TEE EMM

Number 10

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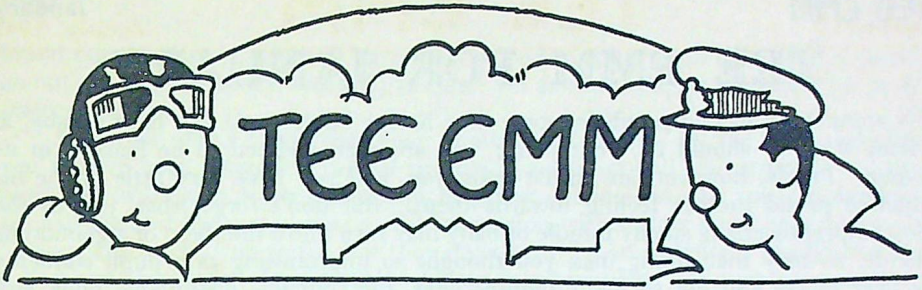
Pilot-Officer Prune says— "Take Tee Emm *regularly! Prevents that Thinking feeling!"*

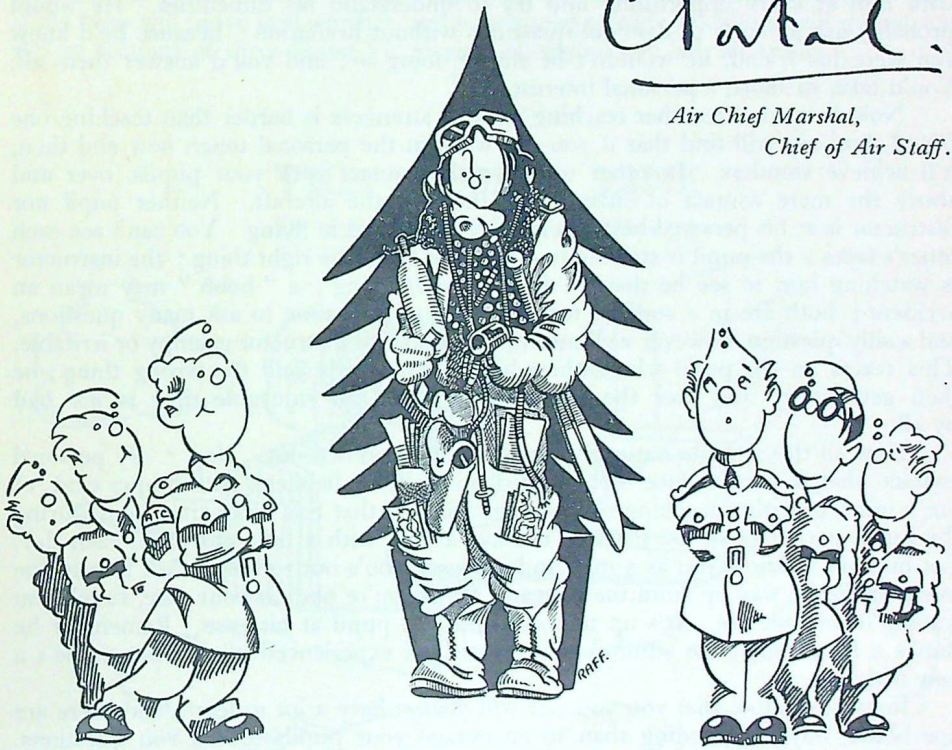
STAR CHART NOTE.

Since our article last month "Seeing Stars" went to press a few slight alterations in the final details of the issue of the Star Charts have been made. There are, in fact, now only *eleven* Star Charts, not twelve, and only twenty-four, not twenty-five, "stars you must know" (good, less work, says P.O. Prune), for one of the three printed in italics has been cut out. Finally, the instructions on the chart are not now quite so detailed as those originally published in Tee Emm.



I offer to the readers of Tee Emm my best wishes for a Happy Christmas and for all success in 1942

Air Chief Marshal,
Chief of Air Staff.



P.O. Prune says he doesn't want a Christmas Tree this year, he darn well is one!

TEE EMM FOR JANUARY

IN some ways having pupils is worse than having babies. If you have a baby, at least it is, or should be, your own : you are even inclined to be biassed in its favour. Pupils, however, are thrust upon you, and you have very little of the instinctive proud mother feeling towards them. But don't forget that, just as the most unprepossessing smelly bundle of baby may turn into a film hero or a glamorous blonde, so may that young man you thought so unpromising as a pupil suddenly fly over to see you not so many months later, the complete operational pilot, and probably the mainstay of his squadron's glorious achievements.

Well, one of your ugly ducklings at least has become a swan. It's up to you to see that *all* those ugly ducklings achieve swanhood.

Suppose you were teaching your best friend to fly, you'd certainly give him all the help in your power. You wouldn't just go through the motions and leave him to puzzle the why's and wherefore's out for himself. You'd discuss the business with him at every opportunity and try to understand his difficulties. He would probably ask all sorts of damfool questions without hesitation : because he'd know you were his friend, he wouldn't be shy of doing so ; and you'd answer them all. You'd take, in short, a personal interest.

Now it is admitted that teaching a lot of strangers is harder than teaching one friend, but you will find that if you *can* work in the personal touch now and then, it'll achieve wonders. In other words, make contact with your pupils, over and above the mere contact of sitting near them in the aircraft. Neither pupil nor instructor is at his personal best when being instructed in flying. You can't see each other's faces ; the pupil is striving to remember to do the right thing ; the instructor is watching him to see he doesn't do the wrong thing ; a " boob " may mean an accident ; both are in a state of tension. There isn't time to ask many questions, and a silly question, however well meant, may make an instructor grumpy or irritable. This reacts on the pupil who gathers he has apparently said the wrong thing ; he then gets jittery and *does* the wrong thing ; and an enjoyable time is *not* had by all.

Now all this is quite natural ; it can all be smoothed out. How ? By personal contact, that is, face to face, not muffled up in flying helmets, with 90 per cent. of one's mind on either teaching or learning. Snatch that half or quarter hour during the lunch period or in the evening to have a chat with a different pupil each day. Let him get to know you as a man and a friend who's out to help. Ask him in the mess, or on the way up from the hangars, when you're both at your ease, to tell you frankly of his worries. It's up to *you* to put the pupil at his ease. Remember he thinks a lot of you ; he admires you greatly, an experienced pilot, whereas he's a new fledgling.

Remember, too, that you yourself will always have a lot to learn, and there are few better ways of learning than to encourage your pupils to ask you questions. You may find yourself and your knowledge very definitely challenged, but having

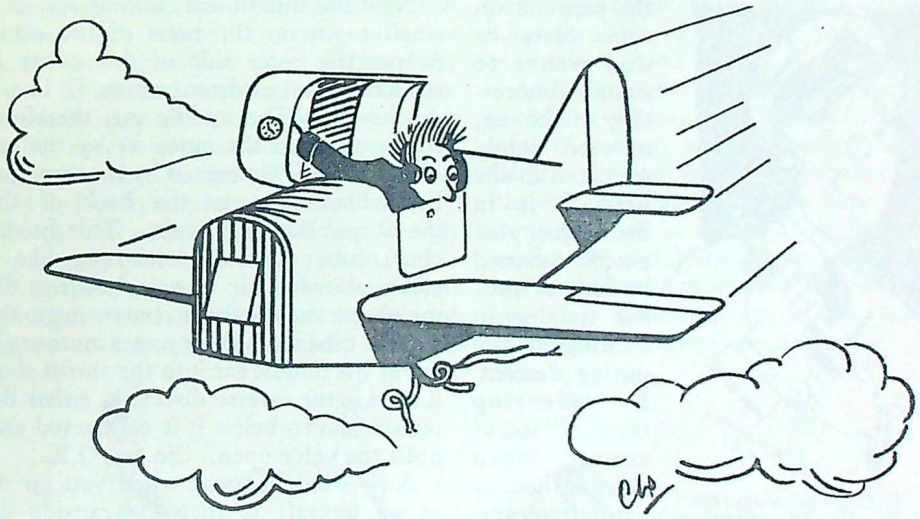
found out the answer, you will have been helped by your pupil (though you needn't go out of your way to tell him so !) to climb yet another rung in the ladder to perfect instructorship.

Above all, don't forget that your pupils aren't fools. By the time they reach you they've been through a careful process of selection and the survivors are fit in body and willing in spirit. You can help that willingness—or you can hinder it. An experienced instructor after a difficult session with a slow pupil once burst out : " We could teach cows to fly, but they must *try !* " An instructor should not leave a pupil on this note. It will rankle rather than stimulate. If such a cry *is* wrung from his heart, well, there it is ; but five minutes chat on the way up to the mess about any points that had not been made clear during that morning's instruction will wipe out any lingering unhappy feeling in the pupil's mind that his instructor really thought he wasn't putting his back into it.

