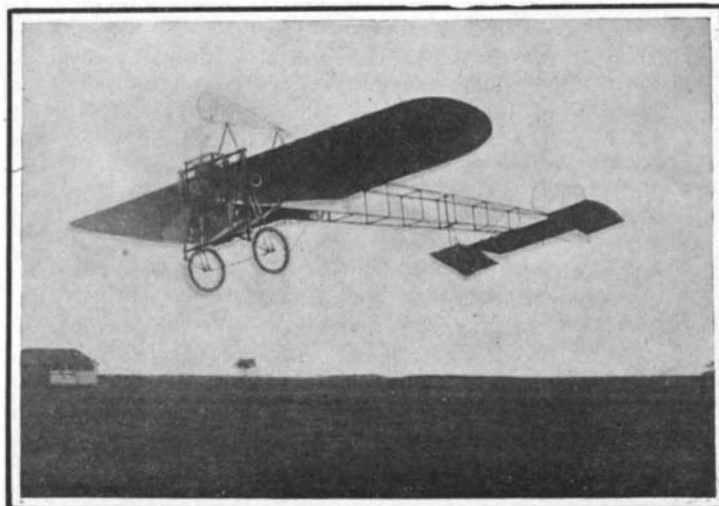


RECENT SUCCESSFUL FRENCH MONOPLANES.

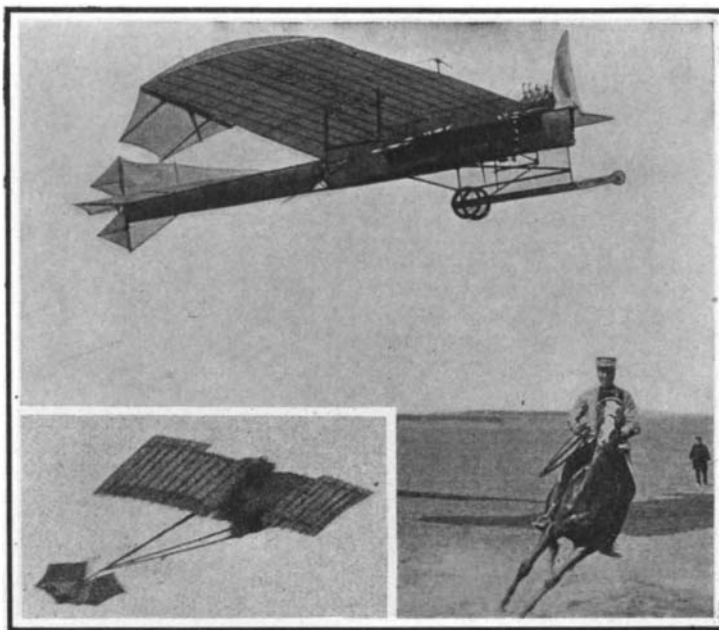
Three of our illustrations depict the three latest monoplanes that have recently made successful flights in France. The largest and most impressive of these is the "Antoinette V," which is the fifth machine built by the company of that name in Paris. The first of these, known as the "Gastambide-Mangin," was experimented with about a year ago. Since then four others have been built. M. René Demanest has been making excellent flights above the parade ground at Chalons, and the photograph depicts him in one of these. On April 9th, after a series of brilliant trial flights of not more than five in number, he won the last of the "250-meter" prizes of the Aero Club of France. He has also made other flights of about a mile, including several turns. His machine is fitted with movable wing tips on the rear edges of the plane. These are used to maintain the transverse stability, and are operated by a vertical wheel beside the aviator's seat and convenient to his right hand. The horizontal rudder at the rear end of the triangular body frame is worked by another wheel in front of the aviator. The latter's seat is in this frame, just back of the rear edge of the plane. A condenser of fine copper tubes extends forward on each side of the body frame from the aviator's seat to the front end for condensing steam formed from the cooling water. The plane is guyed to a central mast above and to the running gear below. The latter consists of a pair of pneumatic-tired wheels, running forward from between which is a beam with a roller on its front end. A telescopic tube with a shock absorber supports this beam near its front end, and takes the initial blow when the monoplane alights. The 8-cylinder, 50-horse-power Antoinette motor is mounted on top of the triangular body frame at its front end, and carries a single 2-bladed propeller on its crankshaft. For an excellent idea of the arrangement of the motor and condenser, as well as for a description of the former, see SUPPLEMENT No. 1728; while a general view of an Antoinette monoplane as exhibited in the first Paris Aeronautical Salon appears in SUPPLEMENT No. 1725. The machine has a spread of 12 meters (39.36 feet), a surface of 40 square meters (430.5 square feet), and a weight of 500 kilogrammes (1,102 pounds). The weight lifted per square foot is therefore 2.9 pounds. The speed of the machine is over 40 miles an hour. Such a monoplane can be imported into the United States for \$6,500, and the purchaser will be taught to fly it, if he cares to go to Paris for that purpose.

