

(No Model.)

L. A. MILLER.

BOBBIN OR UNDER-THREAD CASE FOR SEWING MACHINES.

No. 601,837.

Patented Apr. 5, 1898.

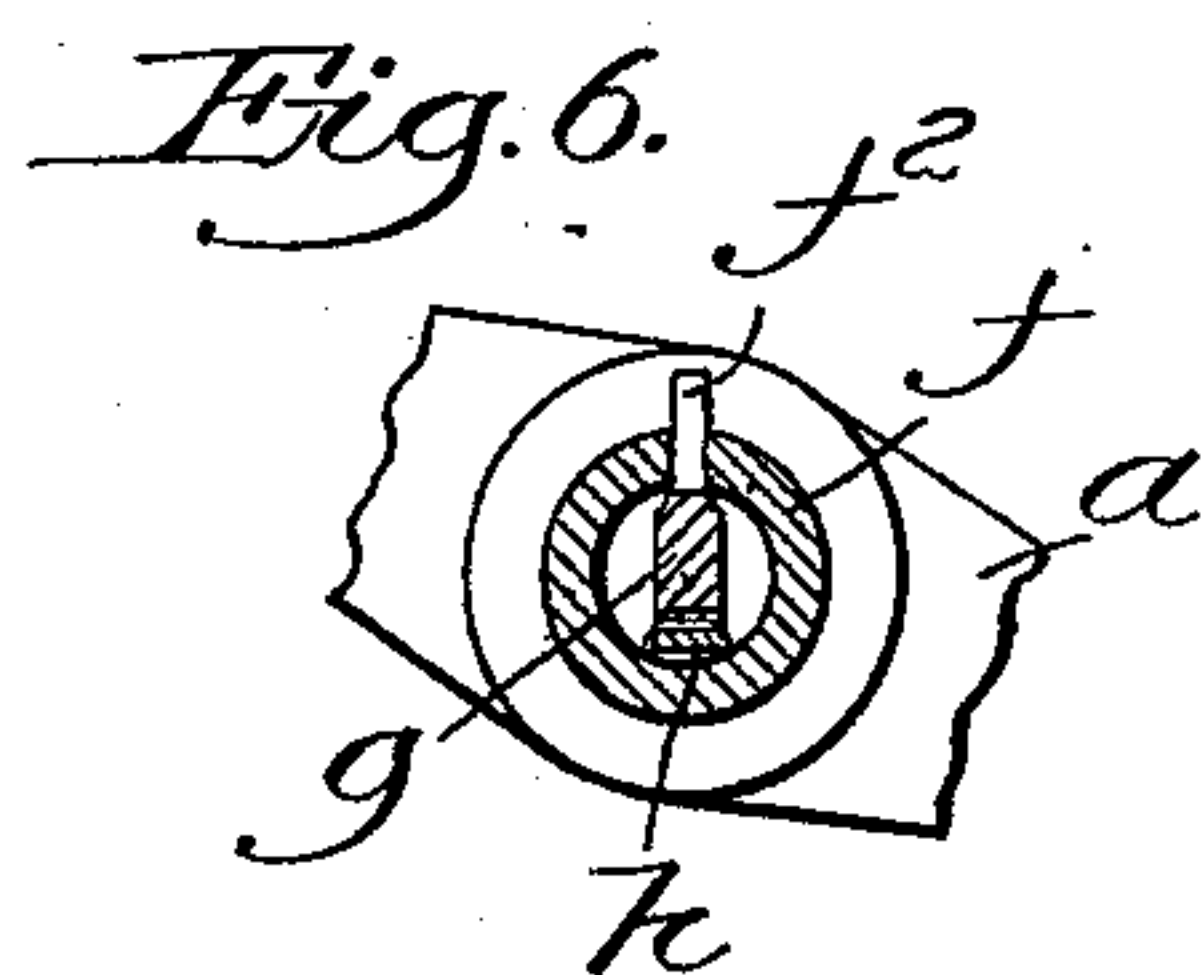
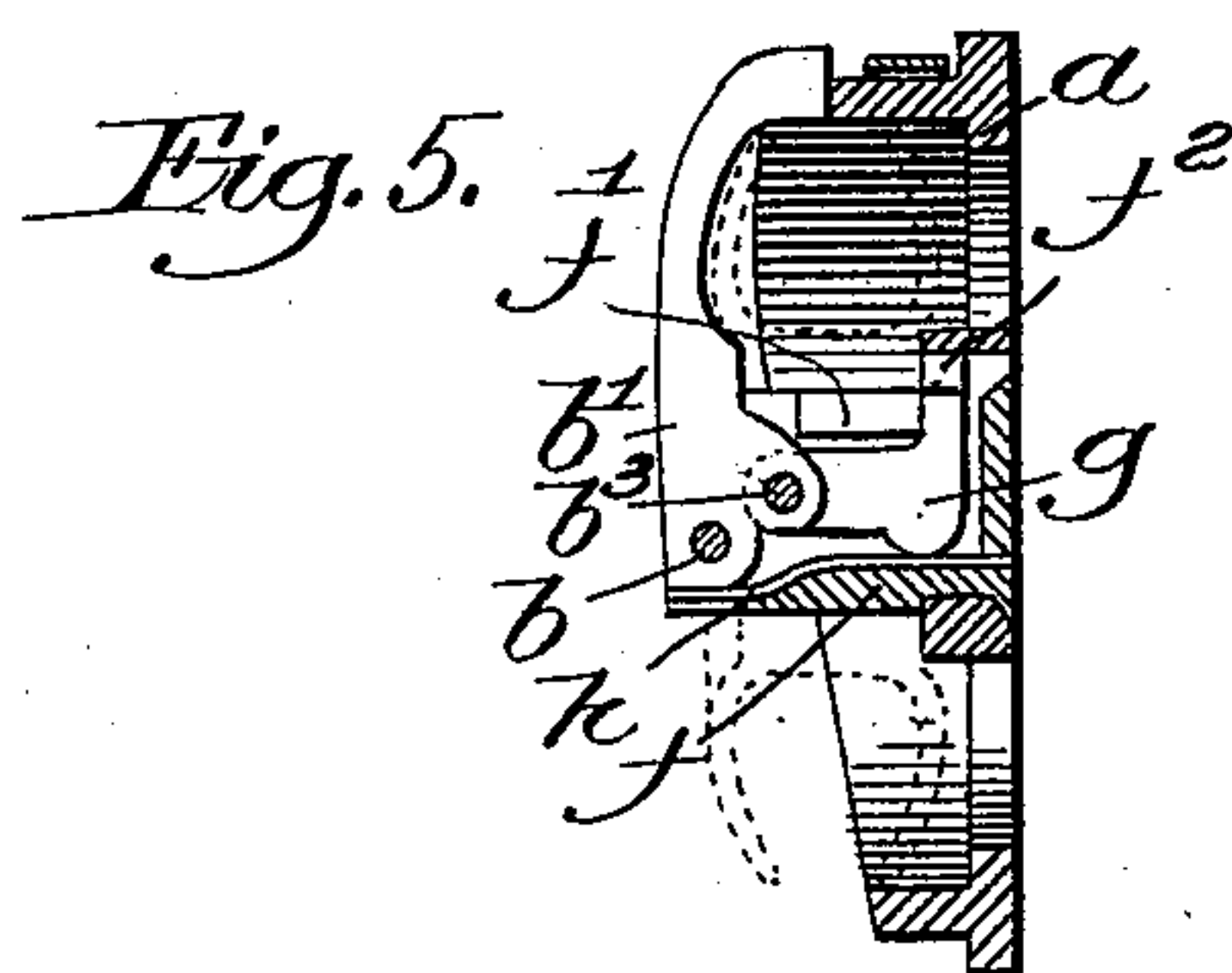