It's a little extra work for you to get to know your pupils outside instructional hours ; *but* it's part of the job. Your interest in them, your encouragement, and your solving of the little problems which you will rarely hear on a strict instructor-pupil basis will prove well worth it, and your squad of ugly ducklings will go out one day in sections of three flying Vic astern—all swans, my lad, all swans.

THE MISSING LINK

Or the Pupil's Christmas Dream



A PAIN IN THE EAR

DO you suffer from pain in the ears, when. . . .

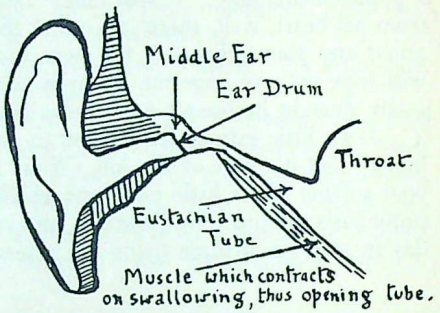
(I think we'd better point out at once that this isn't Tee Emm's advertisement page, and that no " Life-long Sufferer " will be found to have been cured by regularly taking Tee-Emmeline—of all chemists 8/– a bottle, or 1/3 per sample dock glass. Now let's start again.)

Do you suffer from pain in the ears when descending quickly while flying? Many members of air crews do. Judging by tests in the decompression chamber at Farnborough, many cannot descend even at moderate speeds without pain. And of these very many indeed have assumed that, like rheumatism or chronic air-sickness, to have ear pains during and after any swift descent is a personal failing to which they must resign themselves.

Now this is by no means always the fact. While the pain may in some cases be due either to some abnormality of the ear, or even simply to a cold in the head, it is in the majority of people caused by lack of proper training in clearing the ears during descent. By "clearing the ears" we, of course, mean clearing them by natural means, not mechanical; no syringes, toothbrushes, lift-and-force pumps, Hoovers, or anything of the sort are required.

P.O. Prune always has believed in ear maintenance.

Before going further, we'd better explain the anatomy of the ear. First, a picture, herewith—



Yes, all that goes to make up an ear; the thing that sticks out into the air outside the skull fuselage is really a very minor part of the whole works.

Now the middle ear, as you see, is a small cavity in the bone of the skull. Across the outer side of this cavity is stretched the eardrum which is like a diaphragm. The middle ear, therefore, is cut off from the outer air by the ear drum, *but* it is connected by the very fine Eustachian tube to the back of the throat and the air therein. This Eustachian tube operates something like a valve, allowing air to pass between the middle ear and the throat, but owing to the way the tube is made, air passes more easily *out of* the middle ear into the throat than it does in the reverse direction, *unless* the muscle shown below it is contracted and pulls the valve open. So far, O.K.

Now what happens when you go up in an aircraft is that the outside air

decreases in pressure, and so the air in the middle ear immediately equalises this by passing, at intervals, down the tube and out to the throat. You hear a click each time this occurs ; it is the drum snapping back into place as the pressure is released. This doesn't hurt the drum at all ; it's used to it.

When you start to come down, however, the outside air *increases* in pressure, but from the valve-like nature of the tube, as mentioned above, can't pass so easily into the middle ear, as when going the other way. Thus the drum bulges inwards, causing pain from even quite a small pressure rise ; and with a continued increase it may even be broken.

Now the obvious remedy for this is to open up the " valve " part of the tube and let air get in from the throat. This can be done by working the muscle we mentioned, *i.e.*, contracting it and so opening the tube. Unfortunately it's not the kind of muscle you can consciously control, like those which bend the arm or lift the elbow. It's rather like trying to move your ears when you were a schoolboy. You frown and scowl and concentrate on your scalp and jaw muscles—on anything except your ears themselves—and suddenly they move. Triumph ! You can do it (and are probably called " Moke " for the rest of your school-days), though you never *quite* know how you do it.

In the same way this tube muscle can suddenly be made to work by one or more of a variety of manœuvres and every flyer should find out which suits him best. Try, for instance, swallowing repeatedly ; chewing-gum helps in this ! Or try yawning : thinking of some of the radio-comedians' jokes will assist here ! Try jutting the chin forward ; thinking of Mussolini is the dodge for this one. Or again, pinch the nose and blow, with mouth shut and cheeks held in ; and to improve the performance with head held back. Any of these are good, but many people do not find this last one effective unless combined with swallowing or chin-jutting. Better not look in a mirror while it's going on though ; you'll be sure to laugh which will probably cattle the whole thing.

To impress upon you how important is regular and repeated clearing of the ears while coming down and *before* pain is felt, you should realise that a continued descent, without relief, may reach a point when the increased pressure is such that the muscle *can't open* the tube, whatever you do, re-ascent being the only answer. Therefore get to work on your comic exercises in good time.

And, above all, remember that repeated practice is of great value in achieving high rates of descent without inconvenience. Certain peculiar people at Farnborough Physiological Laboratory can come down at 50,000 feet a minute, yawning and swallowing and Mussolining all the way and never have a moment's pain. If *they* can teach themselves to do this, surely operational air crews can do so too !




A.S.R.S. NOTE

THE HEIGHT OF CONFIDENCE

ONE of Tee Emm's Special Correspondents (engaged at enormous expense, of course) has just made a trip to Northern Ireland by air. He started from an airport on the outskirts of London, and while the aircraft, a Hudson containing eight other passengers, was waiting to take off, he got into conversation with the captain.

"The conversation," he states, "is here recorded word for word; but first, for the benefit of those who don't associate with Hudsons and those who do but don't know this, I must tell you that the dinghy is normally stowed in the fuselage door. Our talk went as follows:—

"Self: 'I say, Sergeant, tell me, where do you keep the dinghy on this aircraft?'

"Sergt.: 'Dinghy? Oh, behind the engine in the nacelle, sir.'

"Self: 'How does it operate?'

"Sergt.: 'It-er-well, it blows out—at least I think so; there may be a switch—tell you the truth I don't really know much about it all. But we've got two engines!'

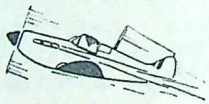
"Now here is the truth. In order to save weight no doubt, that particular aircraft's dinghy had been removed, and was, in fact, *nowhere upon the aircraft*. How stupid that skipper would have looked ripping off panels on a rapidly sinking aircraft searching for a lost dinghy, which was in reality lying in a heap way back at base under the care of the dinghy section!

"On top of this there were eight passengers on that aircraft—and only two of them knew how to operate their Mae West bottles. One man expressed surprise that there were no parachutes about. Yet they were lurking under each seat!"

Aircraft have been lost in the Irish Sea, why not that particular one? Is the crew of such an aircraft so blessed by Providence that they don't need dinghies: why, they might as well not wear Mae Wests either and make a job of it! A dinghy is the only hope of saving the lives of eight passengers and a crew of four, should the aircraft ditch far from land. It's easy enough to get killed without making it easier.

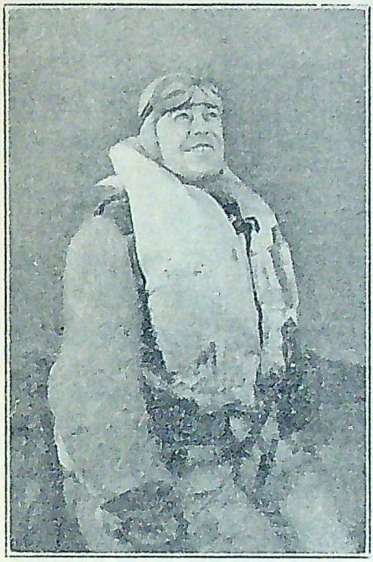
Naturally Air Sea Rescue has come in for some criticism, chiefly from those who don't know the circumstances. In war things can't go right always, but for Heaven's sake give A.S.R.S. a *chance* to save your lives.

It may happen to you—to-morrow! So—where is your dinghy; what's it got in it; where is the manual release? It is no use looking for these things in the short space of sixty seconds on a rough sea and a dark night after a terrific prang against a solid 20-foot wall of green water.



DON'T FORGET YOUR MAE WEST, SHE HASN'T FORGOTTEN YOU!

The following letter from Miss Mae West has reached TEE EMM. *Miss West saw a paragraph in a Los Angeles paper suggesting that the name "Mae West" for the R.A.F. life-saving jacket might soon get into the dictionary.*



Brent Productions]
A Mae West.

DEAR BOYS OF THE R.A.F.,

I have just seen that the R.A.F. flyers have a life-saving jacket they call a "Mae West," because it bulges in all the "right places." Well, I consider it a swell honour to have such great guys wrapped up in you, know what I mean?

Yes, it's kind of a nice thought to be flying all over with brave men . . . even if I'm only there by proxy in the form of a life-saving jacket, or a life-saving jacket in my form.

THE Mae West.

