

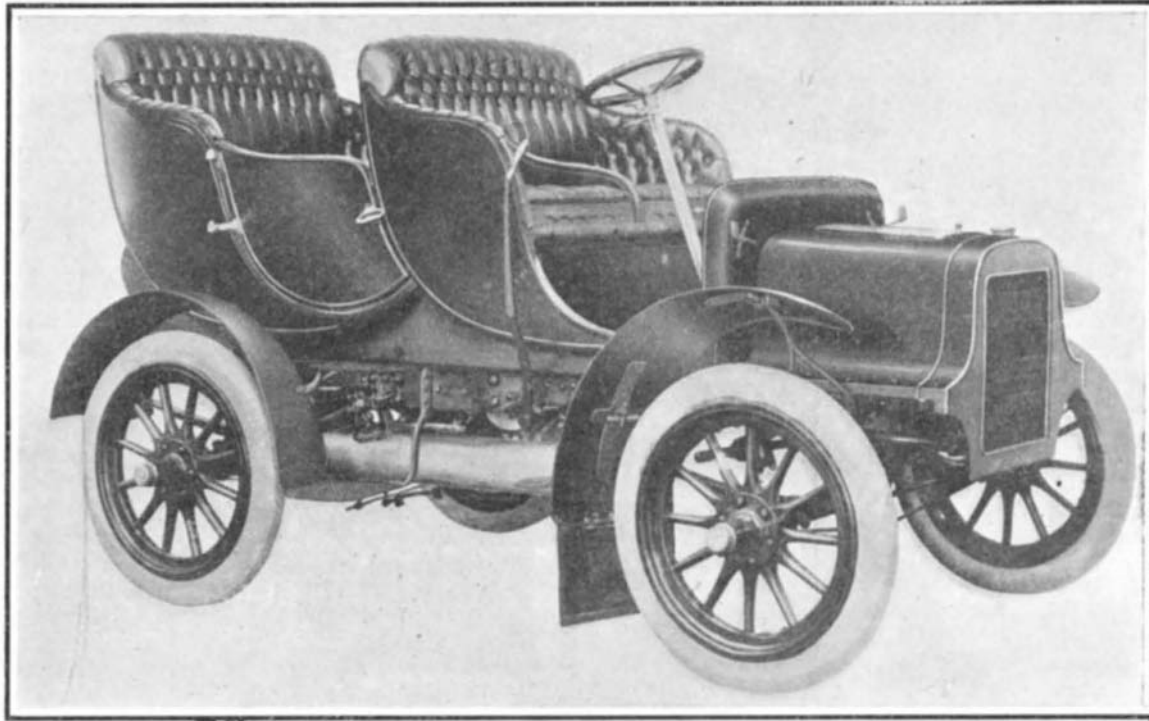
**THE CADILLAC SINGLE-CYLINDER LIGHT TOURING CAR.**

The graceful lines of the new single-cylinder Cadillac are apparent from our illustration. As far as the mechanism is concerned, this has undergone no radical change since the first car was built over three years ago. The workmanship is so good that many of the early cars are still in use to-day after receiving many hard knocks, yet being in constant service for several seasons. Simplicity and service are the things for which this car is noted chiefly. It is so constructed that any of the parts (including the crankshaft bearings) may be readily and cheaply renewed. Its single cylinder is fitted with a copper water jacket which is clamped in place without the use of gaskets. A thorough water circulation is maintained by a positively-driven centrifugal pump. The carbureter consists of a simple mixing valve operated by the suction of the motor. The spark plug is made up of two mica plugs set in a suitable cap. As both terminals of the plug are insulated, it does not short-circuit readily. The 1906 car is fitted with a mechanical oiler driven by a cam on the countershaft. This oiler forces oil through large pipes to the bearings, cylinder, and crank, the result being that the wearing parts are always properly lubricated. A very good feature of the car is that the starting crank can only be put on when the spark is retarded—an arrangement which makes a "kick back" of the engine impossible. The bore and stroke of the motor is 5 inches. Eight horse-power is guaranteed at the start, but after an engine has been run several months, a brake test

will often show 10 horse-power or over at 1,300 R. P. M. The runabout will go 20 to 30 miles on a gallon of fuel, and the touring car 17 to 20. On English roads as high as 40 miles on a gallon has been attained. The front end of the machine is supported by a transverse

