

AIR EDDIES.

WHY is it that pupils of flying schools seem so keen on effecting a double-barrelled name as soon as they get their tickets awarded them? This is a subject that has worried me for some considerable time, and the only reason that I can suggest is that the action of joining the surname by means of a hyphen to the Christian name immediately preceding it is thought by some to lend a certain amount of *réclame* to their otherwise common-place styles. No doubt the idea originated because Grahame-White, who is a pretty sound man to copy on most things, especially in piloting, boasts, and always has done, a name of this *genre*. As a sort of parallel case, it was quite funny to observe at the various meetings of the year before last, that when Grahame-White came down to fly arrayed in a glorious pair of check riding breeches, lounge coat, smart bow, and brown shoes, nearly all his acquaintances turned up later in exactly the same guise.

Dear me, how fast we progress these days. From Manchester emanates an idea of constructing an aeroplane so that it can be converted at will into a neat little two-storey cottage. Exactly what commercial future lies before an aeroplane that fulfils the double purpose of mansion and machine, is somewhat difficult to see. There is, no doubt, some fantastic interest in the prospect of being able to glide down on to some nice healthy gravel site at the close of a long day's flying, and set off again in the morning after having transformed the machine from hearth and home to petrol and plane. The idea really originates from one who has produced quite a useful clinometer for use on aeroplanes. Well, there are moments—

During the past week somewhat of a record has been achieved by one of our British pilots, that is, the honour of being engaged as pilot to one of the biggest constructors in France. As far as I am aware, this is the first time on record that a French firm has acquired the services of an English pilot to demonstrate their machines, and, consequently, much credit is due to Gordon Bell, who has done much good work at Brooklands on the Deperdussin machine, and to the R.E.P. firm, the former for having achieved something decidedly original in the annals of aviation, and the latter for their ability to recognise a really good pilot. He is at present at Buc, where he is getting his initial experience of the machine. As soon as that is completed, it is his intention to fly from Paris to Pau, *via* Bordeaux, accompanied by a passenger.

Living a bit off the line of active life undoubtedly narrows the views of folk. Recently I had a newspaper sent me from the north of Scotland which had, as a subtitle to a paragraph on the proposed

War Office tests, "Huge prizes offered." Whether or not this is the general opinion held by those in that part of the world I do not know, but of this I am sure, that if it is, this opinion is not shared by us southerners. But perhaps the originator of the headline is a descendant of the famous "Bang went saxpence!" northerner.

The Blackburn two-seater at Brooklands has really been giving a very good account of itself under the pilotage of both Lieut. Gray and B. C. Hucks. After only a short experience at rolling and hopping, Lieut. Grey, who had previously done all his flying on a biplane, got the machine into the air and circled round the track for about half an hour. On coming down he fairly shook hands with himself, as Blackburn puts it, out of sheer enthusiasm. Certainly the Blackburn monoplane, with its distinctive control, seems to be an eminently easy one to master, as, later on in the day, Lieut. Grey, after so short an acquaintance with it, took the machine up to over 1,000 ft. At the same time, we must not lose sight at its pilot's undoubted ability at flying.

As a result of the encouragement that has been given to the British aviation industry, by reason of the interest that the War Office is beginning to take in the matter, it is quite likely that we shall see other engineering firms following the example of Vickers, Ltd., in taking up the design and manufacture of aeroplanes. Rumour has it that Messrs. Denny, of Dumbarton, and the Armstrong-Whitworth people are shortly going to branch out in this direction.

It would be difficult to imagine a country where an aerial mail scheme would be more advantageous than in South Africa. To E. F. Driver, who with Compton Paterson, is engaged on an exhibition tour, belongs the credit of having inaugurated the first aeroplane delivery of letters in that part of the Empire, on Wednesday, of last week, by flying in his Blériot monoplane with a load of correspondence from Kenilworth to False Bay.

After the various projects that have from time to time been put forward, with a view to crossing the Atlantic by means of dirigible balloons, proposals to perform a similar feat by aeroplane are beginning to take concrete form. Last week there was James V. Martin, who is busy over here in England making preparations for a trans-Atlantic flight; this week comes the news that Atwood has a similar project in view. Who will come forward with the same idea next week? One at a time, please!

"OISEAU BLEU."

ELECTROPLATING OF NON-METALS.

A VERY interesting and very important process in electro-chemistry, with vast possibilities, has been introduced by the Harvey Electro-Chemical Co., of Norfolk House, Laurence Pountney Hill, E.C., the purpose of which is, principally, to electroplate non-metallic substances. Hitherto a metal deposit on china or glass is made either by first coating that surface with a suitable preparation of black lead and electrolytically depositing the metal thereon, or else by burning what may be described as a metal paint on to the surface, as in the case of lustre ware. In the former process the plumbago base, or whatever else is used, forms a layer between the metal and the china or glass, which can be stripped off bodily after it has been deposited, and cannot, therefore, be really termed secure against the exigencies of rough usage. In the other case the deposit is so extraordinarily thin that the greatest care has to be taken in polishing it, and, ordinarily, it will soon be worn off.

By the new process, which is just now attracting so much attention, an electro deposit is made direct on the surface, which is previously prepared in such a way that the metal adheres to the molecular structure of the base. Take china, for example, the glaze is eaten off in an acid bath containing metal in solution, and the metal in the solution is precipitated on the wetted surface after the object has been removed from the bath. This precipitation is obtained in a variety of ways, one of which is to scratch the surface with a revolving metal brush, the action of which sets up electro-chemical reaction between the metal in solution and the wire bristles, of such a kind as to bring about the desired result. Having been brushed in this way, the molecules of the roughened surface of the china are already coated with metal, and the remaining process of electro deposition merely builds up a suitable thickness of metal on this foundation.

The process is applicable to china, glass, and wood, all of which can be coated with copper, silver, or gold, or practically any other metal or alloy that is capable of being electrolytically deposited at

all. A quantity of household articles are already being manufactured by this means, and they are not only much cheaper but are found to be much more satisfactory than the other methods. The silver bands on water pitchers, for example, are now being made in this way, and there is a great field for its application to delicate glass instruments that are liable to be broken.

The process is, of course, equally applicable to the deposit of metal on metal, and it seems as if this really does offer a satisfactory solution to that hitherto insoluble problem of soldering aluminium. By this process, an aluminium surface can have a deposit of any suitable metal made upon it, which in turn can form a base upon which to solder. Aluminium trays, for example, could be tinned, and lugs, beads and bosses could be soldered thereon. Radiator tubes for aeroplanes might be made of aluminium with tinned ends, which would enable them to be joined together. Crank-chambers for marine motors could be of aluminium with brass plating, and the spokes and bosses of steering wheels on motor cars might, for special work, be given a deposit of silver. Aluminium could doubtless be used for lamp construction by the present system, and it may be that there are several jobs in automobile carriage construction to which it can be usefully applied. A metal deposit on a timber panel, for example, might be useful, as also the plating of iron struts which are used to support the roofs of limousines.

The galvanising of bolts is another interesting example of its utility, and be sure the threads of the bolts are not clogged by this process as in the ordinary way, nor is there any question of high temperature affecting the metal.

In aeroplane construction there is the possibility of metal-plating the propeller, which will render it less liable to split, and it might also be very useful to be able to put metal ferrules on timber struts. One way and another, therefore, it would seem as if there were a great future before the Harvey Electro-Chemical Co. in their new undertaking.