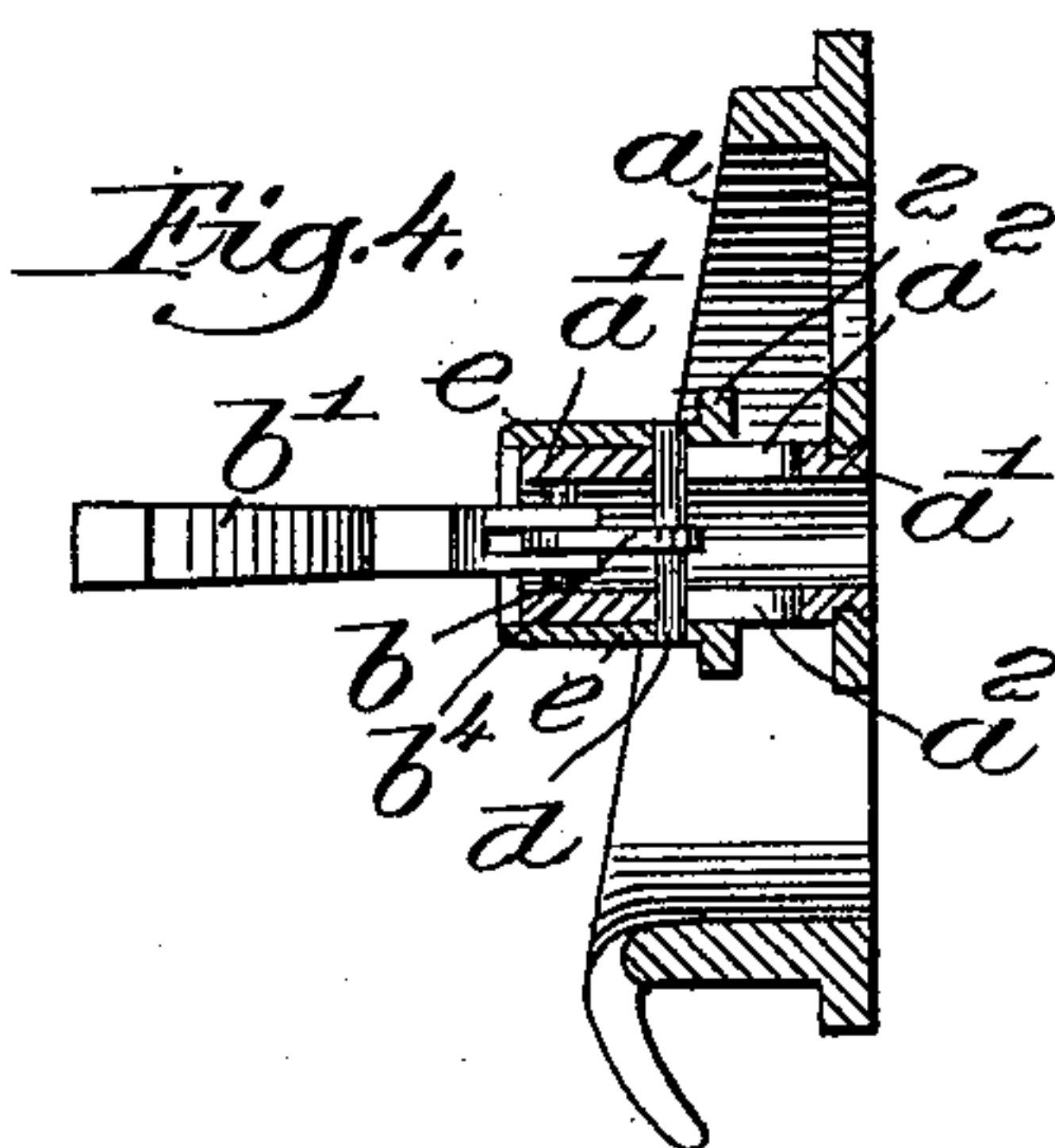
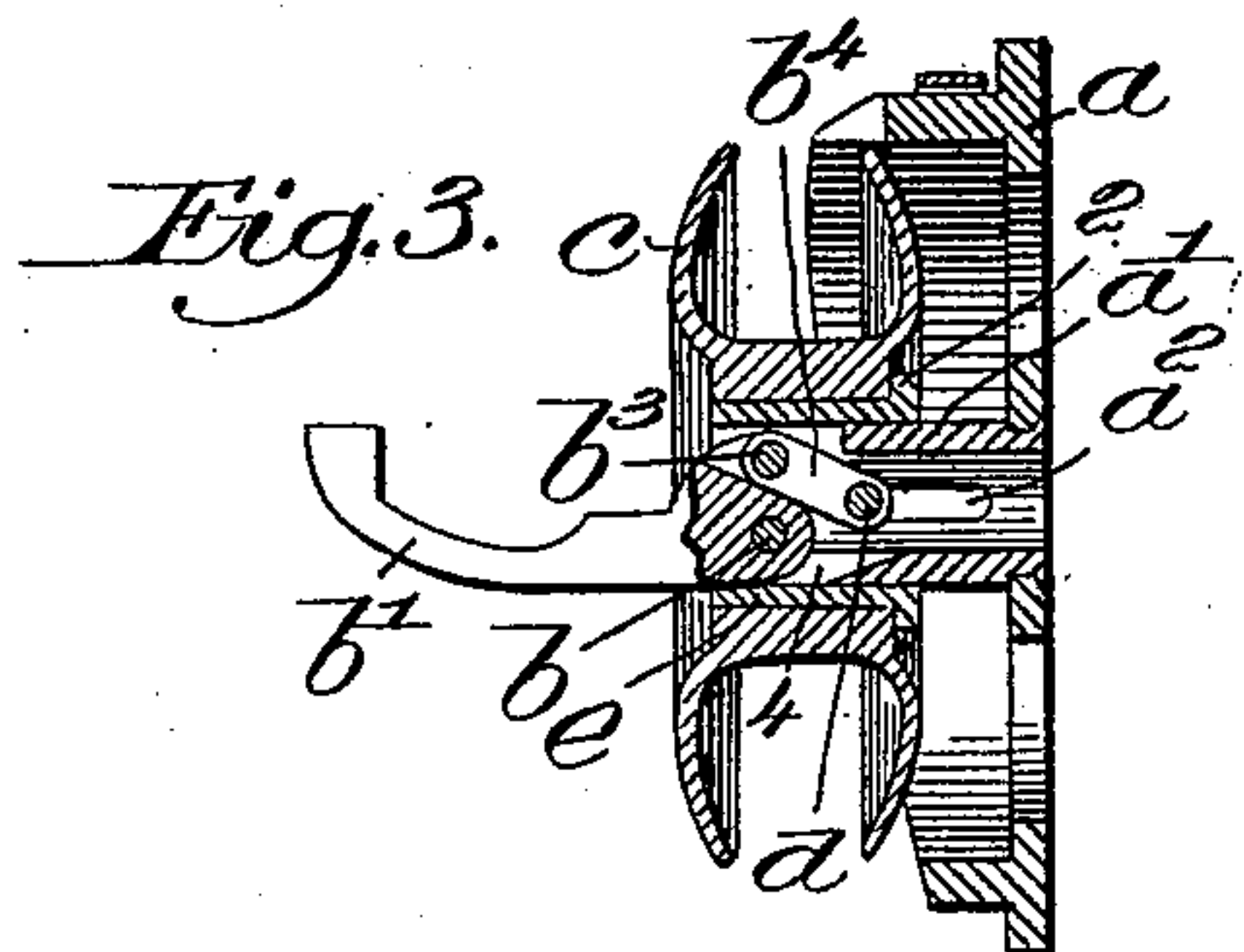
