TEE EMM

Vol. 5. No. 8 November 1945

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Vol. 5 No. 8 **TEE EMM** November, 1945

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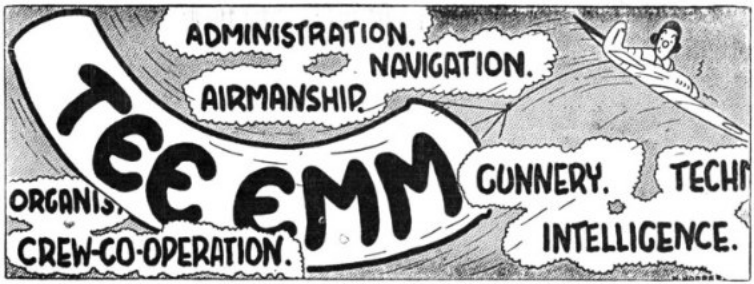
Pilot Officer Prune says—"Take Tee Emm regularly! Prevents that Thinking Feeling!"



"I hope that these Training Memoranda will continue to be as widely read and studied as they have been during the past four years.

Portal of Hungerford.

Marshall of the Royal Air Force, Chief of the Air Staff.

ADMIN. AND THE FUTURE

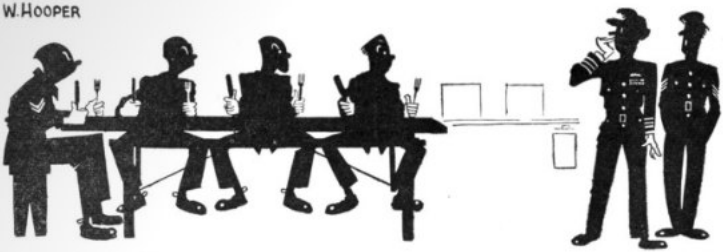
V. Helping Yourself

COURSES are a bind and there's no denying the fact. After two or three years of an active and responsible life, they are far too reminiscent of going back to school.

But don't let this feeling get hold of you. Only fools consistently regard courses as something beneath the dignity of a Tempest section-leader or a Lancaster captain or whatever they happen to be. Only morons look on instructors as something a little lower in the United Kingdom than the Japs.

For though the war is over, the work has just begun. Thousands of ex-operational air crew have to take on the administrative jobs which have hitherto been done by solicitors, barristers, schoolmasters, business executives, all older and wiser men. Stepping into those shoes is not a sinecure. But the Air Force, and it's a pretty big one, has to go on running even while it is slowly deflating. And the airmen will expect the same efficient administration from you as Adjutant or Squadron Leader Admin. as from your predecessor. They probably won't agree that your sparkling

W. HOOPER



fruit salad is sufficient compensation for getting no dinner because you forgot to have the rations collected, or for not getting their proper pay because you muddled the P.O.R.'s. There's no shame in learning more about your job : doctors, for instance, go back regularly to hospitals for post-graduate courses to bring themselves up to date. And if there's no shame in learning more of your job, there certainly should be none in learning a new one.

But here is the point we are leading up to : *How to get the most out of a course.*

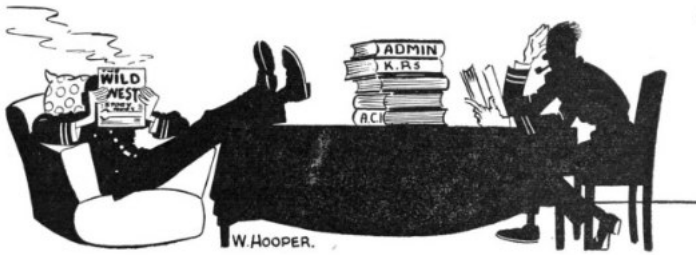
Well, there are two answers to that. The first is obviously to *work hard on the course.* But the second is really just as important ; and it is to *do some work towards it before you go.* You nearly always get two or three weeks' warning and it's quite simple to find out what books and publications you should read beforehand. (We can tell you one right now which covers nearly everything—A.P. 837, the Manual of Administration ; but make sure it's amended to date.) Write, or—better still—ask your Adjutant to write, to the Course Adjutant for a list of books necessary. A list may have been sent already, but perhaps the Adjutant hasn't bothered to tell you because he never thought you would read them—which is why it's a better idea to ask *him* to write.

Prune here asks what the hell's the use of reading all these books : isn't that what the course is for—to tell you all about it ? Well you (not Prune, of course) *may* be able to learn all about, say, R.A.F. Administration in a month, but unless you have had an admin. job for some time the odds are that you won't. And remember that the benefit of a course is that there's someone there who knows all the answers. If you don't quite get some point or other in a book, the book can't help you by further explanation. And if everything could be learned from the books there wouldn't be any point in having a course. *But* if you get the ground-work into your head beforehand, more of the instructors' time can be devoted to explaining the finer points and answering your questions. And any instructor will tell you that the more a class knows, the *more questions* they ask. Already knowing something they are interested enough to want to know more.

