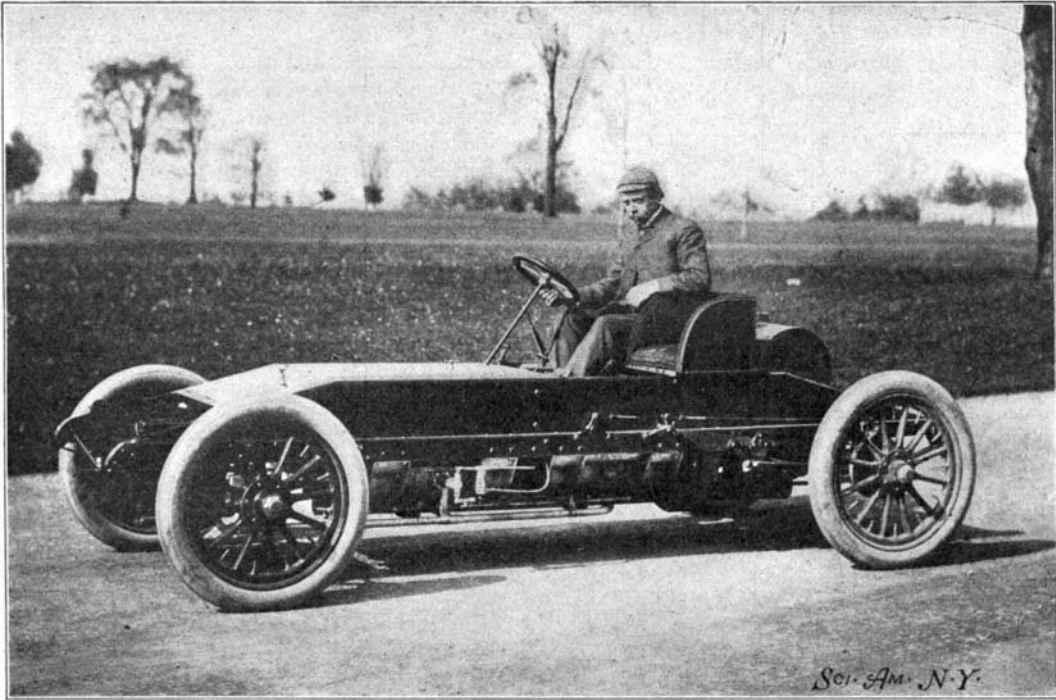


AMERICAN CARS TO COMPETE IN THE GORDON-BENNETT CUP RACE

Our illustrations give a good idea of the appearance of the Winton and Peerless racers that went to Ireland to compete in the Gordon-Bennett Cup Race on July 2.

In "Bullet No. 2," the long, low, high-powered car



ALEXANDER WINTON ON HIS EIGHT-CYLINDER RACER. WEIGHT 2,150 POUNDS.

