(No Model.)

R. TURNER.

SHUTTLE MOTION FOR LOOMS.

No. 423,096. Patented Mar. 11, 1890.

Fig. 1.

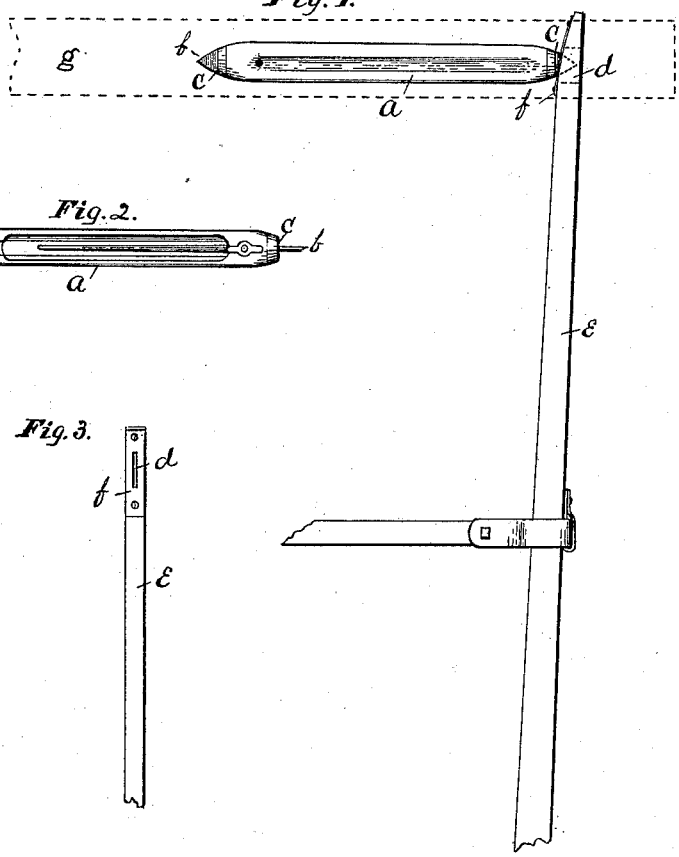

Fig. 2.

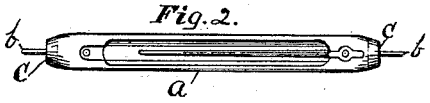

Fig. 3.

Witnesses
Fred. A. Mason
C. O. Mason

Inventor
Richard Turner
by H. W. Mason atty.

UNITED STATES PATENT OFFICE.

RICHARD TURNER, OF NEW BEDFORD, MASSACHUSETTS, ASSIGNOR OF TWO-THIRDS TO MOSES W. SNAILHAM AND FREDERICK LANGHORN, OF SAME PLACE.

SHUTTLE-MOTION FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 423,096, dated March 11, 1890.

Application filed November 5, 1889. Serial No. 329,296. (No model.)

To all whom it may concern:

Be it known that I, RICHARD TURNER, a subject of the Queen of Great Britain, residing at New Bedford, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Shuttle-Motions for Looms, of which the following is a specification.

My invention relates to loom-shuttles and the picker-sticks which actuate them, and has for its object to dispense with the ordinary loom-picker and the mechanism by means of which the end of the picker-stick which drives the shuttle is given a parallel motion with the shuttle-race.

To this end my invention consists, first, in providing a shuttle with a peculiar point having square shoulders to receive the blow of the picker-stick, and, second, in the peculiar construction of the end of the picker-stick which drives the shuttle.

In the accompanying drawings, Figure 1 is a front view of my improved shuttle and picker-stick, showing the lay and shuttle-race in dotted lines. Fig. 2 is a top view of the shuttle, and Fig. 3 is a view showing the construction of the face of the picker-stick which drives the shuttle.

Similar letters refer to similar parts throughout the several views.

In Fig. 1, *g* represents the lay and shuttle-race in dotted lines. *a* represents the shuttle. *e* is the picker-stick, having mortise *d* and leather buffer *f*.

In Fig. 2, which is a top view of the shuttle, *b* represents the flat points, and *c* represents the square shoulders which receive the blow to drive the shuttle.

Heretofore shuttles have been constructed with a round sharp point, and it has been necessary to provide a loom-picker, composed of leather and secured to the picker-stick, to receive the blow when the shuttle was driven across the web. These loom-pickers were constantly being worn out and had to be renewed on account of the penetrating and spreading force of the point of the shuttle; but in the present invention the blow or impulse to drive the shuttle is exerted on the square shoulders *c*. Consequently a loom-picker is not required, and thus the expense of the loom-pickers and the time consumed in renewing them when worn out are saved.

Heretofore in order to drive the shuttle in a straight line without deflecting it from its true course it has been necessary to supply a mechanism at its lower end, by means of which the end which drives the shuttle is caused to move in a line parallel with the shuttle-race, for if the picker-stick were simply pivoted at its lower end its top would move in the arc of a circle, and this would tend to throw the shuttle in other than a direct line, because the point of the shuttle would be enveloped by the loom-picker; but in the present invention the point of the shuttle is not acted on when the shuttle is thrown. The shoulders *c* receive the blow, and although the end of the picker-stick moves in the arc of a circle the shuttle is not deflected from its true course, because the shoulders *c* are flat and the face of the picker-stick has an opportunity to slide on the said shoulders while the blow is being given.

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

1. A loom-shuttle having its ends provided with the flat points *b* and the shoulders *c c*, as and for the purpose shown and described.

2. In combination with a loom-shuttle having its ends provided with the flat points *b* and shoulders *c c*, a picker-stick having in its face a slot or mortise adapted to receive the flat point of said shuttle, substantially as shown and described.

RICHARD TURNER.

Witnesses:

THOS. M. JAMES,

FRANK R. BARROWS.