

NEW AUTOMOBILE SPEED RECORDS IN FLORIDA.

The annual speed trials and races which have been held for the last three years at the Ormond-Daytona Beach, Fla., were run off last week under rather unfavorable weather conditions; but nevertheless they resulted in the complete triumph of a steam racer built by the originators of the steam automobile in America, the Stanley Brothers, of Newton, Mass. This machine not only made a reduction of 9 4-5 seconds in the record for a steam machine, but it also made the fastest time (2 min. 47 1-5 sec., or 108 m. p. h.) in the five-mile race when run against the speediest cars that Europe can produce.

The new record of a mile in 28 1-5 seconds was made on January 26, in the mile trials. This is equivalent to a speed of 127.65 miles an hour, and is only 2 1/4 miles an hour less than the fastest speed (130.4 miles an hour) ever made on rails, which was accomplished by an electric car near Berlin, Germany, in November, 1903.

In competition with the steam machine in the one-mile trials were a special 8-cylinder, 200-horse-power Darracq racer, the 100-horse-power Napier (which made a record of 34 2-5 seconds for this distance last year), a 110-horse-power Fiat, and a 100-horse-power Ford. The nearest approach to the figures set by the steam machine was made by Chevrolet with the 200-horse-power Darracq, who covered the mile in 30 3-5 seconds, or at a rate of 117.64 miles an hour. This stands as the new record for heavy-weight gasoline machines. The Napier did not equal its performance of last year, requiring 37 2-5 seconds for the mile. Cedrino's Fiat made the distance in 36 3-5 seconds, while the Ford machine made it in 40 seconds, or at 90 miles an hour.

The mile record of 57 1-5 made by a 20-horse-power light-weight, double-opposed-cylinder Stevens-Duryea machine last year was reduced to 52 3-5 seconds by a 32-horse-power Reo racer of the same type. The new

national Dewar trophy, given for a one-mile race in three heats. The first and third heats of this race were won by the steamer in 32 1-5 and 32 seconds respectively, while the best time by a gasoline machine in this race was made by Lancia with a 110-horse-power Fiat, which won the second heat in 37 3-5 seconds. It will be recalled that a Stanley steamer also won the Dewar trophy last year in 41 1-5 seconds, which was

won a 15-mile handicap race in 13 m. 42 2-5 s., or at a rate of speed of 65.7 miles an hour.

The huge 8-cylinder car, which we illustrate, was specially designed and built by a noted French automobile engineer, for the purpose of breaking records at the Ormond meet. The machine is rated at 250-horse-power. It has a duplex carbureter and spark plugs in the head and side of each cylinder. The power of its



Marriott in the Stanley Steamer Pressing Lancia on His 110-Horse-Power Fiat Closely in the One-Mile Race for the Dewar Trophy.

The Stanley won the first and third heats in 32 1/5 and 32 seconds respectively. The second heat was won by the Fiat in 37 3/5 seconds.

