

HENRY A. WHITTEN.

Improvement in Loom Picking Mechanisms.

No. 124,995.

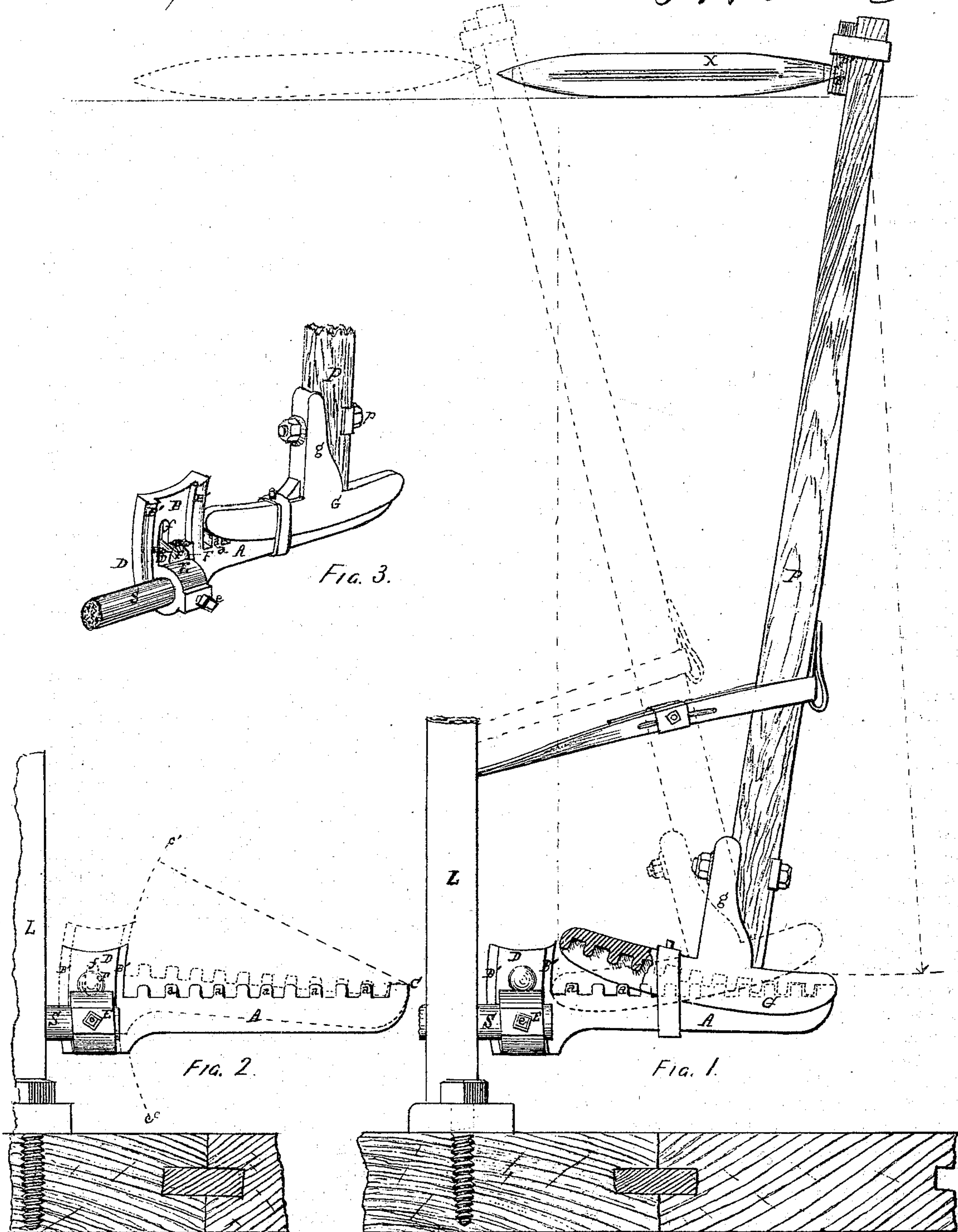
Patented March 26, 1872.

Inventor:

Henry A. Whitten
by J. P. Buckland
his Atty.

Witnesses:

W. A. Miller
J. J. Gray



UNITED STATES PATENT OFFICE.

HENRY A. WHITTEN, OF NEW BEDFORD, ASSIGNOR TO HIMSELF, J. S. DAVIS,
AND GEORGE S. BASSETT, OF HOLYOKE, MASSACHUSETTS.

IMPROVEMENT IN LOOM PICKING MECHANISMS.

Specification forming part of Letters Patent No. 124,995, dated March 26, 1872.

To all whom it may concern:

Be it known that I, HENRY A. WHITTEN, of New Bedford, in the county of Bristol and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Picker-Motions for Looms, of which the following is a specification, reference being had to the accompanying drawing making a part of this specification.

