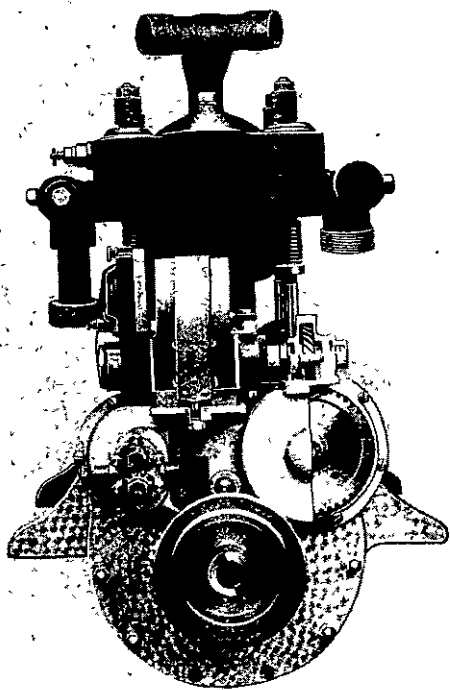


The world's largest motor-car is owned by a Cleveland millionaire, Mr. Louis D. Schoenberg. It is 25 ft. long, and fitted up inside so that the occupants can live on board as though it were a yacht. Another of America's multi-millionaires, Mr. Fiske, journeys to town each day in a motor office, in which he can transact business en route, and it has a dressing-room attached, in which he can change into evening dress in time for dinner when he reaches his suburban home in the evening.

#### TWO GORGEIOUS VEHICLES.

The King of the Belgians spent £6000 on a motor-flat containing a sleeping-room, a dressing-room



FRONT ELEVATION OF THE 16-20 H.P. CHENARD-WALCKER ENGINE.

that cost £800 in fittings alone, and a room for a valet. The late Marquis of Anglesey's gorgeous car, the Quo Vadis, cost £2500, had a Louis XV. ceiling, and silver plate and silver fitting wherever they could be introduced.

Utilitarian motor vehicles are becoming more numerous and varied every day. Commercial travellers' cars, with accommodation for samples, etc., are now supplied for £150 to £200. A motor restaurant exists in London, and a motor ambulance was a feature of the Lord Mayor's Show the other day. Agricultural motors are increasingly used for threshing, hoisting, pumping, shearing, grinding, and so forth.

Motor fire-engines are as yet in the trial stages. The London brigade's latest acquisition, "Motor Fire King No. 2," is proving very satisfactory. It travels thirty miles an hour on the level.

Armoured motor-cars are being largely introduced into the world's armies. The Russian government has just acquired seven cars, which are veritable fortresses on wheels. Each has bullet-proof sheathing and a machine-gun turret which works in any direction, firing 600 shots a minute. In our own army we have a bullet-proof steel first-aid motor, capable of carrying its occupants in absolute safety through a hail of fire from 10,000 rifles.

#### FOR THE DESERT.

Exceedingly interesting are the motors for polar and desert work. The former is expected to supersede dogs in Arctic exploration. It consists of a fiercely revolving, four-bladed fan, driven by a gasoline engine, and is attachable either to a motor-car or a sleigh. The wheels of desert-motors have very broad, flat tyres, with a flange in the centre, which throws up the sand on either side and makes a bed for the flat part of the wheel to run on.

A queer-looking contrivance is the Canadian dummy-horse car. The dummy-horse is fixed to the car out of deference to the nerves of real horses. The horn is attached to the dummy's mouth, and at night the eyes are lighted up, a pair of brilliant green and red orbs glaring at passing vehicles.

The motor-car pawnshop made its inevitable appearance in New York recently, flaunting the sign of the three balls and carrying a cash supply of £10,000.

Motor-skates and flying-boats should not be overlooked in an enumeration of motor "freaks." M. Constantini, a Parsian, has travelled 30 miles an hour in motor-skates. Each skate is fitted with a motor of 1½ h.p., air-cooled. The petrol tank, holding three-quarters of a litre of fuel, is supported by a girdle round the waist. The skater also carries the coil and accumulator and the levers for controlling the speed of the engines. Holding the control lever in the right, and having made the necessary arrangements to switch on the current and open the petrol supply, the skater pushes off on one foot in the customary way.

The motor-boot, by the same inventor, is worked on identical principles. The boots are really diminutive motor-cars fitted to Wellington boots. Each boot has four wheels, 8 in. in diameter, with solid tyres. M. Constantini has travelled hundreds of miles in them.

The gist of what is in everybody's mouth about the tendency to lightness of construction, in defiance of common sense, has been summed up easily, thus by an expert:—

One would naturally think makers of air cooled engines for a high compression would have castings of a fair weight for the sake of safety, but my experience is that they don't. Probably this is accounted for by the constant craze for lightness. A light engine is made, it does not give enough power, or at least the h.p. of a reasonably heavy one, and up goes the compression. Result: A banging, knocking engine, that is a misery to drive and a source of constant trouble to keep gastight.

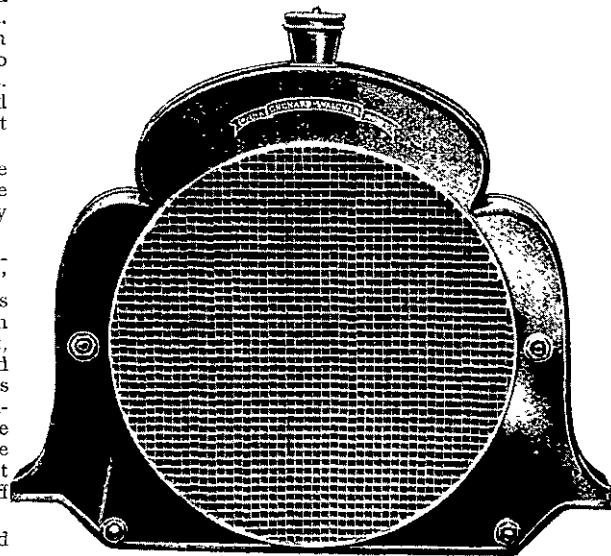
One sixteenth of an inch thick is not enough for a cylinder casting. If the piston stuck at any time from faulty lubrication the cylinder would break off at the foot, if it did not break before. Three-sixteenths of an inch is not too thick for even a motor cycle engine.

