

J. F. DUSTIN,
 LOOM SHUTTLE.
 APPLICATION FILED SEPT. 10, 1909.

994,578.

Patented June 6, 1911.

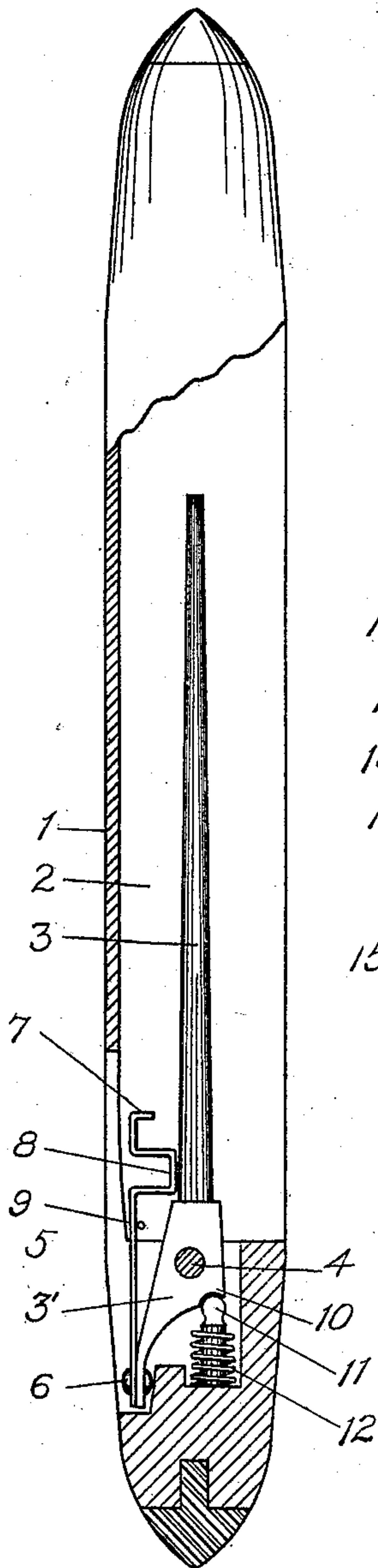


Fig. 1

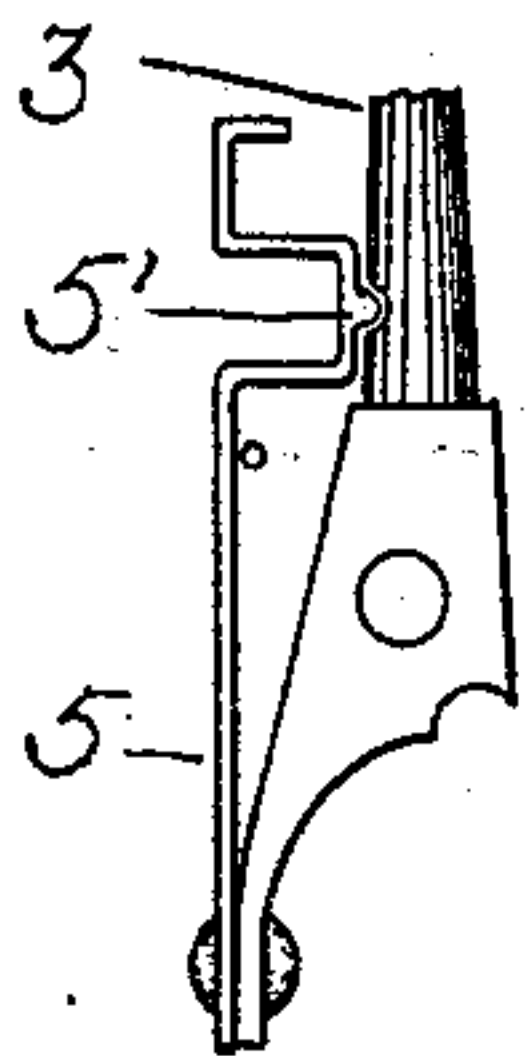


Fig. 2

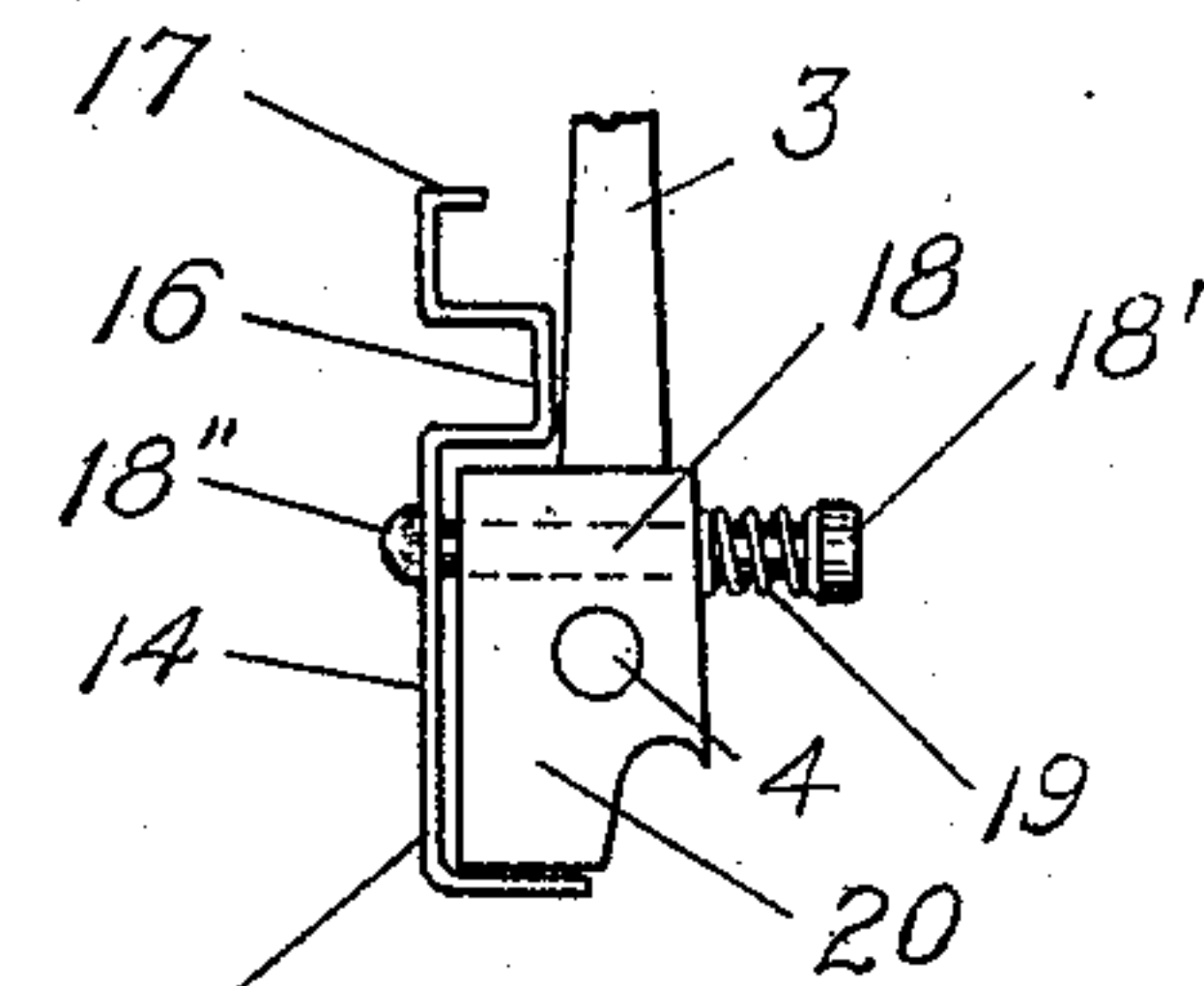


Fig. 3

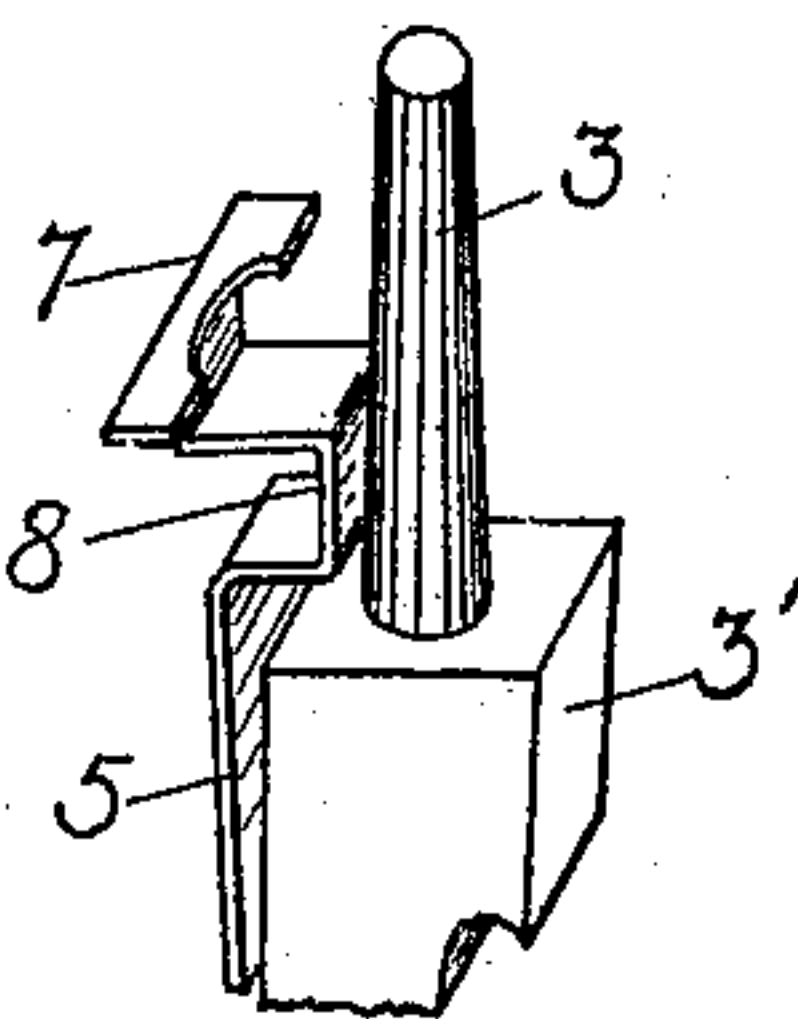


Fig. 4

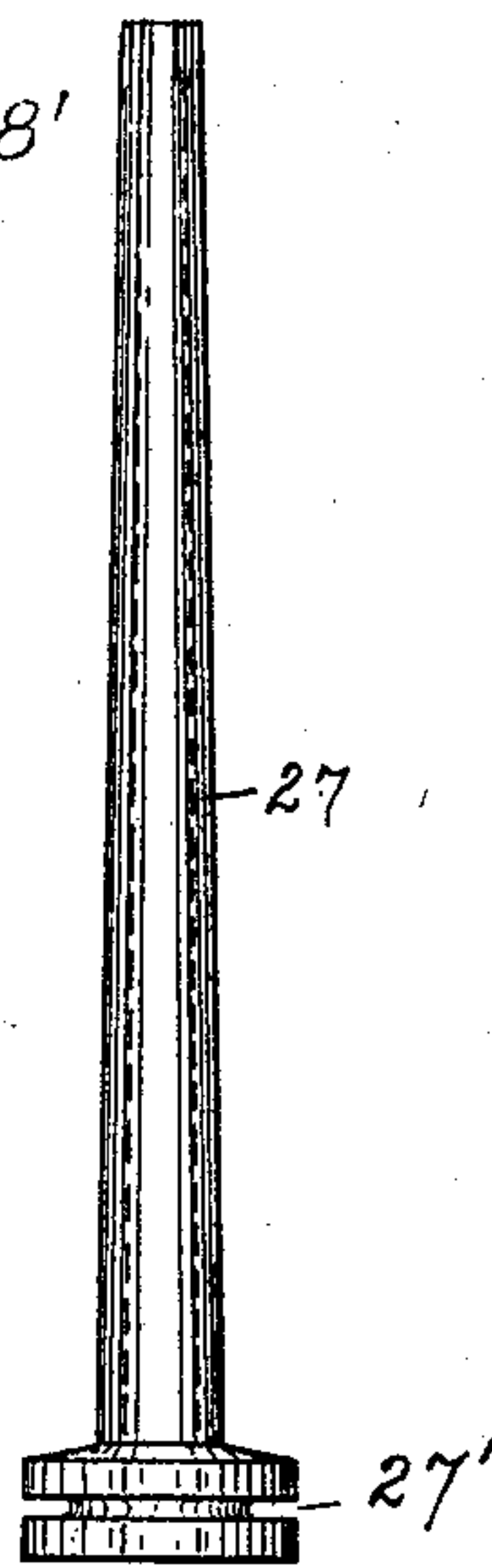


Fig. 5

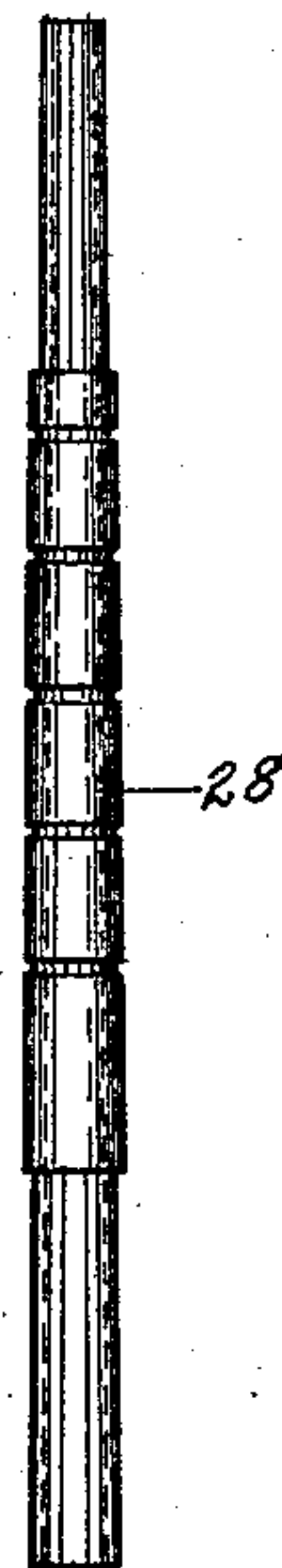


Fig. 6

Witnesses:
 Justin P. Paccard
 Eleanor Coakley

Inventor
 John F. Dustin
 By his Attorney
 Richard J. Tatham.

UNITED STATES PATENT OFFICE.

JOHN F. DUSTIN, OF FULTON, NEW YORK.

LOOM-SHUTTLE.

994,578.

Specification of Letters Patent.

Patented June 6, 1911.

Application filed September 10, 1909. Serial No. 517,033.

To all whom it may concern:

Be it known that I, JOHN F. DUSTIN, a citizen of the United States, and a resident of Fulton, in the county of Oswego and State of New York, have invented certain new and useful Improvements in Loom-Shuttles, of which the following is a specification.

My invention relates to improvements in loom shuttles and the object of my invention is to provide a shuttle which is adapted to receive and hold alternately a cop or a bobbin with a base, as desired.

My improved device is illustrated in the accompanying drawings, in which—

Figure 1 is a view of the preferred form of my device partly in section, Figs. 2, 3, and 4, are views of optional forms of my device parts being broken away, Fig. 5 is a view of the bobbin and Fig. 6 is a view of the cop.

Similar characters of reference refer to similar parts throughout the several views.

