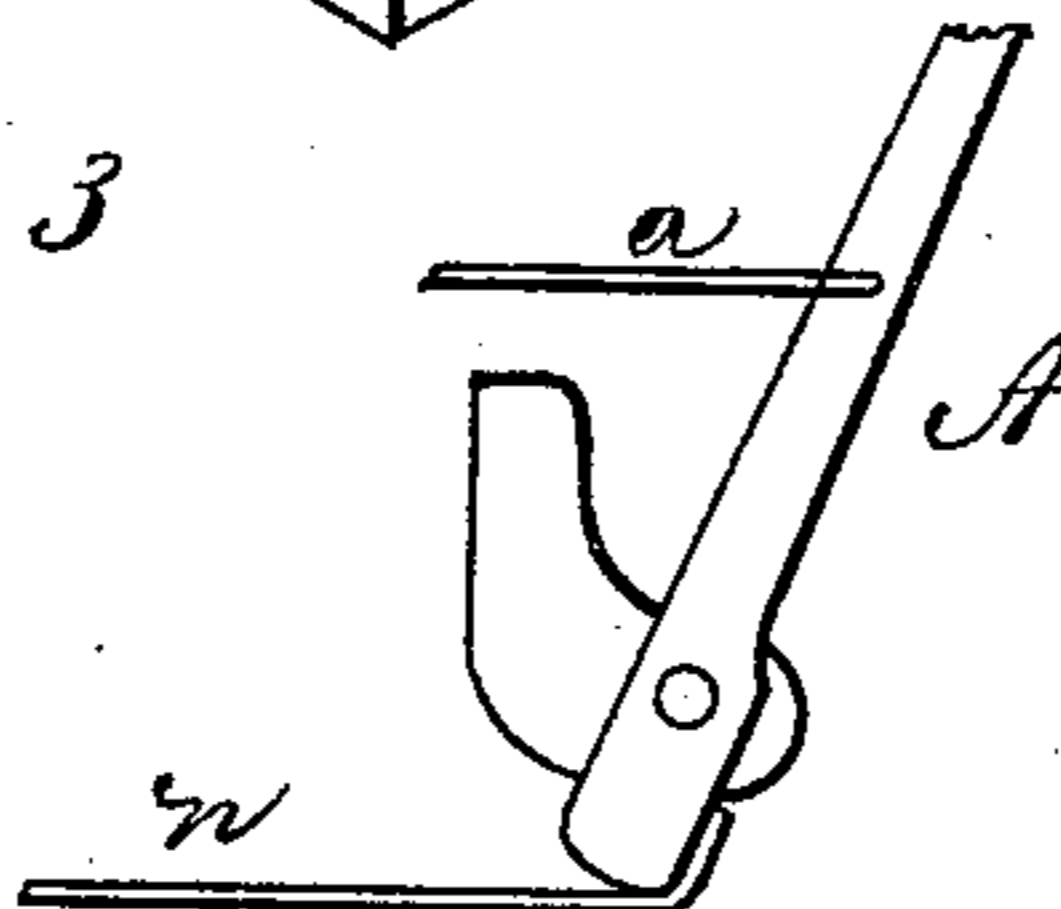
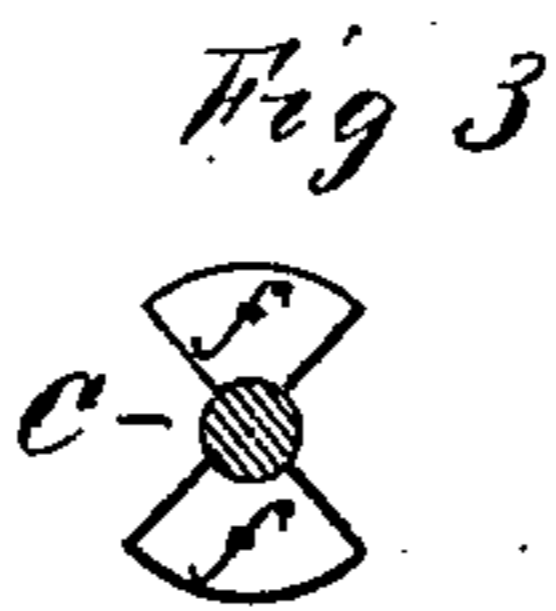
