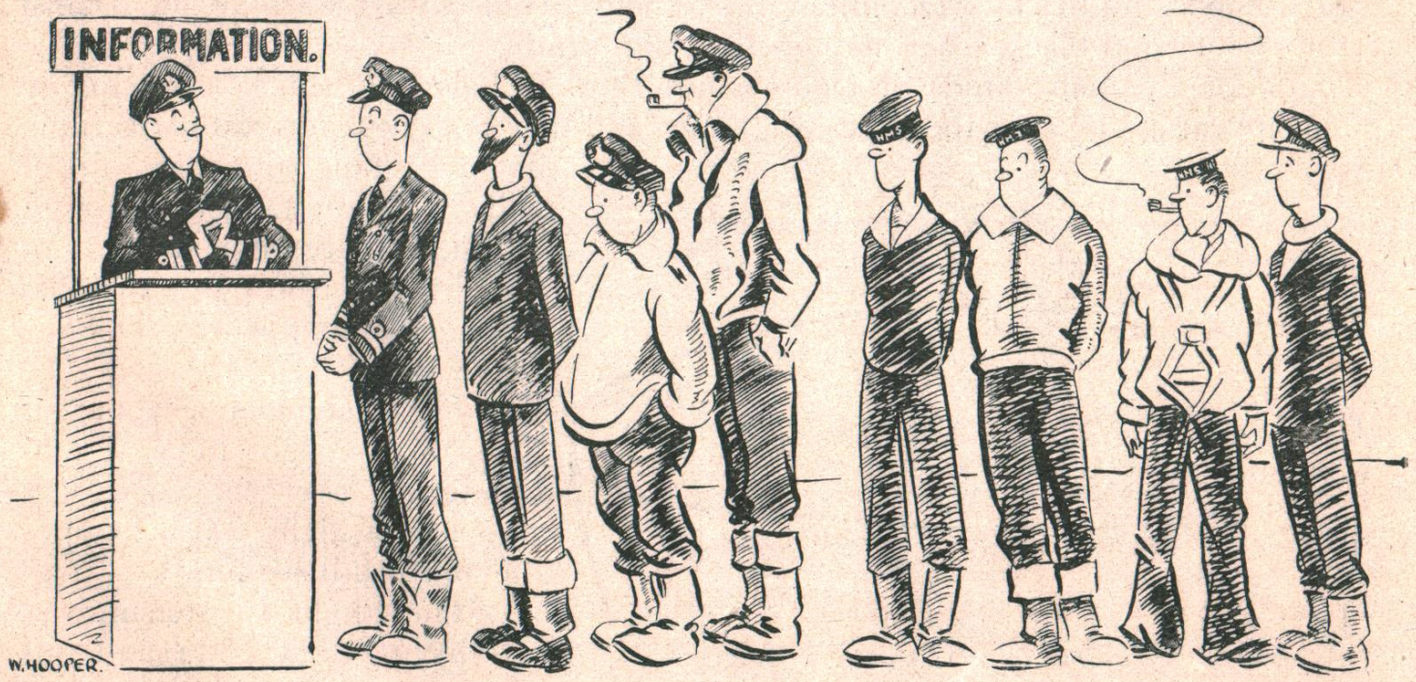
The fighting characteristics of the Japanese, the conditions in the jungle in Burma and Borneo, and the type of country and people to be encountered there and elsewhere in the Far Eastern theatre of operations are still relatively a closed book to most air crews, but who knows when *you* may not have to force-land in, or bale out over, some of these areas some day and then have to try to dodge the Japanese and regain our lines ? If that day comes won't you be much better off if you have spent a little of your off-duty hours reading the information available in the Intelligence Room ; or if you have listened to a lecture on the subject by the A.I.O. and prepared yourself thoroughly for such an emergency ? Remember, too, it is not only the Japanese you'll have to think of. In fact, they often take a very poor second place to the jungle and the weather as potential obstacles to your journey home. So learn how to live in

the jungle; how to travel through it and learn the customs and habits of the local natives, how to obtain help from them and how not to offend them. And here again the A.I.O. can help you.

