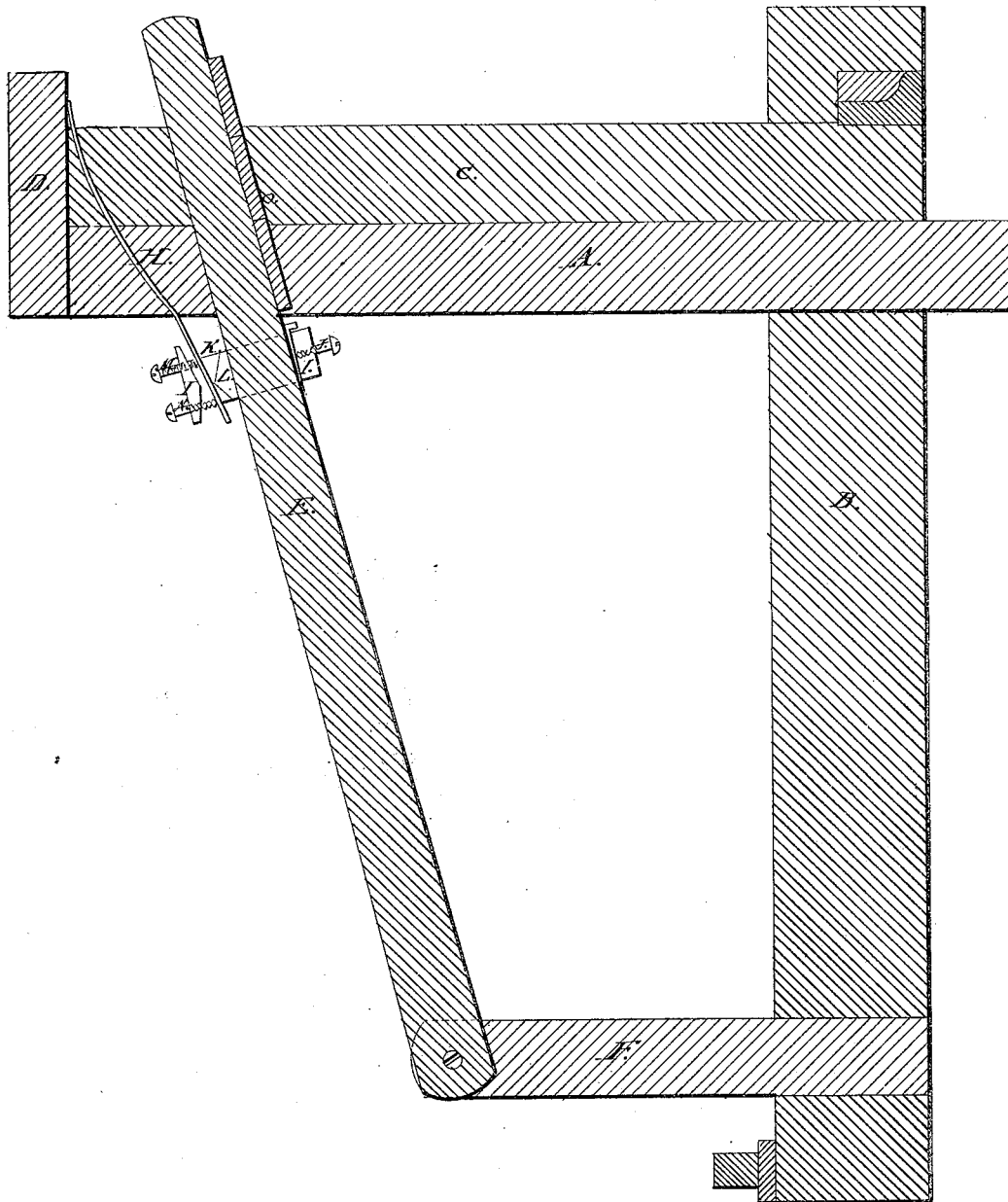


O. B. Hubbard,

Loom-Picker.

Nº 46,971.

Patented Mar. 21. 1865.



Witnesses:

John E. Crane.
O. M. Higgins.

Inventor:

Orange B. Hubbard.

UNITED STATES PATENT OFFICE.

ORRANGE B. HUBBARD, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO HIMSELF, LYMAN S. SMITH, AND LUCAS I. McMASTERS, OF SAME PLACE.

IMPROVEMENT IN LOOMS.

Specification forming part of Letters Patent No. 46,971, dated March 21, 1865.

To all whom it may concern:

Be it known that I, ORRANGE B. HUBBARD, of Lowell, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Looms; and I hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, which forms a part of this specification.

The drawing shows a longitudinal section of that part of a loom to which my improvement is applied—viz., one end of the lay—showing the sill or beam A; B, the sword; C, back of the shuttle-box; D, head block; E, picker-staff and its support F, upon which it swings; H, the adjustable spring, and I I the clasp which is placed on the picker-staff E, directly beneath the lay, and provided with a set screw, J, so that it can be slid up or down upon the same when desired. The adjustable spring H is held in the slot K of the clasp I I, and is adjusted therein by means of the set-screws M and N and block L, so as to increase or lessen the distance of the free end of the spring from the picker-staff, and thereby increase or diminish its force on the staff when its end is against the head-block, and regulate the distance of the recoil of the staff. I employ a piece of leather, O, at or near the top end of the picker-staff E, for the point of the shuttle to strike against. When the shuttle strikes against the picker O, the top end of the spring H rests against the head-block D, so that when the shuttle comes against the staff the spring will allow it to yield to the sudden blow of the shuttle, and thereby prevent it from injuring the picker O or the picker-staff E to a great extent, and also preventing the upsetting and tangling of the yarn.

In the ordinary loom the picker-staff rests against a metallic head-block, and sometimes hard rubber is used between the head-block and the picker staff to ease the blow of the shuttle; but this I consider too unyielding to be of service. The action of the shuttle soon destroys the picker, and sometimes forces the leather of which the picker is composed into

the picker-staff, thus splitting or tearing off the substance of the picker staff, thus rendering it necessary that it should be replaced before it is otherwise much worn; and, moreover, this sudden blow of the shuttle, by coming in contact with an unyielding staff, has a tendency to upset and tangle the yarn or filling on the bobbin, so that it will not run off from the bobbin and has to be thrown out as waste, thereby causing a great loss of valuable material.

In my improvement the adjustable spring H is made to exert a greater or less resistance to the blow of the shuttle by means of the set-screws M and N, and yields to the blow of the shuttle, and thereby obviates the difficulties caused by the action of the shuttle on the unyielding staff as used in ordinary looms.

By reason of the simplicity, cheapness, and efficiency of my improvement, it will be of great value to those using the ordinary loom, and may be applied to looms of a complicated nature.

I am aware that hard rubber has been used to ease the blow of the shuttle, and that several combinations of devices are in use for taking up or arresting the sudden blow of the shuttle against the picker. (See patent granted to Jos. Welch, October 3, 1854, and to Joseph Welch, January 9, 1855, and to Barton H. Jenks, April 3, 1855.) I do not claim any of these combinations of devices, nor do I claim the hard rubber to ease the blow of the shuttle; but

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

1. The combination and arrangement of the adjustable spring H, the clasp I I, and picker-staff E, substantially as herein specified, and for the purpose set forth.

2. The method of adjusting the spring H, substantially as herein set forth, and for the purpose specified.

ORRANGE B. HUBBARD.

Witnesses:

JOHN E. CRANE,
O. M. HIGGINS.