I always thought that the best way to hold a man was in your arms—but I guess when you're up in the air a plane is safer. You've got to keep everything under control.

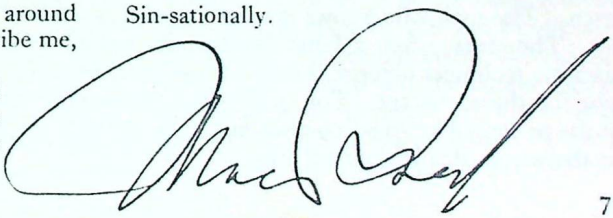
Yeah, the jacket idea is all right, and I can't imagine anything better than to bring you boys of the R.A.F. soft and happy landings. But what I'd like to know about that life-saving jacket is—has it got dangerous curves and soft shapely shoulders?

You've heard of Helen of Troy, the dame with the face that launched a thousand ships . . . why not a shape that will stop thousands of tanks?

If I do get in the dictionary—where you say you want to put me—how will they describe me? As a warm and clinging life-saving garment worn by aviators? Or an aviator's jacket that supplies the woman's touch while the boys are flying around nights? How would you describe me, boys?

I've been in *Who's Who*, and I know what's what, but it'll be the first time I ever made the dictionary.

Sin-sationally.



DON'T SEND A BOY TO DO A MAN'S WORK!

He doesn't like it!

At a large number of manufacturers' works, such as Rolls Royce, Armstrong-Siddeley, Boulton and Paul, and others, special courses are held to give instruction in the maintenance of the latest air-frames, engines and equipment, which have been, or will be, sent to units.

Unit Commanders and their Technical Officers know this. Indeed they have been sending people on these courses for some time. But do they fully realise the importance of sending the *right* people? Do their technical officers feel (not think) that they cannot spare their most experienced and intelligent men, and think (not feel) that these men will be lost to them once they have left the Unit for such a course? If they do, they would be wise to feel, and think, again.

These courses are short. Their object, as we have said, is to enable men to get the latest information about new aircraft, new items of equipment, and the modifications that have been made to these, so that they can go back and tell the others. It is no good designers and manufacturers trying to meet the needs of the flying service unless people are shown how to use the things they devise. Even a patent tin-opener has to be demonstrated.

Now, of course, it is only natural to want to freeze on to one's best men. This is true in the R.A.F. as in everything else. "We can't possibly spare Soandso, he's invaluable at this. And Whatsisname is too useful at that. Oh, well, what about those new arrivals; we don't know anything much about them? They'll do. Send them!" The result is that completely inexperienced youngsters arrive at a course, the instructor is flummoxed, and they return from the course little wiser than when they started.

After all, airmen at Technical Training Schools cannot be given Experience. They are only given the "first things first" of their job. They cannot therefore be expected to pick up the details of new equipment quickly, still less to pass on these details to others: thus the courses will be just so much waste of time. Conversely, the more experience a man has and the more he knows of a subject, the quicker he will pick up new ideas about it; and so it is wisest in the long run to send the best men. The man who knows is nearly always worth ten who are trying to find out.

Therefore, when a Unit Commander knows he is going to be re-equipped, he and his technical officers should choose with the greatest care the best men they've got for these courses. For, remember, these men remain on the strength of their units at manufacturers' courses and they go back to their units afterwards. That is the whole idea in sending them.

COURSE SENSE- IS HORSE SENSE

"I think the compass must have been out, sir."

EXTRACT from pre-war daily paper: "The pilot was lost and forced to fly by his compass." We well remember the derisive hoots this statement caused at the time among the navigation-conscious. It does, however, show that the pilot had a certain amount of gump. He relied upon his compass when all else failed and, as a result, lived to shoot a line to a newspaper reporter. Nowadays you don't wait till all else fails. You rely upon your compass at all times and in all weathers to take you through the darkness, over the sea, across the deserts, and on week-end leave. In fact, the compass is the navigator's best friend. It is also his best scape-goat. Like Wrong-way Corrigan, who started from New York saying he was flying to Los Angeles and ended up in Ireland, he is very apt to blame it for his mistakes. "I think the compass must have been out, sir," says P.O. Prune, standing uneasily on his flight commander's best mat. Which brings us, as it were, to the milk in the coconut.

The compass is first and last the navigator's instrument. It is also the most important link between him and the pilot. It should, therefore, be above suspicion as regards accuracy. If, as navigator, you found that your pilot had been steering 5° off course for the last couple of hours, you would rightly take an exceedingly poor view and probably tell him so in a downright manner. Yet you would be just as much to blame as the pilot if you had failed to make sure that the compass itself was not 5° wrong. Compass accuracy should be your fetish. That deviation card in the cockpit is all very well in its way, but ten to one it is the result of a ground swing carried out weeks ago. Have you the confidence to say that it is accurate in flight with bombs on and undercart up? If not, then only by checking course on the

actual trip will you be able to guarantee the courses you give the pilot. Air swinging can help a great deal. It is definitely better than ground swinging and solves the undercart and attitude problem. But it is not always enough where big bomb loads are carried near to the compass. Here are a couple of examples to show you what *can* be done.

First there was the navigator of a Catalina who made a perfect landfall at Rockall after about four hours' flying out of sight of land. Rockall is just a rock sticking out of the sea half-way between Scotland and Iceland. Then there was the navigator of another Catalina who intercepted with great accuracy a convoy some 400 miles from the nearest land. On both these occasions the weather was foul and the only kind of navigation possible was dead-reckoning by bomb-sight drifts and winds estimated from " lands " in the sea surface. No radio aids of *any* kind were used. From this you can see how much depended upon the accuracy of the compasses since there was no question of unknown deviations being absorbed in wind calculations. If the compasses had been in error the drifts used would have given wrong tracks, Rockall would have been missed, and the convoy found probably only after a search. The navigators, however, knew a thing or two. Catalina number one had been swung in the air by astro compass the day before the Rockall trip. Catalina number two carried an astro compass, and this was used to check the course being steered, from a brief glimpse of the sun shortly after leaving base; incidentally, the deviation found in this case (and used) was not the same as that on the deviation card in the cockpit.

You haven't all got astro compasses. You haven't all got aeroplanes that can be fitted with them. But there are still one or two things you can do—or stop doing—to help matters. For instance, quite a lot of people find it worth their while to check deviation with bombs on just before take off. They do this only on the course or courses they are going to fly to the target, so it only takes two or three minutes. It can be done at night, too, with the aid of an Aldis lamp and the aircraft's hand-bearing compass. Up to 7° of unexpected deviation has been found in this way. Quite enough to upset calculations on a murky night.

Be careful of this parallax business. It is often maintained that when swinging an aircraft on the ground the compass should be read and corrected from the viewpoint of the pilot sitting in his normal position. This is wrong, because when the aircraft is tail-down the planes of the grid wires and the north-south pointer are no longer parallel. As a result you get reading errors which don't occur in level flight. The only way to read a compass is with the eye vertically above the centre. If you can't get your head there, use a bit of mirror.

If you have got astro compasses in your squadron you will find them invaluable. They make this air swinging business and course checking just too simple. They're good things to have with you, too, if you run into a spot of bother with electrical storms and the steering compass does funny things. And

you navigators in northern waters remember that the instrument was designed specially as a safeguard for you. The pilot's compass gets pretty 'tatered in those latitudes and may " act queer " when near land masses or when magnetic storms get cracking. These magnetic storms, by the way, are not the same as the electrical thunder-and-lightning ones. They are caused by sunspots. Sunspots are holes in the sun from which emerge millions of highly technical particles which strike the earth's atmosphere and play Old Harry with the magnetic field. They cause the Aurora Borealis, upset wireless communication, and have their worst effect near the magnetic poles.

If you haven't got a copy of the new *Manual of Air Navigation, Volume 1*, there's a little green booklet with every astro compass which tells you how to use the thing. Here are a few extra ideas to help you get the most accurate results.

When you put the astro compass in its standard you will find a bit of play in the locating slot; so always bring the locking-pin up against the same side of the slot before tightening the clamp. If you're careful about this right from the time you first line up the standard you will dodge a possible 1° error.

The main thing to remember when using the instrument in the air is that it is very similar to using a sextant. A single observation with it is not enough to give you an accurate answer. You should take a lot and average them. This is because levelling is very important and however carefully you centralise the bubbles at one instant a movement of the aircraft may disturb them the next. The same applies to the magnetic compass you are checking. It also is affected by aircraft movement and must therefore be read a number of times to get the right figure. For the best results, as in sextant work, a good " George " is required. There must also be a lot of team work between yourself and the chauffeur (beg pardon—pilot). Let us assume that you have got him organised and are going to do a check.