Referring to the construction shown in Fig. 1, 1 is the body of the shuttle having the usual central channel 2, in which is located a spindle 3. This spindle 3 is pivoted at one end on a shaft 4 extending crosswise of the shuttle. The flat spring 5 is provided at one end of the shuttle below the enlarged end section of the spindle 3 to which it is secured by means of the rivet 6 at the rear end. This flat spring 5 is provided with a bent up end section 7 at its forward end to engage a groove 27' of a bobbin 27 and with a bent up section 8 intermediate of its ends to engage a cop 28. A stop bar 9 is provided above the flat spring 5 to limit its upward movement. The spindle 3 is provided with an enlarged end section 3' having a seat 10 formed in its upper rear side to receive the head of the bolt 11 which is pressed forward by the spiral spring 12. The upper side or top of the bent up section 8 of the flat spring 5 is preferably channeled to the form of the spindle 3. My device being thus assembled, the spindle 3 when raised will be held in its raised position by the pressure of the bolt 11 and spring 12 and a bobbin 27 or cop 28 may be slipped thereon. The spindle 3 is then depressed when a bobbin 27 thereon will be engaged by the bent up end section 7 of the flat spring 5 or a cop 28 slipped there-

on will be engaged by the bent up section 8 of the flat spring 5. It will thus be obvious that either a bobbin or a cop may be used interchangeably as desired.

In the optional form of my device shown in Fig. 2, the bent up section of the flat spring 5 is provided with a rib 5' and a depression 5'' is provided in the spindle 3 to receive the rib 5'. In all other respects this form of my device is identical with the form shown in Fig. 1.

In the optional form of my device shown in Fig. 3, I provide a flat spring 14 having a bent up end section 15 at its rear end to fit the enlarged end section 20 of the spindle 3 which is pivoted on the shaft 4 extending crosswise of the shuttle. This flat spring 14 is provided with the bent up forward end section 17 and the intermediate bent up section 16 in the manner shown in Fig. 1, above described. A vertical bolt 18 having a head 18' is passed through a vertical aperture in the enlarged end section of the spindle 3 and rests loosely therein. At its lower end this bolt 18 is bound to the flat spring 14 by a shoulder and head 18''. The bolt 18 fits tightly within the spring 14 and is held by friction or by a shoulder against the head 18'' so that the spring 14 will always be held against the head 18'' and a spiral spring 19 is provided upon the bolt 18 between the head 18' and the spindle to normally hold them apart. The head 18' of the bolt 18 within the enlarged end section 20 of the spindle 3 is inserted within the cut out section of the shuttle in such manner that the head 18' will rest against the under side of the top wall of this cut out section, thus preventing the bolt 18 from rising with the movement of the spindle. In this form of my device, the raising of the spindle 3 will cause the rear end of the enlarged end section 20 of the spindle 3 to be engaged by the bent up end section 15 of the flat spring 14 below the horizontal plane of the shaft 4 thus retaining the spindle in its raised position, and when depressed the bent up end section 15 of the flat spring 14 which fits upon the enlarged end 20 of the spindle 3 will hold the same in its depressed position. In this form of my device, the action of the flat spring 14 in holding a bobbin 27 or cop 28 upon the

spindle 3 is identical with that above described.

Having thus described my invention what I claim is:

- 5 1. In a device of the character described, the combination of a shuttle provided with a central channel, a spindle therein pivoted at one end upon a shaft extending crosswise of the shuttle, a flat spring below one
10 end of the spindle having a bent up section intermediate of its ends to engage a cop upon the spindle and a bent up end section to engage a bobbin substantially as shown and described.
- 15 2. In a device of the character described, a shuttle a spindle therein pivoted at one end upon a shaft extending crosswise of the shuttle, a flat spring below the spindle provided with a bent up forward end section
20 and having a bent up section intermediate

its ends substantially as shown and described.

3. In a device of the character described, a shuttle, a spindle therein, pivoted at one end upon a shaft extending crosswise of the shuttle, a flat spring below the spindle provided with a bent up end section to engage a bobbin upon the spindle and having an engaging section carried by said flat spring intermediate the ends thereof to engage a cop
25 upon the spindle substantially as shown and described. 30

Signed at Fulton in the county of Oswego and State of New York this third day of September A. D. 1909.

JOHN F. DUSTIN.

Witnesses:

E. H. WILSON,
J. R. SULLIVAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