In these days of large-scale amphibious warfare with large carrier forces the importance of ship recognition as well as aircraft recognition cannot be too strongly emphasised. Once more the Air Intelligence Room is the place to find the latest gen. How much more favourably your Commanding Officer will look on you if, on your return from a strike, you can tell the A.I.O. *with confidence* during your interrogation that you scored a hit on a "Tone" class cruiser, knowing that you had counted the tell-tale four turrets forward. How much *less* favourably he'll regard you if all you can give is some vague statement to the effect that you just thought it might have been a cruiser of sorts.

Similarly, with merchant ships it is of much more value to your Intelligence Officer if you can report that you had hit, say, a fruit ship, recognising it by its tall ventilators, and go on to give an estimate of its length, number of funnels, boats, masts, hatches, etc., all of which help to determine its size reliably, rather than hazard a rough guess at a merchant ship of 5,000 tons. Once again, it's a strong case for reading the reference books in your Intelligence Room.

If you are a fighter pilot you may even save your life and add to your score of E/A. destroyed, merely by having read the latest combat report of an engagement between a Seafire and a Tony. Don't just know your A.I.O. as merely another officer who stands up at briefings and says something about flak somewhere; know him personally and let him help you with your queries. Above all, we repeat, read and digest the valuable gen he has on tap in the Intelligence Room. You can never know too much about the enemy, and only by keeping yourself up to date can you fight your aircraft successfully.



# KITE-HAWKS

BIRDS, as every aviator knows, can be quite a menace to an aircraft, and, though the bird always comes off second best, this is no consolation to you, as you crawl from the wreckage.

Here's a tip for fliers in India on how to avoid kite-hawks—a fairly common carrion bird in these parts.

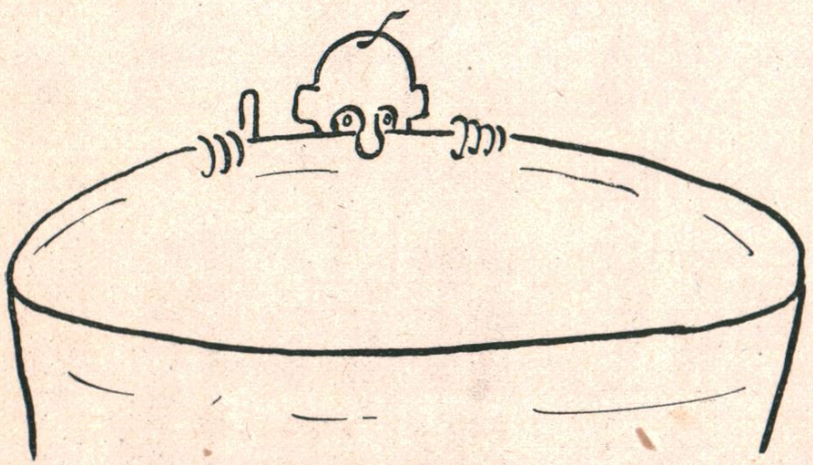
It is pointed out (by a Ferry Unit) that these birds usually break *downwards* and away from approaching aircraft. It is therefore advisable to pull up, if possible, away from the birds immediately ahead and keeping others in plain sight above the aircraft. While the habit of these large birds of breaking downwards is by no means infallible, it is quite true in the majority of cases and is well worth putting to the test.

# MEET DOOMIE!

HAVE you ever met Doomie? If not, meet him now. Quite possibly you've never seen him, but make no mistake, he's seen you. For Doomie is always watching you. Any day you may catch him at it—and benefit by it.

For Doomie, you see, is out to help. He is, one might say, the mortal enemy of things like gremlins which in the old days you used to blame for all your own errors, boobs and blacks. Doomie wants to help. He is always warning you against errors, boobs and blacks—and he hopes he is in time.

There are many kinds of Doomie but they all have two things in common. They appear at you over the edges of things, and they hold up a forbidding warning finger. This minatory finger tells you to beware, to watch it, to think twice, not to commit that boob, not to put up that black. In other words, Doomie Says Don't.



