

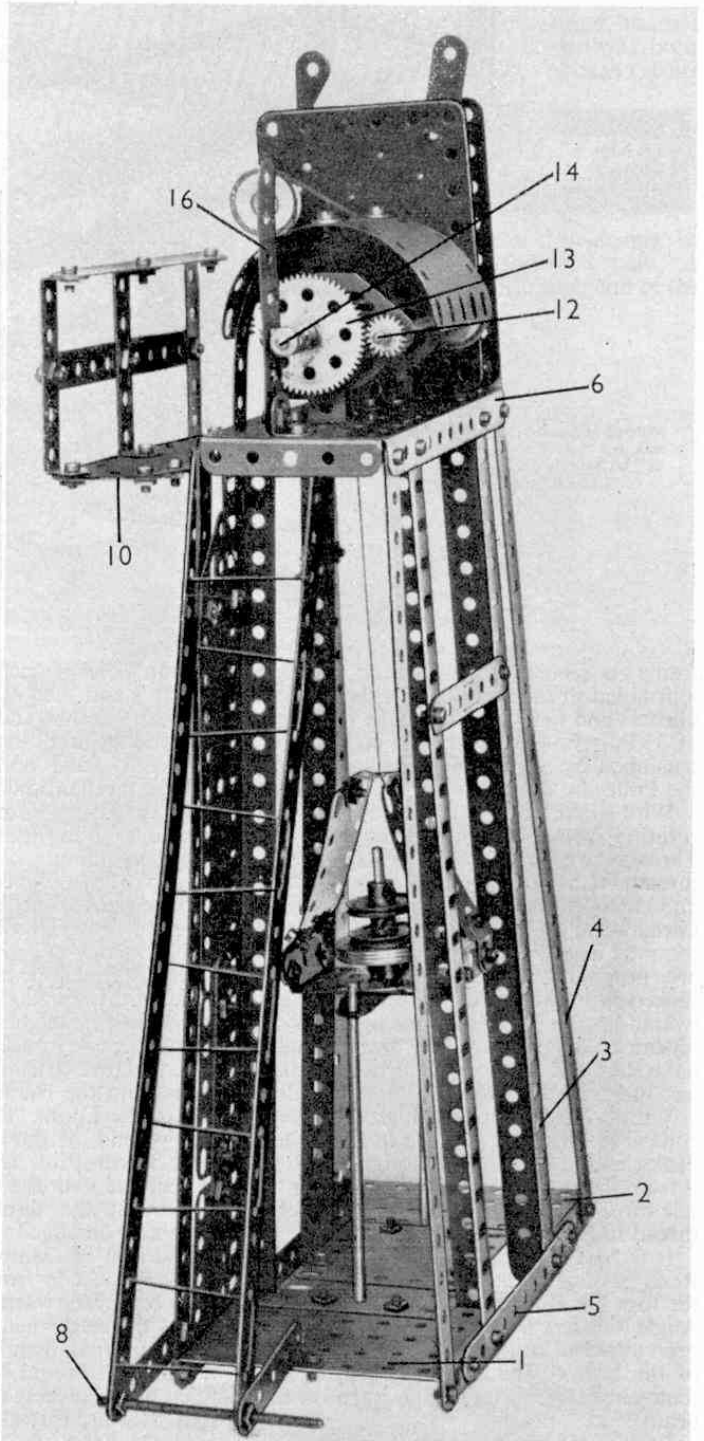
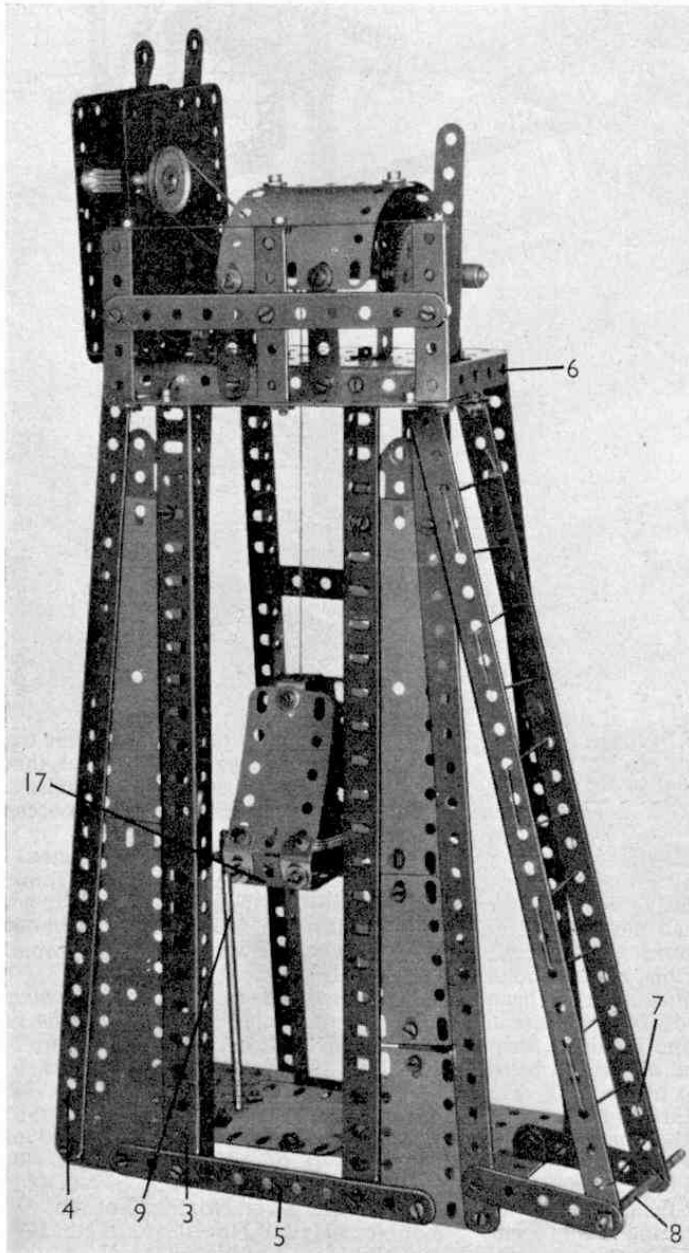
# A DROP STAMP FORGING MACHINE

