

THE MECCANO LOOM

FOR REAL WEAVING

INSTRUCTIONS FOR BUILDING THIS REMARKABLE MODEL

No model could better illustrate the wonderful genius of the Meccano system than the Meccano Loom. In this model every technical operation in the process of weaving is perfectly carried out in miniature, exactly as in every-day practice in actual manufacture. The Loom is operated simply by the turning of a crank handle, which sets in motion the whole of the necessary operations.

THE main framework of the loom is made up as shown in Fig. B, both sides of the framework being similar in construction.

When the framework is built, proceed to insert the driving mechanism, Fig. C.

The main operating handle 1 on the rod 2 drives a $\frac{3}{4}$ " pinion 3 meshing with a 50-toothed gear wheel 4 on the spindle of which is a $\frac{3}{4}$ " pinion 5 meshing with 50-toothed gear wheels 6 and 7 driving them in opposite directions.

Picking Motion

On the rod 8 of the gear wheel 7 are fixed 2 $1\frac{1}{2}$ " bush or pulley wheels 9 connected by 3 double angle brackets 10 forming a cam, Fig. D, upon which 2 $5\frac{1}{2}$ " strips 11, placed together, pivoted at 12 ride, and are held in contact by the springs 13. The cams at each side of the loom are disposed oppositely, that is to say, the 3 double brackets 10 on one cam are on the top when the corresponding 3 double brackets on the other side are beneath. To the outer end of the strip 11 is bolted a $12\frac{1}{2}$ " angle girder 14 the top of which is connected to a crank 15 formed of two cranks butted together with a 2" strip between, secured on the rod 16. At the far end of this rod is another crank 17, to the outer end of which is connected a spring 18 which normally tends to hold the crank 15 down, and return it after it has been moved up by the cam. To the outer end of the rod 16, by means of 2 couplings 19, is attached the picking stick 20 formed by a $9\frac{1}{2}$ " rod, the lower end of which is connected to a cord 21 passing round 2 1" pulleys 22. This cord is connected to a double bent strip 23 which engages a shuttle and flicks it across the slay 24. As the cams 10 are oppositely disposed, the picking sticks at each side of the machine work in unison and throw the shuttle to and fro.

Take up Motion

This is shown in Fig. C. On the rod 63 of the gear wheel 6 are also mounted 2 worms 64 which engage and drive 57-toothed wheels 65 on rods 66. $\frac{1}{2}$ " pinions 67 (Fig. A) drive $\frac{3}{4}$ " contrate wheels 68 on the vertical rods 69.

It is to be noted that the contrate wheels 68 are reversed. Other $\frac{3}{4}$ " contrate wheels 70 on the rods 69 engage and drive $\frac{1}{2}$ " pinions 71 on the sand roller 72. Owing to the gearing of the worm 64 and gear wheels 65 the necessary slow "take up"

motion of the sand roller is imparted, and the woven material, after passing beneath the sand roller, passes over the rod 73 to the lower roller 74, on which the fabric is wound. The lower roller (74) is driven

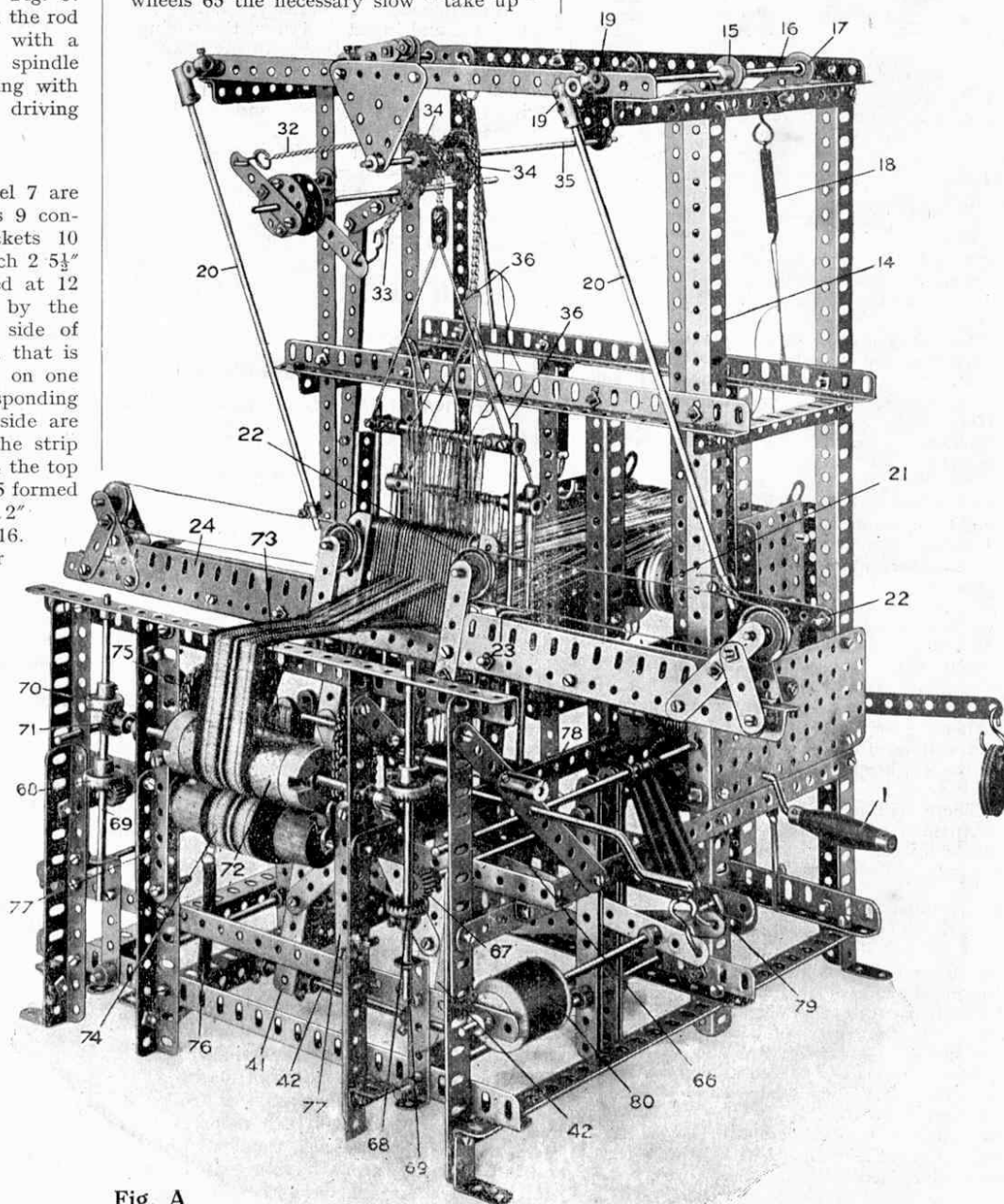


Fig. A
The Meccano Loom