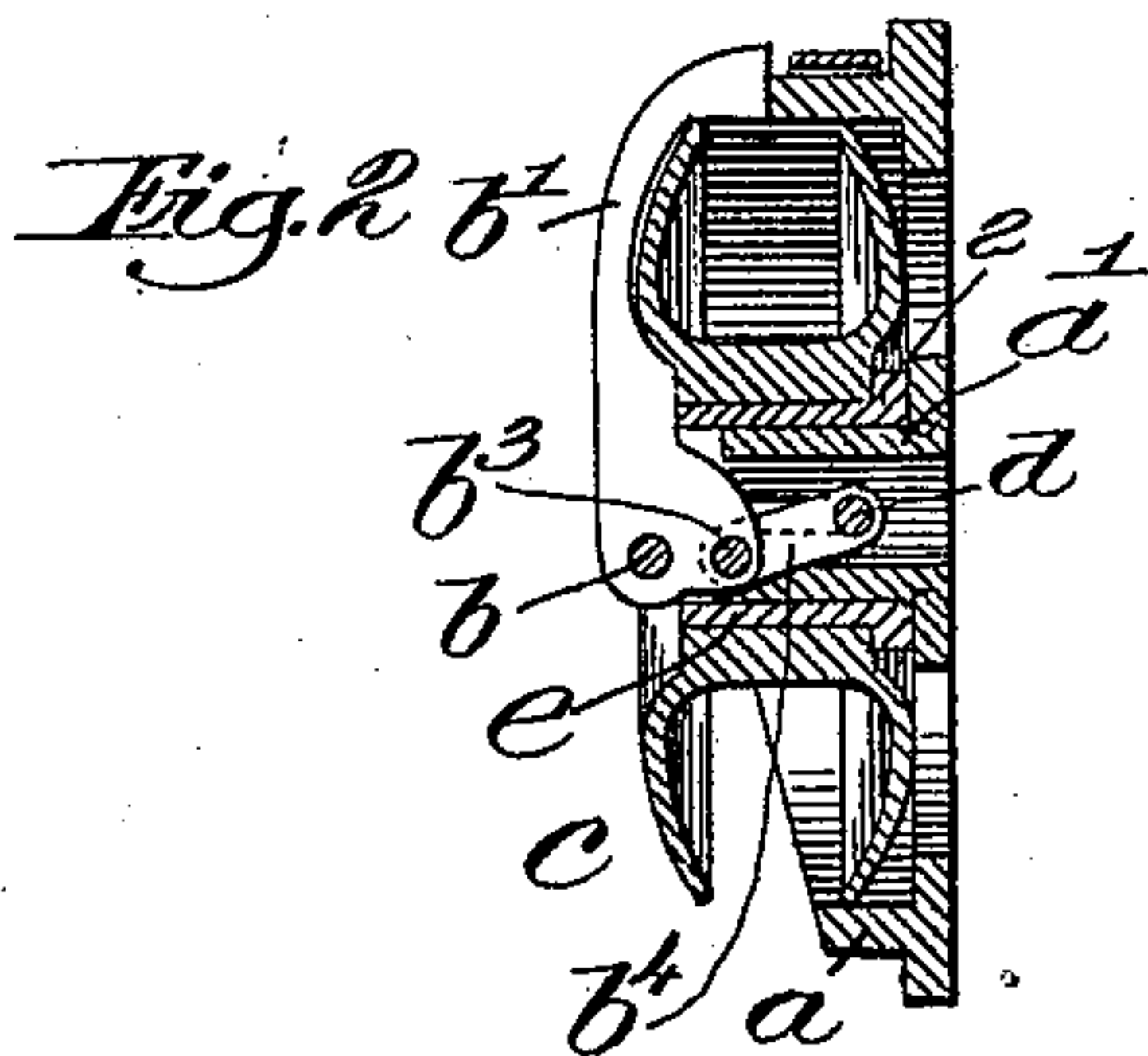