First of all get the pilot to put " George " in and let you know when the aircraft is steady in both airspeed and course. While he is doing this put all the settings on the astro compass. When the pilot gives you " O.K., chaps " or otherwise indicates that all is well, level the instrument carefully and take the first reading. At the same time the pilot must read the steering compass. Do this every half minute, re-levelling the astro compass between each reading, until you have at least five simultaneous readings of both compasses. Average the astro compass readings and apply Variation to the result; average the pilot's compass readings, find the difference . . . but you can read up the rest in the booklet or Manual. A pair of dark glasses by day and a torch by night will be found useful.

One thing that may bother you is vibration. At certain revs this can be enough to cause the astro compass settings to " creep." It is therefore worth while to check settings between observations and, if you find them creeping, get the pilot to change the revs slightly.

Don't forget that microphones are

magnetic and that the pilot should not let his come near the compass when reading it.

Remember that the astro compass can give you the answer to within two degrees—almost as close as you can read it—*provided* you do your stuff and give it a fair chance.

A certain unit of the R.A.F., closely connected with navigation, has for its motto the words "*Recte Volare*," which means "Fly Straight." (P.O. Prune thought it had something to do with a pile up.) It's a good motto, except when there's flak about, because it sums up very nicely all we've just been trying to tell you. How about adopting it for 1942?

P.O. Prune says, "Well, hasn't it?"

NOTHING TO DO WITH TRAINING

(BUT WE HAVE TO FILL UP THIS HALF-PAGE SOMEHOW!)

THERE is a small hook on the front of the sling of our gas-face. We often wonder what it is for, though we have an idea we were told all about it by someone long ago. Probably it's for something very vital, which we shall never know till St. Peter is laughing heartily at us and saying: "So you *didn't* use that hook on your gas-face then!"

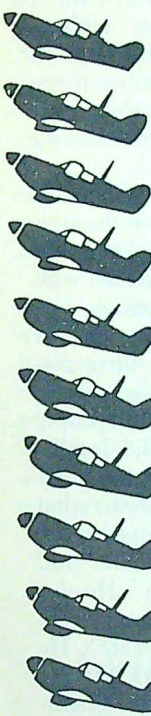
However, we've learnt one thing about it since a certain morning last week. Leaving Holborn Tube Station we saw a very senior officer—you know, cap simply weighed down with scrambled egg—who was just arriving for his day's work at the Air Ministry. The Tube had been crowded evidently—standing room only and close packed at that—and the respirator sling hook of our very senior officer had been in its own way quite busy. For hanging from his chest, as yet unnoticed, was a smart gaily-coloured lady's umbrella. . . . (The umbrella, we mean, was smart and gaily-coloured: we didn't see the lady!)

We followed him all down Kingsway, watching the faces of those who approached, watching the meticulous salutes turn to laughter, as the saluters drew out of range, watching later the discovery and the frantic attempts, first of all to dispose of and then to hide the embarrassing evidence. But whatever he did with it, and however he carried it, it was still a ladies' umbrella. . . . Ultimately with scarlet face he popped into the Air Ministry like a rabbit into its hole. . . .

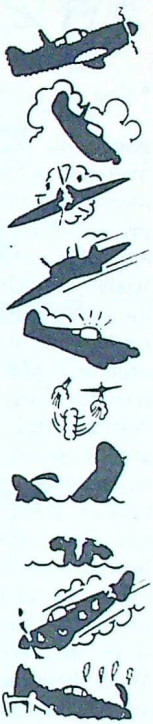
During our Tube journeys now we always look frequently at our own hook—rather like a hopeful fisherman who constantly pulls up his line to see what he has caught. To date, not even an old boot.

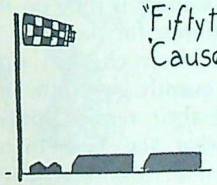
Don't look for a "training angle" in this. There isn't one. It's Christmas time and we just felt like telling a story, that's all.

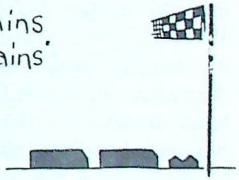
TEN LITTLE FICHTER BOYS



Ten Little Fighter boys taking off in Line
One was in coarse pitch, then there were nine
Nine little fighter boys climbing through the gate
One's petrol wasn't on, then there were eight
Eight little fighter boys scrambling up to heaven
One weaver didn't and then there were seven
Seven little fighter boys up to all the tricks
One had a hangover then there were six
Six little fighter boys milling over Hythe
One's pressure wasn't up and then there were five
Five little fighter boys over France's shore
One flew reciprocal and then there were four
Four little fighter boys joining in the spree
One's sight wasn't on and then there were three
Three little fighter boys high up in the blue
One's rubber pipe was loose then there were two
Two little fighter boys homing out of sun
Flew straight and level and then there was one
One little fighter boy happy to be home
Beat up dispersal and then there were none
Ten little Spitfires nothing have achieved
A.O.C at Group is very very peeved
"Fifty thousand Smackers thrown down the drains
'Cause Ten Silly baskets didn't use their brains"







DO YOU PAY FOR YOUR LIFTS?

"Keep that mouth shut."

It happens like this. A.C.1 Natter, or Sergeant Straddle, or even P.O. Prune, is temporarily without means of transport from the local town out to the aerodrome. In Prune's case his small car has just gone into garage, owing to his having overshot, with flaps up and brakes off, on coming in to the municipal parking place, which had a brick wall at the end of it. So Prune, unable to find a friend knocking round, is faced with a long walk—unless he can pick up a lift *en route*. In Straddle's case his carefully organised plan for connecting up with a friendly Ford van has gone astray. In Natter's case, of course, he rarely has any transport, but starts back along the road, either jerking his thumb at passing cars or, if the competition in this line is too great, putting on a pathetic limp, bowed shoulders, and the heart-breaking expression of one who's not *asking* for a lift but is just doggedly getting back to duty in spite of his sprained ankle. With these tactics he generally beats the simple thumb-jerkers to it.

Now in all these cases a lift is offered by a generous civilian and accepted by a grateful walker. And what happens? Well, there's no getting away from it: it's been proved time and time again that what happens is *TALK*. P.O. Prune talks because he likes to be polite; Sergeant Straddle talks because he likes to show off a bit; and A.C.1 Natter talks because he can't ruddywell help it.

Not one of them realises he may be giving something away; not one of them, we feel sure, *wants* or intends to give anything away. But they *do*. It's amazing how little scraps here and there fit into an ultimate picture. Even when they are positive they have not deliberately told the civilian driver anything, do they, when he gives a lift to two or three of them at a time, ever stop to think that he can overhear what they are talking about among themselves?

Let's get down to a concrete instance, in case you think we're taking through the TEE EMM hat. A certain Air Force Intelligence Officer knows a civilian who regularly passes an R.A.F. Station and who, being a kind-hearted fellow, always manages to squeeze in two or three airmen who ask for lifts. He is not an inquisitive chap who badgers people with questions, but he told the Intelligence Officer that he now knows exactly what squadrons are at that Station, what types of aircraft they are equipped with, what the various bomb-loads are, and what targets they drop them on. He also can make pretty accurate guesses from time to time at what our losses are. He went on: "The chaps I give lifts to constantly discuss things between themselves and I simply can't help overhearing. Indeed, some fellows insist on telling me; I often wonder if they do it as a sort of thank-offering for the lift."

The Intelligence Officer checked up with others who frequently gave lifts to the Air Force, and their replies completely bore out what the first man said.

Well, there you are! It happens! It *is* done. Prune and Straddle and

Natter *do* talk. They pay for their lift with information.

Now remember, not everyone with a car in this country is by any means entirely in sympathy *with* this country. We know Hitler's methods, and we can be sure of that. It is, indeed, quite probable that any such ill-disposed person, definitely seeking information for a hostile purpose, would not be such a fool as to try to wriggle his way into an aerodrome and snoop around. He'd go daily past an aerodrome in a car, offering lifts and keeping his ears open—and then move on to another. As things are, we think he'd glean quite a lot.

So why let him? It is the responsibility of you all, from the Station Commander, who should plug the point in Routine Orders, and his officers of all ranks, who should see that these Orders are not disobeyed and that punishment is handed out to those who do, right down to the Sergeants and Aircraftmen, who are more likely to be given lifts and unconsciously disobey. All, in fact, should remember what we have just written.

When you sit in the back of a car you can often see the eyes of the driver in the driving mirror. Let this remind you that he has ears too—and *Don't Pay for Your Lift.*

STAFF COLLEGE

P.O. Prune wonders if he's quite brainy enough for this Staff College Business.

The R.A.F. Staff College is to reopen about January 5th, 1942, for short three-months' courses: object—the instruction and training of selected Officers, of Wing Commander rank and under, in Staff duties. Students will also be given a good background of knowledge of the organisation and operations of the Service, in order to help them understand the "exercises" which will be set and the broader aspects of any branch of work on which they may be employed.

