

Travel By Balloon.

By M. Santos-Dumont.



BEFORE my time, when men went up in balloons they left the earth with an extremely vague idea of where they would land again. They went where the wind took them, and when there was no wind they drifted aimlessly about, the sport of every current they encountered. But I have shown the world the steerable balloon. I not only start on an aerial trip; I come back again. I have said to my friends, "I shall meet you at the Longchamps racecourse," and I have done so. I have given rendezvous at other places and steered my balloon to the point agreed upon. I have left the Aerostation Park at St. Cloud, have sailed round the Eiffel Tower, and returned to the starting point in half an hour. That is what I have done.

I am leaving for the Riviera shortly, and on the shores of the Mediterranean I mean to build another shed and continue my experiments. I shall take all my apparatus, my machinery for making hydrogen, and my workmen, and with the Santos-Dumont VI. will make trial trips over the water.

I have provided against falling into the sea. The framework of the balloon will be incased in an impermeable silk covering, so that if I come down in the Mediterranean I shall float. My guide rope, too, will be made of what sailors call "bastin," so that it will float on the surface of the sea and serve as equilibrium in the same way I employ it when maneuvering over Longchamps racecourse. I shall be followed by a steam launch in case of accidents, and shall extend the radius of my excursions every day. Then, on a nice, bright day, provided with a message which I shall ask the postal authorities to intrust to me for delivery at a given spot in Corsica, I shall try to cross from France to that Island. I believe I shall beat the mail boats, for they are slow

craft, and my airship can cover nearly 25 miles an hour. By carrying out this plan I hope to prove that my airship is not a mere plaything, but a practical invention, capable of being applied in a thoroughly useful fashion.

Should these experiences be attended with success, I shall attempt later on to cross the Mediterranean from the French coast to Tunis.

I think it will be possible to cross the Atlantic in a navigable balloon. If I can obtain good hydrogen on the Riviera, I shall be able to carry 250 pounds of petroleum, which would provide ample fuel to keep the motor working for 15 hours. To cross the Atlantic is only a question of multiplying these con-

ditions. I believe it could be done with a smaller balloon than that with which Zep- pelin experimented on the Lake of Geneva. A powerful motor, giving several hundred horse-power, would be necessary, but big motors are lighter in proportion than small ones, and a suitable motor could doubtless be made.

For a long journey like that between Eu- rope and America you would require a power- ful balloon, capable of resisting a certain amount of rough weather and able to rise and fall easily, so that the aeronaut could seek his own currents. If you rise to a height of 5,000 yards from the ground, you



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are almost certain to find currents going in any direction you wish, and a skilful balloonist, once he found the current he wanted, would simply travel with it and utilize it to help him on his way.

I would not attempt a transatlantic voyage with less than half a dozen men. That number would be necessary to work the apparatus and to allow of them sleeping in turn.

It is not easy to say before one has made the attempt how long the trip would take, but with powerful machinery the speed would be great, and the time taken at present between Europe and America would certainly be considerably shortened. I do not regard it as impossible that with a strong and steady wind behind him—such as frequently sweeps across the Atlantic—an aéro-

naut should do the journey between Paris and New York in two days.

The difficulty of carrying sufficient petroleum is the biggest problem in connection with such a project. But that will be overcome, just as engineers have solved the question of carrying enough coal to stoke Atlantic liners. What would Fulton have said if he had been told that steamers would be built of 40,000-horsepower? The Santos-Dumont VI. has an 18-horsepower motor. Who can say how many horse-power the navigable balloon of the future will possess?

The first step in aerial navigation has been successfully accomplished. The era of long voyages in steerable balloons is now beginning, and the crossing of the Atlantic is only one of the vast designs which will be realized sooner than most people imagine. I am persuaded it is possible and I hope to try it.