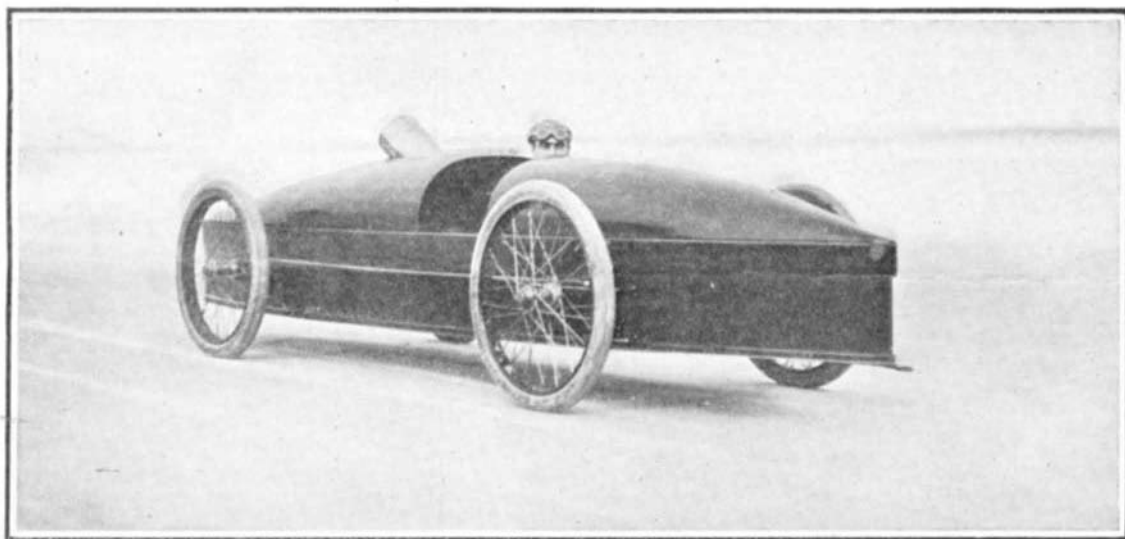
but 3-5 of a second faster than the time made by a Napier machine. So sanguine is Mr. Stanley of lowering the record still more, that he has contracted to build a new machine which will do a mile in 25 seconds, or at a rate of speed of 144 miles an hour. As can be seen in the illustration, the new Stanley machine is built on much the same lines as the racer used last year. The body resembles a boat with a rounding deck, while that used previously was more the shape of a

engine is so great that the clutch could not transmit it, and the machine from various other causes was unable to run successfully in any of the races. Another machine which was finished at the last moment and shipped to Florida in the hope of breaking records was a 100-horse-power Christie direct-drive car. Trouble is said to have developed in the cylinders of this machine, and while practising one day on the beach it ran into a piece of wreckage, smashing the front wheel. It is to be hoped that the Christie car which, we understand, has been repaired, will be able to run in some of the longer races.

The great reductions which have been made in time for the mile and for longer distances, make it impossible to prophesy where the craze for speed will end. While two miles a minute—the mark set for a gasoline machine of not over 1,000 kilogrammes (2,204 pounds weight)—seems to be about the limit with a gasoline machine, a specially-built steam car of this weight will probably be able to reach as high a speed as 150 miles an hour over a distance of one mile. That this record will soon be attained does not seem an improbability, in view of the great increase in speed shown by a special type of steam racer within the brief space of one year.

Germination of Orchid Seeds.

When the seeds of orchids are sown, especially those of the Cattleya or the Lælia, it is found that the germination, which is quite irregular, is accompanied with the presence at the extremity of the plantule of a cluster of filaments due to an endophyte fungus. Recent experiments of the French scientist, M. Noel Bernard, have shown that the presence of this fungus is indispensable to the germination of the orchid seed. If the seeds are asepticated, they will not germinate; but if they are put in a pure culture of the fungus, the mycelian filaments of the latter penetrate the embryo; then the germination commences, and is pursued regularly. This observation shows a distinct case of normal parasitism, in which an organism cannot be developed without the penetration of a parasite.



The 50-Horse-Power Stanley Record-Breaking Racer Which Traveled a Mile in 28 1/5 Seconds at the Remarkable Speed of 127.65 Miles an Hour.