Recommendations for these courses are now being called for, and it should be noted that students will as far as possible be posted back to their Commands, or returned to any appointments not officially filled in the meantime. Any selected officer who holds acting rank will keep that rank, as long as he has held it for not less than a month previously, but it will have to be given up if he cannot be subsequently posted to a vacancy of the same or higher rank.

PILOT OFFICER PRUNE WRITES TO TEE EMM

After several months of taking Pilot Officer Prune's name in vain in TEE EMM, and even commenting upon some of his weaknesses, idiosyncrasies, and peculiar habits, we have at last received a letter from him and are of course delighted to have this opportunity of reprinting it. It should, however, be pointed out that views expressed in correspondence to the Editor are not to be taken as those of TEE EMM and do not necessarily represent Editorial or Air Ministry policy.

December 10th, 1941.

R.A.F. STATION,
NEW HEARY,
ENGLAND.

DEAR EDITOR,

I gather that several people seem to have the idea that I am not a real person and that there's a suggestion that you invented me just as an imaginary character to do damfool things. I take a pretty poor view of this, I may tell you. I was posted here eight months ago and am still fully operational, alive and kicking—in spite of a few unavoidable accidents about which there's no need to go on making those jokes. In any case, I send you my photo to prove I'm me. Publish it if you like for all the clots who don't believe I exist.

Percy Prune

Pilot Officer, No. 89008.

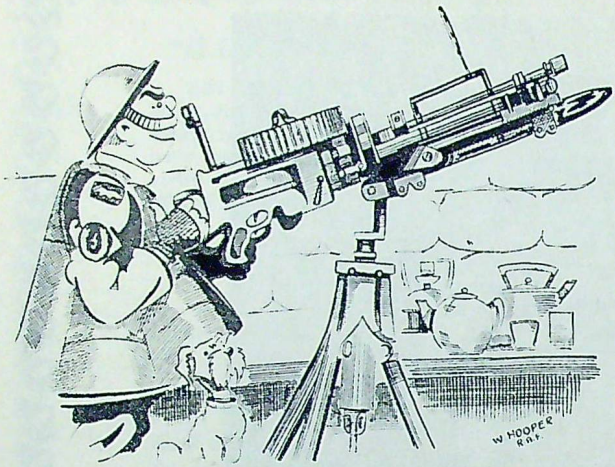
P.S.—And now if anyone says I'm not real you can tell them to pull their finger out.

In accordance with our correspondent's suggestion we publish his photograph on the opposite page. We repeat that any photographs sent us in the course of correspondence does not represent Editorial or Air Ministry policy, and we cannot be held in any way responsible for the same. TEE EMM, it must be pointed out, is for Official Use Only, and no part of the photograph opposite can be reprinted in the Press or communicated to those not entitled to look at it, nor must it be taken into the air.

EDITOR.


"Cracking Show"
P. Gruner
P.O.

"G.G."★



IT is not a bad idea to remember occasionally that the safety of your Station may well depend upon the watchfulness and skill of the Ground Gunners.

Watchfulness and Skill—two very important qualities for those engaged on Ground Defence. Two qualities, therefore, to the development of which the utmost attention should be paid.

Watchfulness is all important. It is no good waiting to see whether an aircraft drops bombs or not, before deciding whether it is a Blenheim or a Ju.88. The G.G.† must know which and *at once:* "form at a glance" so to speak. Given good eyesight, watchfulness depends largely upon interest. There are plenty of opportunities for stimulating this interest at the gun-posts where time may hang heavy on the hands. And there are plenty of ways in which to stimulate it. Sets of silhouette transparencies are provided at every post—in fact they are a definite part of the equipment. There is also the new game "Sieg Heil." Aircraft recognition can further be learned by working out games like "Snap" with packs of recognition playing cards. Gunners can be asked to keep a log showing all the aircraft which come within range of their guns during their tour of duty, logging type, estimated range, height, angle of approach, speed and so on. Ground range cards for each post can (and certainly should) be prepared and Gunners can then make themselves expert at estimating the range of men, aircraft, lorries and so on on the ground.

For practice in every way and every day is a thing that helps enormously: you'll be surprised at the answers you get if you ask an untrained man to estimate range. Why not, by the way, try dividing distance up into soccer grounds, cricket pitches, javelin throws, shove-ha'penny pushes, or even golf drives as a change from the more orthodox methods. (Well, perhaps not P.O. Prune's golf drives: they've been known to vary from 250 yards, following a good lunch and with a good following wind, to

★ According to recent A.M.O.'s, now officially "G."

† Or rather "G." Sorry!

3 feet, following too good a lunch and keeping his eye on the wrong ball.) And do not forget estimation of heights as well as of distance : the Ground Gunner * should have excellent opportunities for this. Why not take an interest in what he's doing for you by having a chat with him out near dispersal and see if he isn't better than you ?

Next comes skill. Perhaps we should have put this first, but unless you can see and recognise a Hun you can't fire at him. First spot your Hun ; then hit him : that's the rule. Now skill with any weapon is made up of the following : (i) exact knowledge of its capabilities and idiosyncracies, *i.e.*, just what the weapon *can* do and just what your particular weapon *does* do ; (ii) practice in using it : and (iii) a certain limited amount of natural ability. The star-turn fighter pilots, and air gunners, both in this war and the last, became stars very largely because they spent endless time and trouble on their guns and sights. It is hard enough to hit a dive bomber with the very best apparatus : it is quite impossible to do so if you don't know the theory. Go round your own aerodrome defences and ask the Gunners why the Ring and Aperture Sight has two alternative positions for the Ring Sight. (It is as well of course to know yourself. We do, because we have just seen the film " Lessons in Aiming for Machine Gunners "—mentioned already in TEE EMM—which should, of course, have been seen by all, and not only by Gunners.) When you have tried that one, ask whether the sights are harmonised and at what range : also how to aim at ground targets and parachutists.

* Still "G." Still sorry !

If your Gunner knows his job you may learn a lot yourself. If he doesn't then he is the weak spot in the defences for which the Hun is always looking. And the ultimate responsibility for that does not rest entirely with the Gunner.

Actual firing practice against air targets is not possible at most stations for obvious reasons, but much can be done with camera guns both in the open and synthetically. It should be possible to adapt locally a Ring and Aperture Sight for the Cine-camera Gun and we feel sure someone can somehow devise a synthetic range indoors. Again, at all aerodromes Gunners have unlimited opportunities of aiming at aircraft taking off and coming in to land. (It will, of course, be better if the guns are not loaded and cocked for this !) This will teach Gunners the art of swinging their guns and estimating range (when a certain type of aircraft fills the inner ring it is so many yards away and so on).

Here's a story to end up, and to hearten all G.G.'s.* During the blitz in France in May 1940, twelve Heinkels came over and did a low-flying attack on one of the A.A.S.F. aerodromes. All the ground defences opened up, and what with that and the bombs and a few burning aircraft it was as good as a Fifth of November, but it didn't appear to affect the Hun very much. All the Heinkels flew away and the Gunners were somewhat distressed ; indeed, they had to put up with a bit of adverse comment. Next day, however, the French authorities rang up H.Q. A.A.S.F. and said there were ten Heinkels lying about the countryside and did the British know anything about them ? . . . So you see it *can* be done.

* All right, all right ! *Sorry !*

WIRELESS O.K., SIR?

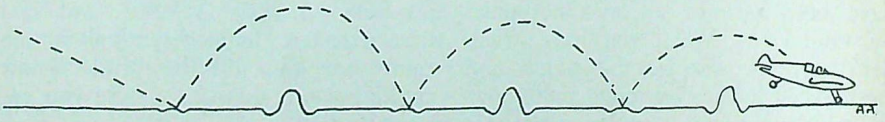
YOU have probably heard this query many times on landing. Perhaps you have sometimes answered "No, it isn't."

Have you ever wondered just *why* it wasn't O.K.? No need to stop reading this: we're not going to go all technical! We admit that some failures *are* due to technical trouble, but you are not asked to mend your own set. Other failures, however, are due to " cockpit trouble " ; that is, they are either the pilot's fault, or they are things that could be righted by the pilot in the air.

For example—swinging from your helmet and generally getting in your way, is a plug which connects your microphone and phones to the set. Now this plug sometimes gets in the way in the air and is pulled out of its socket. At this point all signals cease. Well, do you sit back and curse the W/T Op? Or do you find the plug and push it back? The latter, we hope. And do you push it right home. The genuine article has a clicking-ring built in to help keep it in place; so as you push it in, feel for it clicking home. Do this once or twice when sitting in the cockpit waiting for something to happen, and you'll find that, having got the feel of that final click, you won't be satisfied with shoving it in anyhow and being surprised when it comes out again. A small thing, yes! But the number of times that plug is forgotten!

