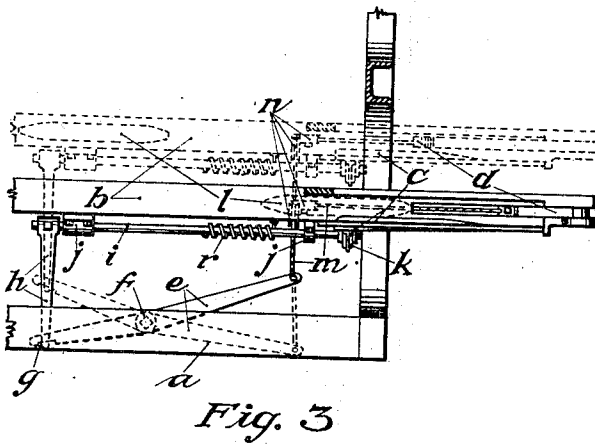
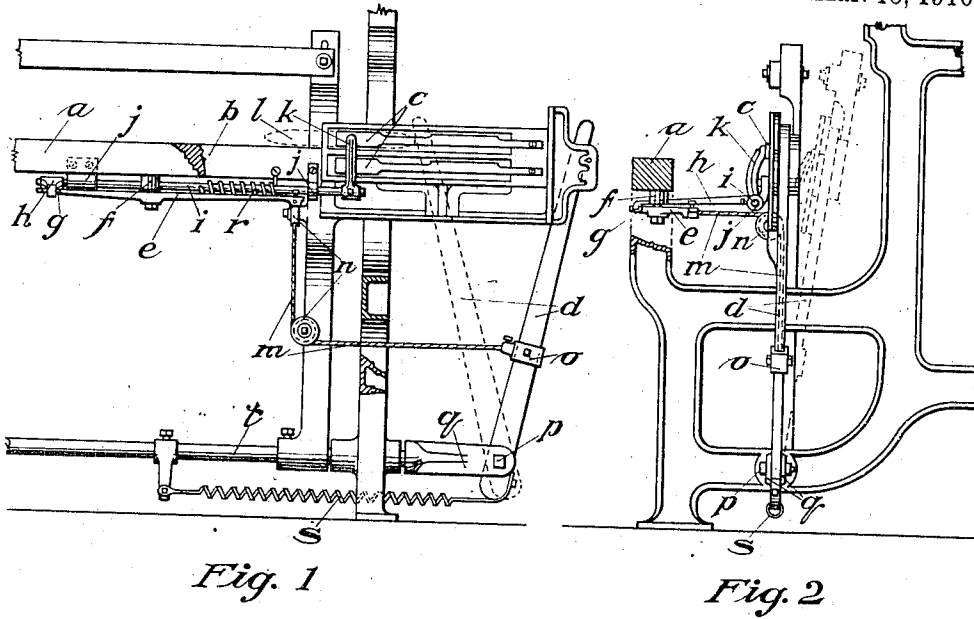


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 APPARATUS FOR OPERATING PICKER MOTIONS FOR LOOMS.
 APPLICATION FILED SEPT. 7, 1909.

952,096.

Patented Mar. 15, 1910.



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CHARLES BREHIO, OF WORCESTER, MASSACHUSETTS.

APPARATUS FOR OPERATING PICKER-MOTION FOR LOOMS.

952,096.

Specification of Letters Patent. Patented Mar. 15, 1910.

Application filed September 7, 1909. Serial No. 516,463.

To all whom it may concern:

Be it known that I, CHARLES BREHIO, of Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Apparatus for Operating Picker-Motions for Looms, of which the following is a specification.

This invention relates to new and useful improvements in loom attachments, particularly to mechanism for operating the picking-sticks, which repeatedly impel the shuttle, by way of the shuttle-race, which is on top of the lay-beam, from side to side of the loom, and it comprises simple and efficient means calculated to produce a more or less powerful throw of the shuttle, depending upon whether a broad or a narrow fabric is about to be woven. I attain these objects through the mechanism illustrated by the accompanying drawings, in which—

Figure 1 represents the front elevation of one end of a loom, with portions of the breast beam and frame broken away. Fig. 2 represents the end elevation of a loom, with portions of the frame broken away. Fig. 3 is the top plan of one end of a loom.

In the figures above referred to, the unbroken lines represent the movable members of the loom carrying the shuttle-box, shuttle, shuttle-binder and shuttle-race, in their initial outward position against the fabric being woven, while the light, dotted portions of the same movable members indicate their extreme inward position after the shuttle has passed through the shed. At the other end of the loom is an exactly similar and independent device.

