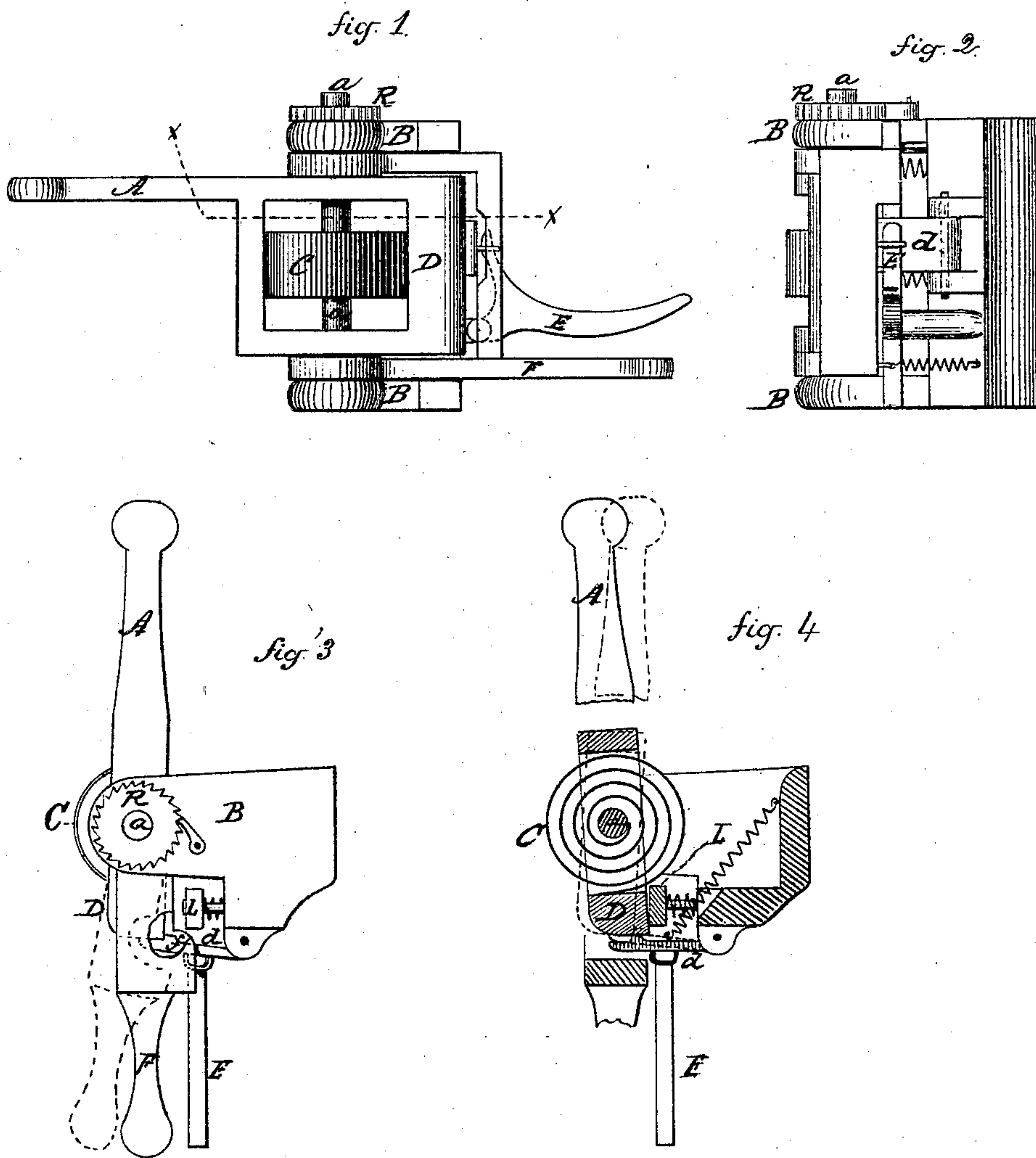


J. STEVER.

Picker Motion for Looms.

No. 131,575.

Patented Sep. 24, 1872.



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UNITED STATES PATENT OFFICE.