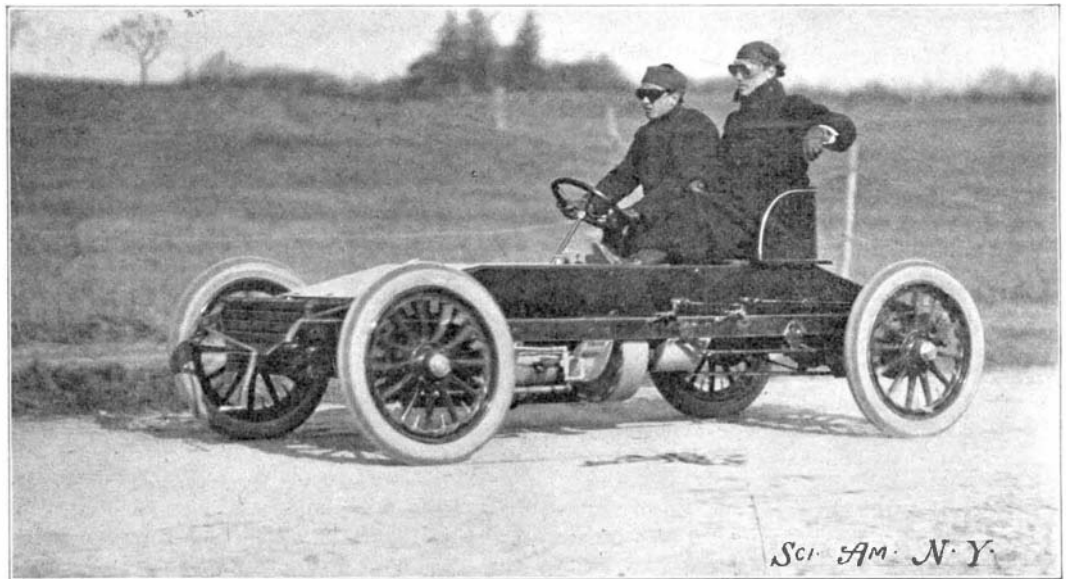
in which Mr. Winton is seen seated, were placed America's chief hopes of lifting the cup for this country. The machine is the outcome of all Mr. Winton's racing experience, and is without doubt a very smooth-running, speedy car. Planned on the general lines of the first "Bullet," which made a name for itself breaking records and which we illustrated in our issue of January 17, the chief feature of the new machine that strikes one, upon examining it, is the great abundance of power beneath its flat, sloping body. Mr. Winton has followed up the experiments of Charron, Giradot, and Voigt with an eight-cylinder motor quite closely, it would seem, for he has equipped his new racer with a similar engine having eight 5 x 6-inch cylinders. The eight cylinders are arranged in two groups of four each. They are horizontal, set transversely of the body, with their heads on the opposite side of the car to that shown, the crank shaft being on the side shown in the picture. A cone clutch in the flywheel connects the crank shaft directly to the differential on the back axle through a longitudinal driving shaft. A speed reduction of $1\frac{1}{4}$ to 1 is used, and at 700 R. P. M. of the motor, the car will travel at the rate of 64 miles an hour. As the motor is said to be capable of turning up 1,000 R. P. M., the car has a maximum speed of over 90 miles an hour, while it can also be slowed down to 9 miles an hour by throttling the motor. Its weight complete, with tanks empty, is 2,150 pounds. The capacity of the gasoline tank is 22 gallons, and that of the water tank, $12\frac{1}{2}$. It has a wheel base of $9\frac{1}{2}$ feet, and a gage of 4 feet, 8 inches. It is fitted with no slow speed or reverse, but simply with the clutch and direct drive to the rear axle. Wheel steering is employed, the hand wheel shaft being connected to a short shaft carrying a bell crank by means of a worm gear and sector. A tubular rod runs from the universal joint on the bell crank to the steering arm beside the front wheel. There are two

brakes on the hub of each rear wheel, one an expanding ring within the brake drum, and the other a brake band on the outside. The two brakes are applied by separate levers.

A single carbureter supplies gas for all the eight cylinders; but a separate centrifugal water-circulating pump is used for each group of four cylinders. The

pumps make half as many R. P. M. as the motor, and keep up a good circulation through the radiating coils in front.

The smaller Winton racer is built on the same general lines as the one just described. It has half the power of its big brother—four cylinders instead of



PERCY OWEN ON HIS FOUR-CYLINDER WINTON CAR. WEIGHT 1,450 POUNDS.

eight—and weighs over two-thirds as much (1,450 pounds with tanks empty). The performance of these two machines should demonstrate, therefore, whether twice the power will more than compensate for less than one-third extra weight. The smaller machine was driven by Mr. Percy Owen.