FOR those Meccano enthusiasts who own an Outfit No. 6 or 7, the Drop Stamp Forging Machine shown in Fig. 1 provides an interesting subject which is not difficult to construct. The model is driven by a No. 1 Clockwork Motor, but it can be operated manually, if a Motor is not available, by substituting a Crank Handle for the Rod marked 12 in the illustrations.

Here now are instructions on assembling the framework: Two  $3\frac{1}{2}'' \times 2\frac{1}{2}''$  Flanged Plates 1 and 2,

Figs. 1 and 2. Two views of the Drop Stamp Forging Machine, which is operated by a No. 1 Clockwork Motor.

Spanner Writes For The Intermediate Model-Builder



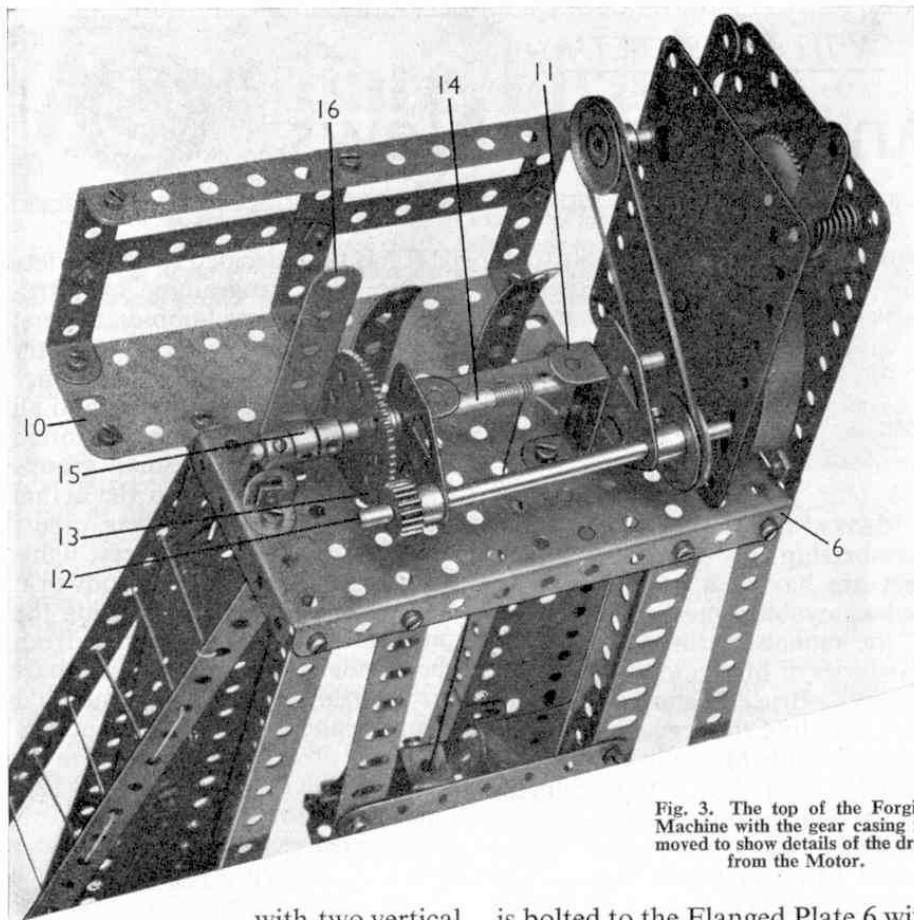


Fig. 3. The top of the Forging Machine with the gear casing removed to show details of the drive from the Motor.

with two vertical  $12\frac{1}{2}$ " Angle Girders and two  $12\frac{1}{2}$ " Strips 3 and 4, are joined together by  $5\frac{1}{2}$ " Strips 5. The upper ends of the Girders and Strips are attached to a  $5\frac{1}{2}$ "  $\times$   $2\frac{1}{2}$ " Flanged Plate 6, and the space between them (at the front of the model) is filled in with two  $5\frac{1}{2}$ "  $\times$   $1\frac{1}{2}$ " Flexible Plates and a Flat Trunnion on the left, and two  $2\frac{1}{2}$ "  $\times$   $1\frac{1}{2}$ " and one  $5\frac{1}{2}$ "  $\times$   $1\frac{1}{2}$ " Flexible Plate, a  $3\frac{1}{2}$ " Strip and a Flat Trunnion on the right-hand side of the model.

