(No Model.)

H. F. WEST & G. P. WOOD.

LOOM.

No. 428,436. Patented May 20, 1890.

Fig: 1.

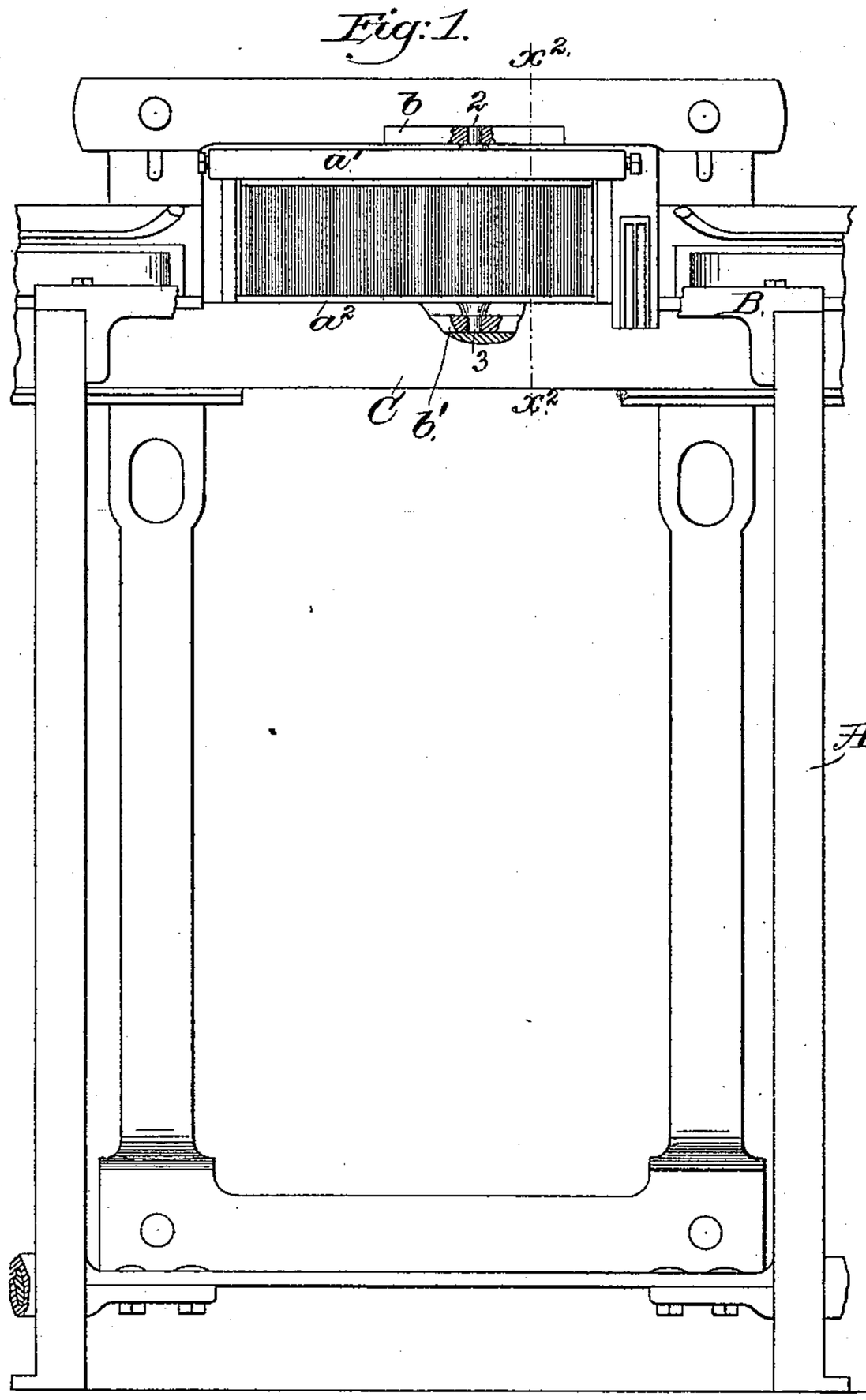


Fig: 2.

