

F. J. MOORE.

LOOM.

No. 263,422.

Patented Aug. 29, 1882.

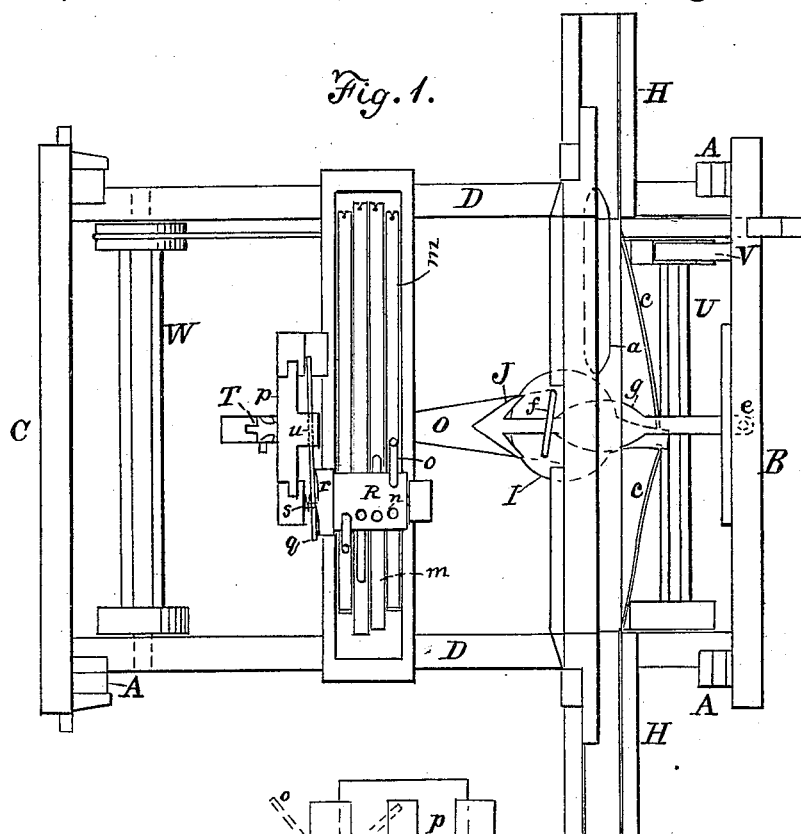
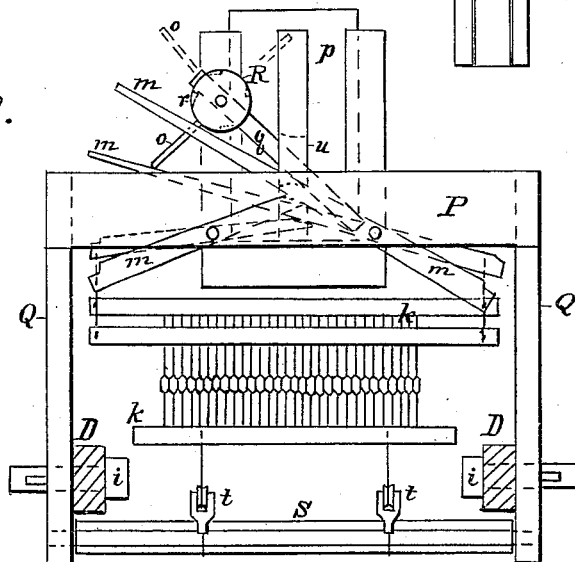


Fig. 3.



