

NO SHIFTING OF GEARS IN NEW TRANSMISSION

WHAT is likely to be the automobile of the future, at least in a number of particulars, was discussed last week at Quebec at the Summer meeting of the Society of Automotive Engineers. The various speakers talked about details of development which promised motor car improvement along several lines.

One of the addresses that attracted widespread interest was that of D. Sensaud de Lavaud, a French engineer, who described his invention of a new transmission that eliminates gear-shifting and automatically changes speeds. He said that the operation of automobiles on the streets of Paris with the new transmission had convinced him of its practicability.

Because, with ordinary gear-shift cars, the driver never operates continuously at the most efficient relation between speed of engine and wheels, M. de Lavaud claimed that the automatic transmission will increase the average speed possible and effect a fuel saving of more than 20 per cent. in general and some 40 per cent. in the dense traffic areas of cities.

A long transmission shaft is driven directly from the engine and rotates an inclined "inertia hub," which changes the rotation of the shaft into reciprocating motion. Connecting the inertia hub with the drive of the rear axle are rods which, by acting on roller ratchets, translate the back-and-forth thrusts into rotary motion applied by the axles to the wheels. The trick of the transmission consists in the variation of the inclination of the inertia hub with the engine torque and road resistance which automatically varies the throw of the connecting rods, consequently the rotation of the wheels and the speed of the car. This automatic transmission is combined with a gearless differential and a planetary reverse-gear located on the rear axle.