## Ten Years of Motor Racing.\*

By GEORGES PRADE.

The sport of automobile racing began in France and the entire world ten years ago, and these ten years are those that created not only the racing car which we saw whizzing by on the Circuit de la Sarthe at ninety miles an hour, but also the touring carriage which brought the visitor to the tribunals of Mars, and which, however humble and modest it be, is nevertheless a monster of speed as compared with the racing car of days gone by.

Let us, then, date the foundation of automobile racing in France from the Paris-Bordeaux race of 1895 (although a few races of no great importance

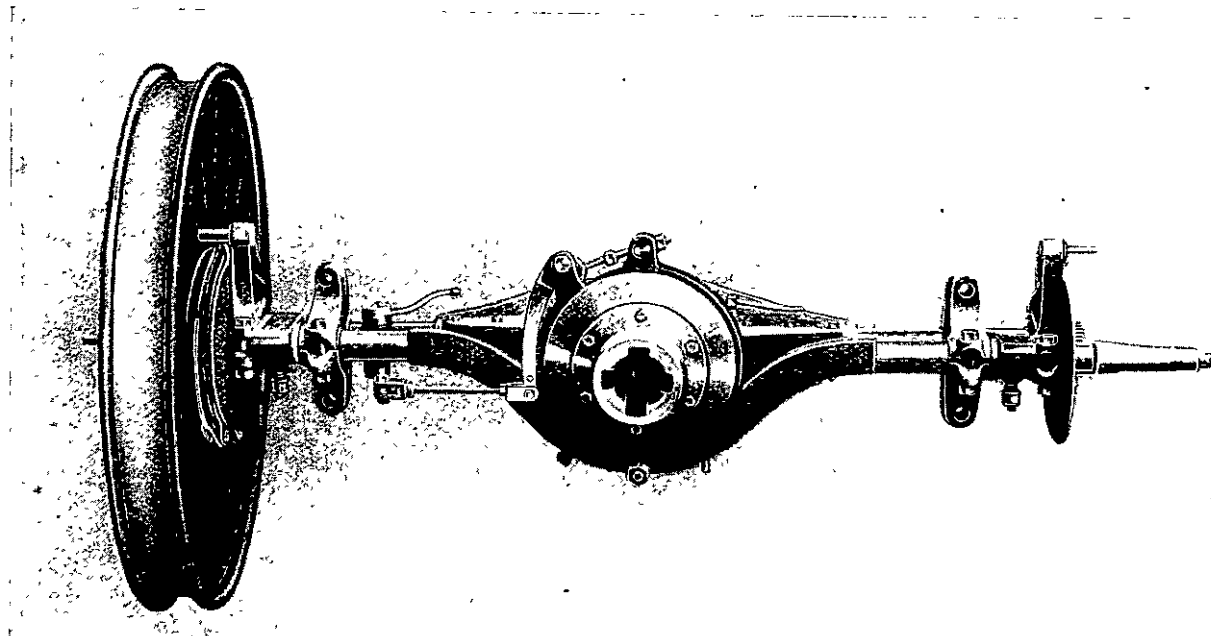


THE DISTINCTIVE RADIATOR DESIGN IN THE CHENARD-WALCKER CARS.

had taken place previously), and allow us to present the first winner, the famous No. 5, which was driven by Levassor himself, the founder of the great French establishment which was found in line again this year. It is a far cry that crude carriage with its 4-h.p. motor to the monster of to-day. High and short, and so heavy that with so moderate a power it would not even have been able to take part in races in which the weight is limited to 2200 lb., it took 48 h. 12 min. to make the round trip, a total of 720 miles.

It was also a Panhard that triumphed in 1896 in the Paris-Marseilles and return race, organised by the Automobile Club of France, which had then been formed. The test was a 1054-mile one, and the winner was Mayade, who covered the distance in 67 h. 42 min. 58 sec. This time the run was by stages, and the race lasted ten days. The carriage would appear to-day as ridiculous as that of the Paris-Bordeaux race, with its cow-tail steering lever, which was to cost the life of Levassor in this same race, and, three years later, that of Mayade himself.

Nevertheless, we note an improvement in the first motor with four non-balanced cylinders, in which the explosion passed successively from the first to the second, from the second to the third, and from the third to the fourth, thus making of the motor and carriage a genuine instrument of torment by reason of its vibrations. In the test for motor-cycles, now abandoned, the winner was Viet, upon a De Dion machine. Among the participants in the Paris-Marseilles race with Viet, now engineer at the Renault Brothers' works, was to be found in a carriage with seats for four, and which was to make the first trials of pneumatic tyres, Chevalier Ren. de Knyff, now president of the Racing Committee of the Automobile Club of France. The Marquis De Dion had already taken part in the Paris-Bordeaux race, and in 1897 we saw Baron Zuylen in line upon a motor-cycle in the first Marseilles-Nice race. The year 1897 was more con-



THE CHENARD-WALCKER DUPLEX BACK AXLE, SHOWING THE BRAKES AND DRIVING MECHANISM.

\* Translated from *Les Sports*.