

Over-Sea Notes.

What is Doing in America.

Mr. Philip Wakeman Wilcox writes from Long Island:— "Some of the doings in this country are marvellous to read about, but I am afraid that you see more about them in England than we do over here, because here the papers are very much on the look-out for fake stories, and as a result, it is hard to get anything in the papers which is not pretty true.

"There is mighty little being done over here which is at all startling. Perhaps the most energetic man in the experimental line is Mr. Glenn Curtiss, who has been doing the hydro-plane stunts in California. There has been some good flying going on in different sections of the country, but I do not think that there has been anything that could compare with the stunts done in your part of the world. I think the man who is going to do more for aviation in this country than anybody else is Mr. Moisant, who is the brother of John B. Moisant, the man who was killed last year trying for the Michelin trophy.

"He is the president of the Hempstead Plains Aviation Co., which has leased a tract of land of about 1,000 acres out here in Long Island, and is going to have the best proposition in the country when things get going. A contract has been given for five concrete steel hangars to start the ball a-rolling, and he hopes to have a number more before the summer is over. He also plans to erect a large grand stand, factory, and club house on the grounds. This same company conducts the Moisant School of Aviation, which is now running. There are now five students regularly practising, and they are all in the air. The Blériot type machine is being used. All of the machines are built in the factory in New York City.

"I am sending you a picture of Sopwith's machine after the wreck. The man standing up is Mr. André Houpert, the school pilot. The others are mechanics, but you can get an idea of the condition of the machine after the wreck.

"Miss Quimby, who is the dramatic editor of *Leslie's Weekly*, has been quietly taking lessons since the last of April, and in that time has really accomplished a few excellent flights. Until May 11th, when she made the best of her trips, her identity had been a secret, for she dressed in a tight-fitting aviator's suit, and wore a deep hood. She and her instructor, André Houpert, have done all their work shortly after sunrise in the mornings.

"For the past two years the Aeronautical Society has been the real centre of all activity in a real way among Eastern aeronautical followers. The field at Mineola was in truth the first field in the United States, and on it have been conducted some of the most important experiments to date. That its office as a public point for flying has been terminated will be a surprise to more than one. Notification was given the Society on May 28th that it must vacate within the next thirty days.

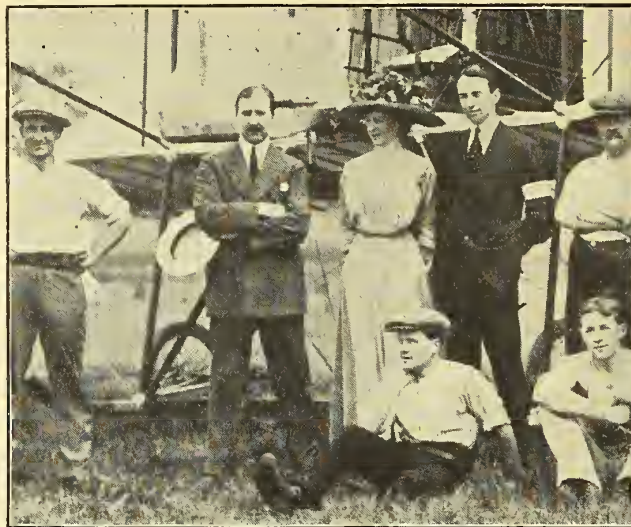
"While the action is not unexpected, the dispossession of the thirty odd aviators with their machines causes considerable anxiety. Large flat fields like Hempstead Plains are very rare in the vicinity of New York. Early this year the fields near Mineola, as well as the large field in the neighbourhood of Westbury, were leased for a term of five years to the Hempstead Aviation Company, which has arranged to give the Moisant School exclusive use of the property. Moisant, as well as officers of the real estate company, holds large interests in the organisation which now has the field."

The Latest from Sopwith.

Writing from Columbus, Ohio, on June 2nd, Mr. T. O. M. Sopwith says: "How do you think the outfit looks at the Columbus, Ohio, meeting? Everything going strong, but impossible to get good petrol here, so not much power. Have to stir it up with a stick before you put it in the tank."