**THE OLDSMOBILE TWO-CYCLE AND FOUR-CYCLE TOURING CARS.**

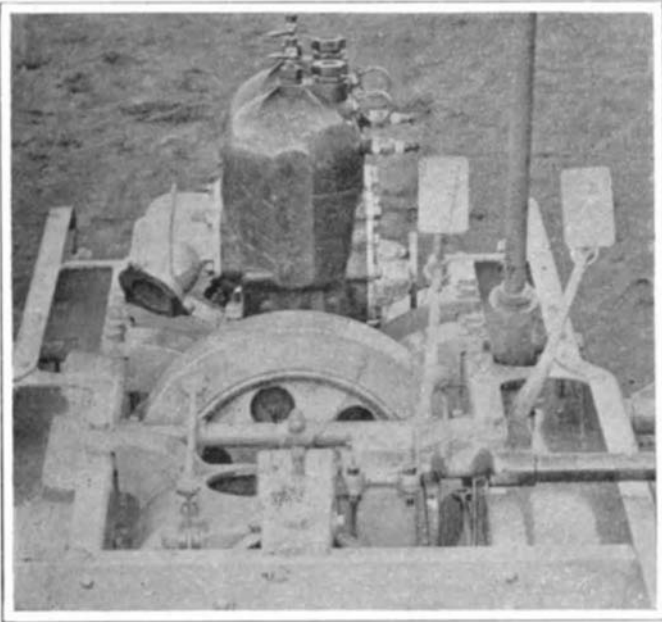
The Olds Motor Works have this year brought out a new, light, side-entrance tonneau, shown herewith, which has for its motive power a two-cylinder, vertical, two-cycle engine, placed in front under the bonnet. The chassis of this car is identical with that of the larger four-cylinder four-cycle touring car. The front end of the two-cycle chassis is shown herewith. The motor is substantially constructed, having a large crankshaft and bearings 3 inches long. The latter have adjustable boxes for taking up the wear. A relatively high compression (about 8 pounds) is obtained in the crankcase, the space of which is filled by aluminium disks on the crankshaft. The transfer ports are of liberal dimensions, and as direct as it is possible to make them. The result is that about 25 horse-power is obtained with two 5 x 5-inch cylinders. This power is transmitted to the rear wheels through a three-speed sliding-gear transmission of the selective type and the usual universally-jointed propeller shaft and bevel gear drive at the rear axle. The latter is fitted with roller bearings, while the transmission has babbitt bearings, lubricated by oil-soaked waste. The transmission gears are of high-carbon steel, tempered and hardened. The lower half of the transmission case is removable, and the upper half is provided with an inspection cover for examining the gears. The view of the chassis from beneath shows very distinctly the arrangement of the different parts. A universal joint



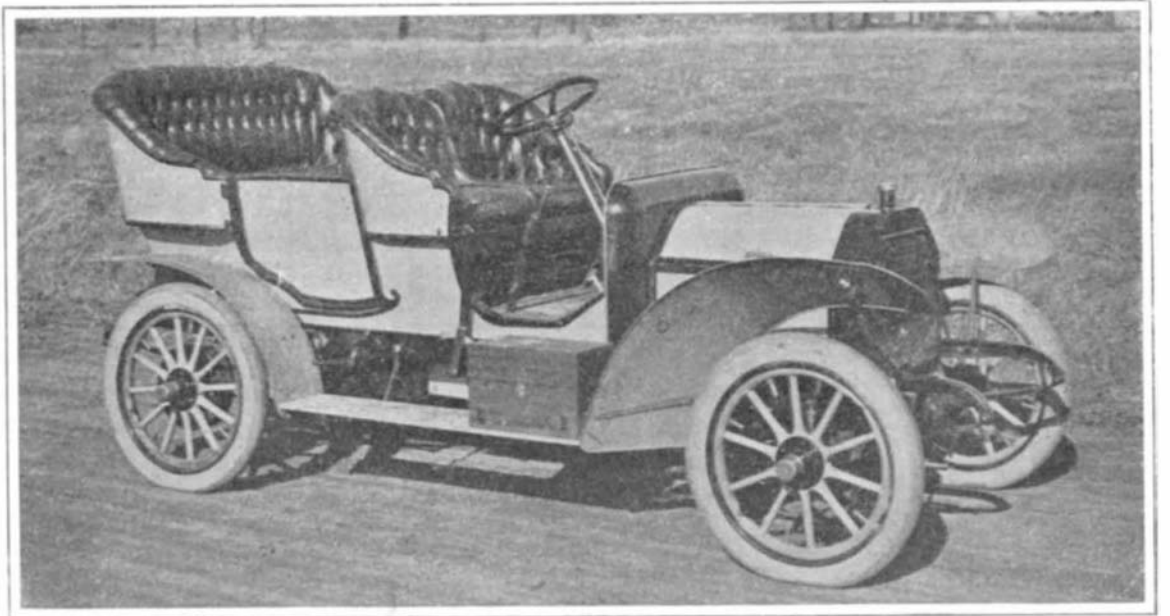
**THE NEW CADILLAC 8-HORSE-POWER SINGLE-CYLINDER TOURING CAR.**

spring mounted on a rocker which sets upon the upwardly-curving tubular front axle. Thus the axle can be raised at either end without affecting the body in the least. The car is fitted with double band brakes on the differential, which is driven from the engine by a hardened detachable roller chain of the cotter-pin type. The Cadillac company are also making two four-cylinder cars having 4 3/8 x 5 and 5 x 5 engines respectively and being fitted with their three-speed planetary gear. These cars are very similar to that illustrated in our issue of December 16 last.