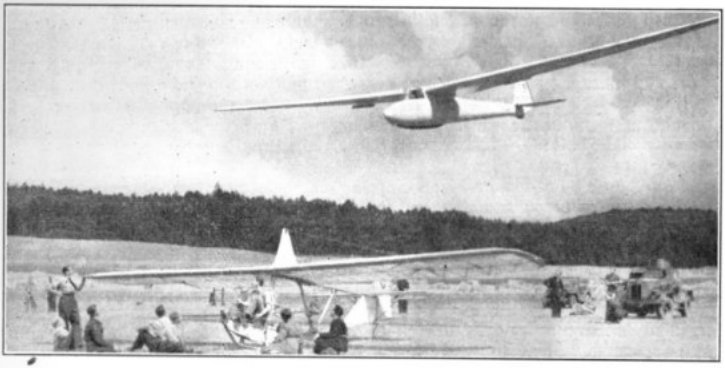
There's another point too about this prior mugging-up of the subject. Probably

your job has been open air and practical. You haven't done any concentrated studying for some time. Thus the part of your brain which tackles studying will be a bit rusty, and you won't find it easy to concentrate at first. In other words, during the first half of the course you will be forcing your mind to accustom itself to that sort of thing and so won't be deriving the fullest benefit. On top of that, exercises you are set will take a long time ; arrears of work will pile up ; you will naturally get more and more depressed ; and you may even give up the effort in disgust. You will, in fact, be like a man who is learning to lay tiles on a roof and is at the same time trying to build the ladder he is standing on. An hour or so of work each day for a fortnight before the course starts will make all the difference to the value you get from it.

And here's a final point. Supposing you are not staying in much longer and you are lined up for a course which you don't want and which doesn't look as if it is going to be much use to you. You ask disgustedly, what *is* the good of it ? Well, more than you think. Administrative training is *always* valuable. Every executive job, whether in an Air Force or a uranium factory, is partly administrative. The job you are going back to may not be run anything like the Service. In fact, it's pretty unlikely that it will be. But in learning the administration of an immense organisation like the R.A.F. you may pick up some ideas which will help you to run your department efficiently. And if you are going back to your old employer and he has promised you a better position on the strength of your war record, he will—perhaps unjustly, but certainly naturally—expect you to know more, not less, than when you left. He wants knowledge and ability, rather than D.F.C.'s and flying skill ; and once he has given you the job, it's up to you to hold it down. To paraphrase an old Lancashire saying : " It's easy to get work but it's damn difficult to keep it."



AT THE GLIDE INN



TEE EMM, in person, has visited a new unit. A very nice new unit, and, in our opinion, a most interesting and valuable one. We actually went right out to Germany to visit it, too, and so are rather full of our experiences. ("*Haben sie bier? . . . Danke schön! Bitte!* Oh very well then, mild-and-bitter!")

Well, we'll start this unit's history at the beginning, when a couple of rather browned-off R.A.F. officers in a Wing of 84 Group out in Hunland started to play around with bits and pieces of a German glider they had found, the object of the exercise being to stick them together, make the thing glide, and then, if possible, start a Gliding Club in their Wing. We gather that at this stage it was all rather speculative and not unlike cutting out a toy aeroplane from the centre page of *Tommie's Weekly*.

About the same time, some other officers elsewhere in the Group had got together with much the same idea and put it up to Headquarters. Group H.Q. considering that there was a future in it somewhere, took it up in a big way and picked an officer to organise a Group Gliding Club. Later they heard of the embryo effort in the Wing and co-opted it. There was at this time still no official unit, merely half a dozen pioneers, who had now been brought together and attached to Group H.Q.

The first weeks were hectic because German gliders—which were slightly ahead of ours in development—were few and far between. Those that the Air Disarmament Wings weren't busily destroying as weapons of war were being equally busily destroyed by Displaced Persons, whose one idea was to take a sledge-hammer to anything

with a swastika on it. Indeed, a pair of the Gliding Club's officers were kept busy racing all over Germany with a "Queen Mary" low-loader, trying to keep one jump ahead of the destroyers, whether professional or amateur. The remaining officers had by then acquired a H.Q. for the new Gliding Unit in a valley of the Harz Mountains. Actually it was a proper N.S.F.K., or Nazi Flying School, previously used for a similar purpose by those horrible little baskets, the Hitler Youth. It is now named the "Glide Inn."

Gradually, however, gliders were collected: a two-seater Kranich, half a dozen Grunaus, an Olympia, a Weile, an M.U.13—all these more properly known as "sail-planes"—and some "Primaries," the type on which pupils first start. These latter were dangerous-looking stick-and-string affairs with the pilot right out nakedly in front. Presumably this was to break the force of any crash and so save the precious glider. Possibly, too, the idea of starting people off on these was that, if they could learn not to be frightened on them, they'd never be frightened on any other more advanced type.

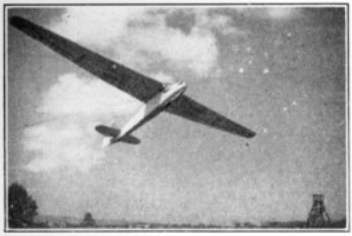
By this time the unit, though still not officially recognised, was definitely in being. Some ten or so O.R. of selected trades, for glider and launching-winch maintenance, had been allotted to it, and also a detachment of about thirty R.A.F. Regiment for guards and other ground duties. The venture was definitely launched and the Group Gliding Club's log book records its first flight in these words: "On Saturday 30th June W/Cdr. —— became airborne in a Grunau Baby on the Club's first flight. Shortly afterwards F/Lt. —— also became airborne but quickly became otherwise."

You must not, however, think that the Gliding Club was formed merely in order to exist beautifully and for the benefit of a few lads who wished to spend their days gliding. Its job was definitely to encourage the technique of gliding, and courses were soon in full swing.

The courses are each about a dozen strong and are of all ranks and types, from ground-duty erks to fully operational pilots covered with D.F.C.s. Actually, flying and non-flying types are now kept in different courses with a slightly different syllabus, because it is not unnaturally assumed that a fellow with wings up (even P.O. Prune) must have some vague glimmering of the principles of flight, while Rigger Mortice, say, would be presumably starting from scratch.

The common method of launching the glider is by a winch (though they can be catapulted from hillsides) which pulls the glider over the ground at a terrific speed. It can accelerate up to 50 m.p.h. in 20 yards or so—and this means that if you pull the stick back you leave the ground at about 20 m.p.h. and are instantly climbing at a very steep angle

The Glide Inn.