*The first Doomie.*

The first Doomie appeared some years ago to a Flight Lieutenant over the edge of a glass late at night. (Look opposite and you'll see him.)

The Flight Lieutenant was just having that extra and un-

necessary drink to wind up the evening and he was momentarily forgetting that he was due to fly first thing next morning. Doomie popped up with that warning finger and said " Don't." And, rather to his own surprise, he didn't.

Instead of having that last one, which in turn might have led to another and another, he went to bed and was on the top line next morning. Indeed, instead of being a little muzzy, he shot down an Me 109.

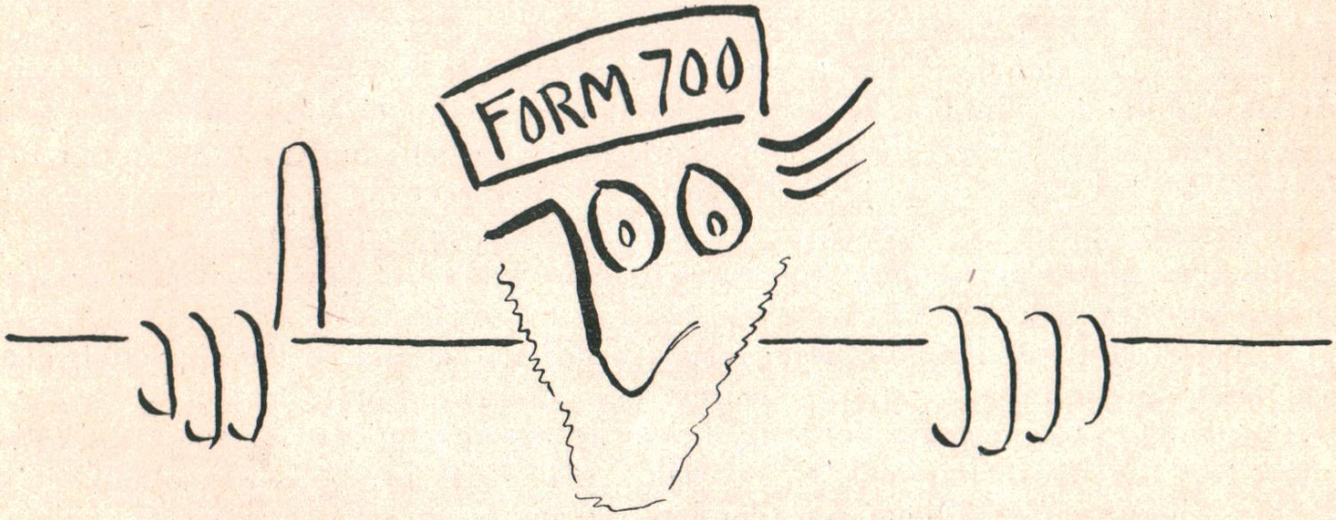
*Just a wee Deoch and Doomie.*

North of the Tweed you get Scotch Doomie's. Here is one of them opposite. The idea, however, is the same. Doomie Says Dinna.

We haven't space to show you many other types of Doomie. Besides, it's really up to you to look out for them and maybe you know a Doomie or so that we don't. Here, at any rate, is one of our favourites—the " Synaform Doomie " who pops up to remind you about signing—and checking—that Form 700. Maybe he'll jog *your* memory next time.

For remember, Doomie's warning finger is a finger that is *out*, well out. Doomie says " Is *yours* out ? Be careful ! You're about to make a boob."

And Doomie Says Don't.