My invention relates to that form of looms in which the picker-stick is supported by a rocker or foot having the lower face thereof slightly curved, and having a rocking or oscillating motion on a bed-piece, which is attached directly or indirectly to the rocker-shaft of the lathe and moves with it. In the picker-motion shown, the lower face of the rocker is furnished with side flanges, which project below the upper face of the bed-piece or rack (which I denominate the bed-piece) to prevent lateral movement of the rocker on the rack, and is also furnished with teeth on the lower face, which mesh with teeth on the upper face of the rack, and thus prevent any longitudinal play of the rocker on the rack. The only motion, therefore, of the rocker, and the picker-stick which it supports, relatively to the rack, is an oscillating or rocking motion in the direction of the length of the rack, and also of the shuttle-race of the loom. My invention relates to such a construction and arrangement of the aforesaid rack, and the part or parts by which such rack is attached to the rocker-shaft of the lathe, that the end of the rack next to the lathe can be elevated or depressed by the weaver, while the outer end of the rack remains at the same distance from the floor, and by this means I secure the following result—viz., that the top of the picker-staff will always be at a uniform height above the bottom of the shuttle-race when it falls back to the outer end of the shuttle-box, and can be caused to rise more or less as the staff moves along toward the middle of the shuttle-race. This result is desirable from the fact that the sharp end of the shuttle makes a depression or shuttle-print in the leather pad which is attached to the upper end of the picker-staff, and, while it is essential that this shuttle-print should always be at the same height from the bottom of the shuttle-box when it first strikes the

shuttle, (so that the sharp end of the shuttle may always enter the print,) it is also desirable in many kinds of weaving that the shuttle-print should rise slightly as the staff moves forward with the shuttle, so as to raise the rear end of the shuttle more or less. If there is no rising of the rear end of the shuttle, the latter is liable to fly out of the race. Weavers on the same kind of work differ as to the amount of rise thus required in order to produce the best work, and different kinds of work also require different elevations of the rear end of the shuttle when it leaves the shuttle-print; and my combination and arrangement allow the weaver to adjust the rack so as to vary the elevation of the rear end of the shuttle more or less.

Description of the Accompanying Drawing.

Figure 1 is an elevation of my improved picker-motion attached to the rocker-shaft, with the picker-staff at rest before delivering its pick. The dotted lines show the position of the staff and its rocker when the staff has moved forward to the point where the shuttle is about to leave the shuttle-print. Fig. 2 is an elevation of the rack as adjusted on the rocker-shaft, so that its upper face is horizontal. The dotted lines show the position of the rack with the inner end elevated, and also show that the line of motion is a true circle described from a point at the extreme outer end of the rack, which point is therefore stationary whatever the elevation or depression of the inner end of the rack may be. Fig. 3 is a perspective view of my improved picker-motion, the picker-staff being shown as broken off.

General Description.

L is a part of the end of the frame of an ordinary weaving-loom bolted to the floor. S is the outer end of the rocker-shaft of the lathe. A is the rack, having coarse teeth on its upper face. The inner end B of the rack is extended above the line of the teeth, and has on one face curved flanges B' B' on each side, making a socket, the sides of which are arcs of circles described from the point C as a center. A slot, *f*, is also formed in B, as shown. To attach the rack to the rocker-shaft S I use a

piece, D, having curved sides to fit into the socket in B, and an ear, E, bored out to fit on the end of the shaft S. A set-screw, *e*, turning in E, allows the piece D to be rigidly secured to the shaft. A bolt, F, passing through D and through the slot *f*, fastens the rack A to the piece D, and allows the inner end of the rack to be raised or lowered by slackening the nut and moving B, as the weaver may think necessary. The rocker G, having teeth to mesh with the teeth *a a* on the rack, and having side flanges, as shown, has also a foot, *g*, in which is a socket, which receives the lower end of the picker-staff P. The lower toothed face of G is curved in such a manner as to secure the falling back of the picker-staff to the outer end of the shuttle-box by gravitation without the application of a spring, and in the manner shown in certain Letters Patent No. 111,595, granted to me and E. D. Gove on the 7th day of February, 1871.

The same method of elevating or depressing the inner end of the bed-piece, while the outer end remains at the same height from the floor, is equally applicable to picker-motions wherein the bed-piece and its rocker have their meeting faces free from teeth, and are kept in

contact by other devices; and I do not herein claim the application of teeth to the meeting faces as a part of my present invention; nor do I limit my said invention to picker-motions having teeth, as aforesaid; but

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The bed-piece A of a picker-motion, having an upward-projecting socketed piece, B, the inner sides of which are concentric circles described from the point C at the outer end of A as a center, in combination with the ear-piece D, constructed substantially as described, and the whole arranged and operating as specified.

2. The combination and arrangement of the bed-piece A and part B and ear-piece D, formed substantially as above claimed, with a rocker having its lower face slightly curved, for the purpose specified.

In witness whereof I hereunto set my hand this 17th day of February, A. D. 1871.

HENRY A. WHITTEN.

Witnesses:

J. P. BUCKLAND,
GEO. S. BASSETT.