

Fig. 2. The built-up Loom Shuttle.

Drawing the warp

Put the prepared beam in the

loom. Take the first thread, pull it through the *first* heald on the *front* frame, then the second thread and pull it through the *first* heald on the *back* frame. These two threads are drawn through the *first* division or dent in the reed. Continue in this way using each dent until all the threads are drawn through. Lightly brush and pass them around the upper roller and secure them to the take-up roller by means of the Rod placed in its groove.

it is in position in the race the picking sticks must strike the shuttle nose centrally. Carefully wind some "weft" thread on the shuttle spindle, keeping it in the centre portion of the Rod. Do not try to put too much on at one filling, and make sure it will run off perfectly freely, otherwise the shuttle may "stick" between the warp threads. The thread is then brought out from the shuttle as shown.

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Beaming Frame

Fig. 1 shows a simple Beaming Frame suitable for preparing the beam of warp threads ready for insertion in the Loom. The base of the frame is a $5\frac{1}{2}'' \times 3\frac{1}{2}''$ Flat Plate, fitted at each side with a $5\frac{1}{2}''$ Angle Girder 1 that supports a $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flat Plate. A Rod 2 carries the beam 3 on which the threads are wound.

Timing the Loom

The mechanism must be set so that when the slay is at back centre, one heald frame is in its highest position and will stay up until the shuttle has passed through the warp threads. The picking stick motion should then come into action just before the slay reaches back-dead centre, and should shoot the shuttle across to reach the other end just as the slay leaves back dead-centre. A little time spent in careful adjustment will soon give the desired position for smooth running.

A handle 4 is fitted to one end of the Rod 2, and the other end carries a Ratchet Wheel 5. A Pawl 6 on a Pivot Bolt engages the teeth of the Ratchet Wheel. The Pawl is weighted by Washers on a $\frac{3}{8}''$ Bolt screwed into its boss.

The reed or frame 7 consists of 31 $2\frac{1}{2}''$ Strips spaced apart by Washers on two Screwed Rods, and is supported in the $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flat Plates by Collars on two Rods 8.

Now knock two nails into a wall, a few yards apart, and then wind around them 30 turns of thread. These are now taken off the nails carefully, and cut at one end. You will then have 60 separate lengths of thread. The threads are now drawn through the reed, two threads between each pair of Strips, and with one knot are secured to the centre of the beam axle. Holding the threads tightly in the left hand, wind them on to the beam; the reed will space the threads evenly between the Face Plates. A little practice will soon produce a neat beam.

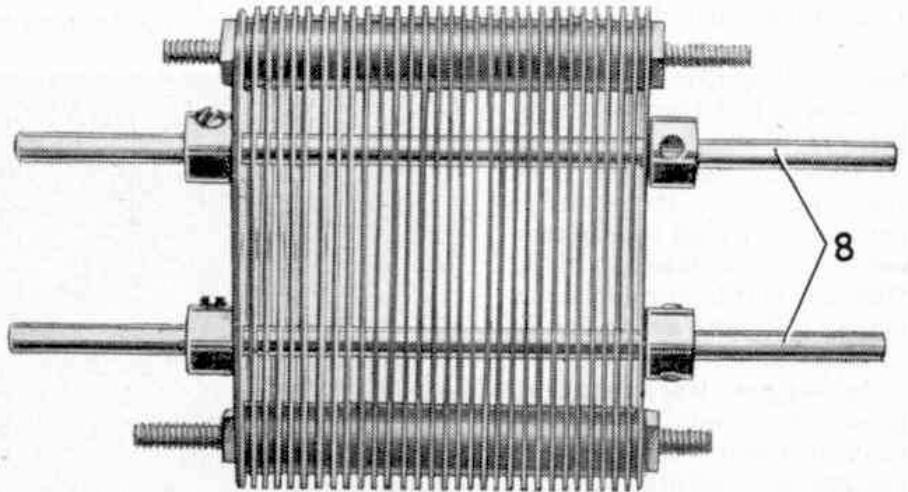


Fig. 3. The reed removed from the Beaming Frame to show its construction more clearly

Parts required to build the Meccano Loom: 6 of No. 1a; 5 of No. 1b; 14 of No. 2; 5 of No. 2a; 9 of No. 3; 3 of No. 4; 33 of No. 5; 1 of No. 6a; 4 of No. 8; 6 of No. 8a; 4 of No. 8b; 9 of No. 9; 2 of No. 9a; 6 of No. 9b; 2 of No. 9d; 10 of No. 10; 1 of No. 12; 3 of No. 12a; 1 of No. 12b; 1 of No. 13; 3 of No. 13a; 4 of No. 14; 6 of No. 15; 5 of No. 15a; 2 of No. 15b; 6 of No. 16;

(Continued on page 50)