An M.U. 13.

up to over 1,000 feet high, when, if you haven't been taken by surprise, you should remember to release the launching cable.

The non-pilot pupil—after suitable lectures—starts with "ground-slides," *i.e.*, he is towed over the ground at a reduced speed in a Primary, finding out what it's all about; then he goes on to "low hops" in which he gets about six feet off the ground for short distances and learns the use of the controls; finally he goes on to high hops, in which he is slapped up 100 feet in the air and has to come down again more or less gracefully. The course lasts only a week, and in that time the instructors reckon that they can get types who have never been off the deck before up to the standard required by the Royal Aero Club "A" Certificate. TEE EMM, by the way, having incautiously asked what it felt like, was bunged on to a "low hop" right away by an instructor with a misplaced sense of humour. We were airborne for five seconds, during four of which we were busy praying.

The pilot courses, however, more or less start with the "high hops" and go on to airfield circuits in Primaries and then in Grunaus, followed by hill-soaring. They are, in short, taken up to the stage where they can qualify for a Royal Aero Club "C" Certificate.

Advanced courses are also being planned—in which presumably pupils will end up with Royal Aero Club Certificate "M" or something, and take week-end trips to Berlin in a Grunau.

There was, by the way, another equally important visitor at the "Glide Inn" while we were there—no less a person than the English record-holder for both height and distance gliding. He had originally come out on a two-day visit, but had been there twelve days when we arrived and was still there when we left—which shows what he thought of the place. On the mornings when there was a good soaring wind he used to dash away after breakfast and be no more seen for the day. We understand that he used to have his lunch sent up to him in a Primary. We also understand that he ultimately—on a particularly good day—absent-mindedly returned to England in an Olympia instead of the small aircraft he had flown out in.

In our humble opinion, these Gliding Club courses (which are regularly calling for volunteers) are of the utmost value,

How not to come down.

both in encouraging air-mindedness in non-fliers and showing them the principles of flight, and in convincing some of those pilots who have been used to powered flight only that they may yet be not as fully conversant with the principles of flight as they ought. Indeed, it has been found that many operational pilots are rather too "cocky" on being introduced to mere gliding. They think they know it all, and end up by not doing as well as they might, because for many months they have been relying entirely on their power without having assimilated the fundamentals of being airborne. In this respect it is grand practice for those moments when your engine, or engines, may accidentally cut out.

Anyway, we strongly recommend gliding as a good show—two other Groups, by the way, have also started up Gliding Clubs of their own—and urge any of you in the three Groups concerned to volunteer when the chance comes round. You certainly won't regret it, and you'll learn a lot.

Ensa takes an interest in gliding—and one of the instructors takes an interest in Ensa.

INSTRUCTORS COME INTO THEIR OWN

BEING a flying instructor is, we understand, no piece of cake. Time and time again have we listened to binds by pilots who resented being made Instructors; some indeed even seemed to consider it as a sort of stigma or black mark.

Most of these resentful gentlemen, however, are people who have been made instructors aganist their will; they have, in short, been detailed for the job. Instructors who volunteered have done so because they like the work and know its value; and these rarely complain.

Now actually the detailing of instructors, the direction of labour, as it were, has been purely a war-time measure. Before the war flying instructors were only trained from among those pilots who had already proved their flying skill and had experience. To be selected for a flying instructors' course was a plum, something to wear in your cap. It showed you were above the average. It showed you had trained yourself so well you had been chosen as the best man to train others.

Well, we have to announce that the war is over—though glancing round the world to-day it doesn't look much like it—and that the Service is getting back to the old system and to the highest possible standard of training. In future flying instructors will be selected solely by merit and will have to be enthusiastic enough to volunteer for the iob.

So here is your chance, those of you who are making a career in the R.A.F.

But note that you must have the following minimum qualifications : Five hundred hours' flying, and a year's service as pilot after O.T.U. or H.C.U. training. On top of this you must be keen to teach, and must intend to make regular service your career.

If you've got this you can then apply for a course at a Flying Instructor School. Your application should go to D.P.5, Air Ministry, in triplicate on R.A.F. form 2859, of which you'll find a specimen in Appendix A to A.M.O. A. 1025/45.

This is a ten weeks' course and if local boy makes good you have several types of instruction jobs open to you, the tour of duty being eighteen months. There is, first, " Grading," a specialised form of elementary instruction and testing of new material ; or there are the E.F.T.S. or S.F.T.S. jobs ; or Flying Training Schools, either training on elementary trainers, followed by advanced training with the same pupils on single-engined advanced trainers ; or else all-through training of pupils on these latter. Or you can go to a Glider Training School with Hotspurs ; or finally to Heavy Glider Conversion on Horsas or Wacos.

Well there you are. Instructors are coming into their own again. Interested ?

OXYGEN AGAIN

IT was about four and a quarter years ago, in June 1941, that we first took up our snub-nosed cross-nibbed pen (supplied by the Air Ministry) in order to write a piece about oxygen. Since then we don't seem to have mentioned the subject much. So—after a word with the medical types, who said it'd be a good idea (well, what they actually said was " it is considered that a fresh article should be prepared, based on Part II of, etc., etc.")—we are once more taking up our bewhiskered goose-necked pen (still supplied by the Air Ministry) to give you the oxy-gen * once more.

Our article this time is to be about the necessity for taking oxygen on flights above a certain height. The body, of course, needs oxygen to exist

* Prune's idea of a joke.

and this oxygen is in the air, forming about 20 per cent. of the volume. The enquiring mind at once asks, why—if we get on without *extra* oxygen on the ground—should we need it at high altitudes where the air still contains 20 per cent. of oxygen. The answer is the change of atmospheric pressure.