Supposing, however, the plug is in and the set still isn't doing its stuff. Well, try answering these questions: Is the set switched on? Are you on " receive " ? Are you on the right channel? And is your contactor out? *Don't* take these for granted just because, of course, *you* never make silly mistakes like that: take a quick dekko and *make sure!* At the same time check up on your microphone switch, if you have one: Is *that* on? As with all switches, we know that you always leave yours on, but it may have been pushed off accidentally. We once saw a main charging-switch travel gently from " on " to " off "

SLAP-HAPPY LANDINGS



P.O. Prune had to force-land in a field. Luckily, his natural style of landing enabled him to avoid the artificial obstacles.

purely from vibration while the aircraft was being run up, so, sometimes it's not enough to say, " well, it *was* on ; so it must be on now ! "

Talking of main supplies—if the radio works off the aircraft battery and the battery is flat, there will be no radio. (Pilot Officer Prune has worked this one out for himself. He is naming it " To-day's Great Thought.") You can check up on the battery, of course, by trying something else and seeing if *that* works.

Many other small snags are peculiar to the set in use ; so if you are posted to a squadron using a type of set with which you are not familiar, go into the R/T Section and ask for the gen on it. Don't wait for the C.O. to send you—with a chilly suggestion that you might have gone before. And when you get there, don't be afraid of being thought a fool. The real fool is the pilot who doesn't know and *doesn't ask*. You won't be shown any circuit diagrams or things like that unless you are a radio man ; but you will be shown what the various units of the set are and how to use them.

Let them give your helmet the occasional once-over too ; if they never see it, as often happens, you can hardly blame them if anything goes wrong. By the way, if you break the plug, do have it mended at once, and have the new cover padded with rubber tape.

If you get a snag at any time, ask the W/T Op. all about it, and find out particularly if *you* should, or could, have done anything. You want to know better next time, don't you ? Even if it turns out to be your fault, well, any fool can make mistakes, but it takes a wise man to admit and profit from them. So, on such occasions, always tell the W/T Op. all you know about the snags. As soon as you can, too ; it saves a lot of his trouble and time in checking up what really did happen. For you mustn't think things won't be noticed if you keep quiet—or that you can shoot a line and get away with it.

Of course, when your wireless set suddenly packs up, it may be a valve gone west. Well, you can't do much about that. But you can concentrate on the simple things—such as not kicking switches by accident when climbing in and out, and seeing—before you get out —that *all* switches are *off*.

In short, get interested in your wireless and R/T set. It is going to get you back to bed one of these murky nights, and you will never forget it. It's very easy after all.

SLAP-HAPPY LANDINGS

When P.O. Prune finds he is over-shooting, he has his own method of going round again ; he prefers to do it vertically.

IT GOES ON BEING A FUNNY THING

IN TEE EMM for June we published an article called " It's a Funny Thing, But . . . " and in July another one called " It's Still a Funny Thing, But . . ." These articles dealt with the fact that engine failures on multi-engined aircraft with C.S. airscrews may not be immediately apparent. You look at your rev.-counter, but the C.S. unit is at work keeping the revs. up : you look at the boost, but as that varies with the revs., which are still up, and the throttle setting, which you haven't moved, it remains the same.

These articles caused a good deal of controversy ; but the TEE EMM Editor—who doesn't know a damn thing about aeroplane engines or indeed about anything much—wisely kept out of all this till the dust had cleared. It now seems to have flared up again, for we have received a letter, from which the following is an extract :

> " One point particularly interested me in these articles, namely, the behaviour of the boost gauge, and after discussing it at various units without obtaining a satisfactory answer, I referred the problem to the Controller of Research and Development and attach a copy of his reply.
>
> " May I take this opportunity of saying what a very valuable and interesting publication TEE EMM is. It is by far the most . . . "

(Well, never mind, the rest is purely personal, the sort of boost *we* understand—excuse us, while we go and preen ourselves in the typist's pocket mirror . . .)

And here is the reply from the Controller of Research and Development :—

" Further thought on your problem regarding boost gauge indication on multi-engine aircraft when one engine has failed to deliver appreciable power has, I think, disclosed the answer.

" Provided that the engine is operating below its rated altitude, the automatic boost control will be in operation. Any incipient failing of the engine will thus be compensated by the automatic opening of the throttle to maintain the controlled boost pressure. The falling power of the engine will be further masked by the automatic compensation of the constant speed airscrew.

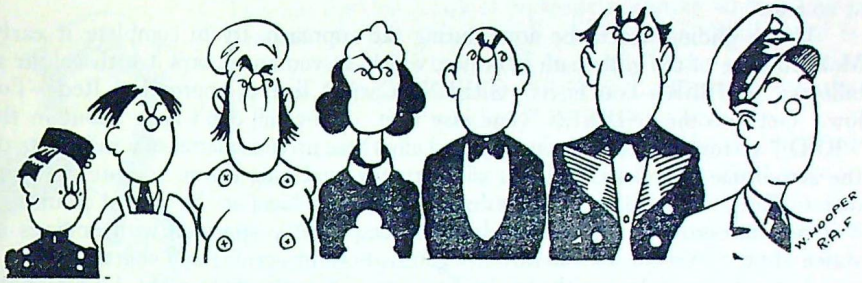
" The loss of power will only be indicated by a change in boost pressure, or R.P.M. when the throttle has reached the fully open position or the constant speed airscrew reaches the limit of its fine pitch setting.

" Unfortunately, there appears to be no simple means of providing an indicator to give warning of an impending engine failure. Even if it could be provided, however, its only advantage would be to enable the pilot to throttle back his failing engine before the deterioration reached the point of a definite mechanical failure."

P.O. Prune says he has now one hell of a headache.

SOME TIPS FOR NIGHT FLYERS

(BY ONE WHO HAS DONE A LOT OF IT)



P.O. Prune says he never gives tips.

Take Off. Don't try to look for the flare path over your left shoulder. It is still behind you: flare paths don't often run away or blow up, when your eye isn't on them. Climb to a safe height—not less than 1,000 feet, unless you are experienced—turn through 180 degrees on instruments and *then* look. If the flare path *hasn't* run away or blown up, you will see it in front of you and slightly on your port bow. If either of these disasters *has* occurred, well, you couldn't have done anything about it—and anyway you are now at a safe height with full control of your aircraft.

Instruments. Don't be afraid to change to instruments in plenty of time, both during take-off and if you overshoot. Don't hang your head out of the window in a desperate attempt to catch a glimpse of the last flare as it disappears into the night, then, with a wail, turn to the instruments and expect them to get you out of the jam. Give them a chance, and you won't *be* in a jam.

Engine-Assisted Approach and Landing. This is the method which should be employed always for Night Landings. Note that the heading says Engine-Assisted Approach *and Landing*. In other words, the engines should not be throttled right back until the aircraft is actually being held off, the approach being governed by the throttles and the speed kept constant by the elevators. This ensures that there is no violent alteration of the attitude of the aircraft either during the approach or for the actual landing.

Here it all is in more detail: For the last 500 feet or so, the aircraft should be heading comfortably into the aerodrome and the throttles set to give an engine speed of about double that of idling r.p.m. Flatten out with engines running at this speed, then close the throttles fully and hold the aircraft just clear of the ground, easing the control column steadily back until it is fully back, when the aircraft will make smooth contact with the ground with all three wheels together. (We hope!)

Once having decided on an Engine Approach and Landing, instead of a glide, do not mix the two up. It is dangerous to try to change to a glide approach at 50 feet.

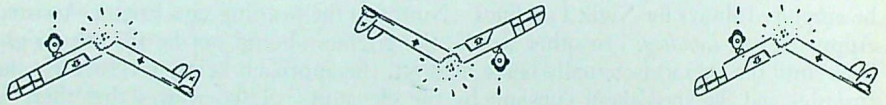
Neither pilot nor aircraft have time to adjust themselves to the large change of attitude necessary. The aircraft does not have time to increase speed before the hold-off becomes necessary, and the pilot will be caught bending. In fact the whole thing becomes a shambles ; and the pilot will exclaim afterwards that " it seemed to stall at 20 feet."

If any gliding has to be done during the approach, try to complete it early. Make full use of the glide path indicator, which, as you know, says it with colour as follows: AMBER—Too high: GREEN—Correct line of approach: Red—Too low. Get into the " GREEN " and stay in it. Above all don't hang about in the " RED " sector. If you do, you may land anywhere up to a quarter of a mile outside the aerodrome boundary, and you will certainly land long before you are ready to do so. Keep one hand on the throttles, land with one hand on the control column—it is not necessary to use two hands—and complete the approach with engines as stated above. Always use the throttles gently, both in opening and shutting.

Never try to judge height for landing, even on a moonlight night, by watching a shadowy runway. The landings, more often than not, will be poor and if the habit is formed, landings on dark nights will be pure hit or miss—probably miss. Get the habit of always judging height by the " glims." The " glims " are always there, but runways are apt to become suddenly a bottomlesss abyss.

