

(No Model.)

H. A. BATES.

BOBBIN HOLDER FOR SEWING MACHINE SHUTTLES.

No. 505,305.

Patented Sept. 19, 1893.

Fig. 1.

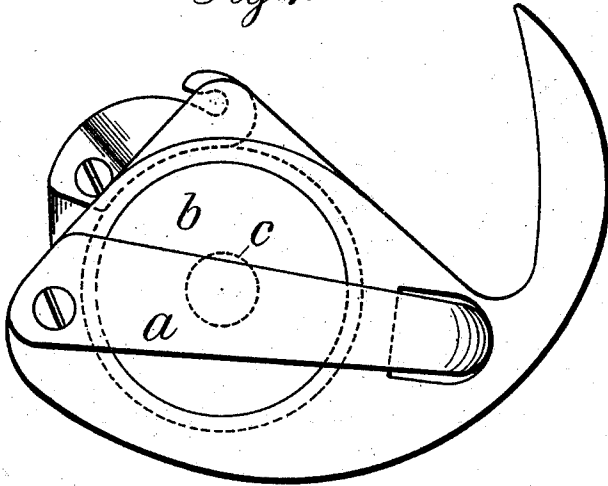


Fig. 2.

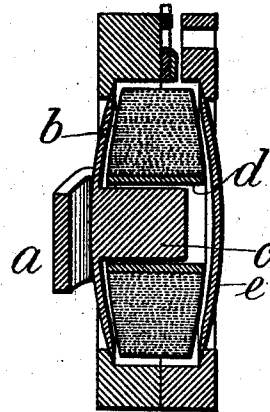


Fig. 4.

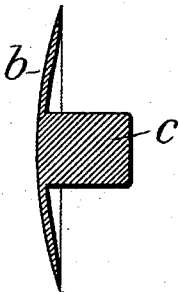
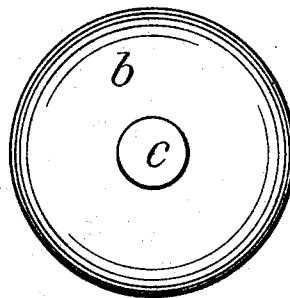


Fig. 3.



Witnesses:
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HENRY A. BATES, OF YONKERS, NEW YORK.

BOBBIN-HOLDER FOR SEWING-MACHINE SHUTTLES.

SPECIFICATION forming part of Letters Patent No. 505,305, dated September 19, 1893.

Application filed November 2, 1892. Serial No. 450,768. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. BATES, a citizen of the United States, residing at Yonkers, in the county of Westchester and State of New York, have invented an Improvement in Sewing-Machine-Shuttle Bobbin-Holders, of which the following is a specification.

Sewing machines have been extensively manufactured in which there is a shuttle that is passed through the loop of needle thread, and my present invention is especially adapted to the rotary or oscillating shuttle made use of in the Singer sewing machines. In this character of shuttle it has heretofore been usual to wind the thread upon a movable metallic shell that can be inserted into or removed from the shuttle, such shuttle being made in two parts that can be opened.

Difficulty has been experienced in this character of shuttle in consequence of the metallic shell containing the thread rotating within the shuttle as the thread is drawn off, and in machines that are run for manufacturing purposes it is found that the metallic shell is worn out with rapidity and also that the shuttle itself is injured and worn by the rotation of the metallic shell within it.

The object of the present invention is to dispense with the metallic shell and prevent the wear resulting from the rotation of the same, and with this object in view I provide a removable disk having a spring edge to hold within the cavity of the shuttle and a cylindrical center pin for receiving and forming the support for the paper tube of a thread bobbin. By this construction the disk closes the opening at one side of the shuttle and also supports the paper tube of the thread bobbin and there is little or no wear upon the shuttle itself, and when desired the disk can be pressed out from its position in the shuttle and the ordinary metallic shell introduced in its stead.

In the drawings, Figure 1 is a side view of the shuttle with my improvement applied to the same. Fig. 2 is a cross section of the shuttle, thread bobbin and disk. Fig. 3 is a face view, and Fig. 4 a section of the movable disk and its center pin, all being of an enlarged size.

The shuttle employed in the Singer machine is usually of the character represented in Figs. 1 and 2, or approximately so, the same being made of two parts pivoted together and capable of being opened, and the spring cross bar *a* is provided at one side of the shuttle, and there is a circular recess within the shuttle adapted to receive the ordinary metallic bobbin or shell, but my invention is not limited to this specific shuttle.

In place of using the metallic bobbin or shell, I provide a disk *b*, the edge of which is slightly dishing and sufficiently thin to be sprung into the cavity of the shuttle and close the otherwise open side of such shuttle, and this disk *b* remains in the shuttle by the friction of the edge thereof but such disk can be pushed out of the shuttle whenever desired. Upon the center of the disk *b* is a pin *c* that is cylindrical and projects so as to receive around it the paper tube *d* of the thread bobbin, such paper tube *d* having the thread wound around it compactly and in a substantially cylindrical form, and this thread bobbin is adapted to fill the cavity of a shuttle and usually contains considerably more thread than can be introduced into the ordinary metallic shell, so that when the shuttle is opened the paper tube of the previous bobbin can be instantly removed and a new thread bobbin introduced, thus not only lessening the time consumed in refilling the shuttle, but saving the time otherwise consumed in winding the thread into the metallic shell heretofore employed, and the thread draws with uniformity from the bobbin and there is little or no wear upon the shuttle in consequence of the rotation of the thread bobbin, because there is no moving metallic device within the cavity of the shuttle to wear the shuttle or to be worn by the shuttle.

It is generally advantageous to employ a thin disk *e* to fill the opposite side of the shuttle cavity to the disk *b*, so as to protect the thread of the bobbin from becoming soiled.

I do not claim removable shells introduced within the shuttle, as two shells each having inwardly projecting teats have been employed within a shuttle. By my present improvement the cylindrical center pin upon one of

the disks forms a supporting axis for the paper tube of the thread bobbin so that the same is always held centrally within the shuttle.

I claim as my invention—

- 5 The combination with a shuttle having a circular cavity, of a removable disk having a spring edge adapted to be held within the cavity of the shuttle by the friction of its edge, and a cylindrical center pin upon such

disk adapted to receive and form the support for the paper tube of the thread bobbin, substantially as set forth.

Signed by me this 28th day of October, 1892.

HENRY A. BATES.

Witnesses:

GEO. T. PINCKNEY,
WILLIAM G. MOTT.