Witnesses:
Derdueand Schmidt.
E. J. Hall

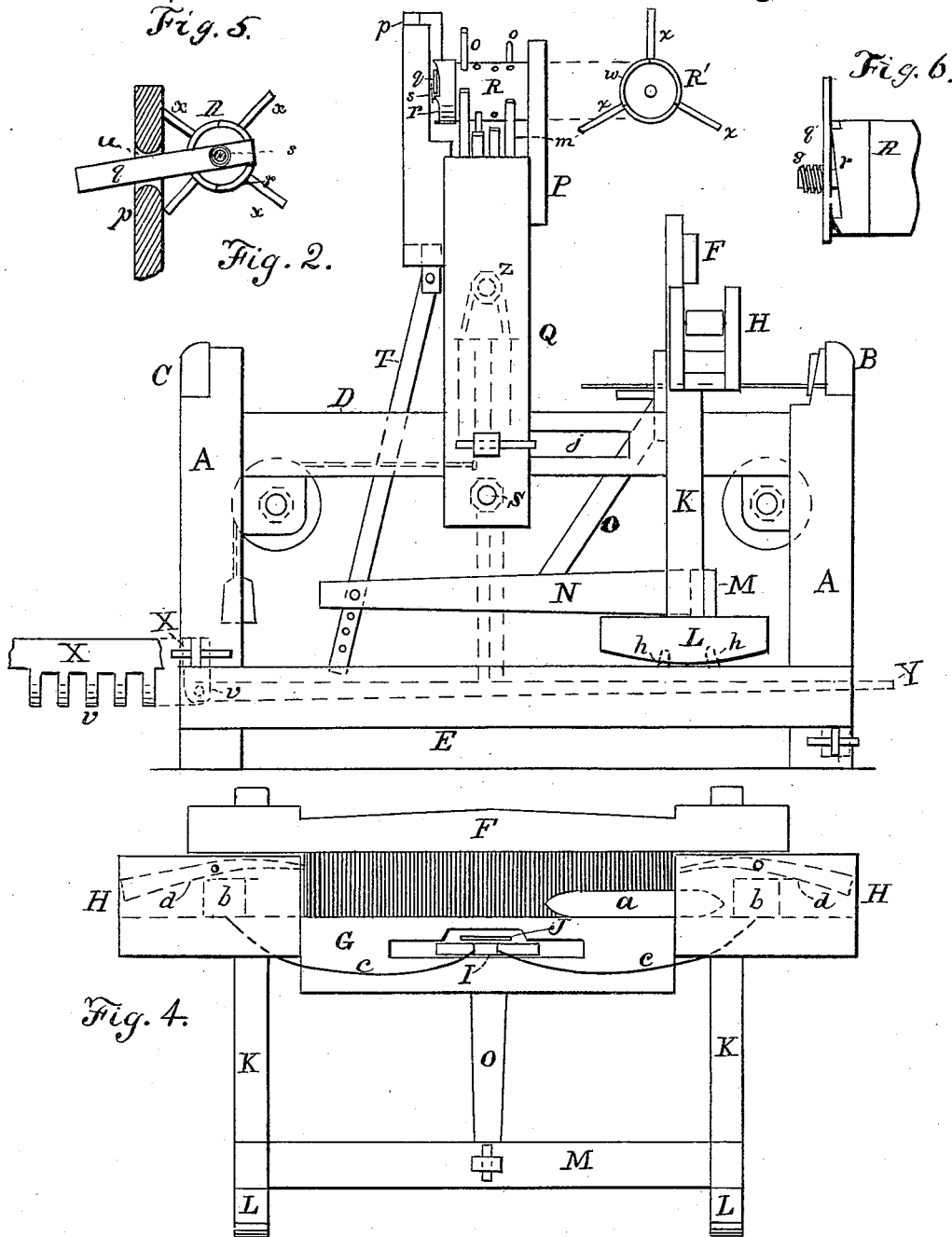
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UNITED STATES PATENT OFFICE.

FREDERICK J. MOORE, OF SHOAL CREEK, ARKANSAS.

LOOM.

SPECIFICATION forming part of Letters Patent No. 263,422, dated August 29, 1882.

Application filed August 6, 1880. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK J. MOORE, a citizen of the United States, residing at Shoal Creek, in the county of Logan and State of Arkansas, have invented certain new and useful Improvements in Looms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention consists in the mechanism or means whereby the harness may be actuated from either a pattern-cylinder or treadles, so that either automatic pattern-weaving or ordinary hand and treadle weaving may be done on the same loom.

In the accompanying drawings, Figure 1 is a top view of a loom provided with my improvements; Fig. 2, a side view of the same; Fig. 3, a cross-section of the side beams of the loom-frame and front view of the harness, pattern-cylinder, and adjacent connecting and operative mechanism therefor; Fig. 4, a front view of the rocking batten detached from the loom, and Figs. 5 and 6 views of parts detached.