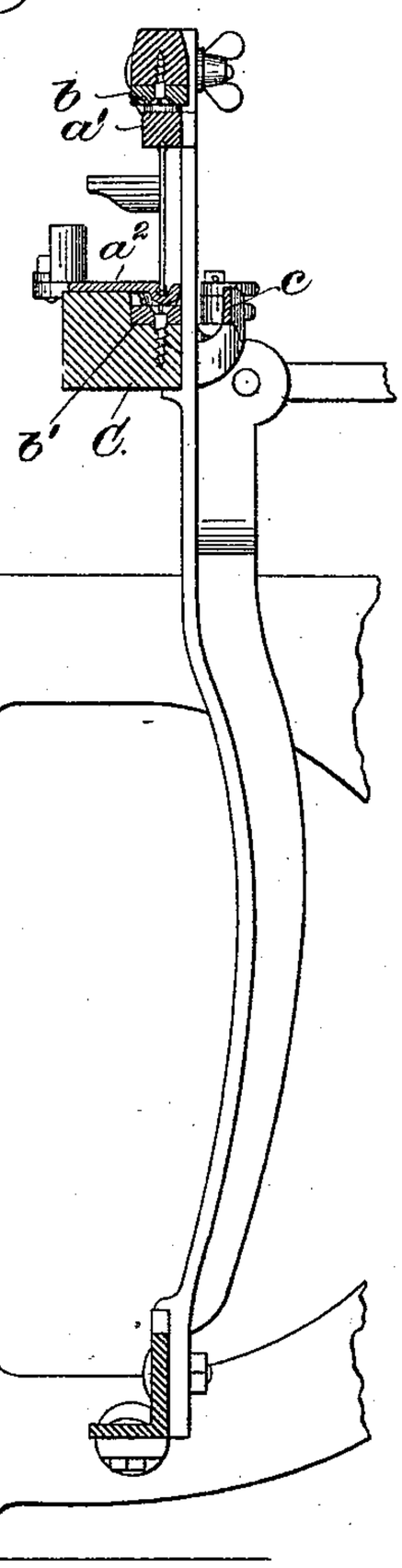
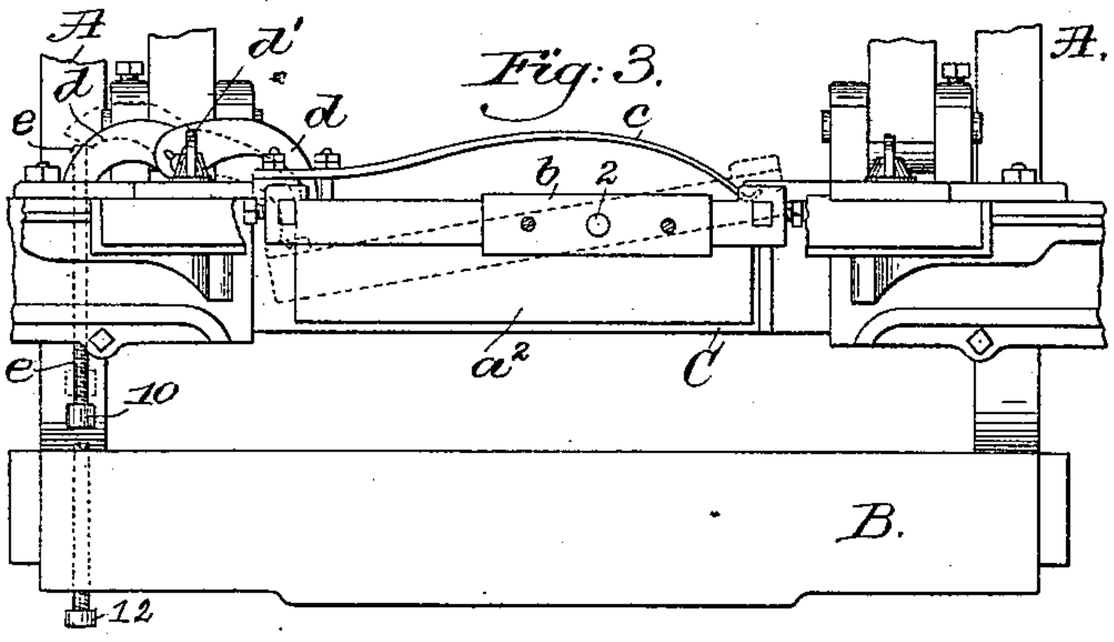


Fig: 3.



Witnesses.
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Frederick L. Emery

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UNITED STATES PATENT OFFICE.

HENRY F. WEST, OF GLOUCESTER CITY, NEW JERSEY, AND GEORGE P. WOOD, OF OLNEYVILLE, RHODE ISLAND.

LOOM.

SPECIFICATION forming part of Letters Patent No. 428,436, dated May 20, 1890.

Application filed January 11, 1890. Serial No. 336,637. (No model.)

To all whom it may concern:

Be it known that we, HENRY F. WEST, of Gloucester City, county of Camden, State of New Jersey, and GEORGE P. WOOD, of Olneyville, county of Providence, State of Rhode Island, have invented an Improvement in Looms, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

This invention has for its object to provide a loom with devices by which the weft may be beat diagonally into the warp at the fell.

One especial use to which the invention to be herein described may be put is that of weaving pockets or bag-like webs having diagonal ends for the bottoms of the pockets. This diagonal placing of the weft in the warp obviates straining or pulling the fabric more at or near one selvage than at or near the other selvage, as has been attempted in order to provide a diagonal bottom for a pocket; but such straining of the pocket fabric is very detrimental to the selvage and warp and is not in our judgment practicable.

