

(No Model.)

E. P. RICHARDSON.

THREAD WAXING DEVICE FOR SEWING MACHINES.

No. 440,327.

Patented Nov. 11, 1890.

Fig. 1.

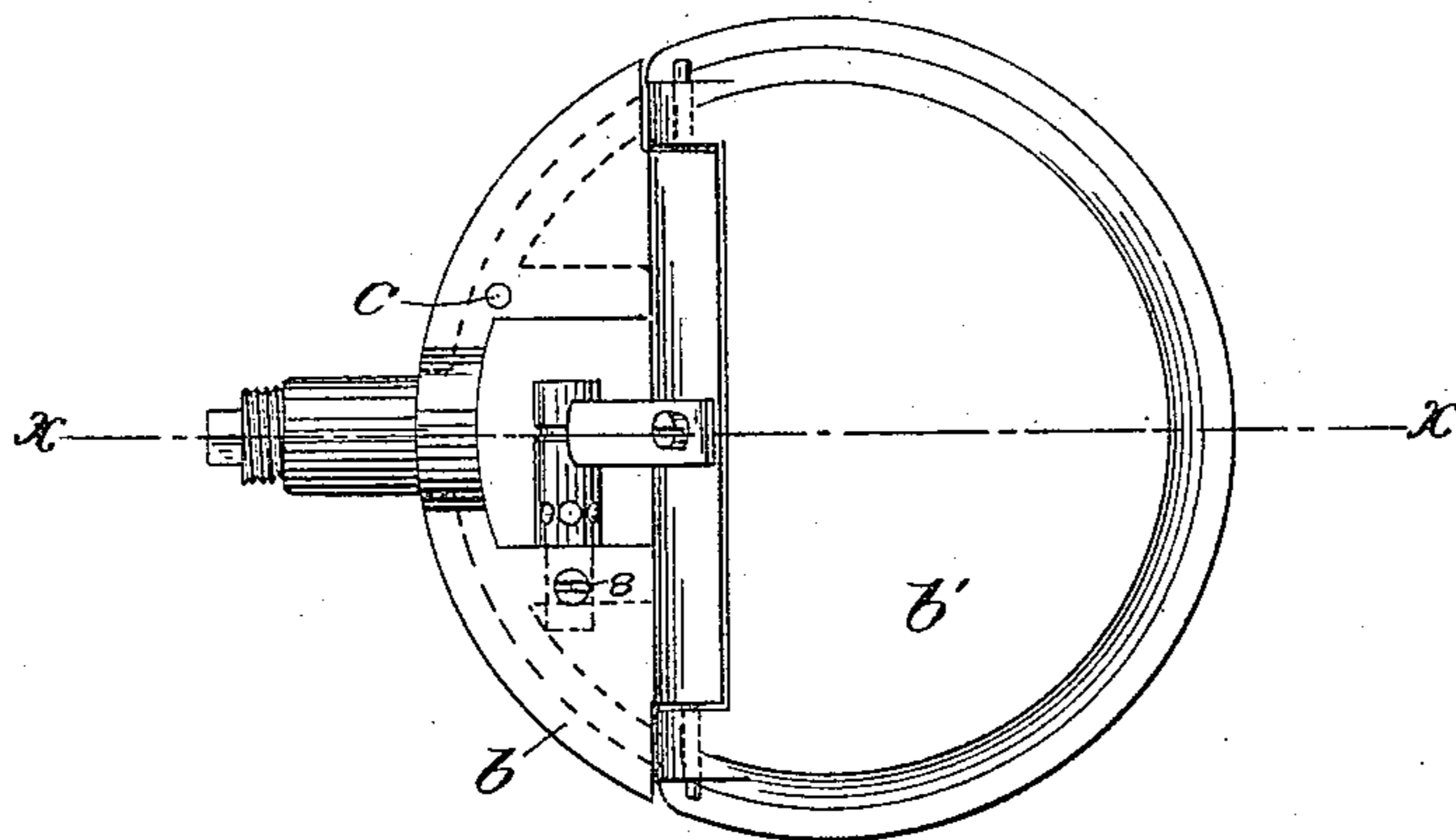


Fig. 2.