Atmospheric pressure is necessary to push the oxygen into the blood *via* the lungs. Since the pressure decreases as you go higher less oxygen is forced into the blood. Therefore you must breathe in additional oxygen. Simple! Even Prune says he think he gets it.

This extra oxygen first becomes necessary at heights over 10,000 feet. You put on your mask and the air you breathe is enriched with oxygen from cylinders. As the regulator is set up, the amount increases till at 30,000 feet you are breathing pure oxygen With this equipment you can carry out your duties efficiently up to 38,000 feet. Above this, the air is so rarified that even pure oxygen can't do the job and pressure cabins or suits are needed.

Someone in the back row of the hall now asks: isn't all this talk of lungs and pressure and oxygen being necessary above 10,000 feet rather academic? The questioner says he understands that you don't drop stone-dead if you don't take oxygen at 10,001 feet. In fact, he personally has flown without oxygen as high as 16,000 feet and felt as efficient as hell. Well, we'd like to say right away that he was probably lucky to get down again safely from his 16,000 feet. For the very reason he felt as efficient as hell was because he *was not taking oxygen*. It is a hundred to one that he was being inefficient as hell, and *did not know it*.

Let him listen to us a moment. It cannot be emphasised too much that from 10,000 feet up oxygen *must* be taken if you are to remain efficient. Lack of it results in a steady increase of errors—often of a simple kind such as a pilot flying on a reciprocal—without them being detected as such. And as you get above 18,000—minus oxygen—the errors get worse; there is no sense of judgment or appreciation of danger; a state of mind often sets in which is not unlike the hilarious stage of drunkenness; or

Prune says not taking enough oxygen is cheaper than taking too much drink—and just as good.

else sleepiness results, or complete lack of interest in what's going on. The effects of cold upon the body are also intensified and tissues may be actually permanently damaged by oxygen lack—largely because when cold the body requires even more oxygen than when normal. Night vision too, in particular, the statistics prove, is definitely impaired; this is noticeable at as low as

4,000 feet, while at 16,000 feet, unless oxygen is taken, there will be a decrease in range of vision of 40 per cent. or more.

And when you get over 25,000 feet—and often at lower levels, if heavy physical or brain work is being done—lack of oxygen will cause stupor and unconsciousness, very often in a matter of minutes. In other words, failure to take oxygen from 10,000 up, at the appropriate rate as laid down in A.M.O's. is a very serious matter indeed.

And the most serious part of it, as we hinted above, is that the effect of lack of oxygen on the brain causes loss of judgment *without your being aware of it.* All the above failures, errors, and symptoms may set in and not only—unless you are forewarned—will you not recognise them, but you will actually think you are doing fine and absolutely on the top of the world.

We'll conclude with a true report—taken from A.M.P. 165—about the effects of lack of oxygen upon a Halifax pilot, flying at 20,000 feet, whose oxygen system went u/s for a couple of hours. The Navigator, whose oxygen was functioning, and who was therefore normal, stated: "The Captain became very talkative and resented any suggestion that he was behaving abnormally. On seeing the marker flares over the target he found he could not take his eyes off them and forced the aircraft into a steep dive. Afterwards he said that he could only read the large figures on the instrument panel and that these appeared far away. When we realised that the aircraft was out of control the Engineer trimmed the aircraft. The Pilot resented this and assaulted the Engineer. He then gave the order to bale out, which we cancelled. He opened the window to look out, and was only prevented from falling out by the Engineer who hauled him in. He said that he felt very happy, and had no feeling of fear even when he tried to force-land on a cloud, thinking that he was near the ground. On one occasion he informed us that we were below ground. After being forced to take oxygen from the spare helmet and oxygen mask he gradually recovered his senses and was able to fly the required course to base, although he suffered from headache which persisted after landing."

Well, there you are! Don't say we didn't tell you. Take your doses of oxygen as the doctor orders. Don't think you know better; or that quack, Doctor Oxygen-Lack, will see that you *keep on* thinking you know better—until you find St. Peter explaining curtly that you didn't.

THIS MONTH'S PRUNERY

THE MOST HIGHLY DEROGATORY ORDER OF THE IRREMOVABLE FINGER (Patron : Pilot Officer Prune) has this month been awarded to Lieutenant —— U.S.A.A.F. for Blissful Ignorance of the Uses of Variation Scale on the Fluxgate Compass.

On completion of a flight, this pilot reported that his Fluxgate Compass was 55 degrees out on all headings. An examinaiton by the Compass Adjuster disclosed the fact that there were 56 degrees of variation set on the Variation Scale of the Master Indicator.

The M.H.D.O.I.F. has also been awarded to Lieut.-Commander (E) —— for Realising the Genuine Value of Form 700.

During a visit to a R.N. Air Station this officer, who had had four years' experience in the Engine Repair Section of the F.A.A., saw a pile of newly arrived Form 700's and was told that these forms were in short supply and slow in being delivered. He took a poor view of this, remarking that he considered the form an excellent thing and suggesting that a specimen copy should be sent to the Admiralty for printing and distribution to all R.N. Stations and aircraft carriers.

The M.H.D.O.I.F. has also been awarded to Warrant Officer —— for Not Only Reporting a Serious Fault But Also Knowing the Cause.

His report read as follows : " Artificial Horizon not showing level when in level flight, but no doubt is due to the fact that the port undercarriage was one inch lower than the starboard on assembly."

The M.H.D.O.I.F. has also been awarded to —— Command.

The Ops. Room at Station " X " was rung up about 1.0 a.m. by a Group Controller who asked for the recognition signals for the day. On being given them, *via* the scrambler, he said politely : " Thanks, I wouldn't have troubled you, but Command want to know."

