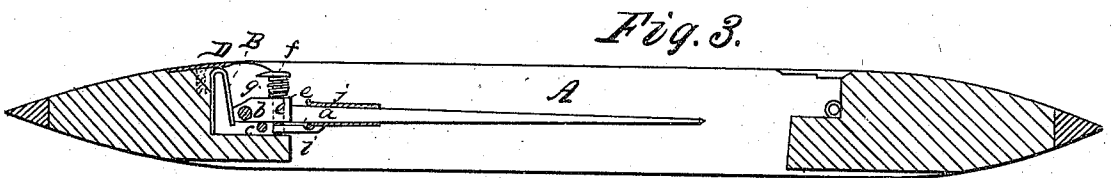
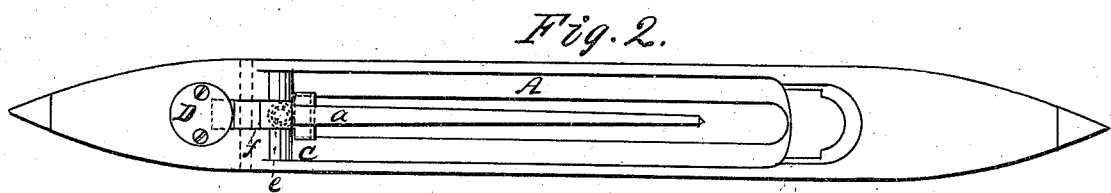
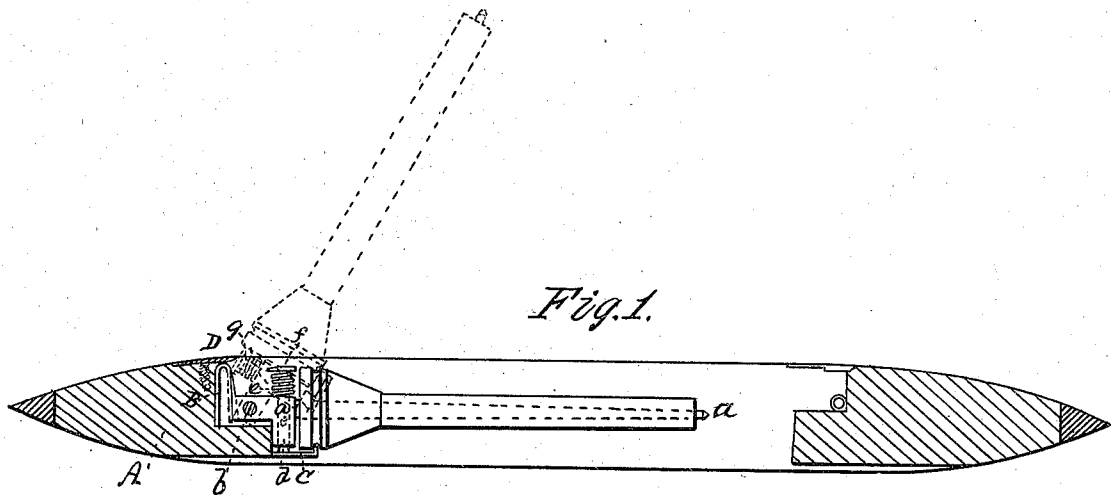


E. P. Marble. Shuttle.

N^o 12,781.

Patented May 1, 1855.



UNITED STATES PATENT OFFICE.

EZRA P. MARBLE, OF NEW WORCESTER, MASSACHUSETTS.

SHUTTLE FOR LOOMS.

Specification of Letters Patent No. 12,781, dated May 1, 1855.

To all whom it may concern:

Be it known that I, EZRA P. MARBLE, of New Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Shuttles for Looms; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, is a longitudinal section of a bobbin shuttle constructed according to my invention. Fig. 2, is a top view of the same with the bobbin omitted. Fig. 3, is a longitudinal section of a cop shuttle showing the application of my invention.

My invention consists firstly in an improved mode of applying the spring catch which is employed to confine the bobbin in bobbin shuttles, whereby it adapts itself to the varying sizes of the heads of the bobbins, and is caused to be drawn off the bobbin heads square with the spindle so as not to drag upon and split the heads like it does in all or nearly all the shuttles now in use. This improvement also enables the catch to be conveniently applied to the cop shuttle to confine the tin tube on which the cop is spun or to confine the cop if it is spun without the tin tube.

A, is the body of the shuttle.

a, is the spindle secured in the shuttle in the usual way by a transverse pin b.

B, is the main spring which is of inverted V, or U, form, and applied in a recess in the body of the shuttle to act upon the butt end of the spindle which is made oblique in order that the spring may act in the proper direction. In order to stop the spindle in its operative position in the shuttle, I either employ a fixed transverse pin c, to support it in front of the pin a, as shown in the cop shuttle in Fig. 3, or I make the spindle with a jog d, as shown in the bobbin shuttle in Fig. 1, to fall back against the wood below, but do not confine myself to these modes of stopping it.

C, is the catch the operation of which will

be best understood by reference to Fig. 1. It is attached to a pin e, which passes upward through the spindle perpendicularly to the axis thereof and fits to work freely therein, and it is furnished with a head f, between which and the spindle, a spiral spring g, is coiled around the pin, for the purpose of holding up the catch into the notch in the head of the bobbin.

D, is a metal plate secured to the body of the shuttle in such a position that as the point of the spindle a, is raised, the head (f) of the pin of the catch comes in contact with it and is by it arrested so that as the rising of the spindle continues, the catch is thrown out of the notch in the bobbin head and the bobbin is set free, as is illustrated by the red outline in Fig. 1. The plate D, also serves to confine the main spring.

The catch C, shown in Fig. 3 to confine the cop is made with a small notch i, to receive the collar of the tin tube j, and is formed with a point which if the tin tube is not employed will catch the cop and confine it.

It will be readily understood that as the pin e, of the catch moves with the spindle, and is perpendicular thereto, the catch must be drawn off the bobbin square without dragging endwise on the head.

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

Attaching the catch C, which confines the bobbin or cop on the spindle to a pin e, which works perpendicularly through the spindle, and is acted upon for the purpose of throwing and holding the catch in operation by a spiral spring g, or its equivalent, and acted upon for the purpose of throwing the catch out of operation, by coming in contact as the spindle is raised, with a plate D, or other fixed stop, the whole operating substantially as described for the purpose set forth.

EZRA P. MARBLE.

Witnesses:

GEO. W. WHEELER,
SUMNER PRATT.