(No Model.)

J. J. CLARK.

SPINDLE FOR WINDING YARN OR THREAD ON CARDS.

No. 405,077. Patented June 11, 1889.

Fig. 1.

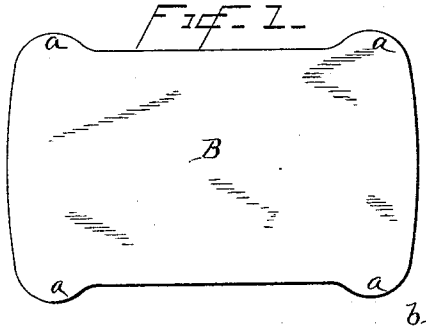


Fig. 2.

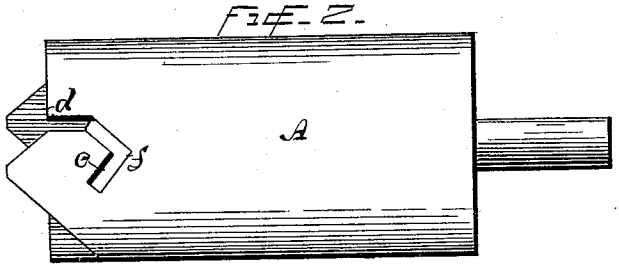


Fig. 3.



Fig. 4.

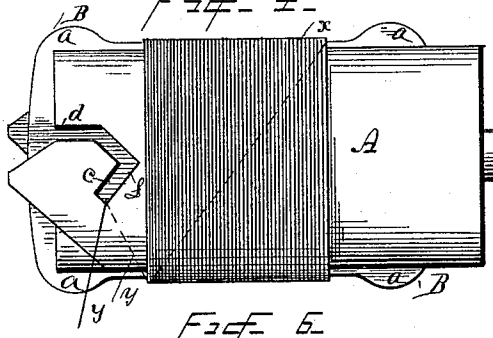


Fig. 5.

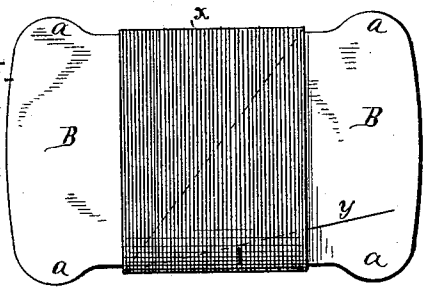


Fig. 6.

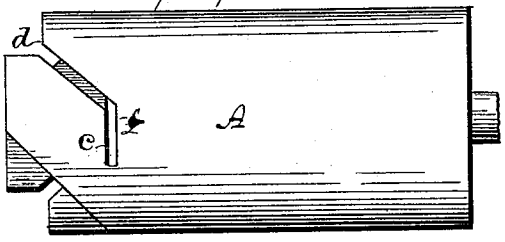


Fig. 7.

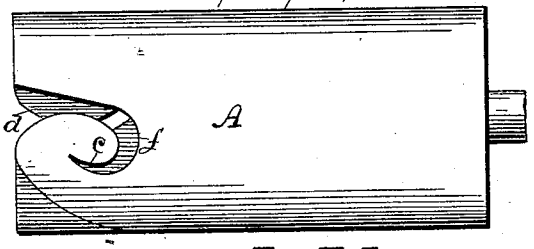


Fig. 8.

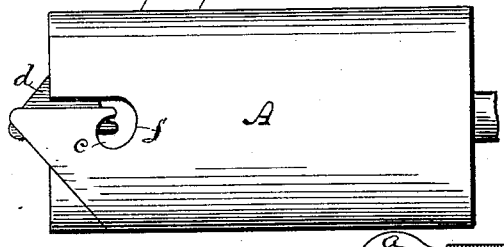


Fig. 9.