The M.H.D.O.I.F. has also been awarded to Captain —— of an Air O.P. Squadron for Touching Faith in the Power of the Human Finger.

This officer, having for two months regularly flown a particular Auster with the Direction Indicator disconnected, returned one day with the glass of this instrument shattered. He stated that though he knew there was no pump connected to drive it, he thought he would try if tapping it would make it work—but must have tapped too hard.

THOSE NEW NAV. WARRANTS

LOOKING through some A.M.O.'s the other day and idly checking up the number of times that foul word "personnel" was used, we came across a new A.M.O. which all you members of the Navigators' Union might like to hear more about. It's concerned with straightening out the R.A.F. Air Navigation Certificates situation in relation to Civil Aircraft Navigators' Licences. The Air Force will no doubt be for some time the chief source of man-power supply for civil aviation, and so the Powers That Be have come to the conclusion that the whole question of professional qualifications between the two needs a spot of clarification.

The chief headache—which they are trying to combat—is that many people have come to think that the possession of R.A.F. Certificates carries with it exemption from parts of the examinations for Civil Licences. Well, this conception is erroneous. Exemption is actually only granted in terms of certain R.A.F. *courses* and Certificates have nothing, repeat nothing, to do with it.

At the same time the Powers feel that there definitely ought to be *some* documents which will be recognised officially in civil aviation as ensuring that various civil requirements have been met, and so in this A.M.O. under discussion First and Second Class Navigation Warrants

But, dammit, I've flown a Spitfire and I've got my R.A.F. Certificate.

make their bow; and, with their introduction, R.A.F. Navigation Certificates are no longer being issued. The idea is that these Warrants carry with them the guarantee that the holder is, in the case of the Second Class, a sound practical Navigator and, for the First Class, possesses in addition high competence and knowledge of theory, to the extent that he can carry on, if necessary, without being briefed by experts.

Here, then, for your information is a brief statement of the actual conditions with which you must comply before you can touch the Authorities for one of these nice new Warrants.

For the First Class you must either be qualified on the Specialist Course—the new series which began in 1942; *or* you must have had your "N" before March, 1943 and passed on a post-graduate and visitors' course; *or* you must have been recommended for the Warrant after passing a Staff Navigation Course with not less than 75 per cent. in any navigational subject, and 85 per cent. in your total. You must, in addition, have flown at least five hundred hours as pilot or navigator, and also have flown as a responsible navigator within the last five years for at least three hundred hours, a hundred of these at night.

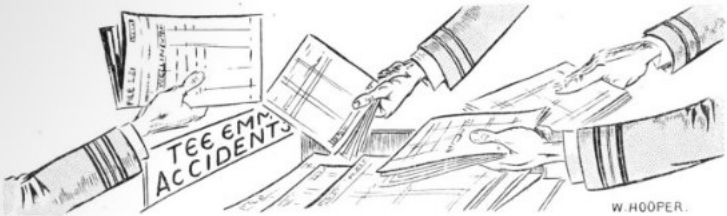
Well, having got your First Class Warrant, what use is it to you? This: You will be qualified for the grant of a First Class Civil Aircraft Navigators' Licence, subject only to passing their own particular examinations in such subjects as air legislation, and civil procedure in flight planning, signals, met. organisation and so on—which obviously you will not have covered in the Service. And, of course, you must pass their medical examination as well.

For the Second Class Warrant you must have passed one of the following courses: a short (ten weeks) nav. course before the war; *or* a short nav. instructors' course since the war; *or* a staff navigators' course; *or* a "Spec. N." course before March, 1943; *or* a nav. reconnaissance course; *or* the full basic training course of a navigator as per the war syllabus. And in these courses you must have got not less than 60 per cent. in each subject, with 70 per cent. in those subjects, such as maps and charts, air navigation and so on which are included in the ordinary civil examination. In addition, you must have flown as pilot or navigator for three hundred hours and acted as responsible navigator for at least one hundred hours, twenty of them at night.

Armed with your Second Class Warrant you are now qualified for the Civil Nav. Licence, Second Class, subject to passing, as for the First Class Licence, supplementary examinations in certain aspects of civil procedure. Plus, again, the medical.

Well, there you are. That's all we have to say about the new Nav. Warrants. We haven't, naturally, covered every little point—otherwise we might just as well have printed the A.M.O. itself and left it at that. But it's enough to give you an idea and send you bustling off, if interested, to dig out the A.M.O.—note its number, A.925 of 1945—in which you'll also find the gen on how to apply for the Warrants, if qualified.

IN UP TO THE WRIST



IN a long and disillusioned existence, TEE EMM has had many examples of "finger trouble" brought to its notice. We can do nothing but shake our hoary head in disapprobation at these all too frequent manifestations of R.A.F. chuckle-headedness and pass them on to you in these pages, hoping vaguely that they may serve as a warning to others not to go and do likewise. Then we sigh, and sit down and wait for the next example to flutter into our IN Tray . . . Alas, we rarely have to wait long. In they come. And come.

Last week arrived a beauty. It is not just a mere example of minor finger-trouble. The culprits' fingers must have been in up to the wrist. It is monumental, imperial. And yet the pilot and navigator immediately concerned in this shockingly poor show were fully experienced men, the pilot indeed having over sixteen hundred flying hours to his credit.

Here's the story. We shan't bother to point a moral. It's just the same old tale—but with added clottish embellishments.

A flying boat took off early one morning in poor weather conditions from a base in North Ireland. The pilot's finger-trouble had already set in by then, for he had completely omitted at any time to make himself familiar with the various Command Instructions and Orders relating to flying. In addition, he had not properly briefed his second pilot, who throughout took a very casual interest in the flight, not even bothering to set his altimeter or find out the Met. wind velocity.