*Doomie says " Don't forget that Form 700 ! "*

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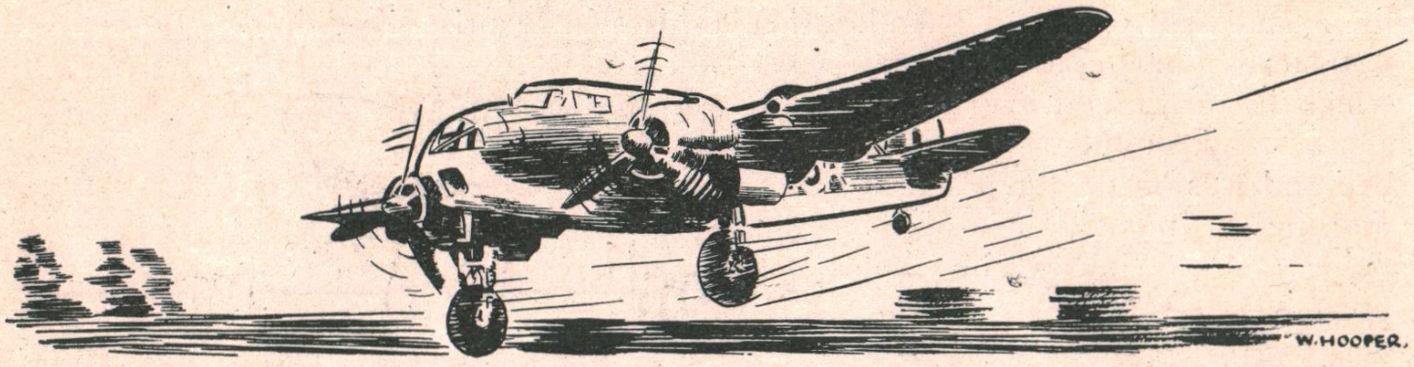
## AMBITION AND HOW

THE scene is an Aviation Candidates Selection Board. A very small civilian candidate was asked by the President what he wanted to be in air crew. The answer came without the slightest hesitation, " A Wing Commander, sir."

# QUEL BEAU LANDING




YOU recall our piece in last September's TEE EMM which told you how a pilot by skilful flying coupled with cool judgment managed to land a Lanc. in safety although he had no aileron control whatsoever. We published it solely that readers might see what can be done—if one's put to it ; and in these stirring times you never know when you *will* be put to it.

Now into our In-tray this morning has come floating another example of a pilot's skill under difficulties due to German interference with a British aircraft going about its lawful occasions. This time it's a Beau. which was successfully landed in spite of lacking both rudder and port aileron control.

We'll tell it, as before, in the pilot's own words :—

" The Beaufighter was hit by enemy flak—as a result of which over half of both the rudder and port aileron control surfaces were blown away and both were partially jammed. The port wing was also damaged. Full aileron and rudder trim were applied, but this was insufficient—and excess port engine had to be applied in the ratio of + 6 boost port, + 2 starboard with 2,200 revs. on both engines, giving a speed of 200 knots. No turns to port were possible and turns to starboard were possible only when port engine boost was increased and by using what little rudder control was available.

" No circuit was possible upon arrival back at base and so the aircraft had to make a straight approach—landing against a 90° crosswind of 20–25 knots.

" Owing to the necessity for a fixed throttle setting, the undercarriage had to be lowered at the boost and revs. in use—but a decrease in speed was obtained by climbing the aircraft. Full flap was then lowered and boost was decreased gradually—keeping the same ratio as formerly used. The port wing dropped occasionally but this was picked up by engine. Neither trims could be reverted to zero position. An approach at 160 knots was made to avoid the port wing stalling prematurely—and the aircraft was flown into a 3-point position 5 feet above the ground. Flap was then raised and the aircraft sank on to the ground. The wing did not drop and the aircraft had no tendency to swing. Brake had to be applied to stop the aircraft running off the end of the runway."

" Good show," says Prune. " Couldn't have done better myself."

# THAT COURSE AT CARK

*" What Course at Cark? " says Prune.*

MANY people dislike intensely the idea of going on a course. It takes them away from their familiar surroundings and friends ; they have a natural feeling that they are better employed where they are ; they often firmly believe that the course is useless as far as they are concerned ; and in many cases they urgently desire to do something else. These are the factors which operate in the minds of potential " course fodder " and, as we said at the start, the result is that they just don't want to go.

