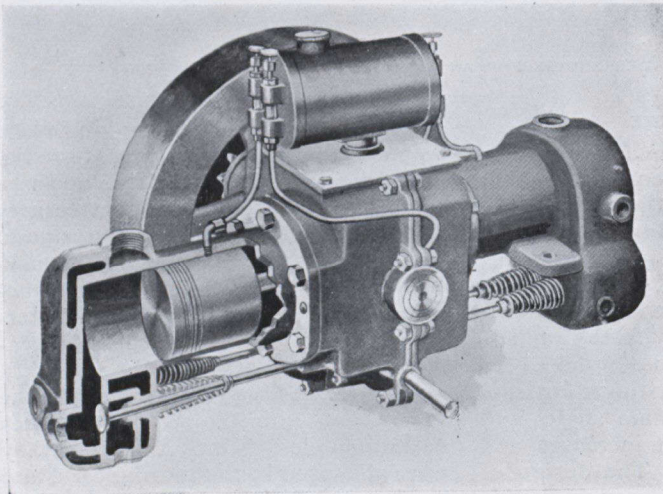


THE SLIDE GEAR TRANSMISSION

For increasing or decreasing the speed of an automobile. The short shaft is driven by the engine and the longer shaft is connected with the wheels. When the large wheel on the long shaft is meshed with the small wheel on the other shaft, the slow or "hill-climbing" speed results; when either of the other two gears are meshed, the speed is increased.

in these cars to bring them in conformity with the styles and structure which had been worked out of the French models. Instead of one or two-cyl-

indering engines has rendered possible wide variations of speed, and, at the same time, material reduction of noise and vibration. Hence the leading touring car models on the American market this year are representative of the very highest type of automobile construction.



EXAMPLE OF A DOUBLE-OPPOSED CYLINDER GASOLINE ENGINE

The power is increased, and the vibration off-set by this method

der engines being situated under the body, the larger class are mostly equipped with three or four vertical cylinders situated in the front of the carriage. This is a practical necessity in a large touring car, as the parts require attention, which it is hardly possible to give them, if the operator has to get under the machine or remove the passengers from the car in order to look over his engine. The location of these engines in front has been a marked improvement. The adoption of the three or four-cylinder engines has rendered possible wide variations of speed, and, at the same time, material reduction of noise and vibration. Hence the leading touring car models on the American market this year are representative of the very highest type of automobile construction.

#### THE TRANSMISSION

By the transmission is meant the mechanism, of whatever description it may be, which transmits the power from the engine to the rear axle for driving the carriage. In this transmission must be provided attachments for changing the speed, so that at the one