If you feel you have done a heavy landing, don't wait to make certain on a subsequent landing. Bring your aircraft in at once for inspection, or the under-carriage may collapse—much to your astonishment—even when your next landing is a perfect one. Worse still, don't leave it to fold up on the next pilot who happens to fly that particular aircraft : it might be the Flight Commander.

Brakes. When taxying always try to imagine that you have no brakes. You will be surprised to find then how slowly you will taxy and what a wide berth you will give obstacles. Don't wait until the last moment and then find you have not got enough brake pressure ; it sounds so silly afterwards. It *is* silly at the time.



TEE EMM'S CHRISTMAS PUZZLE

A. is a Wing Commander, who long ago went through Cranwell, and B. is a Squadron Leader, who joined just before the war. Their united ages are sixty-six years.

A. is twice as old as B. was when he joined the Service, when A. was a Squadron Leader and half as old as B. will be if he's lucky enough to die in bed at a ripe old age, when he'll be three times as old as A. was when he was a Flying Officer three times as old as B. was when he first went to school. How old is B. ?

Answer on p. 35.

"CAN I BELIEVE MY SENSES?"

P.O. Prune says he can always believe his.

This is the exclamation so frequently made in old-time melodramas. It is wrung from the heroine when Uncle George, whom they were all told had died of beri-beri in the tropics about the end of Act I, suddenly walks on to the stage in Act III, as large as life and twice as natural, as he wittily explains. The idea in the girl's mind, of course, is that, incredible as it may seem that dead Uncle George has turned up as large as nature and twice as lively, there can only be one *more* incredible thing, and that is, that her own senses were actually playing her false. And senses, she is convinced, never play one false.

As a matter of fact she's quite wrong! Our senses, on which we rely for so many things in this life from finding bedroom slippers in the dark to telling the waiter the wine is corked, are frequently letting us down. Mirages, sounds that aren't there, the "burning" sensation of icy cold water—you can find a hundred examples. These, however, are well known: others are not—particularly when you take a human being complete with his five senses and put him in a high-speed aircraft. In these conditions his senses are often quite inadequate to their task of correctly reporting what is going on around, of telling him exactly what is happening to him. Hence we have the instruments in the cockpit to tell the pilot what he wants to know.

Let us, for instance, take the question of balance. When powerful out-of-balance forces causing acceleration are applied to a human being, the result is generally that he feels like a worm loaded with buckshot one minute and like Alice after eating the port side of the mushroom the next. Soon, however, his balance mechanism takes up the question for him and he becomes used to these curious conditions. He thinks everything is well and that it's all over now, while actually the conditions are still persisting. Later, when proper balance is restored, he has another period of wondering discomfort and may easily think some other terrific change has occurred, when really it may only be a reversion to the *status quo*.

In other words his senses only say that changes have occurred: they are quite unable to say exactly what those changes are. Ever since aircraft first began flying in cloud this fact has been recognised, and so instruments have been developed which will tell the pilot *exactly* what is happening at all times. Very necessary too, for every pilot knows that if he does not look at his instruments it is quite possible to go into cloud beautifully level and come out at any old angle—and not even know he has done it.

Unfortunately, as instruments have

developed into an essential and permanent part of all flying, the pilot has got into the habit of treating them a little familiarly. They are always there and most of the time he knows what they say. He is inclined to revert to the days of relying on his senses, in preference to his instruments, at times when he should not do so; and one of these times is when taking-off at night.

Recently a number of night-flying accidents have occurred which are all very much the same. The aircraft takes off, climbs to about 400 feet, turns slowly down wind, changes gradually to a gentle dive—and crashes.

These accidents have been investigated as far as possible, and a probable reason for them has been suggested. There is an interesting paper on the subject from the Aeronautical Research Committee, rather mathematical and full of things like " tractive force," " resultants," " C.G. of passenger," and so on. We may publish this later, if our readers are interested to see it in full. But, briefly, what it means is this. An aircraft accelerates during the take-off and initial climb. This induces a certain sensation in the pilot. He then gets used to this sensation, and any change back to unaccelerated flight seems wrong to him—*if* he is relying on his feelings rather than his instruments and cannot see the horizon. In order to feel right, therefore, he must keep the acceleration going : if he keeps a uniform acceleration going, he must inevitably change from climb to dive : if he changes from climb to dive, equally inevitably he must crash. That's it, in a nutshell.

To test this theory various experiments have been carried out by pairs of experienced pilots, one flying the aircraft and one blindfolded recording his sensations. Here is a record of one of the series of experiments. The blindfolded pilot, by the way, was no amateur; he had a total of 3,200 flying hours. He was firmly convinced that the aircraft had done " a steady straight climb throughout," when in point of fact what had happened, as stated by the flying pilot, was a " normal take-off followed by a gradually increasing right-hand turn with the nose slightly dropping—maximum height attained, 200 feet. This was followed by a shallow dive, while still turning, down to ground level."

On two other occasions, the report runs, " a gradual turn and dive from 500 feet following the take-off was not sensed until much too late to make a satisfactory recovery, and no idea of the magnitude of the dive was realised." In this case the aircraft was, in point of fact, nearly at ground level at a speed of 200 m.p.h. before the sensations of dive developed.

Well, there it is ! There may be—and probably are—other factors in these accidents while taking off at night, but there is only one *cure*. See that your instruments are working properly before you take-off; then stick to them at take-off and after. Do not try and keep the ground lights in view. You can't do so—and anyway they won't run away while you are looking at your instruments; and the beacon will always be there to guide you back.

So stick to your instruments, remembering that for take-off the most important are the Horizon and the Direction-Indicator. Make certain that the pumps are delivering the correct suction and

that your Direction-Indicator is adjusted to your Compass; then uncage the Direction-Indicator and go. Don't take any notice of your Altimeter or Vertical Speed Meter until you have reached a safe constant climbing speed. When acceleration error disappears and position error becomes constant, sit the aircraft on the top of the Horizon Bar, keep straight on the Direction-Indicator, and let your engines climb you safely away from all obstacles.

Shall we, like the B.B.C., "read that piece again?" No, better that you should yourself get it fixed firmly and permanently in your mind! We can only repeat: *Stick to your instruments*—and avoid these crashes.

THE O.T.U. INSTRUCTOR'S NEW YEAR'S ADVICE

"WEAR YOUR WINGS IN THE PROPER PLACE!"

Pupil Pilot Prang says it wasn't really carelessness—all he did was just to . . . .

HISTORY NOTE

A solitary Blenheim crossed the path of the Hurricane Squadron, and this was shot down by Squadron Leader I. Boob (afterwards Pilot Officer I. Boob).

The Awful Tale of P.O. Prune

Who could not concentrate,
*Adapted from a Station Mag.**
And used to Illustrate
A Moral Suitable for Those
Who would avoid Prune's Fate

This is the tale of P.O Prune,
Now in hospital at Frome,
Who, though Industrious and Keen,
The type who keeps his buttons clean,
Earned for himself a bitter fate,
Because he could not concentrate.

* *Wings,*" Jurby, I. O. M.

Although he always tried his best
To be Efficient (like the rest),
He simply hadn't got the skill
To concentrate on COCKPIT DRILL.

He tried mnemonics ; used to sit
For ages memorising it.
But once inside his aeroplane,
He just forgot it all again.

The inter-com., the airscrew pitch,
The warning indicator switch,
The flaps, and elevator trim,
Were one and all alike to him.

He happened then in course of time
To muddle up this pantomime,
Whilst coming in to land one day
In (what he thought) the usual way.

He accidentally pulled the catch,
That jettisons the exit hatch.
It quite surprised him when he saw
His gunner vanish through the floor,
Then hurtle downwards through the air,—
To burst beside the signal square.

Poor P.O Prune in pensive mood,
Forgot to check his altitood,
And at a hundred miles per hour
He cannoned off the water tower,
Mowed down an Orderly Parade,
Then hit the deck and ricochetted
Right through the Mess, wherein a bunch
Of Officers were taking lunch.

Imagine then the screams and groans,
The crunching sound of splintered bones,
The shattered glass, the ruptured seams,
The tangled mass of twisted beams,
The *débris* scattered everywhere.
It was a Terrible Affair.

When all was clear they took the dead
And heaped them in the tractor shed,
They counted them and found at length
That fully half the ration strength
Were incapacitated, or
Revolting messes on the floor.

From 'midst the havoc he had wrought
They dug Prune from his Juggernaut.
The doctor hastily arrived—
And found, alas, he had *survived.*

Next day Group Captain Cholmondly-Pym
Severely reprimanded him ;
A punishment both wise and just,
For pilots in the Service must
(Lest they should share P.O Prune's fate)
Be capable
and CONCENTRATE.