Writing last week, Sopwith says: "The 'Family Tank'—the dear old 'Family Tank'—is more or less a thing of the past. We were at the Columbus meeting and flew every day, and on the last night we had a repetition of Dover. There were two other machines with us in a tent, and the whole thing collapsed. In the morning there was hardly a piece of the machine left whole. Luckily the engine had been taken out, but the planes, elevator, and tail were badly smashed. I think we will be able to rebuild in about a fortnight, and we

are starting in at once. It is bad luck, but as this is our third smash altogether, we must hope for better luck for the future."



SOPWITH IN AMERICA.—Above: Miss Sopwith, T. O. M. Sopwith, and J. Dudley Sturrock, with the English mechanics at Columbus. Below:—Sopwith's Blériot at Hempstead with André Houpert in charge of the wreck.

Italian Notes.

Ciro Cirri, whose death occurred on May 28th at Voghera, as the result of terrible burns caused by a forced descent and subsequent conflagration of his Blériot-cum-Gnôme, was one of the unlucky Piccolo-Céi trio, all of whose deaths have been unusual. Céi's decease is still being investigated here, the body having been recently exhumed (*sabotage*). Cirri was a Roman.

Roman also was Raymond Marra, who was killed at the Roman meeting on 8th inst. by a treacherous wind, aided by local eddies, which beat him down on to one of the big supports carrying the electric power current across country. He is said to have been electrocuted, as the machine—a Farman—was set on fire, and his body, though found well away from the machine, was burnt.

Whatever the cause of the recent numerous conflagrations, would not the enclosing of petrol tanks in leather or some resisting composition be advisable? Anything which would prevent the *immediate* exit of petrol should the tank spring a leak would be useful. Sparks are struck by the motor, etc.,

at the actual moment of contact with the ground, not afterwards. Cirri's tank was, they tell me, pierced by a wire stake, which the leather might have prevented. [What about solidified petrol?—ED.]

The writer, while recently at Rome, took advantage of a lull in the misfortunes which dogged the efforts of those managing the flying week to go out to the Parioli racecourse, where the meeting was being held, and where the Paris-Rome competitors had landed and were expected to be "showing off." At two o'clock in the afternoon, and in the Roman sun no one was present except the aviators and the Press, the latter at loggerheads with the committee over the suspension of their hangar passes. A strike was neatly concocted, and in twenty-four hours the authorities capitulated. Notwithstanding, some excellent flying was done towards the evening, Garros being apparently the great favourite, while Vidart (Deperdussin) thoroughly explored the Roman garrets and church steeples.

Cagno, Ruggerone, and Marra—who was killed later on in

the week—were causing the Italians to sing *Sursum Corda* by their attempts to win the Circuit of the Tibur, a 300-kilometer cross-country flight formed by six trips round a 50-kilometer circuit.

I noted the prevision of protection for the pilot on most of the Farman type biplanes, and also the presence of an Italian biplane of this type, the *Asteria*, with Cavaglia in charge.

On one of the trips for the Circuit Cagno was the victim of a curious accident. One of the cylinders of his Gnome came adrift and broke a skid, so that he was unable to prevent some damage to the machine in the forced landing which resulted.

The Farman monoplane which Goddard attempted to fly was evidently out for a car race only, and, although very fast, did not prove to be a flier, at any rate as far as the air was concerned. This was a great disappointment. Its appearance when on the ground is comic in the extreme, and it will certainly get a nickname. The "fussy fowl" or "hen with chicks" would both suit.

Balloon or Flying Machine—A Problem of the Future.

[The following short article has been written for THE AEROPLANE by a distinguished German student of aviation, and may be taken as a fair indication of the views of most Germans who have studied the subject. From this it may be gathered that the German affection for dirigibles, though not so strong as formerly, still exists in some degree, and has its basis in a reasoned belief in the utility of dirigibles for certain purposes, while at the same time recognising their limitations.—ED.]

By a kind Providence we all have been allowed to see the marvellous rapidity with which aeronautics has developed in the short time of not quite five years. Later generations, who have some historical interest in this matter, will envy us.

Doubtless we have done so much in order to transmit to posterity all the facts, chronologically and systematically summarised, that it will surely be able to realise this rapid progress. But just as we, at the present time, laugh at the enthusiasm shown in the days when Santos Dumont made his first flight at Paris and covered with his biplane a distance of 150 yards, so our descendants may smile with pity when they read the records of Paulhan or Latham.