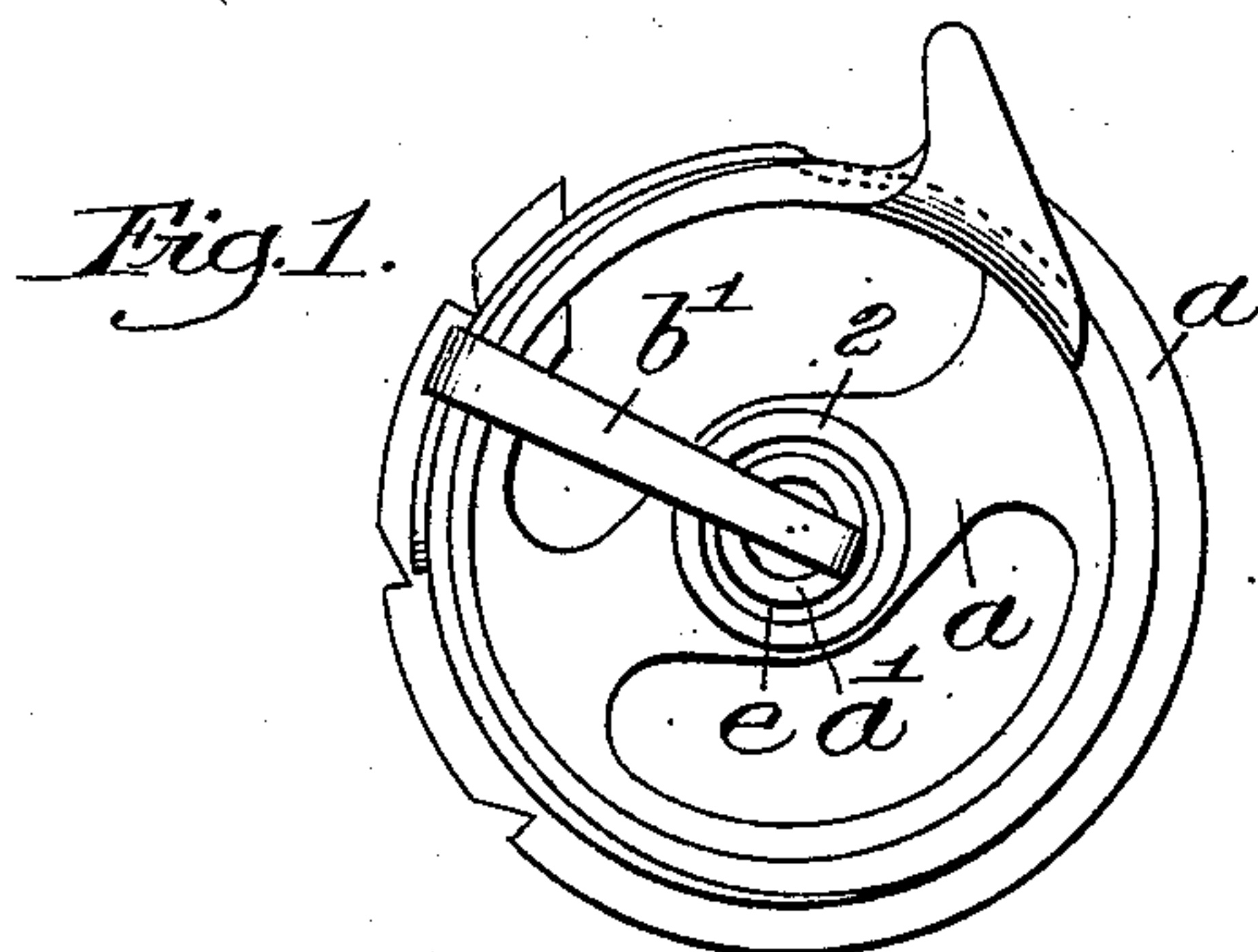
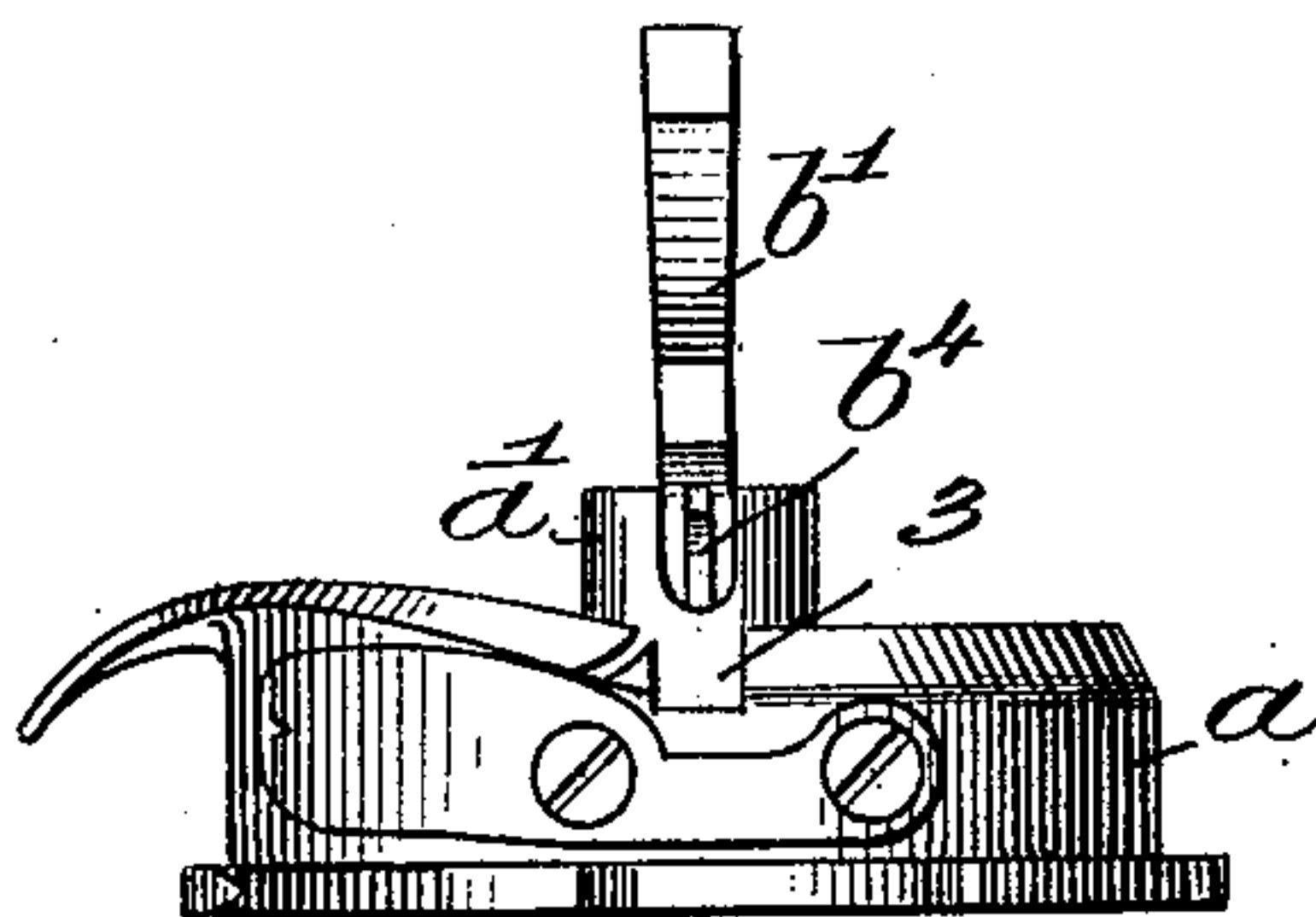