Soon after leaving base, the Flight Plan was discarded and Radio Range used instead. The pilot was apparently not conversant—as he should have been—with Group Orders that Radio Range was not to be used navigationally except in emergency. A radar fix on Lough Neagh was obtained and course was altered, but though the navigator found his ground speed differing by about twenty-knots from that of the Flight Plan, he didn't bother to calculate a new air plot wind.

Later, a radar fix was obtained on Ballyquinton Point on which the pilot wanted to home, but the navigator had not bothered to plot a ground position before homing. If he had, it would have shown him the impossible ground

speed of 136 knots. The difference between the D.R. position and the Radar fix was at the time over twenty nautical miles, but again the navigator, instead of checking his fix by other aids, allowed the captain to start losing height to Ballyquinton through 10/10ths cloud. Indeed, apart from attempting to use Gee and Loran, the navigator failed at all times to take the elementary precaution of using other navigational aids. He, too, as well as the pilot, had completely omitted to make himself familiar with Air Staff Instructions and Group Orders.

The captain, however, was not particularly worried at losing height in thick cloud over land, in spite of the fact that the majority of the trip was to be over sea, when he could have let down without any risk at all. The reason for his confidence was that, as he afterwards stated in his report, he "thought the highest land in that area was about 400 feet." Secure in this ignorance he continued to let down over land in 10/10ths cloud on a radar fix *alone*, and without using the radio altimeter. The result was that he struck ground at about one thousand feet, and severely damaged the starboard side of the aircraft, carrying away the float. He immediately climbed to six thousand feet on a south-easterly course, but unfortunately failed to give clear orders to his W/Op. as to the exact action he should take, in reporting the accident and asking for a land diversion base.

Good piloting, however, of the damaged aircraft resulted in land being at last sighted. It was the Isle of Man, but the navigator here gave a further example of lack of ability by pin-pointing the Calf of Man as Bardsey Island and then, by careless map-reading, sending off the name of the pin-point as Strumble Head, which was further to the south.

A crash-landing at Jurby was skilfully made, but though the port inner caught fire on impact the pilot failed to use the Gravener extinguisher.

As a result of all this sorry business a valuable flying boat was written off and two men of the crew were seriously injured. All due to what the Court of Inquiry held to be "gross inefficiency and culpable negligence of both the Captain and the Navigator in carrying out their respective duties."

A thoroughly bad show.

PRUNE GETS A SHOCK

Prune knows it's against L.C.Z. rules, but he just wanted to get the right time.

Prune walked into the Flying Control at one of the main London airfields the other day. He had been up to town to do a show with the popsie of the moment and now was intending to fly another chap's kite back to his Station in time for Binder's supper.

This was when he began to get the shock. For first the F.C.O. asked him, what about the London Control Zone ?

Prune has to have this one repeated. " London what ? " He hadn't a clue. So the F.C.O. carefully explained to him that this zone was all the air space from ground level up to 10,000 feet within a radius of twenty nautical miles from Westminster Bridge.

" Cor," said Prune, and—just to show he wasn't the bloke to be put off by other blokes giving fancy names to bits of air which were free for all—added hastily, " So what ? "

" So you have to fly in the L.C.Z. under either C.F.R. or I.F.R.," countered the F.C.O. " Contact Flight Rules or Instrument Flight Rules to you."

" I see," replied Prune, who didn't, assuming a great appearance of wisdom. " What are these Contact Flight Rules and when do I start ? "

" Not to-day you don't, under C.F.R.," said the F.C.O., " because the weather's too ropey." " What's the weather got to do with it ? " asked Prune, still trying to make out what it was all about. " *Because* the weather's bad," explained the F.C.O. patiently, " you must fly to-day under I.F.R. You'll have to file an Instrument Flight Plan."

This really did floor Prune. " What *is* all this bull you're handing me ? " he asked angrily.

" It's all designed to save your worthless life," replied the F.C.O. equally angrily. " Without that Flight Plan the Air Traffic Centre won't give you a clearance ; with it they can give you a safe path through the mush." He brought his face very close to Prune's. " *So* what ? "

" So I'm going home by train," said Prune with finality. " This is all too much for me. Never heard of such nonsense."

" I've already gathered you haven't," said the F.C.O., " and so I suggest that

for your reading during the journey, you study a little pamphlet called A.P. 3098—The Combined Air Traffic Regulations (Europe)."

* * * * * * * *

And so, we also suggest, should our readers, if they are unaware of the correct procedure on entering or leaving the London Control Zone. These regulations have not merely been introduced for the fun of it. They are the result of much careful thought and planning on the part of people of wide experience, flying types included, who know what they are talking about and are trying to make the air a safer and better place to be in, whatever the weather and visibility conditions may be. Regulations like those contained in A.P. 3098 are designed for the benefit of all—but to be effective they must be obeyed by everyone.

THE SEVEN DEADLY SINS OF NAVIGATORS. No 4.

Stooging on after E.T.A.

EVERY PICTURE TELLS A STORY

WHAT do these pictures mean ? Can you guess the story behind them ? No ? We'll tell you.

Take the picture on the left for example. It's the wreckage trail from the point of impact of a crashed aircraft. The aircraft was a Master and it was being air-tested by an experienced pilot when excessive vibration set in to such an extent that the pilot decided he'd have to make a forced landing at the nearest airfield.

In his own words, however, when at a height of 500 feet the aircraft " fell out of my hands " and crashed.

Look now at the picture on the right, which shows the main body of the wreckage, *i.e.*, what was left of the aircraft after all the various bits and pieces had already been smacked off from the first point of crash some fifty to seventy yards away.

