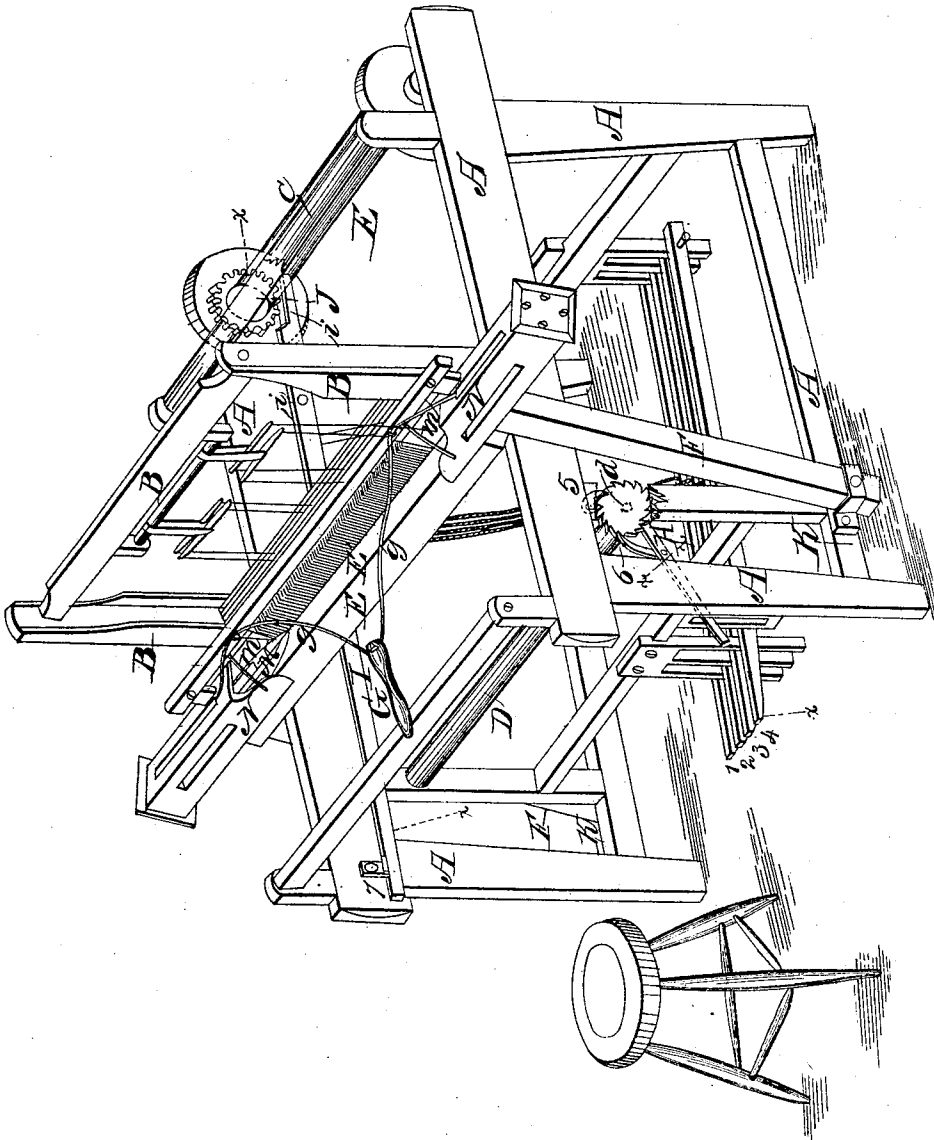


T. G. THOMPSON & BALLARD.
LOOM.

No. 68,583.

Patented Sept. 3, 1867.



Witnesses:
John P. Chandler
Wm. Deming

Inventor:
Thomas G. Thompson
Samuel Ballard

United States Patent Office.

THOMAS G. THOMPSON AND BARCLAY BALLARD, OF RICHMOND, INDIANA

Letters Patent No. 68,583, dated September 3, 1867.

IMPROVEMENT IN LOOMS.