Fig. 4a



witnesses:

Thomas J. Drummond
Fred S. Gumbaf.

Inventor:

L. A. Miller
by Stanley Gregory, attys.

UNITED STATES PATENT OFFICE.

LEE A. MILLER, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO THE WHEELER & WILSON MANUFACTURING COMPANY, OF BRIDGEPORT, CONNECTICUT.

BOBBIN OR UNDER-THREAD CASE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 601,837, dated April 5, 1898.

Application filed June 18, 1897. Serial No. 641,263. (No model.)

To all whom it may concern:

Be it known that I, LEE A. MILLER, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented an Improvement in Bobbin or Under-Thread Cases for Sewing-Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters and numerals on the drawings representing like parts.

This invention relates to improvements in bobbin-cases for use in rotary loop-takers or shuttles, my improvements being directed more especially to the addition thereto of devices whereby the bobbin may be started outwardly mechanically when desired.

In accordance with my invention I have combined with the centrally-located stationary hollow post fast with relation to the back of the bobbin-case or extended from said back into the center of the case a bobbin-starter having a shoulder or projection which may be moved longitudinally with relation to said post by or through the action of a link occupying a position within said post and loosely connected with a suitable lever which is pivotally mounted on said post, the construction of said parts being such that when the free end of said lever is turned outwardly with relation to the bobbin and bobbin-case the projection of the starter coöperating with the inner end of the bobbin will act to start the bobbin out of the case, leaving the head of the bobbin in position to be readily engaged by the operator to be withdrawn from the post, the said bobbin while being taken completely from the bobbin-case passing over the lever.