The "No. XI" Bleriot monoplane, which is shown in another of our illustrations, is the latest machine of that indomitable aviator, M. Louis Bleriot. By lightening the construction, and making his machine as small as possible, M. Bleriot has succeeded in reducing the weight with aviator to 230 kilogrammes (507 pounds). The spread of the monoplane is but 7 meters (22.97 feet), and the length over all is the same. The surface is 15 square meters (161.46 square feet), so that the weight carried per square foot is 3.13 pounds. The "Bleriot IX" carried 4¼ pounds to the square foot, so that although the present machine is much smaller and lighter than the former one, the weight lifted per square foot is less. The wing tips on the ends of the plane have been dispensed with, and the wings themselves are warped instead. The horizontal rudder consists of movable wing tips on each end of a fixed surface placed at the rear beneath the

body framework. The motor used is a 30-horse-power R. E. P. 7-cylinder air-cooled engine. It is mounted at the front end of the body framework, and is direct-connected to a 4-bladed propeller having aluminium blades of nearly rectangular shape. The machine as



The Bleriot "No. XI" monoplane in flight.



The huge "Antoinette" and tiny "Santos Dumont" monoplanes in full flight.

first constructed had only 12 square meters (129.2 square feet) of supporting surface, but this has been increased since the first successful 200-meter (656-foot) flights were made at Issy last January. The speed is about 46½ miles per hour. M. Bleriot has been experimenting of late at Buc, where M. Pelterie has a private aerodrome. In February he made several splendid flights of 1 to 1½ minutes with his "No. IX," in which he made turns with great ease. On March 9th he made a flight of nearly a mile (1,500 meters) with turns with the "No. XI" machine shown here-with; while on March 15th, after executing several flights of 500 to 700 meters (1,640 to 2,297 feet), he made a splendid one of 2,500 meters (1.55 miles) in two minutes with several turns. On April 5th he experienced a slight accident, owing to a wind gust. The machine came to the ground suddenly, but was not seriously damaged, nor was the aviator hurt. We have published descriptions of Bleriot's aeroplanes and of the R. E. P. motor in previous issues.

The small monoplane shown in one of the illustrations is that of Santos Dumont. This machine is so tiny that it can be transported on an automobile, as was shown in the December 12th, 1908, issue of the SCIENTIFIC AMERICAN. An excellent illustration of the motor as he now has it arranged will also be found in SUPPLEMENT No. 1730. This machine has a spread of 5 meters (16.4 feet) and is 6 meters (19.7 feet) long. Its weight complete with aviator is variously given as 120 and 140 kilogrammes (264.6 and 308.6 pounds). Taking the latter figure, the weight per square foot of supporting surface is 2.48 pounds. The machine has a double-opposed-cylinder air-cooled motor with water-cooled heads located on the front edge of the plane. A large wood propeller is carried upon the motor crankshaft. A suitably braced bamboo pole runs back and carries the tail, and water tubes are run along this pole for the purpose of cooling the water of the motor heads. In this way, the extra air resistance of the radiator is dispensed with. Several excellent flights have been made lately, the best of these being at St. Cyr on April 8th, when M. Dumont flew 1½ miles in a straight line, passing over telegraph wires, fences, etc. The machine has made other flights, and has shown its capability of turning and of being readily controlled. It is the smallest and one of the most successful monoplanes that have ever been produced.