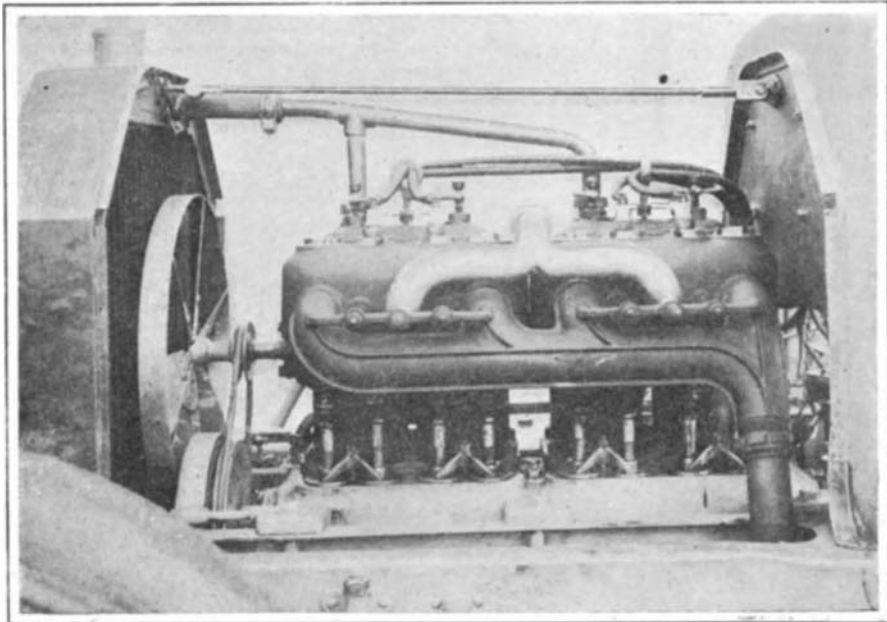
(Continued on page 50.)



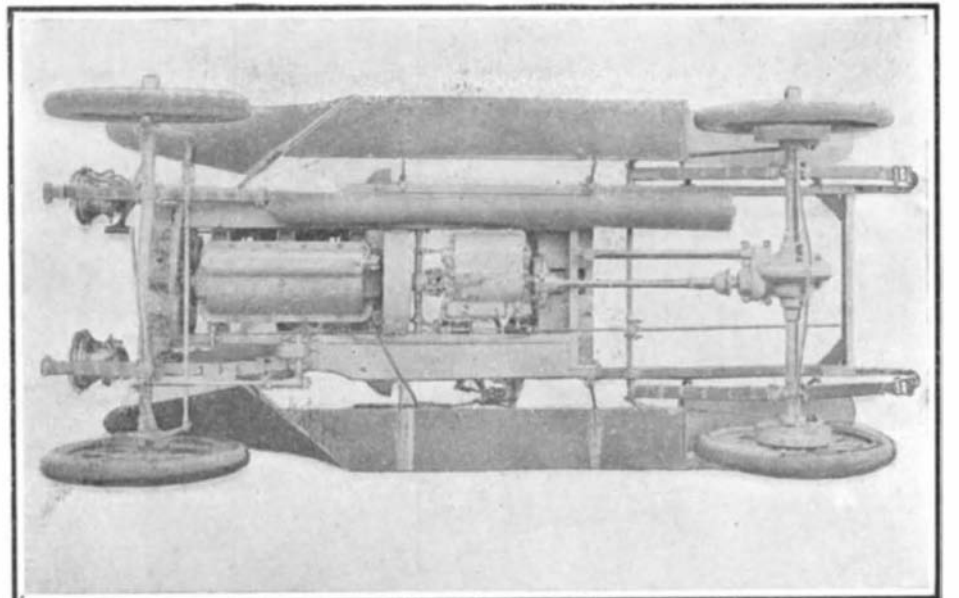
**FRONT END OF CHASSIS OF OLDS 2-CYCLE CAR, WHICH HAS TWO 5 x 5-INCH CYLINDERS.**



**THE OLDS LIGHT, 2-CYLINDER, 2-CYCLE TOURING CAR. WEIGHT, 1700 POUNDS.**



**THE 4 1/4 x 4 1/4, 4-CYLINDER, 4-CYCLE OLDS TOURING-CAR MOTOR.**



**UNDER SIDE OF CHASSIS OF OLDS 4-CYLINDER CAR. A TYPICAL CHASSIS WITH BEVEL GEAR DRIVE.**