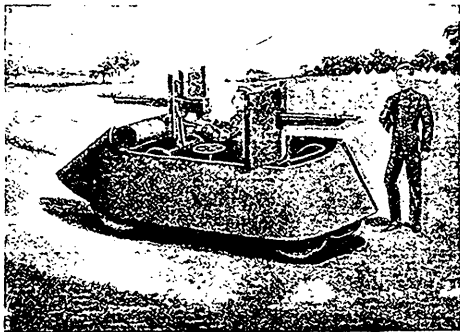


Whether the interest aroused on this, and similar occasions elsewhere, will be maintained, remains to be seen, but it certainly will not be the fault of the various European and American firms engaged in manufacturing the horseless carriage, if the public do not take kindly to the new method of road travel. Improvement in the various parts, all tending to ensure greater safety, freedom from breakdowns, and a lessening of cost, follow each other with such rapidity that it is almost impossible to keep track of them.

The carriage seen in our first illustration is the latest model of a leading American manufacturer. It is fitted with an eight-horse power motor which makes 600 revolutions per minute, and

much higher than for a steam engine, and a considerable amount of the weight should be placed in the fly wheel, so that the motor will run more steadily when out of gear, and will start the carriage more readily when thrown into gear, owing to the energy stored in the fly-wheel. Moreover, the fly-wheel momentum is of great assistance in keeping a uniform speed in the carriage in traversing undulating roadways, which are frequently found in rural districts.

In order that the balance may be effectively and safely used, a very strong crank-shaft is advocated to withstand all the shocks and jabs communicated from the momentum of the carriage as well as the force of the sudden explosions



weighs 310 pounds, including balance wheel.

Power is transmitted through friction clutches to a counter-shaft, and thence by sprocket chains to the rear wheels. The main counter-shaft is supplied with differential gear which permits the rear wheels of the carriage to accommodate themselves to the roadway. This carriage has four speeds of four, eight, twelve and eighteen miles per hour, and weighs, without passengers, about 1,500 pounds.

The manufacturers are in favor of a good full-weight motor. They are aware that motors could be built considerably lighter than they build them; but they question the wisdom of building them too light, as the factor of safety for a gasoline motor should be

of the gaseous mixture in the cylinder. In short, it is claimed the entire motor should be constructed for durability and reliability, qualities far more important than high speed.

There is no gainsaying that the possibilities of the horseless carriage are almost limitless, if the claims of its ardent advocates are substantiated by experience. Governments of different countries are giving serious consideration to its adoption for various purposes. The steedless vehicle will probably be seen in some of the larger American cities doing duty as a postal wagon in the course of a few months, while a good idea of what is expected of it from a military point of view is afforded by our second illustration.