It's a pretty good mix-up isn't it. The picture on the left shows another view of it. What happened to the pilot. And what happened to his passenger—for we should have said he had a Sergeant-fitter with him ?

Well, they were both slightly hurt, but only that. They weren't killed. Why ? Because, as we said, the pilot was experienced. In what way ? Follow out the picture story on the next page.

The pilot had ensured that he and his passenger were both *securely strapped in*. And thus they got away with it. Incredible as it may seem, if you look at the two further pictures below. But it's true.

Arrow indicates pilot's seat.

Arrow indicates passenger's seat.

THREE AND THREE-QUARTER YEARS AGO

This month we publish, as our selected article from the corresponding issue of three and three-quarter years ago, the following piece from Tee Emm of February, 1942.

THE PARABLE OF THE WISE AND FOOLISH LECTURERS

NOW it came to pass that in those days there were two Lecturers in the land of Raf, at the place called Efts. And the one was wise, but the other was foolish.

And these two Lecturers did each gather unto himself a group of young men seeking much learning. " For," said the young men to the Lecturers, " we *see* that certain Things do such and such, but how indeed they *work* is verily a mystery. Tell us, therefore, all that which is in your minds that we too may be learned in the workings of these Things, even as thou art."

Whereat the two Lecturers said unto them, " Be it even as ye wish ! Draw nigh unto us and we will put forth the gen."

And so they went, each group to each Lecturer in his place.

Now the Foolish Lecturer said in his heart, " Yet again do I have to try to teach these clots. Lo, I am greatly browned off with this job ! But, the sooner it is over

the sooner am I free to depart again unto mine own place." And being thus in a great hurry to be done and not caring whether they learned his wisdom or not, he began his talking even as the young men were still coming into the room.

Thus it was that while he spoke saying, " Verily, verily, I tell thee this and thus " there was yet a mighty clattering of the boots of the multitude so that his words were

but half heard. And as he continued there were chairs being drawn out and scraped upon the floor. And even after the young men were all sat down the air was yet filled with coughing and hawking almost as of a Throat Hospital wherein business is good. And voices arose saying lustily, " What man among ye has my pencil ? " and " Take thy fat elbow out of my stomach ! " and such like phrases common to those who prepare to be instructed. So that there was in the room such noise as never had been heard, not in sky, nor in sea, nor in the uttermost parts of the earth—whereunto it seemed it might easily have reached.

Thus the words of knowledge that were upon the lips of the Foolish Lecturer were as naught, and no man knew that of which he spake. Pictures, yea, and even diagrams he did draw upon the blackboard, but because his words were not heard these did fall upon stony ground, so that the pupils and seekers after learning knew not what he was about and did whisper the one to the other, asking each of each, " What means he ? " and " This seemeth all bull to me."

But even while they were at their whispering the Foolish Lecturer was rubbing from off the blackboard that which he had put upon it and was already straightway discoursing upon that in which he did next seek to engage their understanding ; and thus yet again their ears were shut unto him and they heeded him not, for were they not now about new whisperings, saying " What was that blasted diagram ? " And had not one of them, bound beyond measure, drawn an uncharitable likeness of the Lecturer, which he did pass about among his comrades to their great amusement ?

So it came to pass that when the Foolish Lecturer had told them all that which he did know, they were no wiser than when he first started ; nor did any trouble to ask questions, for of these there would have been no end. Yea, even were they less wise than before, for was there not now in their minds much jumble of many words and of pictures which they could not for the very existence of them comprehend ?

Now, while these things were going on, the Wise Lecturer had gathered together his own group of young men of the same sort, seeking instruction. And he was keen upon his job and did say unto himself, " It is not enough that my wisdom shall leave me : I must make sure that it arriveth in the brains of those whom I am about to instruct. Not only must they hear, but they must likewise understand. Verily is teaching a Co-operative Enterprise."

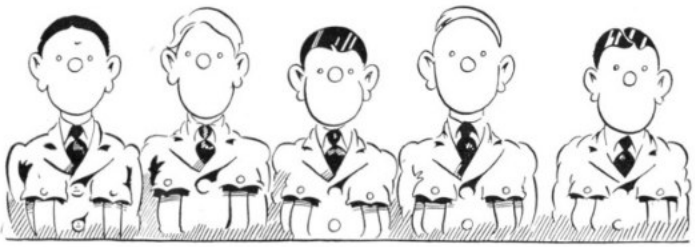
So as they came unto his room and drew nigh unto him he did wait upon their coming until they had parked themselves each upon his seat, and had finished saying " Wotcher " and " Here we are again " one to the other, and were silent and waiting.

Then he did speak unto them and first tell them shortly that which he was going to speak to them about.

And when he had done that, he did speak about it and tell them.

And when he wished to draw upon the blackboard he did say, " This is how this piece of the Thing appeareth " or " Such-and-such functioneth thus and thus," and the drawings did help rather than hinder their understanding of the spoken word.

And at the end when he had done, and wished to make sure that all understood, he did tell them once more, but again shortly, that which he had spoken about, inviting questions. Nor were there many of these, for all had heard his words, and the few questions did but set the seal upon complete understanding of even the smallest points.



Then did they depart filled with the gen of the Wise Lecturer, remembering and making use of his words, prospering in the place called Efts and throughout the land of Raf. And they did praise him mightily.

But the pupils of the Foolish Lecturer did say " Oh, him ! What a poop ! Verily, he should dedigitate ? "

RAIL TRAVEL IN INDIA

THE war has been over two months or so now—but many air crew and other R.A.F. types still have to go to India. And as some of you who go there will also be going for the first time, here is some stuff on the subject of rail travel in that sub-continent.

