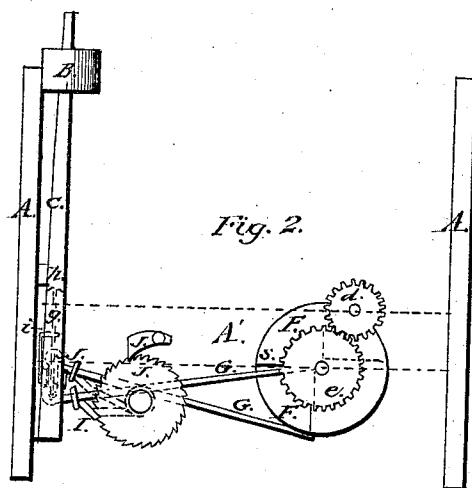
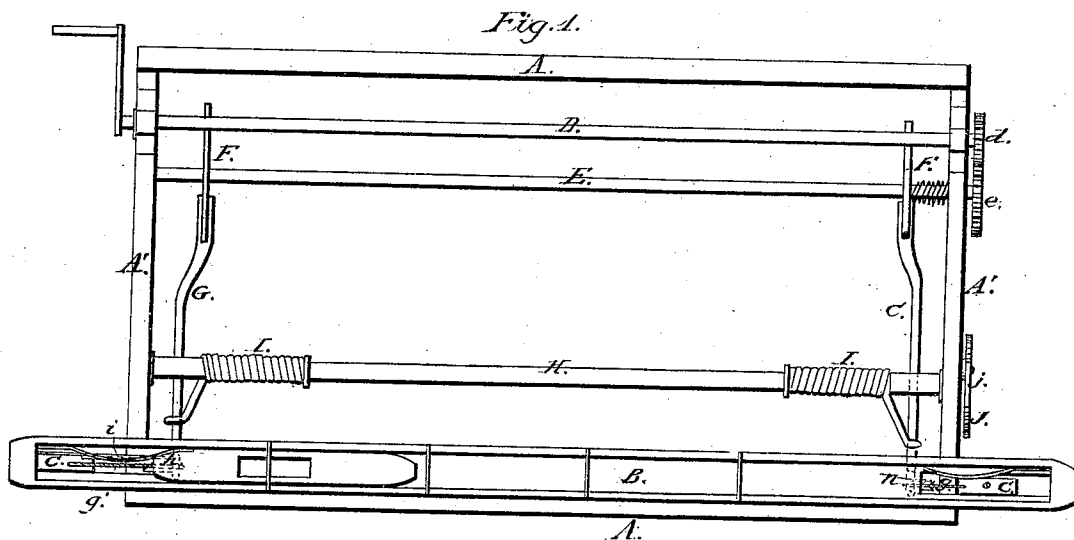


E. P. Terrell,

Loom.

Nº 92,900.

Patented Jul. 20. 1869.



Witnesses:
Samuel Smith,
George B. Thompson.

Inventor:
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United States Patent Office.

ENOCH P. TERREL, OF WEST LIBERTY, OHIO.

Letters Patent No. 92,900, dated July 20, 1869.

IMPROVEMENT IN MECHANISM FOR OPERATING THE PICKING-STAFF IN LOOMS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ENOCH P. TERREL, of West Liberty, in the county of Logan, and State of Ohio, have invented a new and useful Improvement in Looms; and I do hereby declare the following to be a full and correct description of the same, sufficient to enable others skilled in the art to which my invention appertains, to fully understand and construct the same, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1 is a plan view of my improvement in looms, and

Figure 2 is an end view of the same.

Like letters of reference indicate like parts in both figures.

The nature of my invention consists in mechanism for operating the picker-staves, by means of cams, springs, and levers alternately operating the same, as hereinafter more fully explained.

A A', in the drawings, represent the frame; B, the lay, and C, the picker-staves of a loom, all of ordinary construction.

Moving in suitable bearings on the top of the side-pieces A' is a shaft, D, provided, at one end, with a small cog-wheel, *d*, gearing with a larger cog-wheel, *e*, on a shaft, E, rotating in suitable bearings under the pieces A'.

This shaft E carries, at proper distances from the pieces A', two disks, F, having each a quarter section cut out, but at opposite sides of the disks.

One edge of this cut-out section is rounded off, as shown at *f*.

These disks engage with the free ends of treadles G, pivoted or otherwise loosely secured on the shaft H, which moves in suitable bearings or hangers on the under side of pieces A'.

The other ends of these treadles are connected to ropes or bands, *g*, which, passing over rollers *h*, secured on the side-frame, are attached to the picker-staves C, which latter are pressed outwardly by springs *i*, secured on the side-frame, below the attachment of the ropes or bands *g*.

Surrounding shaft H, and with one end securely attached to the same, are coiled springs, I, the free ends of which bear on that part of treadles G to which the ropes or bands *g* are attached, and consequently elevate their free ends.

The tension of these springs is regulated by means

of a pawl, *j*, engaging with a ratchet-wheel, J, on the shaft H, outside of frame A'.

The operation of my device is very simple:

Motion is imparted to the crank I, on shaft D, by any suitable means. This motion is conveyed to the shaft E, through cog-wheels *d e*, and the disks F rotated, so as to bear upon the treadles G, which, depressing the free ends of the same, elevate the other end, thereby slacking the bands or ropes *g*, and allowing the springs *i* to force the picker-staves C outwardly, the tension of the springs I being overcome by means of the disks F.

When the latter have revolved so far that the straight edge of the cut-out section has passed the free ends of the treadles, the latter are suddenly released, and their other ends as suddenly depressed, by the force of the tension of the springs I, (which is much greater than that of springs *i*), and the picker-staves C as suddenly forced inwardly, by means of the ropes or bands *g*.

As soon as the free ends of the treadles G are released from the disks F, they fly upwardly, and strike against the thin upper edge of the cut-out sections, the rounded ends, *f*, of which engage with the treadles, and again depress them.

The force of the picker-staves on the shuttle is regulated by the tension of the springs I, which can be increased or decreased, at pleasure, by the weaver, to suit the web he is weaving, by means of the ratchet-wheel J and pawl *j*.

It is, of course, understood that the disks F, having their cut-out sections at opposite ends, operate the treadles alternately, thus alternately operating the picker-staves.

Having thus described my invention,

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

1. The combination of the disks F, their cut-out section being arranged in opposite directions, with the treadles G, springs I *i*, ropes or bands *g*, and rollers *h*, arranged to operate the picker-staves, substantially as described and shown.

2. In combination with the above, the pawl *j* and ratchet-wheel J, on shaft H, substantially as and for the purpose set forth.

Witnesses:

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