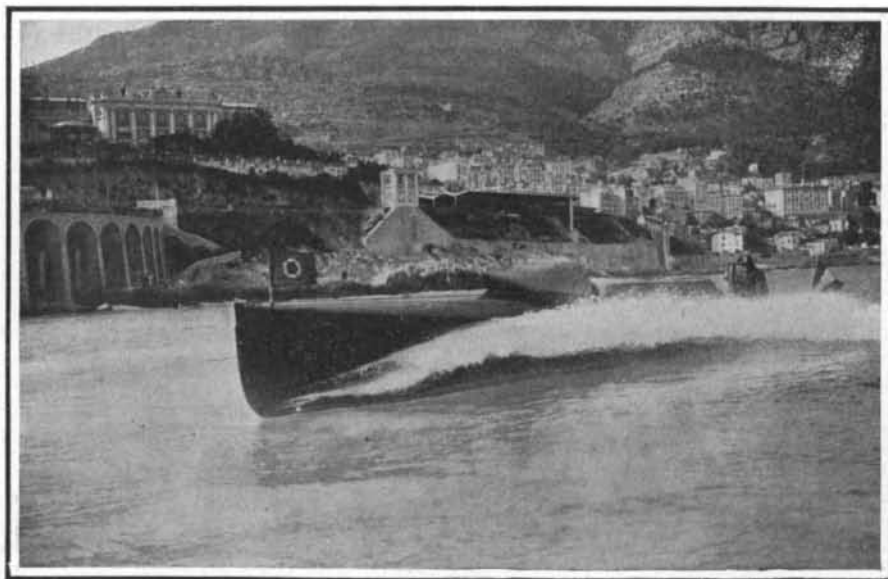
THE WINNING MOTOR BOATS AT MONACO.

Two of the photographs reproduced on this page show the British and French champions that made new world's records last month at the Monaco races. The former is a new 15-meter (49.2-foot) racer fitted with twin screws and two 12-cylinder Wolseley-Siddeley gasoline engines of 300 horse-power each, while the latter is the same Tellier hull that was used last year but which was fitted this time with four 4-cylinder 120-horse-power motors connected in pairs, driving twin screws also.

The results of most of the races were given in the April 17th issue of this journal, but it will perhaps be well to recapitulate here. The two boats illustrated and the American "Standard" were the only 15-meter craft. Our other boat, "Dixie II," was only 12 meters (40 feet) in length and about one-third as powerful. The "Standard" was practically rebuilt at Monaco, and she did not race, while the "Dixie II" could do nothing in the Mediterranean.

The first race in which the American, French, and English racers met was that for the Prize of Monte Carlo, held on April 4th. The distance was 50 kilometers (31.07 miles), and the winner was the "Wolseley-Siddeley II" in 49 minutes and 4/5 second, or at an average speed of 38.03 miles an hour. The "Panhard-Levassor" finished but 13 4/5 seconds behind the "Wolseley-Siddeley II," while the "Dixie II" averaged only 21.16 miles an hour.

The "Coupe des Nations" 100-kilometer (62.1-mile) race was won by the "Wolseley-Siddeley" in 1:35: 9 3/5 at an average speed of 39.15 miles an hour. The best lap of the 16 was covered in 5:44 at a speed of 40.6 miles an hour. The "Panhard" dropped out with a broken connecting rod in the 13th round, and the "Dixie II" with a leaking water pump in the 14th. The English champion made a flying kilometer in 56 1/5 seconds, or at the rate of 39.77 miles an hour. The hydroplane "Duc" covered the same distance at a speed of 41.09 miles an hour.



The "Panhard-Levassor" racing at Monaco.



The "Wolseley-Siddeley II" at full speed.