In accordance with our invention we mount a reed-frame containing any usual dents upon the lay in such manner that it may be oscillated about vertical pivots, the reed-frame standing parallel to the inner walls of the usual shuttle-boxes while the shuttle containing the weft is being passed through the warp, but as the lay is moved forward the reed is oscillated about its vertical pivots, so that the reed-frame stands diagonally to the warp, and, occupying such position, the dents of the reed act on the weft and leave the latter in a position diagonal with relation to the warp. The extent of oscillation to be given to the reed during the completion of its forward stroke may be varied, according to the angle at which it is desired to lay the weft.

In this present embodiment of our invention the reed or its frame is represented as pivoted between its ends or nearer one than its other end, and it is adapted to be turned about vertical pivots, and to turn the reed we have shown in the accompanying drawings an oscillating device, which is represented as a lever carried by the lay and acted upon at one end by a push-bar, also carried by the lay, the said push-bar deriving its motion by striking the breast-beam or some other part of the loom.

This invention is not intended to be limited to the exact form of oscillating device shown.

Figure 1 is a partial front elevation of a sufficient portion of a loom to enable our invention to be understood, the breast-beam being broken out and both ends of the lay being broken off. Fig. 2 is a section in the line x^2 of Fig. 1; and Fig. 3 is a top view with the hand-rail broken out, the dotted lines showing the reed in its diagonal position.

The loom-frame A, the breast-beam B, and the lay C are and may be of usual construction common to looms for weaving pockets or bags. The dents of the reed, of any usual kind are held in the usual manner in a reed-frame a'.

The reed-frame, as herein shown, has at its lower side a forwardly-extended horizontal shelf a^2, which lies in such position as to constitute practically a part of the race of the lay, the shuttle passing over it.

The reed-frame is provided at its upper and lower side with suitable vertical pivots 2 3, which enter suitable bearings or sockets, herein shown as forming part of plates b b', attached, respectively, to the lay and the hand-rail, the said pivots being in the same vertical line and forming points or pivots about which the reed oscillates.

One end of the reed-frame is acted upon by a spring c, connected to the lay, the said spring normally acting to keep the reed-frame with the front side of its dents parallel to the inner side walls of the usual shuttle-boxes at the ends of the lay (but partially shown) and at right angles to the length of the warp.

The long end of the reed-frame is herein shown as acted upon by a reed-oscillating device d, herein represented as a lever pivoted at d' on a stand or ear carried by or attached to the rear side of the lay. The opposite end of the said lever d is herein shown as adapted to be acted upon by a push-bar e, occupying a substantially horizontal position and extended through a suitable guide hole or opening in the lay, the outer end of the said

push-bar being extended beyond the front of the lay for a greater or less distance, so that the said bar will strike the breast-beam as the lay is moved forward by usual means to beat the weft into the cloth. When the shuttle is being passed through the warp, the reed occupies the full-line position shown in Fig. 3; but as soon as the push-bar meets the breast-beam or some stop, as a screw 12, (see Fig. 3,) the said push-bar is stopped, and on the further movement of the lay forward the push-bar, acting on the lever *d*, turns the said lever so that it, acting upon the reed, oscillates the same to place the reed diagonally with relation to the lay and warp, as represented by dotted lines Fig. 3, the reed in such position leaving the weft placed diagonally between the warp.

To vary the diagonal position of the weft we may either provide the push-bar with an adjusting device, as a sleeve 10, screwed upon one end of the bar, or we may provide the inner side of the breast-beam with a screw 12, which may be adjusted longitudinally with relation to the breast-beam, so that the push-bar will strike the same sooner or later during the forward movement of the lay.

We have shown the reed-frame as pivoted between its ends; but we do not intend to limit our invention to the exact location of the pivots of the reed-frame, the gist of the invention being that the said pivots constitute vertical pivots, and they may be more or less near one end of the reed, as desired.

We claim—

1. The lay, combined with a reed-frame mounted to turn about vertical pivots, substantially as described.

2. The lay and reed-frame having vertical pivots, combined with an oscillating device, whereby the reed-frame may be oscillated and made to stand during a part of its forward movement diagonal to the warp, substantially as described.

3. The lay, combined with the reed-frame having vertical pivots and provided with a horizontally-extended shelf, substantially as described.

4. The lay, the reed-frame having vertical pivots and a spring to keep the reed-frame normally parallel to the inner side walls of the shuttle-box, combined with a lever to oscillate the reed-frame, substantially as described.

5. The lay and the reed-frame having vertical pivots and a lever acting on one end of the reed-frame, combined with a push-bar, to operate substantially as described.

6. The lay and the reed-frame having vertical pivots and a lever acting on one end of the reed-frame, combined with a push-bar and with an adjusting device to regulate the extent of oscillation of the reed-frame, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

HENRY F. WEST.
GEORGE P. WOOD.

Witnesses:
CHARLES E. BRADFORD,
JAMES B. CARNES.