(No Model.)

J. C. SERGESON.

LOOM SHUTTLE.

No. 383,774. Patented May 29, 1888.

Fig. 1.

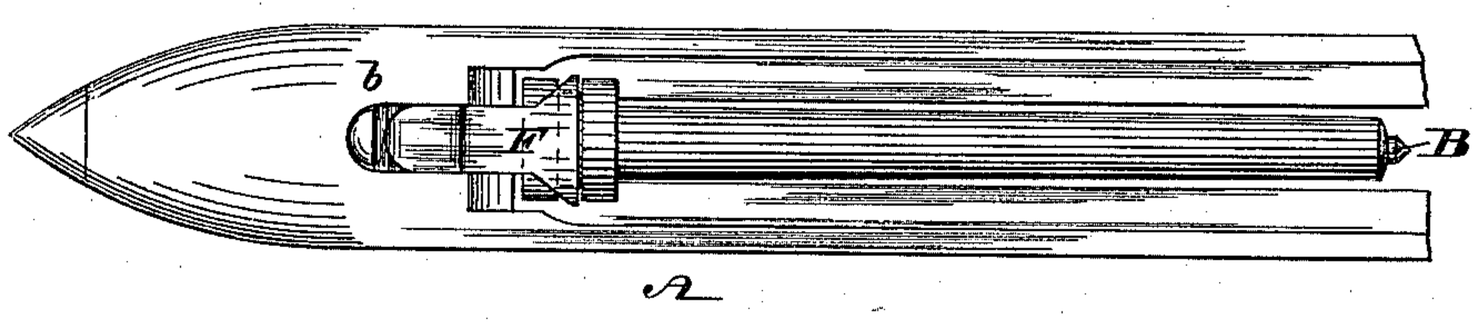


Fig. 2.

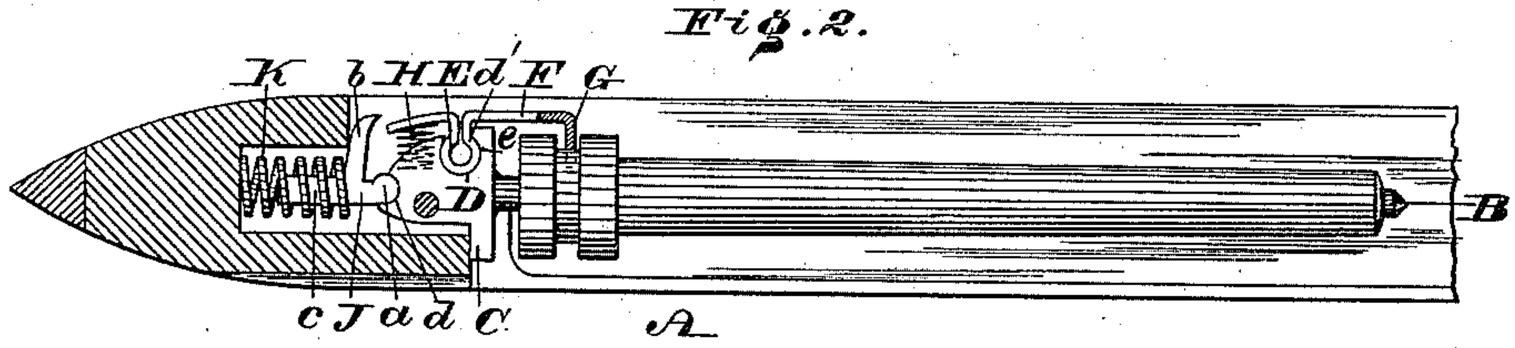
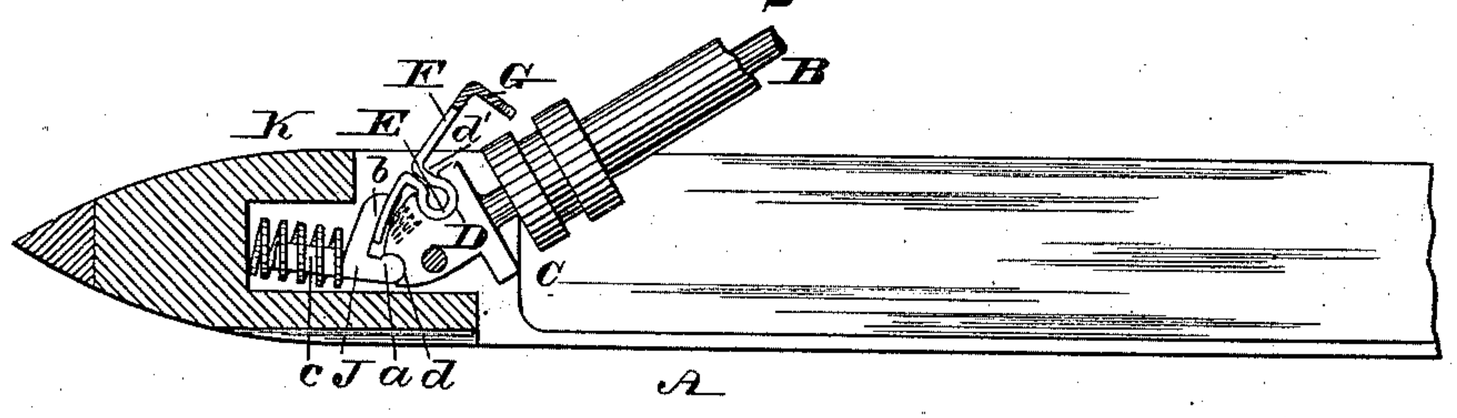


Fig. 3.



