

SANTOS-DUMONT WINS THE DEUTSCH PRIZE.

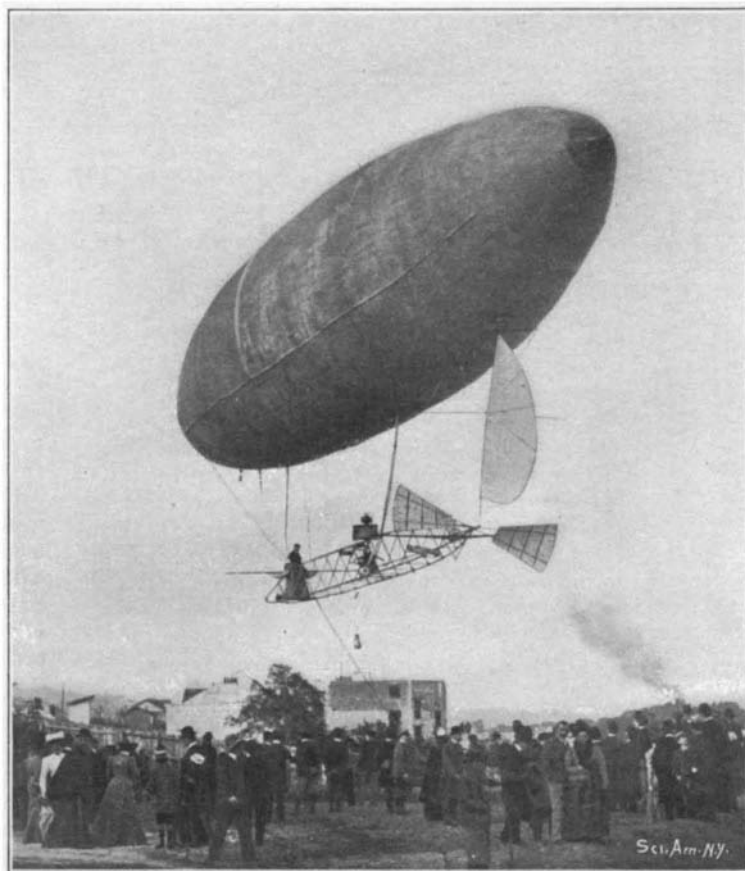
BY OUR PARIS CORRESPONDENT.

Now that the efforts of Santos-Dumont have been crowned with success, it may be of interest to retrace the steps by which the intrepid young aeronaut has been able to accomplish his present great triumph, which is of course only the first step in the work which he expects to carry out. Santos-Dumont is a Brazilian by birth, and was born in 1873; his father, who was of French descent, had a vast coffee plantation which employed as many as six thousand men in the fields and establishments. It was upon the forty miles of railroad which passed around the plantation that Santos-Dumont learned to conduct the small locomotives, and thus obtained his first knowledge of mechanics. He came to Paris while still quite young, and had already turned his attention to aeronautics. He at once commenced to work, and employed his large fortune and his talent in this direction. The result is that within three years he has constructed three spherical balloons and six airships. He began by making the record for the smallest spherical balloon, the "Brésil," which gaged only 140 cubic yards and had a diameter of 18 feet. It was made of fine Japan silk with cotton cordage and an extremely light wicker basket, and the whole weighed but 50 pounds. When it rose from the Jardin d'Acclimatation on the 4th of July, 1898, it seemed like an immense air bubble. After ascending out of sight, Santos-Dumont reappeared with the envelope packed in the basket. With this and similar balloons he made a number of interesting ascensions, but soon began the study of dirigible balloons. His "No. 1" is the first of the series, and started from the Jardin d'Acclimatation on the 18th of September, 1898. It was torn at the start on account of a false maneuver by the aids, but was soon repaired, and on the 20th he made a number of evolutions. But the small interior air-balloon, designed to keep the envelope always swelled out, was only insufficiently supplied by the ventilator, and thus the balloon, which was cigar-shaped, became more or less collapsed and folded upon itself under the tension of the weight. On this occasion the aeronaut had a fall of 1,200 feet at the rate of 12 or 15 feet a second, which, as M. Emmanuel Aimé says, is a record in itself. He came down on the Bagatelle training ground, however, without damage.

