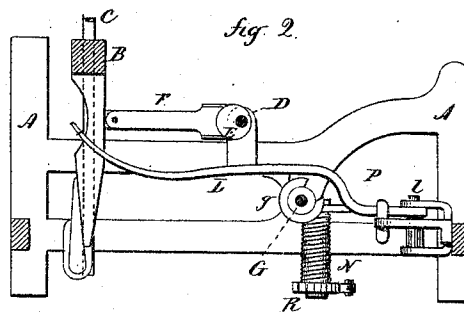
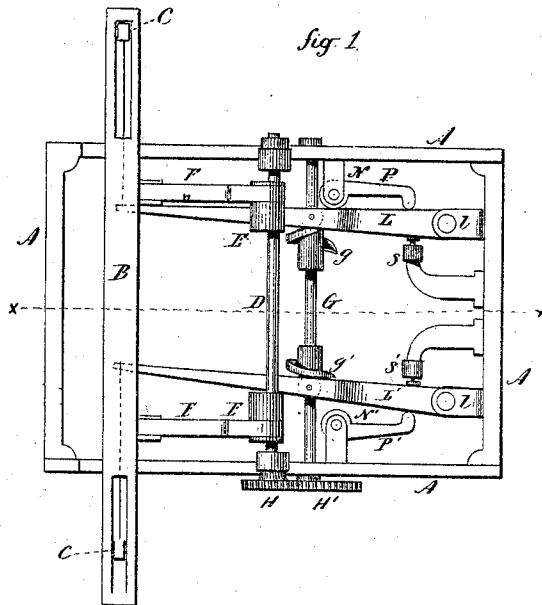


J. STEVER.
Loom-Picking Mechanism.

No. 140,091.

Patented June 17, 1873.



Witnessed

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UNITED STATES PATENT OFFICE.

JEREMIAH STEVER, OF BRISTOL, ASSIGNOR TO THOMAS C. MORTON, OF
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IMPROVEMENT IN LOOM-PICKING MECHANISMS.

Specification forming part of Letters Patent No. **140,091**, dated June 17, 1873; application filed
May 13, 1873.

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; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent in—

Figure 1 a top view, and in Fig. 2 a section on line *x x*.

This invention relates to an improvement in devices for actuating the picker-staffs of looms, the object being to impart to the staff a motion of the same power without regard to the velocity with which the loom is operated, in order to prevent the possibility of the shuttle stopping in its passage across the loom. Various devices have been resorted to for this purpose, but, usually, the spring which actuates the mechanism has been strained to such an extent as to render it liable to break—a difficulty which is overcome in this invention.

This invention consists in combining with each picker-staff a lever actuated by a cam to force it back, which back movement of the lever acts upon a spiral spring to partially wind the said spring; that, when the lever escapes from the said cam, the reaction of the said spring will cause a quick throw of the lever and corresponding throw of the picker-staff, as more fully hereinafter described.

A is the frame, B the lay, C the picker-staff, D the shaft which operates the lay by means of eccentrics E and connecting-rods F, in substantially the usual manner. At a convenient point in the frame a shaft, G, is arranged, preferably taking its power through gears H H' from the shaft D, and so that the velocity of the shaft G will be as 1 to 2. On this shaft are arranged two cams, *g g'*, which are of worm shape, the one a right hand and the other a left. The worm extends nearly around the cylinder, but so as to leave a space between one end and the other for escapement, the escapement of one cam being upon the opposite side of the shaft to the other. L L' are two levers hung upon a fulcrum, *l*, in the rear of the said shaft G, and extending for-

ward and connected to the picker-staff, as seen in broken lines, Figs. 1 and 2. N N' are spiral springs, preferably arranged with their axis vertical. These springs are wound upon a shaft to which levers P P' are attached, these levers bearing, respectively, against levers L L'. One end of each spring is attached to its lever P or P', the other end to the ratchet R, by means of which ratchet the tension of the spring may be adjusted; therefore, as the lever L is forced back by its cam *g*, it bears the lever P back accordingly, and winds the spring to that extent; but as the lever P bears near the fulcrum of the lever L, the extent of this winding is so very slight as to be scarcely perceptible upon the spring, rendering it almost an impossibility to break or injure the spring in the working of the loom. The lever L is forced back by the lever G until it comes to the end of the worm; there it escapes, the spring instantly imparting to it a throw of sufficient force to drive the shuttle from one end of the lay to the other. The other lever in like manner is actuated by its cam until its time for throw occurs, when, escaping from its cam, it returns the shuttle, thus imparting to the shuttle a velocity always the same, irrespective of the velocity of the loom. In order to arrest the lever L L', after the throw is imparted, and so as to prevent an injurious jar to the machinery, I arrange for each lever an elastic bunter, S S', against which the lever strikes when its work is done.

It will be readily seen that the relative position of the parts may be somewhat changed, without departing from the invention as hereinbefore described.

I do not wish to be understood as broadly claiming an independent picker-motion, as such, I am aware, is not new.

I claim as my invention—

1. The levers L L' attached to their respective picker-staffs, combined with the respective springs N N', adjusting mechanism for said springs, and levers P P', and cams to actuate the said levers and springs, substantially as set forth.

JEREMIAH STEVER.

Witnesses:

J. H. SHUMWAY,
A. J. TIBBITT.