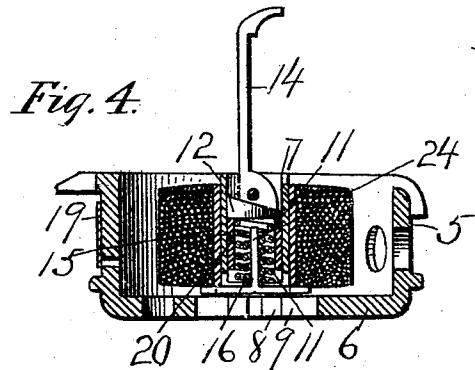
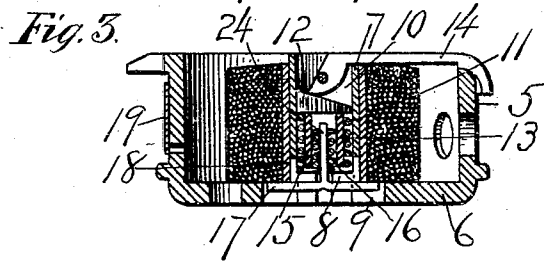
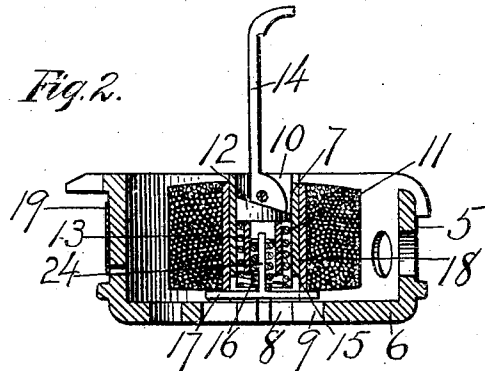
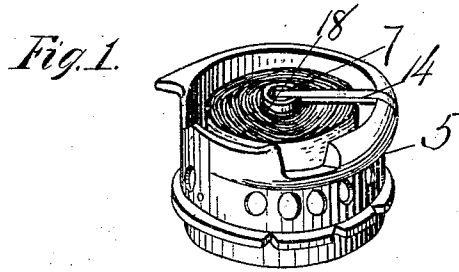


L. E. WEAVER.
BOBBIN CASE.

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939,647.

Patented Nov. 9, 1909.



Witnesses:

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UNITED STATES PATENT OFFICE.

LUCIUS E. WEAVER, OF EAST HAMPTON, CONNECTICUT.

BOBBIN-CASE.

939,647.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LUCIUS E. WEAVER, a citizen of the United States, and a resident of East Hampton, in the county of Middlesex and State of Connecticut, have invented a new and Improved Bobbin-Case, of which the following is a specification.

My invention relates more especially to that class of devices used in sewing machines for supplying thread in the sewing operation, and the object of the invention is to provide a device of this class having numerous novel features of advantage and utility.

Among the different devices in the use of which the objects above set out may be attained two are illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a bobbin case embodying my invention. Fig. 2 is a view in central longitudinal section through the same, the latch being shown as raised. Fig. 3 is a like view, the latch being shown in a closed position. Fig. 4 is a similar view but showing a slightly modified form of construction, the latch being in its raised or open position.

In the use of devices of this class, the rapid movement of the parts of the sewing machine which draw the thread from the bobbin will cause the bobbin to "overrun", that is, unwind the thread from the bobbin faster than it is withdrawn from the case or taken up by said parts. This loosening of the thread on the bobbin will allow it to locate itself next to the end of the bobbin case, so that the next time the thread is drawn taut, it will be drawn down between the bobbin and the bobbin case, thus preventing the unwinding of the thread and causing the latter to be broken. In order to obviate this difficulty devices have been employed for restraining the rotary movement of the bobbin within the case. The device shown herein embodies such a construction and one in which the full capacity of the bobbin case may be utilized to contain the bobbin and the bobbin may thus contain a maximum amount of thread.

In the accompanying drawings the numeral 5 denotes the bobbin case of the usual cup shape, having a bottom 6. A post 7 rises from the bottom 6, this post being tubular and having at its lower end a slot 8 registering with a slot 9 in the bottom 6 of the

case and preferably extending to the end of the post. The post is shown herein as composed of a separate piece of metal and secured to the bobbin case, this being a convenient form of construction, but I do not necessarily limit myself to such means.

The bottom of the chamber 10 in the post 7 terminates near the lower end and a plunger or latch operating spring 11 is seated upon the bottom of the chamber and presses with its upper end against a head 12 of a hollow plunger 13. A latch 14 is pivoted within the post, the plunger 13 pressing against the end of this latch, the meeting surfaces of the latch and head being so formed that the pressure of the spring will hold the latch either in its opened or closed position.

