

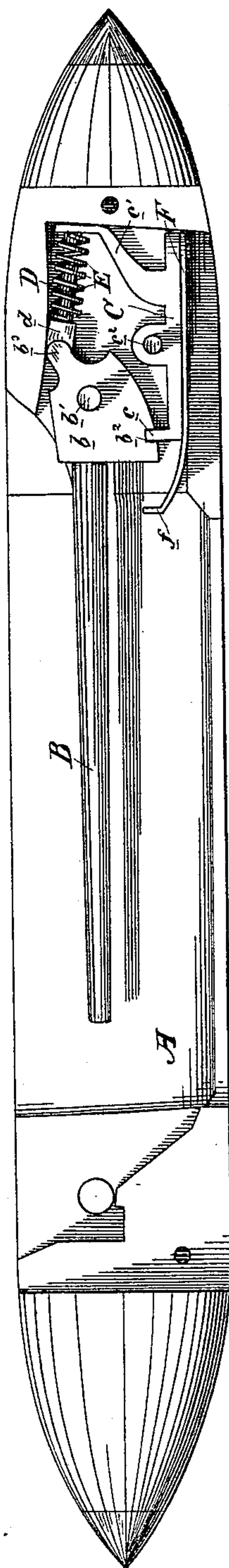
(No Model.)

P. F. MCGEE & M. McMAHON.

LOOM SHUTTLE.

No. 353,872.

Patented Dec. 7, 1886.



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# UNITED STATES PATENT OFFICE.

PATRICK FRANCES MCGEE AND MARTIN MCMAHON, OF OREGON CITY, OREG.,  
ASSIGNORS OF ONE-THIRD TO ALBERT STOKES, OF SAME PLACE.

## LOOM-SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 353,872, dated December 7, 1886.

Application filed April 26, 1886. Serial No. 200,214. (No model.)

To all whom it may concern:

Be it known that we, PATRICK FRANCES MCGEE and MARTIN MCMAHON, both of Oregon City, county of Clackamas, State of Oregon,

have invented an Improvement in Loom-Shuttles; and we hereby declare the following to

be a full, clear, and exact description of the same.

Our invention relates to loom-shuttles; and it consists in a pivoted lever for engaging the base of the spindle-butt and locking the spindle, a small spindle having a head engaging and holding the rear of the spindle-butt against the wood of the shuttle, a spring actuating both the small spindle and the locking lever, and a lock-spring on the base of the lever for the bobbin, all of which we shall hereinafter fully describe.

The object of our invention is to bring a pressure upon the spindle-butt, so directed as to hold it from behind against the wood of the shuttle, and thereby prevent the spindle from being tipped or pressed below the center plane of the shuttle, whether it is locked or unlocked, and at the same time to lock and hold the spindle steady in said plane, and adapt it when locked to resist any blow or concussion which would have a tendency to press it either up or down.

Referring to the accompanying drawing for a more complete explanation of our invention, the figure is a side elevation of our shuttle, one side being omitted in order to show the interior parts.

A is the shuttle-body, and B is the bobbin-spindle having butt *b* pivoted in the shuttle by the cross-pin *b'*. In the base of the butt is made a notch or groove, *b*<sup>2</sup>, and on its back near its top is formed the convex tongue *b*<sup>3</sup>, which bears against the wood of the shuttle.

C is a lever pivoted in the shuttle by pin *c*<sup>2</sup>. One end of this lever has a flange or lip, *c*, which is adapted to engage the notch or groove *b*<sup>2</sup> in the spindle-butt, and the other end is provided with an upwardly-extending arm, *c'*.

D is a short spindle, having a head, *d*, with a concave face for bearing against the tongue *b*<sup>3</sup> of the spindle-butt and holding it against the wood.

E is a spiral-spring which encircles the spin-

dle D, its forward end bearing against the spindle-head *d*, while its rear is fitted on a small lug on the arm *c'* of lever C, and bears against said arm. The arrangement of the

spring is such that its tendency is to hold the

head *d* firmly against the spindle-butt, thereby pressing the tongue of the butt against the wood, and to hold the arm *c'* back against the wood of the shuttle, so that the lever C lies straight with its flange or lip engaging the spindle-butt.

F is a spring secured by one end to the base of lever C, and having its other end, *f*, which projects beyond the spindle-butt, bent to engage and lock the bobbin.