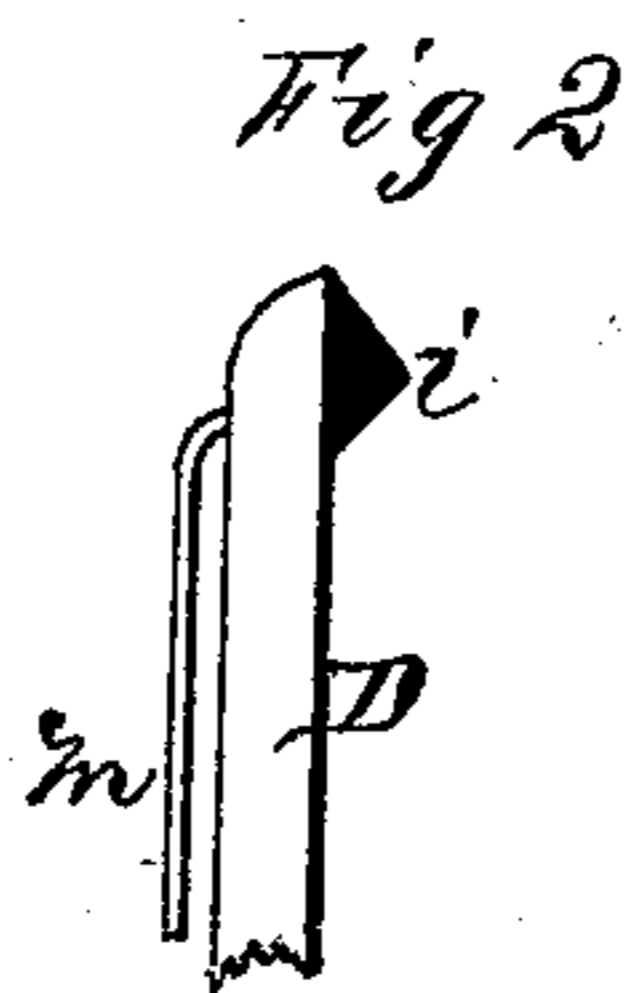
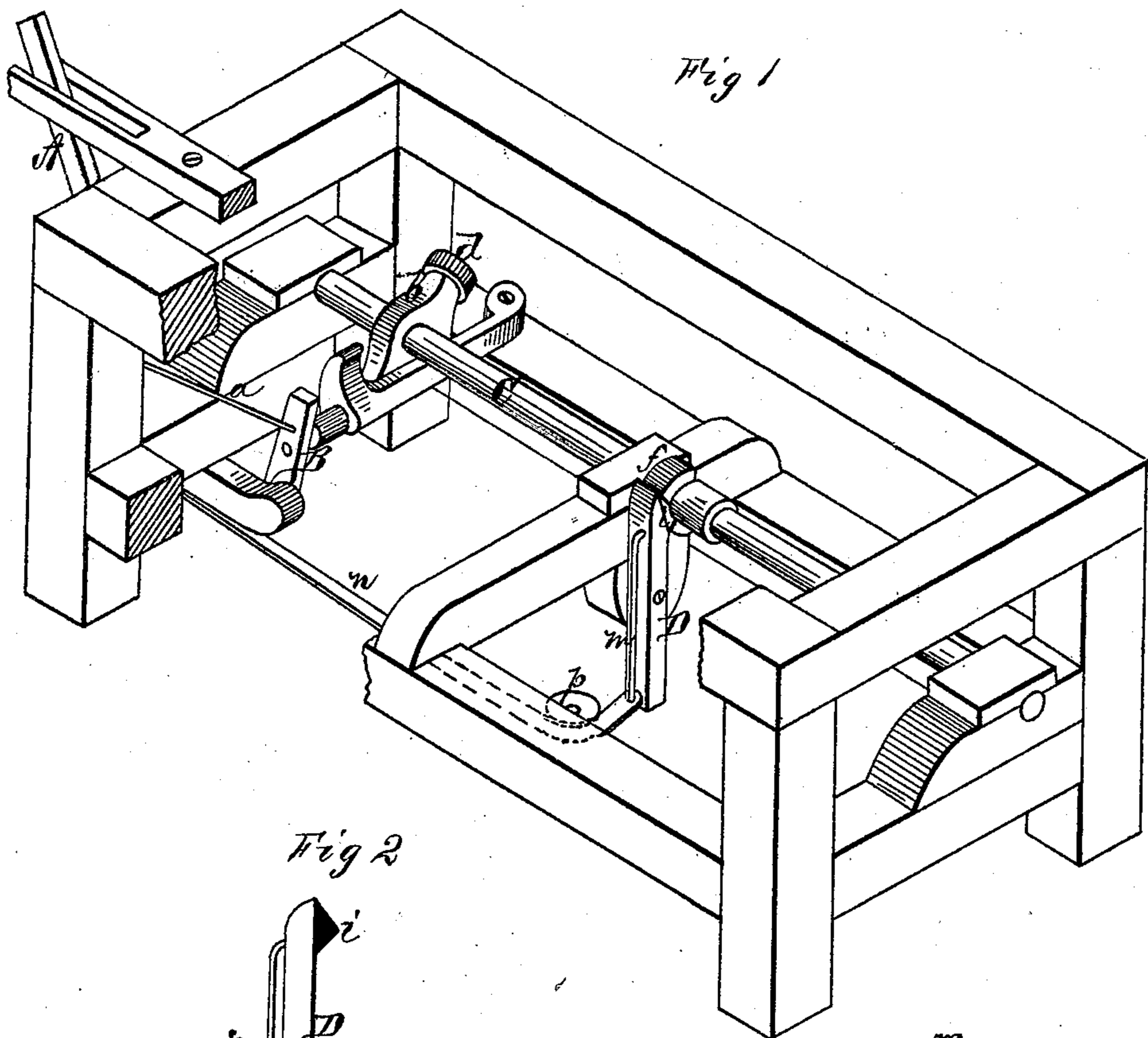