We are telling you about rail-travel in particular, because it is an aspect of Indian life which makes a big impression on the newcomer. Rarely, he discovers, has he correctly visualised just what moving about by rail in India really means. It is quite a new experience, and your first rail journey stays in your memory for a long time. Whether it's a good or bad memory depends on yourself.

The problem is how to get on the train at all.

Several things continue to make rail travel in India something very different from what you've been accustomed to. First the enormous distances—Bombay to Calcutta for instance is twelve hundred odd miles, while Karachi to Colombo is nearly three thousand and takes a whole week. Then there is the heat—which in places goes up to 115° and even over ; there are mosquitoes at night, innumerable other insects of all varieties, and dust everywhere.

But, in case you're already feeling gloomy about the prospect, we'll tell you what good news we can right away. That is, there is a very efficient Movements Organisation which is all out to help. You will find Service R.T.O.'s at every station of any importance, and they will see you through to the best of their ability.

Of course, one of the main problems is not what to do in the train, but how to get on it at all. They're all permanently filled to capacity, and the only way to make sure of a seat is to tell the R.T.O., giving him as much notice as possible. With reasonable notice he'll be able to fix it.

Of course, when you travel on military special trains, there is no difficulty about reservations. Unfortunately, there are other worries. The rolling stock position is a very great headache for all concerned—including passengers ; and it is necessary at times to put troops in whatever type of coach is available. The ordinary upper-class coaches are quite good, with fans, European lavatories and berths ; but there are so few that normally Military, or " M," coaches are provided for troops. These hold sixty passengers, and have fans and home-style lavatories, but only wooden slatted forms for berths. If the rolling stock

position is really at its worst, you may descend even further in the social scale, and be shoved in a Third-Class compartment, originally designed for natives only and with no upholstery of any kind.

The score at the time of going to press is that, if you travel individually, you may get a First-Class reservation if you are an officer, or a Second-Class berth if you are an airman ; but in large parties, officers normally travel in Military coaches at the rate of thirty per coach, whilst the lads travel in Third-Class coaches. We're afraid this is hardly an ideal state of affairs, but you must rest assured that every effort is always made to do the best possible.

Mosquitoes and other insects are also sources of worry, and there is no shortage whatever of these. Cockroaches and such are annoying but not dangerous : the mosquito, however, *is* a menace. Always remember to roll down your sleeves, wear slacks and smear your hands and face with mosquito cream or lotion between sundown and sunrise, and you should then be all right.

So far, this seems to be a recital of hardships and worries, but there is a brighter side to it. First of all whilst you're on the train, the Movements staff definitely do what they can in the way of arranging meals and drinks in advance. Even if occasionally a meal is only hard rations and bully beef, you can always count on at least one hot meal a day. You may be really lucky, of course, and have a military restaurant on your train, in which case, it's a piece of cake ! The Movements staff also provide ice in the coaches, spray them regularly with insecticide, and supply medical orderlies to see that the water on the train is always fit to drink. Whenever possible, Train Conducting Officers, who have all the gen and all the answers, travel on board to give you personal service, while local W.V.S. rally round at many places, with grand meals.

One thing, though : you must also do your part. The Movement blokes, for instance, can't fill your stomach properly if you haven't kept your knife, fork, mess-tin and mug handy—and that goes for officers too. They don't reckon to spoon-feed you all the way : they rely on you to look after your own comfort also as far as possible, too. A valuable point worth remembering, for example, is that the more baggage you take in the coach with you, the less space there is for *you*. So put as much as you can in the baggage van, when provided. For Heaven's sake don't forget to see

Prune always likes to keep his luggage under his eye.

that it is securely locked in every pore. Be sure that you have handy a couple of blankets and something you can use as a pillow or cushion—those wooden seats begin to feel hard around the fourth day, and you'll end up barred on the bottom like a half-done steak.

Your health, even on short journeys, is of course important. While the drinking water in your coaches on military special trains will be O.K., thanks to the medical orderlies, don't drink from water-taps on stations, unless the R.T.O., assures you that it's fit to drink. And, as for those drinks the platform hawkers will try to sell you, shun them like the plague—or you may get something not unlike it. They are *never* safe—even in bottles.

We're afraid all this is not particularly cheerful, but look on the bright side of things. The novelty of seeing new scenery, new people and new customs, will help enormously. Travelling Allowance is payable when you travel by ordinary service and rations are not provided, but whether it is adequate is not for TEE EMM to say. But most of all, you yourself can help. A spot of tolerance and a sense of humour will resolve most difficulties before they are born.

GOOD GEN

We've had quite a few pats on the head from various types about our article " That Sodium Job " in last August TEE EMM. As you remember, it explained the advantages of the sodium flarepath method of teaching night flying in daytime and also stressed the various ham-handed ways in which Stations were mis-using this valuable training aid.

Well, we now want to bring to your attention a most excellent publication—one of the best we've ever seen issued by the Air Ministry, present company, of course, excepted. It's called " Air Ministry Pamphlet 177—1945,"—or " Day-Night Flying " to friends—and it gives you the whole dope on the subject—the Single-Stage Scheme, Two-Stage Brown Scheme, Two-Stage Blue Scheme, Two-Stage Amber Scheme, and so on. If you haven't got it on your Station, apply to your Command Publications Officer and he'll lay it on for you via the usual channels.

He didn't check his position before coming down through Cloud.

TEE EMM is an O.U.O. publication, which means it is for Official Use Only. And 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 and issued *by* the Service in the person of the Air Member for Training.

(3107.) 1428 Wt.8232/N.974. 27,000. 11/45. W.P. Ltd. Gp. 454.

HEAD AND SHOULDERS ABOVE THE REST

PILOT'S NOTES

Just honest-to-goodness gen

WITH APOLOGIES TO GODFREY PHILLIPS LIMITED