It will be and it must be like that, for the law of nature requires it. A thousand years ago men longed for the conquest of the air; at the present day their hopes are beginning to be accomplished. What will the future bring?

I mentioned before only the success reached by aeroplanes. One need not be a professional to acknowledge the statement that the flying machine can still be improved a great deal. This fact one can conclude not only from the progress of flights recently performed, but also from the defective construction of engines and machines existing now.

In 1906 the longest distance covered was 250 yards. In 1910, 350 miles. But in 1910 the number of accidents has also increased; drops from a great height, and, therefore, more dangerous, are the order of the day. A flying machine, type 1910, is, in spite of great improvements, just as helpless against lateral gusts as a machine three years ago; and a "Bleriot No. XV" is, for instance, no less the plaything of wind and weather than a "Bleriot No. I."

But in a few decades this picture will have changed. Every variation of equilibrium of the machine due to atmospheric pressure will set in motion a mechanism which will either restore the former balance, or create a new position adapted to the change of the altered air-pressure.

The engine will be capable of rendering greater performances. Whether the petrol-turbine should be sooner or later used in aeronautics or not, technical engineering will always have to aim at obtaining not only a diminution of the relative weight, but also of fuel wanted for a certain amount of power. Just the unfavourable ratio of fuel to the afforded power is at the present time the cause of a great reduction in the duration of flying performances. Besides, the engines will in future be much more durable than they are now, being useless after working a short time at highest speed.

So much for the evidence of the great capability of development regarding flying machines. But if later generations will hear of the great performances of a *Zeppelin VII*, a *Parseval*, or of any other modern air-cruiser, they will have to confess that they have not been able, to a great extent,

however, to surpass these performances. They will employ a dirigible balloon only for special occasions, as for conveyances of goods in time of peace and for certain purposes in warfare; thus only there, where no velocity but the capability of carrying heavy loads is wanted.

That gives us, however, a hint to find the reason of this remarkable fact: the actual impossibility of increasing the speed of an air-ship in such a way that it could be a match for the rapid heavier-than-the-air machine, or at least come to such a point as to be independent of the fastest air-currents. It is probably well known that the effect of an aero-engine increases theoretically with the cubic root of the speed of an air-ship. This extraordinary unfavourable ratio of those two factors increases still in practice, because the effect of the propeller by using high-powered machines gets continually worse. For instance, a propeller which gives its greatest effect by 300 h.p. would produce by increasing the power of the engine to 400 h.p. an increase of speed the graphic curve of which is not proportional to the line indicated from 300 to 400 h.p. Assuming the power of the engine as abscissa and the effect of the propeller as ordinate, the continuation of this curve would show how the ratio gets worse and worse, until the curve would remain parallel to the principal axis, that is, an increase of power would not produce any increase of speed.

And here comes a third moment: the increasing weight of the engine. Taking the effect of the propeller into consideration, an engine of over 600 h.p. would be wanted in order to produce a speed of 20 metres per second. This speed would be sufficient for an air-ship to perform flights on 270 days in a year. The weight of the engine would amount to 2,500 kg., or 5,500 lbs. Counting thereto 700 kg., or 1,540 lbs., for petrol (five hours), and 300 kg., or 660 lbs., for oil and water, the total weight of 3,500 kg., or 7,700 lbs., would necessarily increase the diameter of the balloon, and therefore also the coefficient of resistance dependent on it.

But the latter would soon, especially by the non-rigid type, increase to such an extent that it would be, and is therefore, impossible to produce a higher average speed than 16 metres per sec. That is the point where aero engineering is standing still at the present time. And the further we proceed the more unfavourable the ratio will be found between the factors: power of the engine, effect of the propeller, speed, weight, and coefficient of resistance.

In consideration of all those facts, one may easily conclude that the rigid type has a greater future. The non-rigid type would need, by increasing the diameter of the balloon, huge apparatus in order to maintain the envelope tight, for the larger it is the easier a strong air pressure will be able to deform it. Apart from this new increase of weight, the shape of the whole airship will become more clumsy, and the coefficient of resistance rises to an immense number.

Therefore a practical employment of the non-rigid type seems to be impossible in future. For sporting purposes it will be used.

The future belongs to the flying machine—the monoplane for a single one, the biplane for the conveyance of the multitude. But whether a connection of balloon or flying machine, based on other suppositions, will not mature, that the future will tell us.—A. V. von F.