W. TOWNSEND.
Picking-Mechanisms for Looms.

No. 141,187.

Patented July 22, 1873.



Witnesses:
Frank L. Curand
C. L. Evert

Inventor.
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 Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM TOWNSEND, OF AUBURN, NEW YORK, ASSIGNOR OF ONE-HALF
HIS RIGHT TO J. WESLEY PIEROE, OF SAME PLACE.

IMPROVEMENT IN PICKING MECHANISM FOR LOOMS.

Specification forming part of Letters Patent No. **141,187**, dated July 22, 1873; application filed
April 17, 1873.

To all whom it may concern:

Be it known that I, WILLIAM TOWNSEND, of Auburn, in the county of Cayuga and in the State of New York, have invented certain new and useful Improvements in Picker-Motion for Looms; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon making a part of this specification.

The object of my invention is to provide an easy picking mechanism for power-loom without the use of springs or weights, in combination with a spring-arm to secure an easy removal of the shuttle for inserting fresh bobbins, all as more fully hereinafter set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a perspective view, showing one picker-staff with the mechanism for operating the same and my device attached thereto; and Figs. 2 and 3 are detached views of certain parts of the same.

A represents the picker-staff connected by a rod, *a*, with a lever, B, and operated by an arm, *b*, with roller *d* on the main shaft C, in the usual manner. These parts are all constructed and arranged in the same manner as is usually done, or in any desired way.

In many looms the lower end of the picker-staff has a spring or weight attached to it, so as to carry the picker-staff back to the rear end of the shuttle-box, and hence the power employed to carry the picker-staff forward had at the same time to perform the work of stretching the spring, or lifting the weight, so as to create the power necessary to carry the picker-staff back.

My invention dispenses with such spring or weight, and by the use of a cam upon the main shaft, in connection with a shoe attached to a lever, and said lever connected with the picker-staff, the said connection is allowed to recede or slacken at every forward stroke, and the back stroke is performed by the cam and its connections.

f represents the cam attached to the main shaft C by a set-screw, or otherwise. D represents the lever pivoted to the frame of the loom, and is at its upper end provided with a shoe, *i*. Near the upper end of the lever D, back of the shoe *i*, is attached a spring, *m*, of sufficient strength not to be acted upon when the loom is in motion. To the lower end of this spring is attached a belt, *n*, or its equivalent, which passes around a guide-roller, *p*, and is attached to the lower end of the picker-staff A.

The loom being in motion, and two cams, *f*, attached on opposite sides of the main shaft to operate two levers, D, one for each picker-staff, at the moment when the roller *d* on the arm *b* commences to move the picker-staff forward the connection *n* slackens by the lever D turning on its pivot, allowing the shoe *i* to drop in between the cams *f*, and as soon as the forward movement of the picker-staff is completed, the cam *f*, striking the shoe *i*, returns the picker-staff by a positive motion to the rear end of the shuttle-box, ready for the next forward stroke.

The object of the spring *m* is to allow the operator to throw out the shuttle by hand when desired, to replace fresh bobbins within the same.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The spring *m*, in combination with the lever D, belt *n*, pulley *p*, and staff A, as and for the purposes set forth.

2. The combination of the shaft C with arm *b*, roller *d*, cam *f*, lever D with shoe *i*, spring *m*, guide-roller *p*, belt *n*, or its equivalent, picker-staff A, rod *a*, and lever B, all the parts being constructed and arranged to operate substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 11th day of April, 1873.

WM. TOWNSEND.

Witnesses:

Z. S. WINEGAR,
HORACE T. COOK.