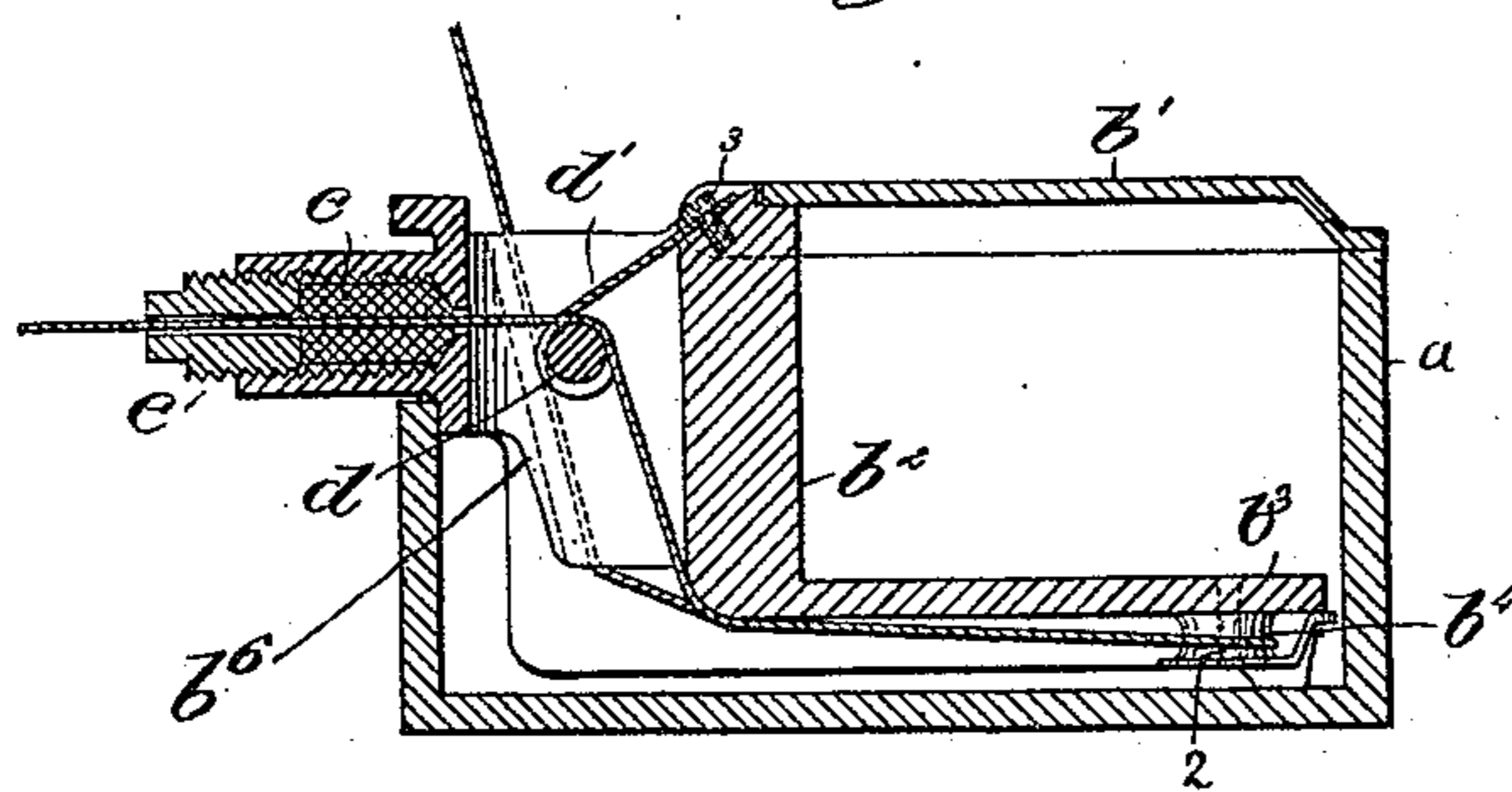


Fig. 3.

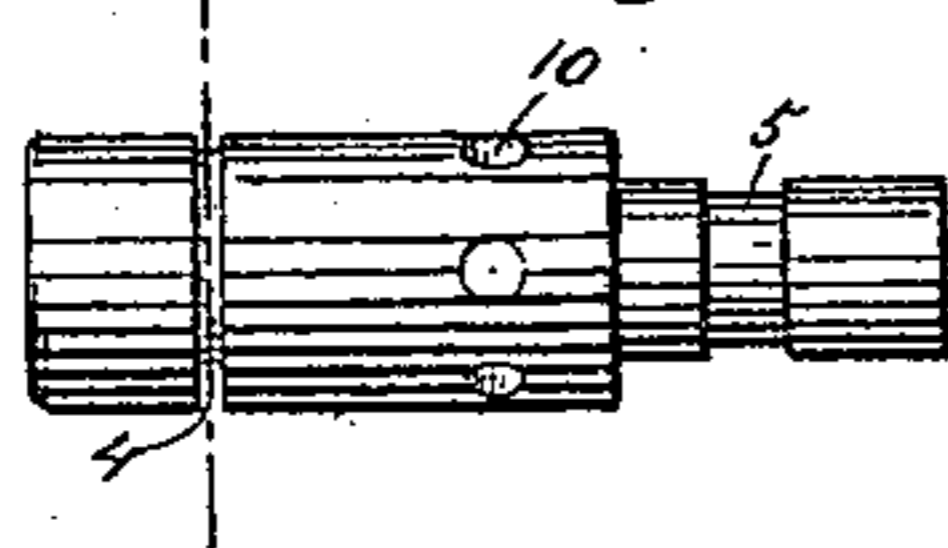
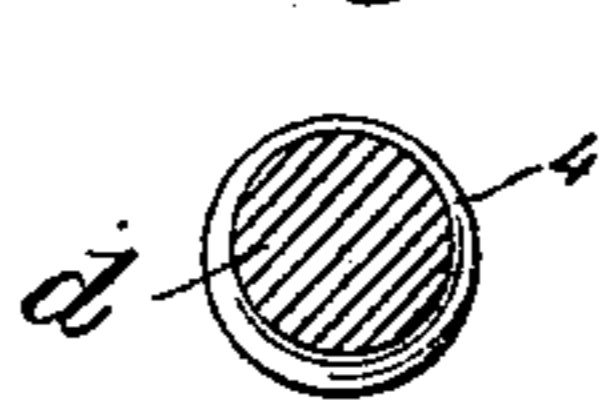