Figure 1, in front elevation, represents a bobbin-case with my improvements added, the bobbin being removed. Fig. 2 is a sectional detail of the bobbin-case and its contained bobbin. Fig. 3 shows the parts with the bobbin-starter in its outer position. Fig. 4 shows a section of the parts represented in Fig. 3, but with the bobbin removed; Fig. 4^a, a side elevation of the bobbin-case of Fig. 3. Fig. 5 represents the bobbin-case in section with a starter somewhat modified in construction, the starter and the actuating-lever being

closed; and Fig. 6 is a cross-section showing the post and starter of Fig. 5.

The thread or bobbin case *a* and the bobbin *c* are and may be substantially such as represented by like letters and numerals in United States Patent No. 480,181, dated August 2, 1892.

The bobbin-case has a central hollow post *a'*, notched at its outer end and slotted oppositely at its two sides, as at *a*². The notch in the outer end of the post receives a pivot *b*, upon which is mounted the head of a lever *b'*. This lever has pivoted to it at *b*³ a link *b*⁴, and the inner end of this link, which is extended inside the post, is made to embrace the lifting-pin *d*, the ends of which are extended through the slots *a*² in the post, said pin entering the bobbin-starter *e*. This bobbin-starter is in Figs. 1 to 4^a represented as a sleeve provided near its inner end with a projection 2, against which rests the inner end of the bobbin *c* when the bobbin is in position about the post.

When the bobbin-case is in use, the bobbin will be well in the case and the lever *b'* will occupy such a position as to prevent the escape of the bobbin from the post. In Figs. 1 and 2 this lever is shown of a length to extend substantially across the outer face of the bobbin, and the free end of the lever enters a notch 3 (see Fig. 4^a) in the edge of the side wall of the bobbin-case.

When the bobbin is to be started out of the bobbin-case, the operator will engage and turn the lever *b'* and in so doing will move the starter *e*, causing it to be moved outwardly on the post, the projection 2 of the starter by its contact with the bobbin starting it outwardly on the post, leaving the outer head of the bobbin in the position to be engaged by the fingers of the operator, so that the bobbin may be taken off the post. In removing the bobbin from the bobbin-case while the lever is turned outwardly, as represented, the bobbin will be passed off over the said lever.

This invention is not limited to the exact length shown for the lever nor to the exact shape shown for the starter, for so far as I

am aware I am the first to apply to the post of the thread-case a movable device accessible at the outer face of the bobbin to act against the bobbin and remove it from the open face
5 of the thread-case.

The post *a'* (see Figs. 2 and 3) is also notched, as shown at 4, to leave a space in which may enter and lie the link *b*⁴ when the lever is in its closed position. (See Fig. 2.)

10 Referring to Figs. 5 and 6, illustrating a modification of my invention, the post *f* has a slot *f'*, and the projection *f*², constituting the starter for the bobbin, is extended through the said slot, so as to occupy a position under
15 the end of the bobbin. The projection *f*² in Figs. 5 and 6 is shown as forming a part of the link *g* instead of being in a separate piece from the link, as in Figs. 2 and 3.

In Figs. 5 and 6 a spring *h* acts to keep the
20 lever closed or open.

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

1. A bobbin-case having a post and a lever
25 mounted on said post, combined with a starting device having a projection to engage the bobbin surrounding said post, and connections between said lever and starting device to start said bobbin outwardly on said post,
30 substantially as described.

2. A bobbin-case having a post, a starting device presenting a projection outside said post, and a bobbin surrounding said post, and a lever mounted on said post, combined with a link which in the movement of said lever
35 operates said projection, substantially as described.

3. A bobbin-case having a post, a starting device made as a sliding sleeve having a pro-
40 jection, and a bobbin mounted on said sleeve, combined with a lever mounted on said post, and having a link connected with and operating said sleeve, substantially as described.

4. A bobbin-case having a post, a starting device made as a sliding sleeve having a pro-
45 jection, and a bobbin mounted on said sleeve, combined with a lever mounted on said post, and having a link connected with and operating said sleeve, said lever being long enough to overlap the bobbin from its center to the
50 edge of the bobbin-case, the end of the lever entering a notch of the said case, substantially as described.

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

LEE A. MILLER.

Witnesses:

GUSTAV LEUPOLD,
A. A. WIEBER.