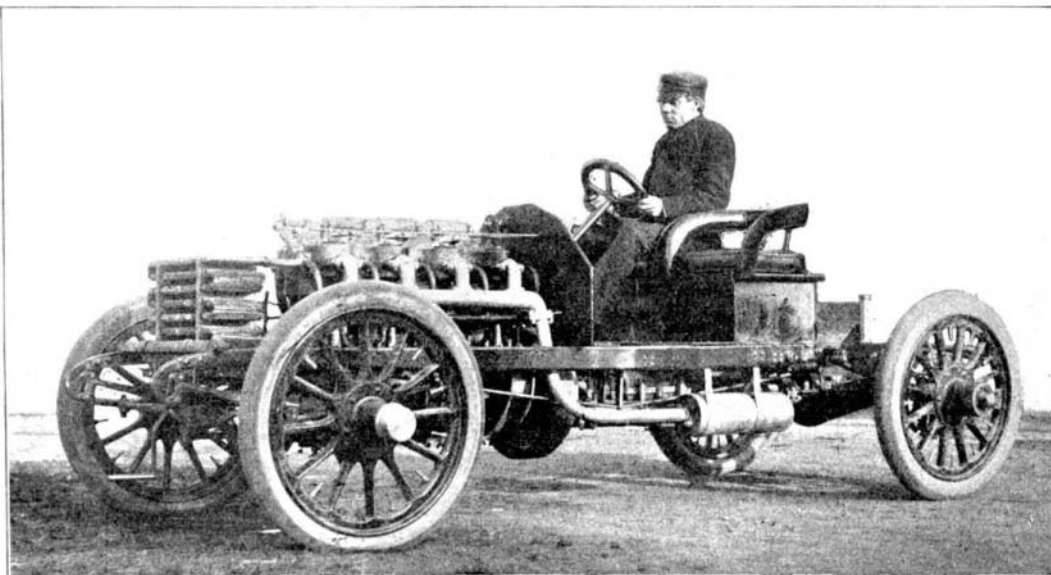
The "Peerless" racing car is built on the general lines of the regular "Peerless" machines which we have illustrated heretofore. The motor has four upright cylinders of 6 inches bore by 6 inches stroke. The cylinders are made of steel tubing, and are screwed into heads which are cast with a water jacket. The water jacket extends nearly half way down on the outside of the cylinder. Mechanically-operated inlet valves and both jump spark and contact igniters are two of the features of this motor. A magneto is used to supply current for the contact igniter system. The exhaust side of the motor is shown in the photograph, and the exhaust pipes from the four cylinders are plainly to be seen, as they bend down and join the main pipe that runs back to the muffler. Unlike the other cars, the "Peerless" racer is fitted with a sliding transmission gear of the usual type, giving a direct drive on the high speed. The machine has a wheel base of 9 feet, 2 inches, and measures 13 feet, 4 inches over all. It weighs slightly less than the limit of 2,200 pounds, and its motor is said to be capable of developing 80 horse power. It was driven in the race by its constructor, Mr. Louis P. Mooers.

The Second Ziegler Expedition Sails for the Arctic.

Commanded by Anthony Fiala, the Ziegler North Pole expedition started on the steamer "America" from Trondhjem on June 23. Fiala hopes to find a good harbor in Franz Josef Land, where the expedition intends to pass the winter.

Santos-Dumont's Latest Airship Trip.

On June 23 Santos-Dumont made a most remarkable trip in his new airship No. 9, the smallest of the series which he has so far built. Starting at 4:30 from Longchamps, he proceeded in the direction of the Place de l'Etoile. He executed a number of skillful maneuvers and encircled the Arc de Triomphe. Then, turning down the Champs Elysées he alighted at his house, where he breakfasted. Bystanders and mechanics held down the airship in the meantime. After breakfasting the aeronaut entered his airship and re-



LOUIS P. MOOERS ON HIS 80 HORSE POWER "PEERLESS" RACER. WEIGHT 2,200 POUNDS.

turned to Longchamps. The entire trip seems to have been accomplished with as much ease as if the Brazilian had ridden in his carriage.

A New Track for the Berlin-Zossen Road.

It will be remembered that the first tests on the Berlin-Zossen road with high-speed electric locomotives and cars had to be abandoned because it was found that the track was too light for speeds above 99.4 miles an hour. The amount of \$72,000 has now been appropriated by the Reichstag for a new track. In place of the present 67-pound rails, 82-pound rails will be used, laid on new fir ties, with hardwood plates 18 to the rail, ballasted with fine broken basalt.

News was received in San Francisco by wire from Midway Island on June 23 for the first time. A cablegram stated that the steamer "Anglia" had left the island for Honolulu, presumably with the last section of the Pacific cable which is intended to connect San Francisco with Manila. The news was sent to Manila over a section just laid, and then by one of the old cable routes. Unless unforeseen accidents occur, the line will shortly be in operation directly from San Francisco to the Philippines.

Marconi wireless telegraphic apparatus has been installed on the steamship "Deutschland." Four other ships of the Hamburg-American Line are also to be equipped with the apparatus.