JEREMIAH STEVER, OF BRISTOL, ASSIGNOR TO HIMSELF, ISAAC E. NEWTON, AND GEORGE A. BOUGHTON, OF WATERBURY, CONNECTICUT.

IMPROVEMENT IN PICKER-MOTIONS FOR LOOMS.

Specification forming part of Letters Patent No. 131,575, dated September 24, 1872.

To all whom it may concern:

Be it known that I, JEREMIAH STEVER, of Bristol, in the county of Hartford and State of Connecticut, have invented a new Improvement in Picker-Motion for Looms; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents in—

Figure 1 a front view; Fig. 2, an end view; Fig. 3, a top view; and in Fig. 4, a section on line *x x* of Fig. 1.

This invention relates to an improvement in the "shuttle-driving mechanism for looms" for which Letters Patent were granted to me bearing date January 18, 1870; the object being to impart under all circumstances to the picker-staff the same force, so that whether the loom be running fast or slow the shuttle will be driven at the same velocity; and the invention consists in a lever arranged to act upon the picker-staff, having a spring attached thereto and combined with a mechanism, substantially such as hereinafter described, whereby the said lever is moved to tighten the spring for each operation and released at the given time, so that the force of the said spring upon the picker-staff through the said lever will be sufficient to throw the shuttle.

A is the driving-arm of the lever, which, by any suitable connection, is attached to the picker-staff. This lever is hung upon a fulcrum, *a*, the fulcrum or shaft being rigidly fixed in suitable bearings B, the lever turning freely thereon. To the said shaft *a* one end of a coil or volute spring, C, is rigidly attached, the other end of the spring being firmly secured to the other arm of the lever, as seen in Fig. 4; hence when the lever A is turned to the position denoted in broken lines it contracts or tightens the spring, and the reaction of the spring when freed will throw the lever back to the first position. In connection with the lever A is a latch, *d*, operating so that when the lever is turned, as before described, it will fall behind the arm D of the lever, as denoted in broken lines, Fig. 4, and also seen in Fig. 3, thus setting the lever in that position. The latch *d* is tripped to release the lever. This is best done through a lever, E, one arm of which is connected to the latch, as seen in Figs. 1 and 2, the other extending out and ar-

ranged in such relative position to a cam on the loom-shaft (or shaft arranged for the purpose) that, at the required time to throw the shuttle, the said lever will be acted upon to withdraw the latch *d* and free the lever A to act upon the picker-staff, as before described. In order to set the lever A, another lever, F, is arranged, upon which is a shoulder, *f*, (see Fig. 3,) which takes upon the arm D of the lever A, and so that when the lever F is drawn forward, as denoted in broken lines, Fig. 3, it will carry the lever A back. This lever F is actuated to thus move the lever A by a suitable cam, which, after setting the lever A, lets the lever F back to its home position. The cam for the two levers E and F, it will be readily seen, may be upon the same cam-shaft, and if desirable to throw two shuttles, another arm upon each of the levers may be applied above to be actuated by the same cams, thus giving two motions to each revolution. The tension of the spring is adjusted by a ratchet, R, on the spring-shaft *a*. As a relief to the sudden throw of the lever A I arrange in the rear of the arm D a bar, L, resting upon suitable springs, so that when the lever is thrown by the spring the arm D will strike upon the said bar L, the springs yielding slightly, preventing the jar which would otherwise occur. The bearings B are connected together so that this mechanism forms a complete thing in itself, and which may be readily applied to many classes of looms.

I claim as my invention—

1. The lever A D, with its spring C and latch *d*, arranged to be set and tripped for each operation of the picker-staff, substantially as described.

2. In combination with the lever A D and its spring C, and a suitable tripping device, I claim the lever F, operating to set the lever, substantially as set forth.

3. In combination with the lever A D, spring C, and latch *d*, I claim the lever E, arranged for tripping the said latch, substantially as set forth.

4. In combination with the lever A D and its spring C, I claim the bar L, or its equivalent, arranged upon suitable springs, substantially as and for the purpose specified.

JEREMIAH STEVER.

Witnesses:

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