Like letters designate corresponding parts in all of the figures.

The various parts of the loom-frame, which may be of ordinary construction, are represented by the letters A B C D E. The batten is a rocker-batten, and its parts are designated thus: F, the upper beam; G, the lower beam, bearing the reed and the shuttle-boxes H H; I, the shuttle-operating lever; J, the hooked bar for operating lever I; K K, the supporting-posts; L L, the rockers resting on the lower side beams, E E, of the frame; M, a cross-bar; N, a lever attached to the middle of the said cross-bar, and extending backward for actuating the pattern-cylinder by the rocking of the batten; and O, a brace for the lever N.

Above the frame of the loom, and extending across the same from side to side, is a frame, P, supported by uprights Q Q, which are bolted and keyed or otherwise attached to the upper side beams, D D, of the main frame. Above this frame P, and supported by suit-

able bearings thereon, is mounted the pattern-cylinder R; and in suitable vertical ways on this frame slides a plate or frame, p, by the motions of which the pattern-cylinder is actuated, the said plate or frame being connected by a connecting-rod, T, with the rear end of the batten-lever N, which thereby imparts a vertical reciprocating movement to the plate or frame p as the batten is rocked. An intermittent rotary motion is communicated to the pattern-cylinder R by means of an oscillating bar, g, pivoted on one of the journals or the shaft of the said pattern-cylinder, and having one end playing in a slot, u, of the plate or frame p, while its other end takes into the notches of a ratchet-wheel, r, on the end of the pattern-cylinder, all as most clearly shown in the detail views, Figs. 5 and 6, said ratchet-wheel being provided with a number of teeth corresponding with the rows of pins upon the pattern-cylinder, as shown in Figs. 2 and 5. A coiled spring, s, on the journal of the pattern-cylinder presses against the oscillating bar g and enables it to alternately ride over and engage with the teeth of the ratchet-wheel r. This pattern-cylinder actuates the harness by means of pins x x, inserted in holes of the cylinder, so as to be removable, and changeable for varying the pattern to be woven, the said pins striking and depressing in turn the upper ends of a series of levers, m m, which have their fulcra supported by the frame P, and support at their lower ends the several upper bars, k k, of the harness. These levers are in pairs, each pair supporting or having suspended therefrom one of the said bars of the harness, and only one of each pair reaching up to be struck by a pin, o, the other lever bearing at its upper and against the under side of and being moved by its fellow lever, as shown in Fig. 3.

I have thus far described only the automatic mechanism for pattern-weaving. I will now describe how the harness is to be actuated by the treadles, and the means by which the change is made from one mode of operation to the other.

The lower bars, k, of the harness-frames are connected by cords with idler-sheaves t t of an idler bar or roller, S, in the usual way, and

as shown in Fig. 3. This arrangement is for the automatic pattern - weaving, as above set forth, and where the idler roller or bar is below the harness, being mounted in bearings in the uprights Q Q of the frame P, near the lower ends thereof, or in other suitable parts of the frame of the loom. When, however, weaving is to be done by means of treadles, the idler roller or bar S is taken from its lower bearings and transferred to upper bearings, as indicated at Z in Fig. 2. The upper bars of the harness are then detached from the levers m m, the harness is inverted in position, and the then lower bars of the harness are connected by cords or other means with the treadles Y Y. (Shown by dotted lines in Fig. 2.) These treadles are pivoted at their rear ends in a cross-beam, X. (Shown in the same figure and in the small detail view at the side thereof.) There is nothing new in the construction and

operation of the treadles, and they need not here be described.

What I claim as my invention, and desire to secure by Letters Patent, is—

The idler roller or bar S, a loom-frame provided with two sets of bearings therefor, and the batten, in combination with a pattern-cylinder, R, and mechanism for connecting the same with the batten, the treadles Y, the harness, and means by which the harness may be actuated from either the pattern-cylinder or the treadles Y Y, substantially as and for the purpose herein specified.

In testimony whereof I have affixed my signature in presence of two witnesses.

FREDERICK J. MOORE.

Witnesses:

T. T. HARRIS,
CHAS. R. SADLER.