The "Santos-Dumont No. 2" was launched on the 11th of May, 1899, but during a rainstorm the balloon folded upon itself and could not be further maneuvered. An instructive test of the motor (gasoline type) and the helice was, however, made on this occasion. With this experience to guide him, he next built the "No. 3." It gaged 620 cubic yards, and was the first of the series to pass around the Eiffel Tower, starting from the Aero-static Park of Vaugirard on the 13th of November. The "No. 4" is an improvement of this type and gaged 525 cubic yards; it was finished on the 1st of August, 1900. He went through a number of evolutions with this airship, notably on the occasion of the Aeronautic Congress, on the 19th of September, at the Aero-static Park of the Aero Club. At the beginning of this year he finished the "Santos-Dumont No. 5," which made such a brilliant performance. It will be remembered that he started from the Aerostatic Park, crossed the Seine to the Long-champs race track, and then took the airship ten times around the track; he then came to the Trocadero, and after an accident to the rudder he started again, went around the Eiffel Tower, came back to Long-champs, and thence recrossed the Seine to the Aerostatic Park.

It was the Henri Deutsch prize that made the Tower the goal of the aeronauts, as the conditions of the prize of \$20,000 were that the start should be made from the Park or vicinity, the aeronaut to pass around the Tower and return to the starting point within half an hour. Accordingly, Santos-Dumont, the day

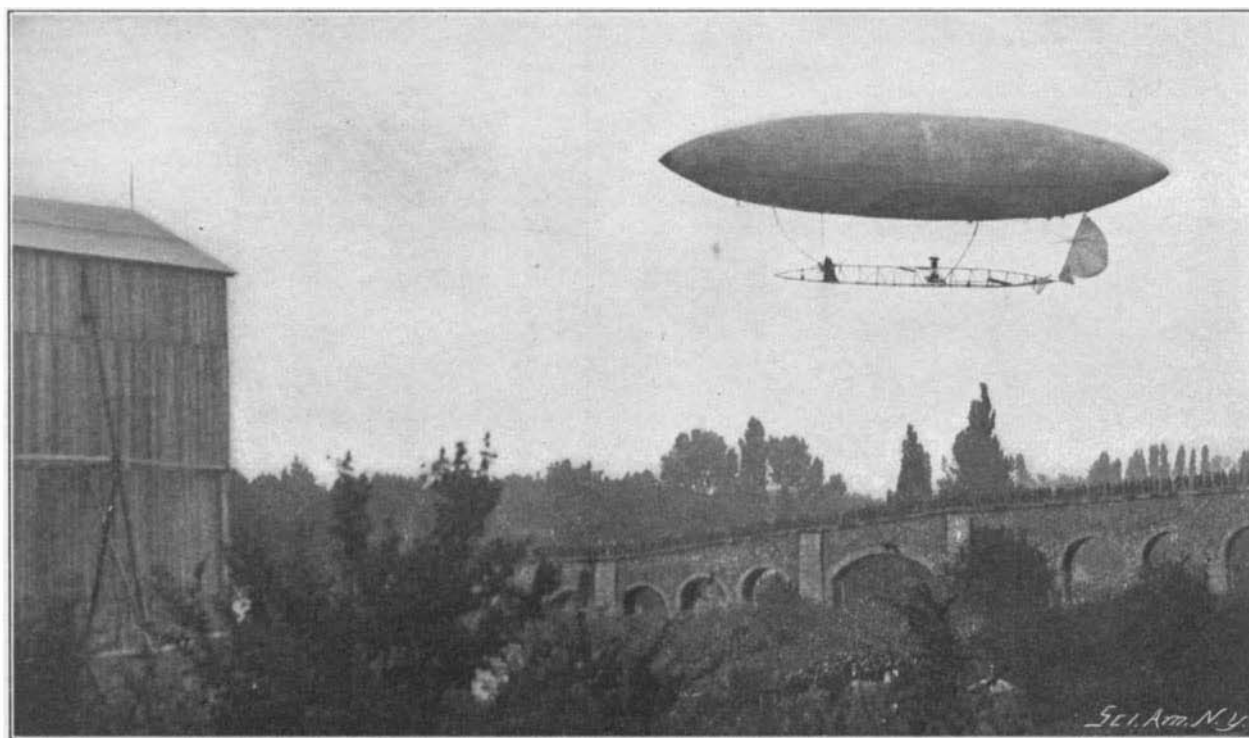
after the above experiments, started from the Park and passed the Tower, coming back in 40 minutes. But owing to a strong wind and an accident to the motor he could not land in the Park, but came down in the trees of M. de Rothschild's garden. It was after this that he had his famous accident, where, after passing around the Tower (8th of August) the motor stopped and the balloon was broken almost to pieces against the roofs of the Trocadero Hotel. Only twenty-