The operation is as follows: By releasing the lever C from its engagement with the spindle-butt, the spring F is compressed. When the spindle is turned down again, as soon as it reaches the center plane of the shuttle, the lever C, the flange or lip *c* of which engages the notch or groove *b*<sup>2</sup> in the spindle-butt and locks it. Now, the spindle, when so locked, cannot be pressed below the center plane of the shuttle, because of the engagement of the tongue *b*<sup>3</sup> of its butt with the head *d* of the spindle D, both said tongue and head bearing against the wood of the shuttle, and the pressure of the spindle D against the spindle-butt holds the spindle in line from behind, and acts, with the arm *c'* of the lever C, as an automatic locking force. The same effect of the tongue and head *d*—namely, of preventing the spindle from being forced below the center plane of the shuttle—is produced, even when the spindle is unlocked by the withdrawal of the flange or lip *c* of the lever C. This flange or lip when in engagement, together with the spring-actuated short spindle D, prevents the spindle from moving up or down by any blow or concussion. By attaching the bobbin-locking spring F to the lever C said spring cannot be forced above the wood of the shuttle, whether the spindle is locked or unlocked. In the shuttle commonly known as the "Litchfield" there is a spring-actuated short spindle, which has a head bearing against the rear of the spindle-butt in a groove therein. The effect of this is to hold the spindle in the cen-



ter plane of the shuttle only with such force as the spring can give; and there being no locking device the spindle may be moved above the center plane by overcoming the spring. This is often done in the operation of the shuttle by accident, and it occasions very injurious results.

In the "Crompton" shuttle there is a locking lever at the base of the spindle-butt, but nothing to hold said butt steady, and it consequently works loose on its pivot, and the spindle can be pressed below the center plane of the shuttle. Our shuttle remedies these defects by preventing the spindle from moving up or down, and at the same time steadying it, a single spring effecting the complete result.

Having thus described our invention, what we claim as new, and desire to protect by Letters Patent, is—

1. In a shuttle, and in combination with the shuttle-body, the spindle B, having a pivoted butt, the spindle D, a pivoted locking-lever for said butt, and a spring on said spindle D pressing against the head of spindle D to steady the spindle B, and against the said lever to hold it to its engagement with the butt, whereby the spindle is held in the center plane of the shuttle, substantially as herein described.

2. In a shuttle, the shuttle-body A, the spindle B, having butt  $b$ , with a groove or notch,  $b^2$ , in its base, in combination with the pivoted lever C, having a flange or lip,  $c$ , at the end for engaging the groove or notch  $b^2$  of the spindle-butt, and an arm,  $c'$ , at the other end bearing against the wood of the shuttle, the spindle D, and a spring on said spindle D, bearing against the head of the spindle D and also against the arm  $c'$  of the lever C, to hold said lever to its engagement, whereby the spindle is held in the center plane of the shuttle, substantially as herein described.

3. In a shuttle, the shuttle-body, the spindle B, having butt  $b$ , with a groove or notch,  $b^2$ , in its base, and a tongue,  $b^3$ , at its rear top, bearing against the wood of the shuttle, in combination with the pivoted lever C, having a flange or lip,  $c$ , at one end for engaging the groove or notch  $b^2$  of the spindle-butt and locking the spindle, and an arm,  $c'$ , at the other end bearing against the wood of the shuttle, the spindle D, having a head,  $d$ , fitting and bearing against the tongue  $b^3$  of the spindle-butt, to hold it against the wood, and the spring E, bearing between said head  $d$  and the arm  $c'$  of the lever C, whereby it acts on both, substantially as and for the purpose herein described.

4. In a shuttle, the shuttle-body, the spindle B, having butt  $b$ , with notch or groove  $b^2$  in its base, and tongue  $b^3$ , bearing against the wood of the shuttle, as described, in combination with the pivoted lever C, having a flange or lip,  $c$ , at one end engaging the notch or groove of the spindle-butt, and an arm,  $c'$ , at the other end bearing against the wood of the shuttle, the spindle D, having head  $d$ , bearing on tongue  $b^3$ , to hold it to the wood and steady it, the spring E, between said head and the arm  $c'$  of the lever C, and the spring F, secured to the base of said lever and having a bent end,  $f$ , for locking the bobbin on the spindle, all arranged and adapted to operate substantially as herein described.

In witness whereof we have hereunto set our hands.

PATRICK FRANCES McGEE.  
MARTIN McMAHON.

Witnesses:

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