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

EVERETT P. RICHARDSON, OF LAWRENCE, MASSACHUSETTS, ASSIGNOR TO
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THREAD-WAXING DEVICE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 440,327, dated November 11, 1890.

Application filed June 23, 1890. Serial No. 356,350. (No model.)

To all whom it may concern:

Be it known that I, EVERETT P. RICHARDSON, of Lawrence, county of Essex, State of Massachusetts, have invented an Improvement in Thread-Waxing Devices for Sewing-Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

This invention has for its object to provide a waxing apparatus whereby the thread may be thoroughly saturated and the surplus wax be then scraped off, the thread being thereafter smoothed and the remaining wax worked uniformly into its surface.

In accordance with my invention I have combined with the wax-cup a scraper which removes more or less of the wax from the thread which has had a long traverse through the wax-cup before reaching the scraper.

The scraper consists of a stud having an annular groove, preferably of varying depth, and a spring-plate, the rotation of the stud bringing a new portion of the groove uppermost.

Figure 1 is a plan view of the top of the waxing device; Fig. 2, a section in the line x , Fig. 1; Fig. 3, an enlarged detail of the stud forming part of the scraping device; and Fig. 4, a section in the line x' , Fig. 3.

The wax-cup a , but partially shown in Fig. 2, has a top plate b , which, as shown, has a pivoted cover b' . This top plate is shown as provided with a downward extension b^2 , having an arm b^3 , at the under side of which is a stud 2, (shown by dotted lines, Fig. 2,) on which is mounted a sheave b^4 . The top plate has a hole c , down through which the thread to be waxed is led from a suitable ball or bobbin, as now commonly done in wax-thread sewing-machines, the thread being carried down through a hole c in a vertical flange b^6 , depending from the top plate b , and under the lower side of the extension b^2 , about the said sheave, back under the extension, up over the stud d , and out through the smoothing device composed of a plug e , preferably of india-rubber or equivalent material, such

as usually employed to wipe the wax into the body of the thread and smooth the wax uniformly thereon, the said plug being compressed more or less, as desired, by a hollow screw e' , the waxed thread passing in practice from the screw e' to the usual tension device and thread-guide. (Not shown.) The thread by its long traverse through the wax in the cup a becomes thoroughly saturated with wax, and the surplus wax and any adhering particles on the outside of the thread have, for the best results, to be cleared or scraped off before the thread enters the smoothing device e . To do this, the said thread is passed over the stud d and between it and the plate or spring d' , connected, as shown, to the top plate by a screw 3. The stud and plate constitute the thread clearer or scraper. The stud has an annular groove 4, through which the thread is led, and by rotating this stud from time to time a new part of the groove may be brought uppermost. To however provide for adapting the scraper or clearer to threads of different diameter, I prefer to make this annular groove of varying depth, as shown in Fig. 4, so that by rotating the stud a part of the groove of the desired depth may be placed under the spring or plate d' .

To enable the stud to be rotated, as described, I have provided it with an annular groove 5, which is entered by a set-screw 8 to lock it in place, the stud having a series of holes 10, which may, if desired, be numbered in succession from the shallow to the deep parts of the groove 4, to thus enable the operator to readily know the part of the groove which is under the plate or spring.

I claim—

1. The wax-cup having the depending flange b^6 and downward extension b^2 and the horizontally-extended arm b^3 and the horizontally-rotated sheave mounted on the said arm b^3 near that side of the wax-cup farthest from the opening c , through which the thread is laid into the wax-cup, combined with a scraper in the said wax-cup, composed of an annularly-grooved stud and a plate d' , and

with a smoothing device to act upon the thread beyond the scraper, all substantially as shown and described.

2. The combination, with a wax-cup, of a
5 scraper or clearer composed of a rotatable stud having an annular groove of varying depth and a plate d' , to operate substantially as described.

In testimony whereof I have signed my name to this specification in the presence of 10 two subscribing witnesses.

EVERETT P. RICHARDSON.

Witnesses:

JOHN R. POOR,
GRACE B. ABBOTT.