Reference now being had to the details of the drawing by letter—"a" designates the breast-beam of a loom; "b" the lay; "c" the shuttle-binder; "d" the picker-stick, all of the usual construction of looms; "e" is an adjustable reciprocating lever, the arms of which may be varied in length to pulsate a more or less powerful throw to the shuttle, supported on the underside of the breast-beam by the fulcrum bearing "f," said lever "e" having the end of its short arm slightly cut out on the outer face of its longitudinal edge for engagement with the hook "h" which hook "h" is fixed to the rod "i" and the rod "i" is journaled in suitable bearings "j" upon the lay beam "b." Fixed, at an angle, to the other end of the rod "i" is a finger "k," which is adapted to press against

the shuttle-binder "c" and be positioned in the path of the shuttle "l" when the latter enters the shuttle-box, thus causing the rod "i" to rock in its bearings "j" and tilt the hook "h" so that it will drop over and engage the cut-out portion of the lever "e." A torsion spring "s" is fixed to the rocking-rod "i" and the lay-beam "b" adapted to release the hook "h" when its work is done, and keep the finger "k" pressed against the shuttle binder "c."

Fastened to the long arm of the lever "e" is the cable "m" which passes about the loose pulleys "n," thence extends to and connects with the metal strap "o" clamped around the picker-stick "d," which latter is journaled on the pin "p" carried by the bracket-fingers "q." A spring "s" attached at one end to the rocker shaft "t" and at the other end to the butt of the picker-stick "d," serves as a means for throwing the upper end of the picker-stick to its outward position, after having been driven inward by pulling upon the cable "m," incident to the reciprocating movement of the lever "e" at each alternate throw of the lay-beam "b." This spring "s" also serves the purpose, through the cable "m," of returning the lever "e" to its initial position, ready to be engaged by the hook "h" when the shuttle is again returned to its box at this end of the loom.

In operation, the shuttle being in either shuttle-box, the shuttle-binder is pressed outward against the finger, the rod is rocked in its bearings, the hook swings over and takes hold of the cut-out end of the lever. When the parts are thus positioned, and upon the inward swinging movement of the lay, after beating up the last thread woven, the short arm of the lever engaged by the hook will be drawn inward with the lay and the hook, and, as the lever rotates upon its fulcrum pin, the cable, fastened to the long arm of the lever, will impart a steady throw to the picker-stick, which will cause the shuttle to leave its box and pass along the shuttle-race to the opposite side of the loom, where a similar shuttle-binder will be pressed back against a like finger by the shuttle as it passes into the box upon that side, and then the action of the apparatus will be repeated.

When this apparatus is used, less power will be required to operate the picker-sticks of looms than with the apparatus commonly employed, and the services of skilled me-

chanics may be dispensed with, for little adjustment will be necessary, the motion being always absolutely in time with the swinging of the lay, and not independent of it, and the shed will always be open in time for the shuttle to pass through, so that it will not jam or be thrown out.

What I claim to be new is:—

1. An apparatus for operating the picker-sticks of looms, comprising, in combination with the loom, a reciprocating lever mounted upon the breast-beam, a hook connected to the lay-beam, means adapted to be actuated by a shuttle for throwing the hook into engagement with said lever, and connections between the latter and the picker-sticks of the loom.

2. An apparatus for operating the picker-sticks of looms, comprising, in combination with the loom, a reciprocating lever supported underneath the breast-beam, a hook connected to the lay-beam, means adapted to be actuated by a shuttle for throwing the hook into engagement with said lever, a cable fastened at one end to an arm of said lever and at its other end to the picker-stick of the loom.

3. An apparatus for operating picker-sticks of looms, comprising, in combination with the loom, a reciprocating lever supported underneath the breast-beam, a rocking rod journaled in suitable bearings upon the lay-beam, a hook fixed to said rod, means actuated by a moving shuttle to rock said rod, to throw the hook into engagement with said lever, and connections between the lever and the picker-sticks of the loom.

4. An apparatus for operating picker-sticks of looms, comprising, in combination with the loom, a reciprocating lever mounted upon the breast-beam, a rocking rod journaled in suitable bearings upon the lay-beam, a hook fixed to said rod, means actuated by a

moving shuttle to rock said rod to throw the hook into engagement with said lever, and pulleys over which said cable passes, and affixed to said picker-sticks of the loom.

5. An apparatus for operating the picker-sticks of looms, comprising, in combination with the loom, a lever adjustably mounted beneath the breast-beam, a rocking rod mounted upon the lay-beam, a hook fixed to said rod, means actuated by a movable shuttle for rocking said rod to throw the hook into engagement with one end of said lever, and a cable fastened to the other end of said lever, and connected to the picker-stick of the loom.

6. An apparatus for operating picker-sticks of looms, comprising, in combination with the loom, a spring-retrieved rocking rod mounted upon the lay-beam, a hook fixed to said rod, means actuated by a movable shuttle for rocking the rod, to throw the hook into engagement with one end of said lever, a cable fastened to the other end of said lever, and connected to the picker-stick of the loom.

7. An apparatus for operating picker-sticks of looms, comprising, in combination with the loom, a rocking rod mounted upon the lay-beam, having an angled end disposed in the path of a movable shuttle, a hook fixed to said rod and adapted to engage over one end of the lever as the rod is rocked by the shuttle, a cable fastened to the other end of the lever, pulleys upon the leg of the lay, over which said cable passes, said cable being fastened at the other end to the picker-stick of the loom.

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

CHARLES BREHIO.

Witnesses:

JOHN H. S. HUNT,

CHARLES H. GOODELL.