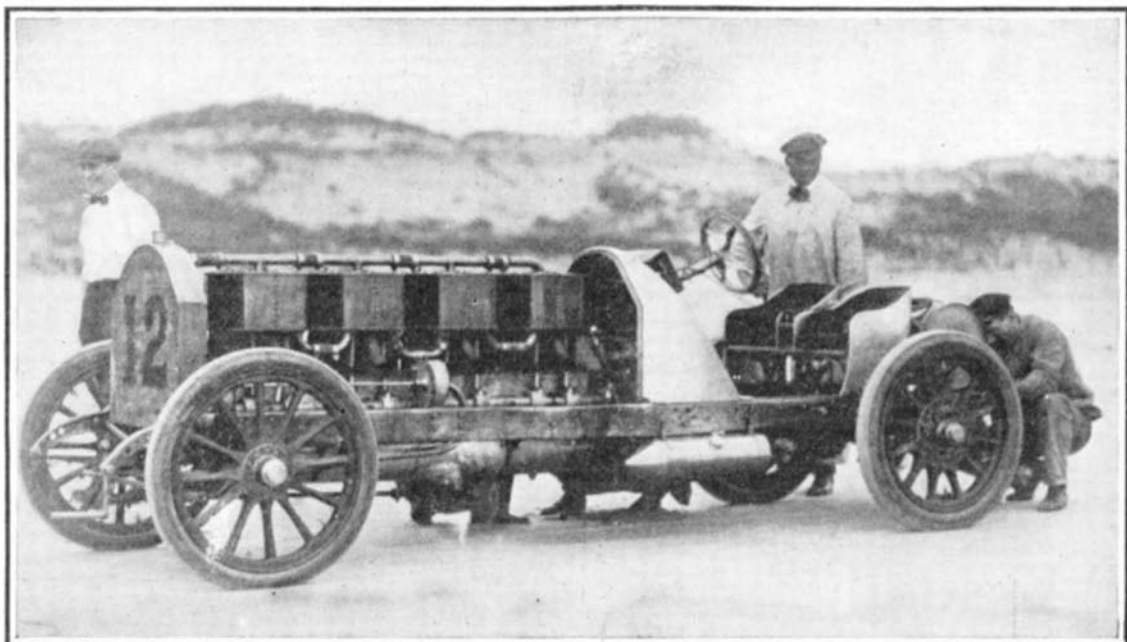
record is equivalent to a speed of 68.44 miles an hour. The cars which were second and third were a 45-horse-power Wayne (time 1 m. 6 s.) and a 12-horse-power Maxwell (time 1 m. 29 2-5 s.)

The speed trials over a distance of one kilometer (0.621 mile) were also won by Marriott in his 50-horse-power Stanley steamer in 18 2-5 seconds, or at a rate of speed of 121 1/2 miles an hour. This is 5 4-5 seconds faster for this distance than was made by a similar machine last year, and 4 3-5 seconds faster than the best previous record, which was 23 seconds, made by McDonald in a Napier machine last year. Chevrolet succeeded in driving the 200-horse-power Darracq a kilometer in 19 2-5 seconds, which was about a second better than this machine did a month ago in France in making its first speed trials. The 100-horse-power Napier car covered a kilometer in 21 3-5 seconds, and the 110-horse-power Fiat in 22 4-5.

Other events which were run off on January 26 were a 10-mile middleweight championship, which was won by Vaughan on a 80-horse-power Darracq in 7 m., or at a rate of speed of 85.7 miles per hour, and a 10-mile Corinthian handicap, which was won by Harding on a 45-horse-power Daimler (having 3 1/2 minutes handicap) in 8 m. 48 4-5 s., with a scratch car—an 80-horse-power Darracq—second in 6:42 4-5, which is equal to 89.37 miles an hour.

The first record-breaking performance of the Stanley steamer occurred on January 23, when it covered a mile in 31 4-5 seconds, and thus reduced by one second the record made last year by an 8-cylinder Mercedes machine, which was over the specified weight of 2,204 pounds, and the record of which consequently did not stand. This first record mile was made in the afternoon subsequent to a drizzling rain in the morning, and the result was that the beach was not particularly fast, nor were the weather conditions of the best. The first record mile, which is equivalent to 113.2 miles an hour, was made subsequent to the winning of the Inter-

torpedo. The power plant is much the same as heretofore, and the Stanley method of construction, with a horizontal engine and spur gear drive, is employed. It is needless to say that very high pressure is employed in the boiler, which is of the usual water-tube type. Not only did the racer succeed in beating all the gasoline cars in its class in distances up to 5 miles, but a smaller machine consisting of a standard chassis also



Mr. Alfred G. Vanderbilt's 250-Horse-Power 8-Cylinder Racer Which Was Specially Built to Break Records, But Which Did Not Succeed in So Doing.

This car was considerably over weight. Its eight cylinders are cast in pairs and provided with copper water jackets. The valves are on opposite sides and there are two spark plugs in each cylinder.

THE FASTEST AND THE MOST POWERFUL CARS AT THE FLORIDA SPEED CONTEST.