

## L O O

**LOOM**, the weaver's frame: a machine whereby several distinct threads are woven into one piece. Looms are of various structures, accommodated to the various kinds of materials to be woven, and the various manner of weaving them; viz. for woollens, silks, linens, cottons, cloths of gold; and other works, as tapestry, ribands, stockings, &c., divers of which will be found under their proper heads. See **WEAVING**. The weaver's loom-engine, otherwise called the Dutch loom-engine, was brought into use from Holland to London, in or about the year 1676.

The lower compartment of pl. 100 represents a loom for weaving silks or other plain work. **A**, fig. 6, is a roll called the cloth-beam, on which the cloth is wound as it is wove; at one end it has a racket-wheel *a*, and a click to prevent its running back; at the same end it has also four holes in it, and is turned by putting a stick in these holes; at the other end of the loom is another roll **B**, on which the yarn is wound; this has two small cords *bb* wrapped round it, the ends of which are attached to a bar *d*, which has a weight **D** hung to it; by this means a friction is caused, which prevents the roll **B** turning by accident. **EF** are called lambs; they are composed of two sticks *efhi*, between which are fastened a great number of threads; to the bar *e* are fastened two cords *gh*, which pass over pulleys, and are fastened to the bar *h* of the lamb **F**; the lower bars of each lamb are connected by cords with the treadles **GH**; the workman sits on the seat **K**, and places his feet upon these treadles; as they are connected together by the cords *gh*, when he presses down one, it will raise the other, and the lambs with them; a great number of threads, according to the width of the cloth, are wound round the yarn-beam **B**, and are

stretched to the cloth-beam **A**; the middle of the threads which compose the lamb **EF**, have loops (called eyes) in them, through which the threads between the rolls **AB**, which are called the warp, are passed; the first thread of the warp goes through the loops of the lambs **E**, the next attached to the lamb **F**, and so on alternately; by this means, when the weaver presses down one of the treadles with his foot, and raises the other, one lamb draws up every other thread, and the other sinks all the rest, so as to make an opening between the sets of thread. **LL** is a frame moving on a centre at the top of the frame of the loom; the lower part of this frame is shown in fig. 8. **LL** are the two uprights of the frame, *l* is the bar that connects them. **M** is a frame carrying a great number of pieces of split reed, or sometimes fine wire, at equal distances; between these the threads of the warp are passed; the frame **M** is supported by a piece of wood *m* called the shuttle-race, which is fastened into the front of the pieces **LL**; each end of this piece has boards nailed to the sides, so as to form troughs **NO**; at a small distance above these are fixed two very smooth wires *no*; their use is to guide the two pieces *pg*, called peckers or drivers; to each of these pieces a string is fastened, and these strings are tied to a piece of wood **P**, which the weaver holds in his hand, and by snatching the stick to either side, draws the pecker forwards very quick, and gives the shuttle, fig. 7 (which is to be laid in the trough before the pecker) a smart blow, and drives it along across the race *m* into the other trough, where it pushes the pecker along to the end of the wire ready for the next stroke, which throws it back again, and so on. Fig. 7 represents the under side of the shuttle on a larger scale: its ends are pointed with iron; it has a large mortise through the middle of it, in which is placed a quill *a* containing the yarn; *b* is a piece of glass, called the eye of the shuttle, with a hole in it, through which comes the end of the thread; *dd* are two small wheels to make it run easily on the race. The operations are as follow:—The workman, sitting upon the seat **K**, holds the stick **P** in his right hand, and takes hold of one of the bars of the frame **LL** with his left; presses his foot on one of the treadles **GH**, which by means of the lambs **EF**, as before described, divides the warp; he then snatches the stick **P**, and by that means throws the shuttle, fig. 7, which unwinds the thread in it, and leaves it lying in between the threads of the warp; he then relieves the treadle he before kept down, and presses down the other: while he is doing this, he with his left hand draws the frame **LL** towards him, and then returns it. The use of this is to beat the last thread thrown by the shuttle close up to the one that was thrown before it by the split reeds **M**, fig. 8. As soon as he has brought the frame **LL** back to its original position, and again divided the warp by the treadle, he throws the shuttle again: when he has in this manner finished about 12 or 14 inches of cloth, he winds it up by turning the roll **A** with the stick, as before described. Some very expert weavers

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will throw the shuttle and perform the other operations at the rate of 120 times per minute. (*Gregory's Dictionary*).

**Loom (Indian).** The Indian loom consists merely of two bamboo-rollers, one for the warp, and the other for the web, and a pair of geer; the shuttle performs the double office of shuttle and batton, and for this purpose is made like a large netting needle, and of a length somewhat exceeding the breadth of the piece.

This apparatus the weaver carries to whatever tree affords a shade most grateful to him, under which he digs a hole large enough to contain his legs, and the lower part of the geer; he then stretches his warp by fastening his bamboo rollers at a due distance from each other on the turf by wooden pins; the balances of the geer he fastens to some convenient branch of the tree over his head; two loops underneath the geer in which he inserts his great toes, serve instead of treadles; and his long shuttle, which performs also the office of a batton, draws the weft, throws the warp, and afterwards strikes it up close to the web: in such looms as this are made those admirable muslins whose delicate texture the European could never equal with all his complicated machinery.

*Loom.*  
*Fig. 6.*