Take, for instance, the Staff Pilot's Course at Cark. Here the last factor is probably the most weighty. For every keen pilot, on leaving his (P) A.F.U., wants to do just one thing—go on to an O.T.U. and get on ops. as soon as possible. Instead, he is told that he has clicked for the Staff Pilot's Course at Cark, and as far as he can make out, all he is to be trained for is merely to go into Flying Training Command and become a driver for aircraft-loads of student air crew at (O) A.F.U's. Worse still, he ruminates, a large part of the flying will be at night, probably in foul weather ; it will be long dull " cross-country's " or trips round the British Isles, not simple local stooges ; and since the only navigators he'll carry are u/t, they'll be frequently getting lost and he'll have to bring them home. No future in all that. And to think that, instead, he might be shooting down F.W's.' No wonder he is browned off when he hears he is to go to Cark.

And that is just why we want here to talk for a moment about the whole idea of the Staff Pilot Training Unit.

First and foremost, we'll tell you definitely that no one who is sent to Cark is sent because at some time or other he has made a boob, as a result of which a black mark has promptly been put against him, and he is considered

" only fit for Flying Training Command duties." Quite the opposite, in fact.

A pilot detailed for this course is one whom the authorities think will get the fullest value out of the training there and will perhaps be ultimately of even more use to the Service and his country than if he went on to an operational squadron in the normal way. He has in fact been *selected*, not detailed ; it is an honour—though one that at first he naturally doesn't appreciate.

And now we'll explain why this is so by telling you about the actual job the S.P.T.U. pupils are being trained for.

They are to be Staff Pilot Captains at (O) A.F.U's. (A small percentage, however—those who do best on the course—are picked for Staff Pilot duties at the Empire Air Navigation School, a most interesting business, involving regular long-distance flights to India, Canada, and so on.) Now the Staff Pilot's job at an (O) A.F.U. is not just a boring chauffeur's job. It is work of the utmost value and responsibility. For the (O) A.F.U. crew has, besides the Captain, only two u/t Navigators, a W/Op., with possibly a u/t W/Op. and u/t Air Bomber as well. To this lot, particularly the budding Navigators, the Captain has to be instructor as well as pilot. He must assist them in every way he can and, above all, he is responsible for their safety. A u/t Navigator can, and does, boob—after all, he's there to learn by practical experience—and when he does, the pilot has to get the aircraft back or, at any rate, safely down at some airfield. This means that he must be constantly checking in his own mind the courses given him—a very different thing from being able to turn to an experienced Navigator and say, " What's the course and where am I ? " This in turn means that he must have considerable skill in mental D.R. and D.R. procedure ; and must realise the Navigator's responsibilities and be able to help him by kind and timely criticism.

Added to all this he must be capable of flying accurately by day and night, both visually and on instruments, in bad weather, over sea and over that small but very difficult and knobby country—the United Kingdom. He must, too—and this is vital, for he and his W/Op. are the only trained men in the aircraft—know all the safety aids, Q.G.H. procedure, S.B.A. and R.T.G.

And all this he is taught at Cark. Definitely he is not sent there because he has blotted his copybook. A Staff Pilot's job is probably one of the most difficult in the Air Force, for, unlike the operational pilot who has a full crew to help him, he has to help most of his crew, be able to fly accurately by himself and yet has all the normal worries of a crew captain.

Let's ask a final question ? Whatever pilots may think about the course *before* they go to Cark, how do they feel *afterwards?* The answer is that they are practically unanimous in realising what a lot they have learnt, and how little they knew when they first came—including how much they *thought* they knew. They realise that before they joined they thought they had nothing to learn from the navigational point of view, when all the time they had been merely pushing an aeroplane through the sky instead of flying accurately as good pilots should. And, above all, they realise they have been given Confid-

ence—confidence in themselves and in their own ability to do a difficult and valuable R.A.F. job successfully.

So take all this to heart, those of you who are going to Cark, and don't waste the first week or so of your course—as so many people do—in bemoaning your fate at being bunged in F.T.C., in indignant resentment at going back into ground school, in thinking you are fully trained and know it all, and in wondering vaguely about your future job and deciding that anyway it's valueless.

Realise it *is* valuable; get cracking right away. Cark is there to get the best out of you. See that you get the best out of Cark.