THE "SANTOS DUMONT No. 6" MANEUVERING IN MIDAIR

two days after this catastrophe the aeronaut, whose courage is proverbial, finished his "No. 6," with which he at last succeeded (October 19) in passing around the Eiffel Tower and returning within the half hour, or 29 min. 30 sec. Some time before this, however, the committee of the Aero Club had modified the original rules so that the airship was not only to come over the Park, but its guide-rope should be grasped by an attendant, this constituting a landing. Santos-Dumont was not able to comply with this rule, as before the rope could be grasped he was obliged to remount to avoid being carried by the wind against the balloon shed, and he came down 40 seconds after the allotted time.

The committee decided on November 4 as to this



DEPARTURE OF MR. SANTOS-DUMONT FROM THE AEROSTATIC PARK ON HIS SUCCESSFUL TRIP ON WHICH HE WON THE DEUTSCH PRIZE OF \$20,000.

much-disputed question, and Santos-Dumont was accorded the prize.

Fort Worth papers state that a conductor of the Chicago, Rock Island & Texas Railway, during the recent rush to El Reno to register for government homesteads, collected on one run 241 fares and tickets on the tops of the passenger coaches.

SOME EXHIBITS AT THE AUTOMOBILE SHOW.

The second annual Automobile Show, which has just been successfully exploited at the Madison Square Garden, was a singularly sensible affair. Usually exhibitions of a similar character in any line of progressive industry teem with a curious assortment of mechanical fads and freaks that may entertain the eye in passing without, however, possessing the slightest practical merit. The Automobile Show was, however, purified of any such blemish on serious mechanical enterprise. It presented in a wholesome variety many types and styles of automobiles and accessories, all of practical use, some evincing great structural progress, while there was absolutely no exhibit of the freak kind.

One of the largest and most interesting stands in the big amphitheater was that of the Winton Motor Carriage Company, of Cleveland, Ohio. The new, improved, record-breaking vehicle, herewith shown, probably attracted the major share of popular attention. Its striking appearance is due in a measure to the doing away with the pyramidal bonnet containing the radiators, such as the 1901 racing models wear. Instead of being inclosed in the bonnet in front the radiators have been lowered so as to provide a smooth platform, which is not likely to obstruct the view of the chauffeur, and which will offer no wind resistance worth mentioning. This construction gives the vehicle an extremely racy look. It was on a machine of identically the same mechanical construction that Alexander Winton, president of the company, recently clipped off ten miles in the record time of 11 minutes 9 seconds, his fastest mile being the fifth, made in 1 minute 6.25 seconds. This performance is better than the track record of Henri Fournier, the French chauffeur champion, and when it is considered that Fournier uses a 60 horse power, 4-cylinder machine weighing fully 1½ tons, while Winton's racer is of but 40 horse power with two cylinders and weighing but 2,300 pounds, it is easy to see that the American maker has produced, mechanically and economically, a very much superior result.

A curious cross between a horseless carriage and the victoria pattern in electric automobiles is the Elite, manufactured by D. B. Smith & Company, an exceedingly ornate and elaborate outfit on four wheels propelled by steam.

The Foster steam wagon's strong point is its compact and simple mechanism. Hence its makers thought it wise to show its "insides" in a skeleton vehicle, demonstrating clearly the manner of operation. As the mechanism is carried by the steel framework, the body has only to support the seat and passengers, and is, therefore, merely a shell, removable at will. This arrangement makes the machinery very accessible. It is possible, by removing the foot-boards, to stand, stoop, kneel or sit in front of the engine, with plenty of room for cleaning and adjusting it. The running gear is built of heavy-gage seamless steel tubing with solid reinforcements. The compensating gear is of the inclosed spur type carrying enough lubrication to run a whole season. The fire control has been improved by the introduction of a pilot light in connection with the burner, enabling the chauffeur to regulate the fire from his seat without change of position.

In its "New York" motorette the De Dion-Bouton Motorette Company has probably reached its highest present development, combining safety and efficiency with ample speed and a moderate price. The motor is water-cooled and capable of 5 horse power, which provides for speeds up to 22 miles an hour. The weight of the entire machine is only 800 pounds. The exhaust control and reversing gear have been greatly improved. The foot-brake pedal first regulates the exhaust, thus at once reducing the speed, simultaneously with muffling the noise, a feature of considerable importance in