

# Among the Model-Builders

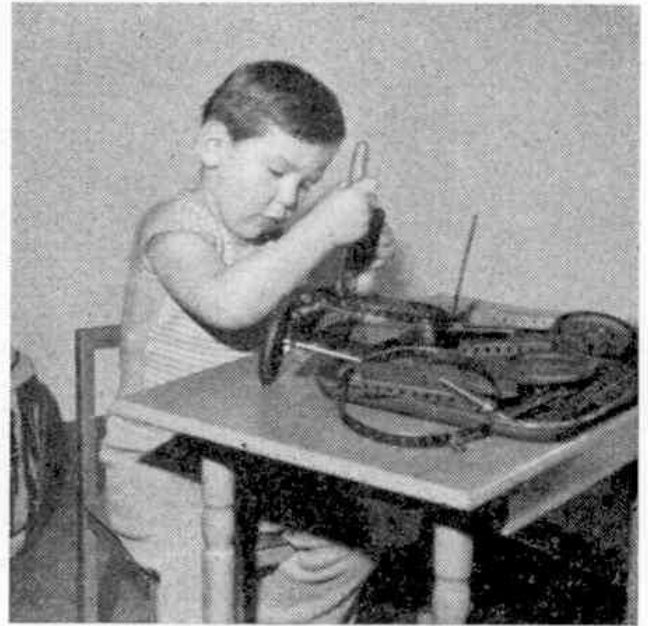
By "Spanner"

## An Unusual Quick Return Mechanism

Machine tools of all kinds make attractive subjects for model-builders with good stocks of parts at their disposal, as most of them incorporate interesting mechanisms. Among these are devices for speeding up the return or non-cutting stroke. Several quick return arrangements have been described in the *M.M.*, but the mechanism I am describing this month is specially interesting as it is operated by a Crank and an ingenious arrangement of pivoted levers that can be seen in the illustration below.

The Crank 1 is fixed on the driving shaft, and to it is pivoted on a lock-nutted bolt a  $3\frac{1}{2}$ " Strip 2. The other end of this Strip is lock-nutted to a  $2\frac{1}{2}$ " Strip 3 and a 3" Strip 4. A  $\frac{3}{8}$ " Bolt is passed through the Strip 3 and is gripped in the boss of a Slide Piece, which is slipped over a  $5\frac{1}{2}$ " Strip supported by Angle Brackets. The Strip 4 is bolted to a Crank that pivots freely on a  $\frac{1}{2}$ " Bolt 5.

Assuming that the Crank 1 is rotating anti-clockwise, when it is in the position shown in Fig. 1 the Slide Piece moves slowly to the left, to make the cutting stroke. As the Crank turns towards the Bolt 5 the Slide Piece returns more rapidly. The closer the end of Crank 1 is to the Bolt 5, the more rapid is the movement of the Slide Piece.



Is he the youngest reader of the "M.M."? Denis Philippe Donner, Bienne, Switzerland, is only four years of age, but he is already a Meccano enthusiast and takes a keen interest in the "M.M."

## A Meccano Front-Wheel Drive Mechanism

The introduction of the Dinky Toys Army Covered Wagon has prompted many enthusiasts to make Meccano models of this and other army vehicles and several have written to tell me of the difficulties they have found in reproducing the front-wheel drive mechanisms fitted to most up-to-date army vehicles. Actually it is quite easy to assemble an efficient front-wheel drive mechanism from standard parts, and the arrangement shown in Fig. 2 is quite satisfactory.

The front axle consists of two built-up strips, each made from two  $5\frac{1}{2}$ " Strips overlapped nine holes. The strips are spaced apart by three Washers on each of the Bolts that fixes them to the front springs. The road wheels are mounted quite freely on short Rods, each of which is fixed in a Coupling that carries two 1" Rods. A  $\frac{3}{4}$ " Pinion 4 is free to turn on the upper 1" Rod, but it is held in place by a Collar, and the

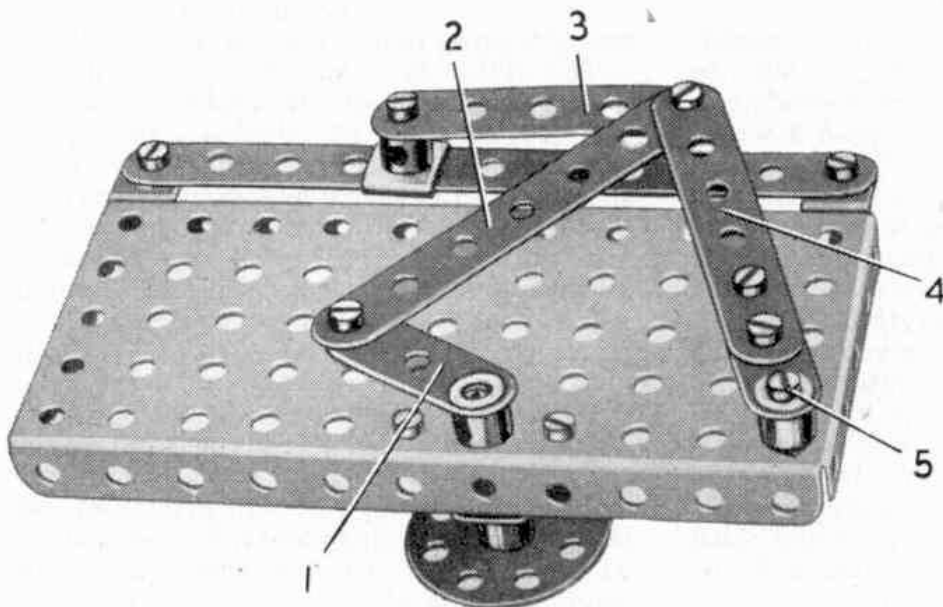


Fig. 1. A quick return mechanism of unusual design, suitable for use in planing machines and models of other machine tools.