*"Or do you mean that Cask and Cork?"*

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# EVE AGAIN


Eve, you may remember, was our name (because life is too short to keep on using the full title) for the Royal Air Force Educational and Vocational Training Scheme, now officially known as E.V.T. You may also remember we wrote a frightfully good piece explaining E.V.T. in our November, 1944, issue, called "How Will Your Civvy Suit Fit?" Look it up if you've missed it.

Well, we want here to add a further short word of explanation about E.V.T., or rather to correct a false impression.

It seems that various types, whose civilian qualifications indicate that they would probably make valuable E.V.T. Instructors have an idea that, if they do volunteer for that job, they may be kept on at it, instead of being released when their time comes.

Well, this is not so. It has been clearly stated in writing that "the Services will make every effort to release men in their turn *in whatever theatre they may be serving*" and it is not intended that, because men (and women) are serving as E.V.T. Instructors, they will be kept back when their turn comes. An A.M.O., too, is shortly to be issued setting out the full conditions of service for such Instructors.

Well, that's fair enough, isn't it? If you want, therefore, to offer for the job, don't hang back under any false impression, but go to it!

# THREE AND THREE-QUARTER YEARS AGO

*As many of you were not in the Air Force when* TEE EMM *started (nearly four years ago) and possibly have never seen our earlier issues, it has occurred to us that it might be a good thing to print some of the less dated articles from these issues. Each month therefore we are publishing a selected article from the corresponding issue of three and three-quarter years ago.*

*We carry on this month with one from our second number, May,* 1941 *:*

## *INSTRUCTORS CAN ALSO LEARN*

*P.O. PRUNE says "they can't teach him anything."*

A good instructor is born not made. Our first comment upon this statement is that, like so many other similar snappy aphorisms floating mistily about the world to-day, it is a half-lie, Worse still, it is a dangerous half-lie, in that, repeated often enough and believed often enough, it leads to self-deception. The instructor who despises instructing and wishes he were on a more exciting job, the instructor who is perhaps depressed at getting poor results, the instructor who is inclined to be lazy, soon starts repeating the phrase to himself by way of comfort and justification. He says, "I was never *born* a teacher. So I just haven't *got* this quality, this innate faculty for imparting information." He thus comes gradually to believe that he's unlucky, that the art of teaching really *is* a mysterious gift which he unfortunately missed when the Almighty was handing out good and bad qualities. And since no one can help bad luck, he's next telling himself that because the art of teaching has been left out of his make-up he needn't do any more about it, except tackle his uncongenial job in a pedestrian manner and hope soon to be posted elsewhere.

Well he might as well be posted to the Sahara for all the good he's doing in his present position. He's not pulling his weight. With that attitude of mind if he tried to teach a hen to lay an egg he'd only end by getting the bird itself all confused.

For while we must admit that an ability to teach is very definitely inborn in a man, it is quite false to assume from this that it cannot also be acquired. It is being acquired every day. Instructors are being made everywhere at this minute. Why ? Because they are *making themselves*. It is only a very, very few who, in spite of every endeavour, still find that somehow or other they remain indifferent instructors.

Remember this one simple point. The gift of teaching is acquired by the *wish* to teach. If you feel you really want to get the stuff over to your pupils the job will be infinitely easier. And the acquiring of this wish to teach is in your own hands naturally ; anyone can acquire a taste for anything if he perseveres—even