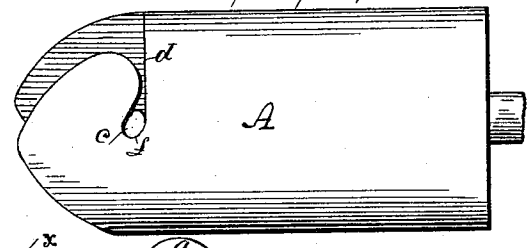
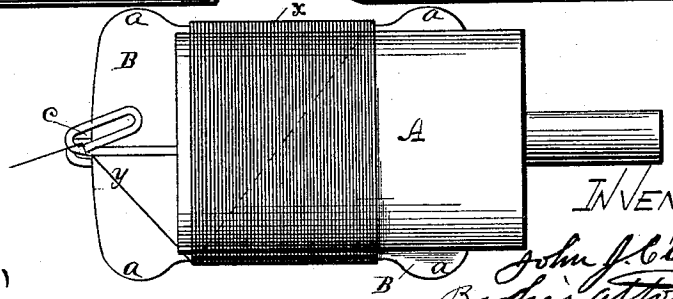


Fig. 10.



WITNESSES.

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UNITED STATES PATENT OFFICE.

JOHN J. CLARK, OF NEW YORK, N. Y.

SPINDLE FOR WINDING YARN OR THREAD ON CARDS.

SPECIFICATION forming part of Letters Patent No. 405,077, dated June 11, 1889.

Application filed November 30, 1888. Serial No. 292,171. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. CLARK, a citizen of the United States, residing in the city of New York, in the county of New York and State of New York, have invented an Improved Spindle for Winding Yarn or Thread on Cards; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, making part of the same.

My invention consists in a preferably split or forked spindle, in which the cards are placed upon which the yarn, thread, or cord is to be wound, one or each fork or side of the spindle having a catch into which the free end of the yarn is caught or inserted, so that when the card is drawn from the spindle the said free end of the yarn, thread, or cord is drawn in between the coils or turns of the same and the card, and thereby neatly fastened without any further manipulation.

In the accompanying drawings, Figure 1 represents a card upon which the yarn is to be wound; Fig. 2, a side view of the spindle which holds and rotates the cards for winding the yarn; Fig. 3, an edge view of the same; Fig. 4, a side view of the spindle and card therein and yarn wound around the same, the broken-off end of the yarn being caught in the catch thereof, ready for the withdrawal of the card from the spindle; Fig. 5, a view of the card with the yarn on it, after the withdrawal of the same from the spindle, and showing the end of the yarn as it is fastened by the act of withdrawing the card from the spindle; Figs. 6, 7, 8, 9, and 10, views showing modified forms of the catch of the spindle for holding the ends of the yarn.

Like letters designate corresponding parts in all of the figures.

The spindle A is thin and of sufficient width to embrace the middle part of a card B, where the yarn *x* is wound on the card, while the card at the ends *a a* is wider than the middle part and wider than the spindle. The spindle has a notch or opening *b* edgewise in it, as shown in Fig. 3, of sufficient width to receive the cards one by one therein in the position shown in Fig. 4. The spindle being rotated, the yarn *x* is wound around both spindle and the card, as shown in Fig. 4. When the required quantity of yarn has been wound on the spindle and card, the unwound extension *y* of the yarn is entered by hand into a catch *c* at the outer or free end of the spindle and broken off, as shown also in Fig. 4. This catch is conveniently formed by notching into the end of the spindle, as at *d*, and forming a kind of hook, as at *f*, laterally from the notch; but I do not limit myself to this manner of making the catch; and in making the catch by thus notching the spindle I do not limit myself to any particular form of notching, but may adopt any one of various forms. I illustrate several modified forms of the catch in Figs. 6, 7, 8, and 9. A notch is generally made in each side or fork of the spindle, although one notch or catch for each spindle will serve the purpose. In Fig. 10 the catch is formed by a wire projecting from the spindle in the form of a loop or hook.

The entering of the yarn into the catch *c* of the spindle is very easily and quickly effected. It may be broken off either after or before entering it into the catch. Then the card, with the wound yarn on it, is slipped from the spindle, and in doing so the catch of the spindle, holding upon the end *y* of the yarn, draws the same under the turns of the wound yarn, as shown in Fig. 5, whereby the same is securely fastened without further manipulation or trouble.

I claim as my invention—

A spindle for winding yarn upon cards, provided with a catch to hold the free end of said yarn, and adapted to draw the same under the turns of the wound yarn when the card is withdrawn from the spindle, substantially as herein set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN J. CLARK.

Witnesses:
WILKIE M. CURTIS,
HARRY F. HUBBARD.