Two  $12\frac{1}{2}$ " Strips 7 are attached to the base at their lower ends by two  $2\frac{1}{2}$ " Strips and are connected to the Flanged Plate 6 by Angle Brackets. Four nuts on a Screwed Rod 8 hold the Strips apart. Cord is used to represent the rungs of the ladder. Between the Flanged Plates 1 and 2 two  $2\frac{1}{2}$ "  $\times$   $2\frac{1}{2}$ " Flexible Plates, overlapped three holes are bolted, together with two Right-Angle Rod and Strip Connectors secured by Angle Brackets, to their undersides to support the vertical slide Rods 9. Next, a  $5\frac{1}{2}$ "  $\times$   $1\frac{1}{2}$ " Flexible Plate 10

is bolted to the Flanged Plate 6 with Angle Brackets. Handrails made up from three  $2\frac{1}{2}$ "  $\times$   $\frac{1}{2}$ " Double Angle Strips and two  $5\frac{1}{2}$ " Strips are bolted to the Flexible Plate 10.

### THE DRIVE MECHANISM

A No. 1 Clockwork Motor is fastened to the platform 6 by two Fishplates and an Angle Bracket. Two  $1\frac{1}{2}$ "  $\times$   $\frac{1}{2}$ " Double Angle Strips 11 are extended with Flat Trunnions and bolted in position. A 4" Rod 12 mounted in the Trunnions takes the drive from the Motor by a 1" Pulley and Driving Band, with a  $\frac{1}{2}$ " Pinion transmitting the power to the Gear Wheel 13 on Rod 14. Now place a loose Collar 15 between two fixed Collars, and with a nut and bolt, connect the  $3\frac{1}{2}$ " Strip 16 (lock-nutted to the Angle Bracket fixed to the platform) to the loose Collar. A Cord Anchoring Spring is placed in the centre of the Rod to form an attachment for the hammer lifting cord. Two Curved Plates are now bolted by two  $2\frac{1}{2}$ " Strips to

the platform 6 to cover the mechanism.

### THE HAMMER

Using four Obtuse Angle Brackets, attach two  $2\frac{1}{2}$ "  $\times$   $1\frac{1}{2}$ " Flexible Plates to a  $2\frac{1}{2}$ "  $\times$   $1\frac{1}{2}$ " Flanged Plate 17 and connect their top edges with a Double Bracket.

Now bolt a  $3\frac{1}{2}$ " Strip across the centre of the Flanged Plate 17 and pass its ends over the Rods 9. Spring Clips are placed on the top ends of the Rods. To increase the weight of the hammer a Bush Wheel is bolted to the Plate 17, together with a 2" Rod that has four Wheel Discs and two 1" Pulleys fixed to it. A piece of Cord is fastened to a Washer and the Cord is then threaded through the Double Bracket on the hammer and tied to the Cord Anchoring Spring on the Rod 14.

The hammer is lifted by the Motor drive and by moving the lever 16 to disengage the 57-teeth Gear Wheel from the Pinion, the hammer drops by its own weight.

Particular care should be taken to ensure that the Rods 9 are in a truly vertical position as it is essential for the hammer to run freely on them. If the Rods are even slightly out of line, the operation of the hammer may be impaired. It is a good idea to spread a little light oil over the Rods so as to keep friction to a minimum.

### PARTS REQUIRED

The parts required to build the Drop Stamp Forging Machine are as follows: 6 of No. 1; 6 of No. 2; 4 of No. 3; 4 of No. 5; 2 of No. 6a; 4 of No. 8; 3 of No. 10; 1 of No. 11; 8 of No. 12; 4 of No. 12c; 2 of No. 15; 1 of No. 15a; 1 of No. 17; 4 of No. 23; 1 of No. 24; 2 of No. 24a; 2 of No. 24c; 1 of No. 26; 1 of No. 27a; 2 of No. 35; 91 of No. 37a; 85 of No. 37b; 15 of No. 38; 2 of No. 48; 3 of No. 48a; 1 of No. 51; 1 of No. 52; 2 of No. 53; 3 of No. 59; 1 of No. 80c; 4 of No. 126a; 1 of No. 176; 1 of No. 186a; 4 of No. 188; 4 of No. 189; 2 of No. 190; 2 of No. 200; 2 of No. 212a; 1 No. 1 Clockwork Motor.