

A reminder of a world that has vanished is provided by this realistic and attractive model of an old-time steam-driven carriage. It was designed and built by Lt.-Comm. J. D. Richard, R.N., Derby.

Huddersfield. His mechanism is shown in Fig. 1, and it gives a speed ratio of 2 : 1 between the input and output shafts.

Two Flat Trunnions are bolted to the ends of a  $3\frac{1}{2}'' \times 2\frac{1}{2}''$  Flanged Plate. Then two reversed angle brackets, each assembled from two Angle Brackets, are attached to the Flat Trunnions and in them are journalled a 4" Rod 1 and a  $3\frac{1}{2}''$  Rod 2. The 4" Rod is fitted with a  $\frac{3}{4}''$  Contrate Wheel and a 1" Pulley, and the  $3\frac{1}{2}''$  Rod carries a  $1\frac{1}{2}''$  Contrate Wheel and a 1" Pulley, both the Rods being held in place by Collars. The inner ends of these Rods project into the longitudinal bore of a Coupling, through the centre transverse hole of which a 2" Rod is passed. This Rod is journalled in a Trunnion bolted to the Flanged Plate. The Contrates mesh with one of two 25-tooth Pinions fixed on the 2" Rod as shown.

**Reader's Suggestion for a Clutch Mechanism**

In my correspondence recently was a letter from A. Wenbourne, Rochester, the gist of which was as follows: "Being one of the many Meccano enthusiasts who take a great interest in building motor vehicles, I have constructed many transmission systems, with the help

may not matter greatly in the case of a vehicle, it may be a disadvantage when used in other models. In any case this difficulty encouraged me to try to design a clutch that would eliminate this trouble and I finally succeeded in doing so by means of the arrangement shown in the accompanying sketches" (reproduced as Fig. 2). In the arrangement I have made, the clutch tends to stay in the disengaged position. If this is undesirable a spring can be placed in the linkage to return it to the engaged position, and a stop so that it does not bear on the clutch.

The construction of the clutch is as follows: To the four outer holes of a  $2\frac{1}{2}''$  dia. Gear Wheel 1, Threaded Bosses 2 are bolted, two opposite (Continued on page 266)

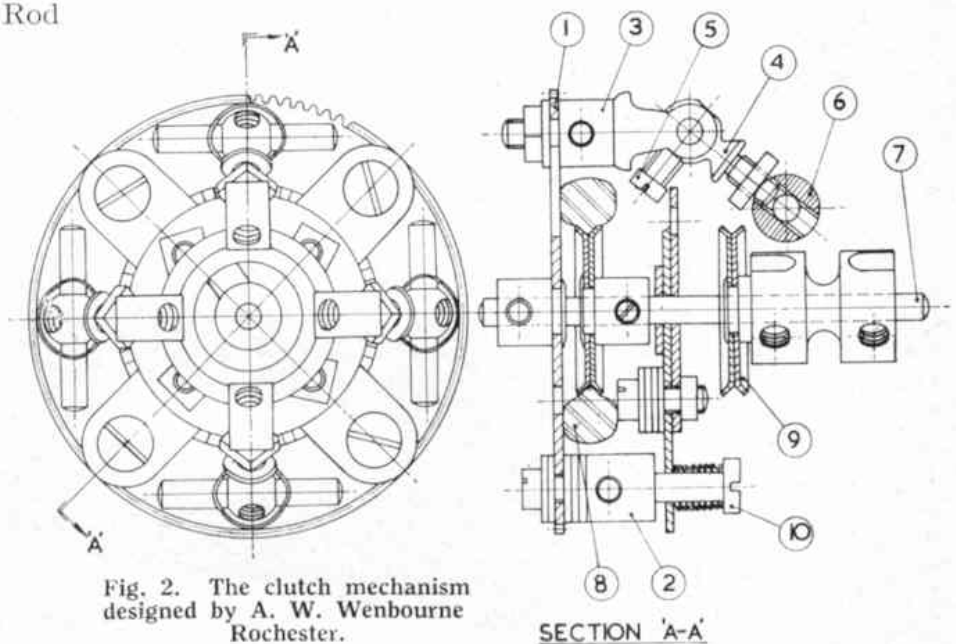


Fig. 2. The clutch mechanism designed by A. W. Wenbourne Rochester.

SECTION A-A