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

TO WHOM IT MAY CONCERN:

Be it known that we, THOMAS G. THOMPSON and BARCLAY BALLARD, of Richmond, Indiana, have invented certain new and useful Improvements in Hand-Looms; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the drawings which accompany this specification, and to the letters of reference marked thereon.

In the drawings our improved loom is represented in perspective.

The nature of our invention consists in the construction of a hand-loom, simple, cheap, and effective, capable of doing every variety of work at a greatly reduced price, and not liable to get out of order by use.

A A represents the framing of a hand-loom of ordinary construction, in which F F are the batten-posts, and E the race or cross-piece connecting the posts F F, and all together forming the batten. In most looms, the bottoms of the posts F are connected by a cross-rail, which rests in bearings on the side rail A. In other looms, pins or short shafts project from each rail A, and enter holes in the bottoms of the posts. These pins are liable to be bent, and often become loose, and thus cause the batten to rest and work unevenly. The brackets K are made of metal, have a square opening in them to receive the free ends of the arms F. These arms are pivoted in these openings on pins J, that have bearing at both ends in the bracket; and these pins or pivots serve for bearing for the lay-arms, and are held securely in a true horizontal position, and insure a proper and even action of the lay. The batten is so hung in the brackets K K, that when it is thrown back to the heddle-frame B B, the race-board E' has an inclination downward and backward from the operator, and this obviates the disposition or inclination of the shuttle in its transit to fly its track and break the warp. *m m* are guide-straps attached to the open ends of the shuttle-boxes respectively, and serving to press the shuttle backward and downward when entering or leaving the shuttle-box. The shuttle-boxes N N are each provided with shuttle-head blocks, to which are attached the throwing-cords *g g*, to the centre of which cords the handle G is secured, the right and left motion of which by the hand of the operator actuates the shuttle. The treadles 1 2 3 4 are operated by the feet of the operator, and are constructed and hung in the ordinary manner, and properly attached to the heddles, which are operated by the treadles aforesaid. The cloth-beam D is operated by a take-up lever, H, and the pawls 5 6 working a ratchet-wheel, *d*, secured to the end of the shaft or beam D. The warp-beam L is properly arranged to revolve in the back end of the upper side rails A A, and is provided with a spur-wheel, J. The spur-wheel J is rigidly attached to the warp-beam L, between one of its heads and the beam-bearing, and revolves with the same. The let-off lever I traverses the length of the side piece A, being pivoted thereto at *i*, and provided with a segment at its rear end, which is fitted into the cogs of the wheel J, and is held there by the action of the stop 7. The warp, being wound upon the warp-beam, is carried forward over the roller-shaft C, and through the harness and reed, and attached to the cloth-beam D in the ordinary manner, and is tightened up by the operation of the take-up lever H on the right hand of the operator, while with his left hand grasping the handle of the lever I, he raises it sufficiently to let off the warp as may be required. The let-off and the take are thus at the control of the operator rigidly and exactly.

Among the advantages which we claim for our improved loom are, simplicity and durability of construction, being composed of fewer pieces, and produced at less cost than any other hand-loom known to us; the brackets K K, as a superior method of pivoting the lower ends of the batten-posts; the arrangement and operation of the levers H and I, and their connections, for governing the tension of the warp; the arrangement race, by which the shuttle is kept in place during its transit, and the use of the guide-straps *m m* as auxiliary thereto.

Having thus fully described our said improved loom, what we claim as new, and desire to secure by Letters Patent, is—

1. The brackets K K, in combination with the batten-posts F F, pivots J, and the side rails A A, all constructed and arranged as herein described.

2. The combination of the warp-beam L, spur-wheel J, pivoted let-off lever I, rack *i*, stop T, cloth-beam D, ratchet-wheel *d*, take-up lever H, and pawls 5 and 6, when constructed, arranged, and operating as and for the purposes herein set forth and described.

THOMAS G. THOMPSON,
BARCLAY BALLARD.

Witnesses:

JOHN G. CHANDLER,
WM. T. DENNIS.