THIS MONTH'S ANNIVERSARY—JANUARY

IN January, 1918, the whole of the forces in the Eastern Mediterranean were stirred into special activity by the sortie from the Dardanelles of the two German cruisers, *Goeben* and *Breslau*. A message that these cruisers had come out was intercepted at Mudros on the morning of January 20th, and all aircraft were immediately ordered to concentrate at Mudros and Imbros. The two cruisers had passed out of the Dardanelles about 5 a.m. with the object of attacking the two British monitors in Kusu Bay, Imbros, and of bombarding Mudros. Off Mavro Island the *Goeben* struck a mine, but the cruisers went ahead and they opened fire on the monitors and on general shipping in Kusu Bay about 8 a.m. Six or seven salvoes were fired, and these destroyed the two monitors.

The cruisers then turned off towards Mudros, but aircraft from Imbros were now on the scene and they began to attack with bombs. Before any hits were made, the bombing, indirectly, brought about the destruction of the *Breslau*. The anti-aircraft shells fired by the guns from the *Goeben* were seen to be falling close to the *Breslau* and the latter ship was thereupon ordered by her consort to take station ahead. As she moved to obey orders the *Breslau* was so harassed by the attacking aircraft that she zig-zagged into a mine-field near Rabbit Island and had her stern shattered by a mine. Almost at the same moment she received a direct hit from a bomb. The *Goeben* turned to take the *Breslau* in tow, but soon gave up the attempt and left the damaged cruiser to her fate. The *Breslau* struck more mines and finally sank.

The *Goeben*, meanwhile, continued her journey towards Mudros, but struck a mine on the way. Her commander thereupon decided to go back, but failed to find the gap he had made in the mine-field off the Dardanelles and struck another mine going in. As the *Goeben* entered the Straits two bomb-carrying Blackburn " Baby " seaplanes, escorted by a Greek pilot in a " Camel," appeared over her, but they were promptly engaged by a formation of ten enemy seaplanes.

In a sharp fight, three of the enemy seaplanes were driven down by the " Camel " pilot, and one of the Blackburn " Baby " seaplanes fell in flames. By this time the hostile formation had been broken and the second Blackburn " Baby " pilot persisted in his bombing attack and aimed his 65-lb. bombs at the *Goeben*, but without the luck of a hit. He was then forced, by engine trouble, to land in the Straits. Soon after this attack two D.H.4 aeroplanes found the *Goeben*, apparently in trouble, and they saw her run aground south of Nagara. Before returning to report her plight the D.H.4's dropped their bombs and scored a hit on a vessel making to assist the German cruiser.

When the position of the *Goeben* became known, aircraft were sent up to take photographs, and the concentration of bombers and fighters at Imbros and Mudros was pressed forward. In the afternoon there were low clouds and

patches of mist, but four 112-lb. bombs were dropped, without direct results, by D.H.4 aeroplanes. At the same time a widespread air patrol of the waters off Mudros was made by all available aircraft to test the truth of statements, made by rescued members of the crew of the *Breslau*, that mine-fields had been laid outside the harbour by U-boats. No mines were discovered, and it is a point of interest that the prisoners' statements, whether they were made in good faith or with the intention to deceive, had the effect of diverting temporarily the activities of aircraft from the possible bombing of the *Goeben*.

The attack on the battle cruiser was resumed at dawn next morning, January 21st, but clouds at 500 feet and mist hampered the bombing operations. Three separate attacks were made during the day, but only one bomb, of 112-lb. weight, hit the *Goeben*. After dark, nine aeroplanes were sent to the Straits, but they got a poor view of their target and no hits were claimed.

On the 22nd and 23rd day and night attacks were kept up; one direct hit was claimed on the morning of the 22nd, with a 112-lb. bomb dropped from a D.H.4. All the bombing formations were escorted by fighters, but there was no opposition other than heavy anti-aircraft gun-fire, by which a Greek pilot was shot down on the 23rd. On January 24th the carrier *Empress* arrived and her pilots were used to relieve the overworked officers at Mudros and Imbros. Next day, also, the *Manxman* reached Mudros with badly needed supplies of bombs. Strong winds and low clouds continued to make bombing difficult up to the morning of the 27th. On the evening of the 24th a monitor, with aircraft observation, attempted to fire at the *Goeben*, but just when her shells were being signalled near the target a haze spread over the Straits, and no further spotting was possible. On the morning of the 27th a "Camel" pilot, in difficult conditions of weather, reached the Straits to find no trace of the German cruiser, but a little later another "Camel" pilot thought he could distinguish her in the mist. She had, in fact, got off on the 26th, and by the morning of the 27th had reached Constantinople under her own steam, but it was not until the morning of the 28th that the weather was clear enough for air observers to say definitely that she had gone. During the few days in which she had been grounded in the Straits fifteen tons of bombs had been dropped. Pilots had been tireless in their efforts to disable their enemy, but they had no luck, nor could they be expected to achieve much with the only bombs immediately available which were of 65-lb. or 112-lb. weight, too light to inflict serious damage on a ship of the *Goeben's* construction.

No reliable torpedo-carrying aircraft were in the Eastern Mediterranean when the *Goeben* ran aground. An attempt was made to fit a 14-inch torpedo to one of the old Shorts in the *Ark Royal*, but the seaplane, so loaded, would not move off the water. When the *Manxman* arrived in Mudros harbour from Brindisi at 7 a.m. on January 25th, she brought with her two seaplanes fitted with 18-inch torpedoes, but there was an unaccountable delay in sending up her seaplanes, and, on the 26th, the day of the *Goeben's* departure, the wind freshened and

the sea was judged too choppy for the torpedo-loaded seaplanes to get away.

Meanwhile the officers of the *Ark Royal* had succeeded in fitting one of the Short seaplanes to take depth-charges of 300-lb. weight, or 18-inch warheads. On the night of the 27th, when it was still doubtful whether the *Goeben* had gone, a pilot set out in a Henri Farman aeroplane, loaded with a warhead, to search for her. The visibility over the Dardanelles was poor, and although the pilot could not locate the *Goeben*, he decided to drop the warhead, from 1,600 feet over Nagara Point, in the hope that the ship, although not visible through the mist, might still be aground. The resultant explosion was so heavy as to shock the anti-aircraft gunners into immediate silence.

Other naval seaplanes were over the Straits that night to keep the attention of the Dardanelles garrison off the entrance in order to make easier the passage of a British submarine, the *E.*14, which had been sent out in the afternoon to attack the German cruiser. The *E.*14 got through to Nagara, but found that her quarry had gone and that her gallant attempt had been made in vain. Nor did she otherwise have the luck she deserved: on her homeward journey she was sunk by gun-fire off Kum Kale.

Many subsequent reconnaissance flights, by D.H.4 aeroplanes fitted with extra fuel tanks to give an endurance of seven hours, were made to Constantinople to keep watch on the *Goeben* in Stenia Bay. But she never came out again.

Note the moral: In spite of the persistent air attacks and the losses incurred, the *Goeben* was not sunk—*but* she never came out again. So, too, have our aircraft played their part in this war. They have persisted in attack after attack over the harbour of Brest; their losses have not been light; nor have they yet sunk either the *Scharnhorst* or the *Gneisenau*. But for nine months now those two would-be commerce raiders, later joined by the scurrying *Prinz Eugen*, have been kept off the seas, bottled up firmly in harbour. Their anti-aircraft defences are something more terrible than the last war ever knew, the targets are skilfully camouflaged and smoke-screened and naturally a heavy toll is taken of our visiting aircraft. But the courage and self-sacrifice of our raiding pilots have *kept* those ships there where they are not much more useful than if they were at the bottom of the sea. And perhaps that moment won't be so far off either.

"It wasn't even his girl who watched the aerobatics."

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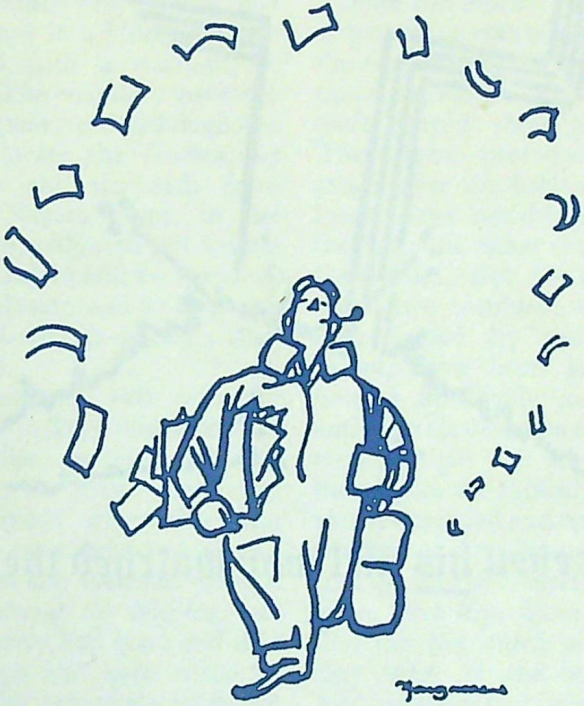

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