A presser is located preferably at the bottom of the case in position to rest against the end of the bobbin and in the preferred form of construction and as shown herein this presser consists of a T-shaped piece having a stem 24 located within the post, and in the form of construction shown in Figs. 2 and 3 within the plunger 13. A pin 15 projecting through the upper end of the stem lies against a presser spring 16 located within the plunger 13, the opposite end of the spring resting against the bottom of the chamber in the post. A branch or branches 17 extend from the stem 24, these branches projecting laterally in diametrically opposite directions and being located in the slots 8 and 9, these branches extending sufficiently to underlie the core 18 of the bobbin. When the latch 14 is in its closed position the bobbin is forced downward against the branches 17 of the presser, and if the bobbin completely fills the spaces within the shuttle case as is the intention, these branches of the presser will be located in the grooves 9 in the shuttle case. It will be seen that should the bobbin not quite fill the space provided for it these branches of the presser will still rest against the bottom of the bobbin, exerting a sufficient pressure upon it to prevent its overrunning as the thread is drawn from it. In case the bobbin should be slightly thicker than the space provided for it, so that some tension on the thread is created thereby, the tension device 19 may be released sufficiently to compensate for such. By thus locating the presser so that its arms are operatively positioned within the wall of the bobbin case,

the caps or shell heretofore provided for the core may be dispensed with and also the tension devices heretofore inserted between the end of the shell and the bobbins may be omitted. This enables the bobbin to be formed of a size to completely fill the case and enables more thread to be placed upon a bobbin than in instances where the length of the bobbin must be less in order to provide for these tension devices.

In the form of the device shown in Fig. 4 the bobbin case and post are constructed as hereinbefore described. The plunger 20, however, is formed to inclose both the presser spring 16 and the plunger or latch operating spring 11. Otherwise the parts are the same construction as hereinbefore described.

While I have shown and described herein one means of practicing the invention, I do not limit or confine myself to the form of construction shown herein, as it may be departed from to a greater or lesser extent without avoiding the invention.

In the form of the device shown in Fig. 4 of the drawings the springs are shown as coiled in different directions, this being the preferred form of this construction as it prevents the springs from interfering one with the other in their expansive and contracting action, but the springs if desired may be relatively coiled in other directions without avoiding the invention.

I claim—

1. A bobbin case having an end wall with a recess therein, a presser located in said recess, means located outside of said recess for exerting force against the presser to force it against the bobbin when the latter is locked in the case, means for supporting the bobbin within the case, and means for locking the bobbin in the case.

2. A bobbin case having an end wall with a recess therein, a presser located within said recess, a spring located outside of said recess and arranged to force the presser against the bobbin when the latter is located in the case, means for supporting the bobbin within the case, and means for locking it in position.

3. A bobbin case having a slot formed in its end wall, a presser including a stem having a branch located within said slot, a spring exerting force upon said stem to press said branch against a bobbin when the latter is locked in the case, means for sup-

porting a bobbin within the case, and means for retaining the bobbin in position.

4. A bobbin case, a bobbin supporting post located within the case, the latter having a recess for a presser, a presser having a stem extending within said post and a branch projecting through the post into the recess in the case in position to underlie a bobbin, a spring located within the post to continually force the presser against a bobbin in the case, and means for retaining the bobbin in the case.

5. A bobbin case having a slot extending through its bottom, a post extending from the bottom of said case and having a slot registering with the slot in the case, a presser including a stem located within the post and a branch located in said slots, a spring to continually retain the presser against a bobbin in the case, and means for retaining a bobbin in the case.

6. A bobbin case, a post projecting from the bottom of the case, a presser located within said post and having a branch extending into a recess in the case, means for continually forcing the presser against a bobbin, a plunger located within the post, and a latch in operative engagement with said plunger and for holding a bobbin in position.

7. A bobbin case, a post projecting from the bottom of the case, a presser having a branch located in a recess in said case and a stem located within said post, a spring located within said post for forcing the presser against a bobbin, a plunger, a plunger spring to operate upon said plunger, and a latch operatively engaging said plunger and arranged to hold a bobbin in place.

8. A bobbin case having a slot in its bottom, a post projecting from the bottom of the case and having a slot, a presser having a stem located within said post and a branch located within said slot, a presser spring located within the post to operate upon the presser, a tubular plunger surrounding said presser spring, a plunger spring located outside of the plunger, and a latch operatively engaging the plunger and arranged to hold the bobbin in place.

LUCIUS E. WEAVER.

Witnesses:

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