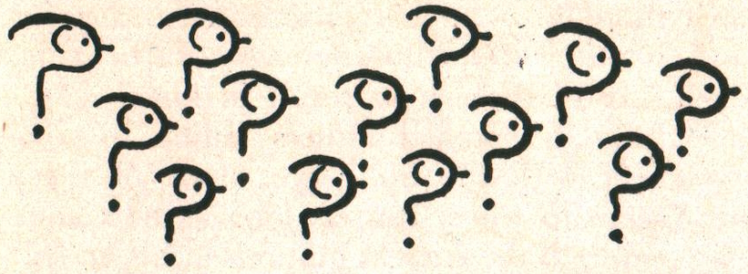
if it is only beer. Indeed, if you are an instructor—and by instructor we mean any officer or N.C.O. who, even if only for a brief half-hour, finds himself in the position of having to impart some knowledge to someone—you must all the time keep in the forefront of your mind a determination to get the stuff over. You must all the time cultivate a real urge to explain what you know to those in front of you in such a manner that they understand it. It should not be very difficult. Their minds are—as far as your subject goes—blank pages, white walls ; and who doesn't love writing on a clean, blank page or drawing on a lovely white wall ? It gives a sense of power, and there is no power so delightful and so permanent as that inherent in teaching, in passing on what you know to people who don't know it. (We recall here the story of the old man of 73 who still called another old man of 89 " Sir " ; for the elder of the two old dears had been the other's headmaster at school !)

We used just now the phrase " A real urge to explain what you know to those in front of you in such a way that they understand it." Those last words are most important ; because if their real meaning is ignored you will never learn the real art of teaching. You will only be a half-instructor. You will be like a man on the rifle range who sets his sights correctly, aims carefully, and squeezes the trigger in the proper manner—and then doesn't give a darn where the bullets strike on the target. The sights may need adjusting, he may be pulling off too jerkily, taking too much foresight ; or there may be corrections necessary for wind or for idiosyncrasies of the rifle. Any of these may result in his so carefully despatched bullets failing to connect with the bull ; yet none of these seem to worry him as long as he's gone through the correct motions at his end.

You would call him a fool. He is. But you in your own line can be equally foolish. It is of little use to concentrate on getting your charts filled up with exercises completed or of indulging in the ephemeral satisfaction of so many pupils passed, on paper. You must, as far as lies in your power, see that the pupils *really* understand what you're driving at, are *really* aware of the pitfalls that you yourself have discovered and avoided, are *really* following you step by step. You must not confuse false results with real results. You must earnestly desire that they *shall* learn. You must see that they *are* really learning, not being towed along like a broken-down car, unable to run under its own power when the tow is cast off. You must, in short, etch lines and patterns which will endure on the minds of those you are instructing, not scribble superficial markings which will soon be washed away.

Your reward will be their gratitude and the realisation that you have added to the sum total of the world's knowledge by distributing your own stock of it permanently over a wider area.

And then you will be a good instructor, not by the easy method of being born one, but because you have *made yourself* into one through your own desire to teach.



# TEE EMM'S Brains Trust

***Tee Emm being an official publication, everything in it appears with the approval of the Air Member for Training and represents official views on policy. This page, however, we reserve for occasional unofficial correspondence, to which we have tried to dig out an official reply.***

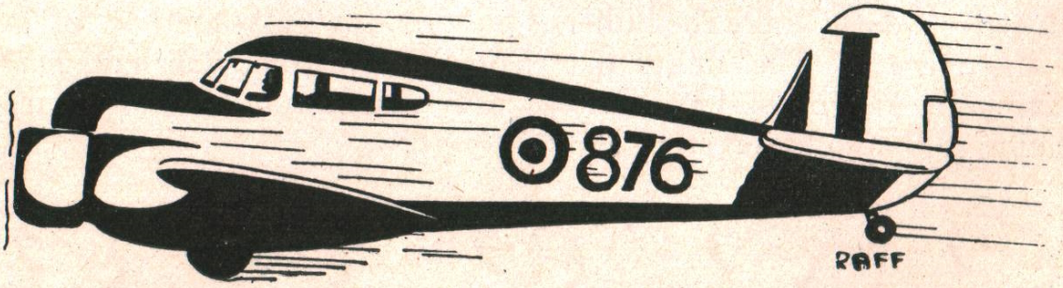
LETTER. " SIR :—Why is Co-efficient ' A ' not removed from the D.R. Compass, as it is in the ' P.4 ' ?