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LOOM-SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 383,774, dated May 29, 1888.

Application filed August 19, 1887. Serial No. 247,331. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. SERGESON, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Loom-Shuttles, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a loom-shuttle having a catch for holding a bobbin, the same being released by throwing up the spindle. The catch is peculiarly constructed, whereby a pivot-pin therefor is dispensed with, and provision is made for preventing the catch when thrown up from breaking out the shuttle, the several features being hereinafter fully set forth and definitely claimed.

In the drawings, Figure 1 represents a top or plan view of a portion of a loom-shuttle embodying my invention. Fig. 2 represents a longitudinal section thereof. Fig. 3 represents a longitudinal section showing the parts in different positions from those shown in Fig. 2.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A represents the body of a loom-shuttle, which, in general respects, is of usual construction.

B represents the spindle for holding the bobbin, the same being secured to a head, C, which is pivoted to the body, whereby the spindle may be thrown out and in, as is well known in loom shuttles. In the upper part of the head C is an opening, D, which is eccentric with the axis of the head and receives the pivot E of a catch, F, the latter projecting over the head and having a flange or tongue, G, which is adapted to enter a groove in the bobbin for securing the latter on the spindle. Bearing against the under side of the rear or heel end of the catch F is a spring, H, which is seated on the head C, and serves to hold the tongue end of the catch in engaging contact with the bobbin.

J represents a knuckle, which is freely fitted within the body A, contiguous to the head C, and consists of a partly-cylindrical piece forming a journal, *a*, an outwardly-projecting lip, *b*, and a longitudinally-extending stem, *c*. In the back of the head C is a circular recess, *d*, which receives the journal *a* of the knuckle, said journal being pressed against the head C by means of a spring, K, which bears against the knuckle and a proper part of the body, so that the pressure of the spring is exerted against the head C, for holding the spindle B in position. The lip *b* of the knuckle extends at an angle to the heel of the catch F, and is so disposed that when the spindle is thrown out said heel engages with the lip and motion is imparted to the catch, so that the front end or tongue, G, thereof is raised clear of the bobbin.

When the bobbin is to be removed, the spindle is thrown out, as usual, and the heel of the catch then reaches the lip of the knuckle and impacts against the same as a deflector. The knuckle slightly yields, so as to prevent binding of the parts, and the catch is forced toward the head C, whereby the opposite tongue end is raised and the tongue emerges from the groove in the bobbin. As the bobbin is now uncontrolled by the catch, it may readily be withdrawn from the spindle, as usual.

It will be seen that owing to the knuckle the catch is thrown out, and said catch is prevented from bearing against the wall of the slot in the body in which it plays and breaking out said wall, the body thus being preserved intact.

When the bobbin is restored to the spindle or a fresh bobbin applied thereto, the spindle is returned into the body of the shuttle, and as the catch is released of the pressing action of the knuckle or deflector J it returns to its normal position, the tongue G then entering the groove in the bobbin, so that the catch engages with the bobbin, and the bobbin is firmly held on the spindle, the latter retaining its position in the body owing to the action of the spring K.

The pivot E of the catch F is integral therewith, and is formed by bending the metal of the same in partly-cylindrical form, leaving a contracted portion or neck, *d'*, at the place of meeting of the catch and pivot. The outer end of the opening D in the head C is also contracted, as at *e*, and receives the neck *d'* of the catch.

The pivot is inserted in the opening D at the side of the latter, and owing to the con-

tracted portion *e* of said opening the pivot is prevented from being displaced, said pivot turning freely on the wall of the opening as its bearings, and a separate or loose pivot-pin being obviated.

The lower portion of the head C is provided with a shoulder or projection, C′, adapted to be brought in contact with the body of the shuttle when the spindle is thrown in, so as to limit the movement thereof.

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

1. A shuttle having a spindle with a spring-actuated catch pivoted to the head thereof, and provided with a spring-pressed knuckle having a projecting lip adapted to bear against the spring-pressed arm of said catch when said spindle is elevated, substantially as and for the purpose set forth.

2. A shuttle having a spindle with a head pivoted to the body of the said shuttle, a catch pivoted in an opening in said head and having the spring H, adapted to keep said catch in contact with a bobbin on said spindle, and the knuckle J, pivoted to said head and provided with the projecting lip *b*, said parts being combined substantially as and for the purpose set forth.

3. A shuttle having a spindle with its head pivoted to the body of the shuttle, a spring-actuated catch pivoted to the head, and a spring-pressed knuckle having a lip adapted to bear on the spring-pressed arm of the catch when said spindle is elevated, said head of the spindle having a projection or shoulder on its lower side adapted to bear against the body of the shuttle, said parts being combined substantially as and for the purpose set forth.

4. A shuttle having the spindle B, with head C and spring-actuated catch F, said head being provided with the recess D, open at its ends and having therein the pivot E of said catch, the latter being secured to said head, and the spring-pressed knuckle J, having its journal *a* in the opening *d* of said head, and the projecting lip *b*, adapted to bear against the heel of said catch F when said spindle is elevated, said parts being combined substantially as and for the purpose set forth.

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