" To my mind the operation would be a very simple one. For example, if we suppose the correction to apply is ' — 6,' the M.U. is reading 278°. If it were to read 272° it would be reading the correct magnetic heading. Now if the pointer were movable could it not be moved to 272° when the compass bashers swing the compass ? An alternative method would be to have the scale itself movable so that it could be pulled around one way or other the appropriate number of degrees. The only reason I can see for not using the first method is that in some cases, when ' A ' is 13°, or some large amount like that, if the pointer were moved it would probably disappear out of sight past the window; but if ' A ' were almost eliminated by the method of moving the scale, I believe ' A ' would hardly ever become any greater than one or two degrees thereafter.

" The question of removing Co-eff. ' A ' may be just one of those things the R.A.F. don't care a hang about, but to me it is always a damn nuisance, particularly when once on course with the V.S.C. set at 10° or 11°. When you start to check back it begins to get complicated. Further, I feel sure that navigators would be more careful to ensure that the repeaters were correctly synchronised if it were just a case of the same figure from one end of the kite to the other. At present there is a tendency to say ' Hell, that's close enough.' "

**REPLY. It is not an uncommon practice in some squadrons for the co-efficient " A " on D.R.C. M.U's to be eliminated completely, by making the necessary offset adjustment to the reading scale on the inner frame. Adjustments up to 10° are possible by this method. This procedure is not encouraged because complications are likely to arise if a master unit with an offset scale is removed from the aircraft in which the adjustment was made, and re-installed in another aircraft. There is always the possibility that the scale would not be returned to the normal position before the customary installation swing is carried out.**

**It is understood that the latest mark of master unit, now in production, has an adjustable lubber line incorporated in the mechanism, and this, it is hoped, will eliminate all complications of this nature.**




He thought Ditching Drill rather a Bind.

TEE EMM, the Royal Air Force's Training Memorandum, is a "Restricted" publication. This means that those not entitled to see it are *not* to see it. It is primarily a Training Memorandum for air-crews, instructors and all those in the Air Force connected with these jobs. It is, in short, a Service Training Memorandum written *for* the Service, issued *by* the Service, and restricted *to* the Service.

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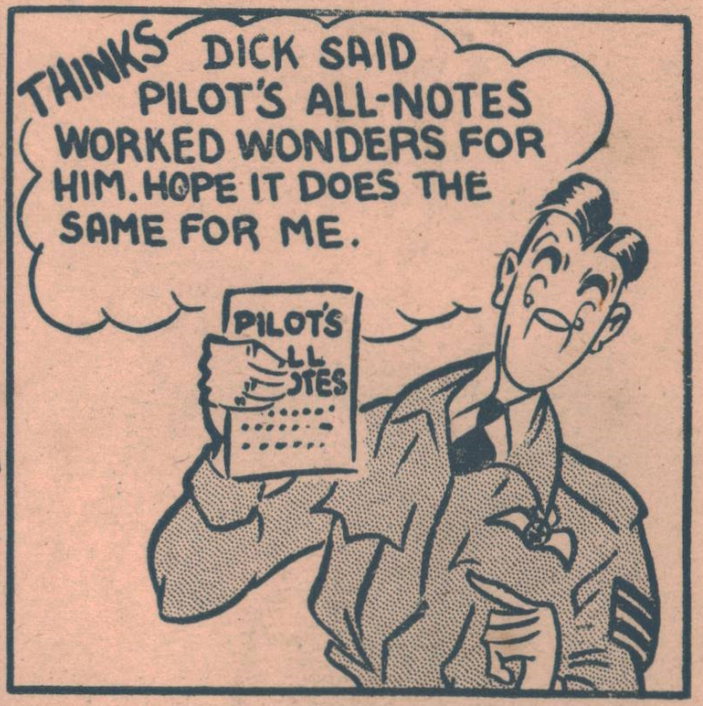
# PILOT LEARNS A LESSON



***IF*** your flying is consistently bad, and you are constantly over-shooting or forgetting to put your undercart down, it's because you haven't got your finger out.

The instruction you get is no use unless it stays in the brain. If it just passes through the head without leaving any impression behind at all, you will never remember anything. No wonder your flying is out of sorts.

Pilot's All-Notes—Pilot's Notes for all types of aircraft—contain just the material your brain needs to assimilate, retain and make best use of the flying instruction you have received.

**PILOTS' ALL NOTES**