

No. 891,028.

PATENTED JUNE 16, 1908.

C. B. ATWOOD.
BOBBIN HOLDER FOR SEWING MACHINES.

APPLICATION FILED DEC. 14, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

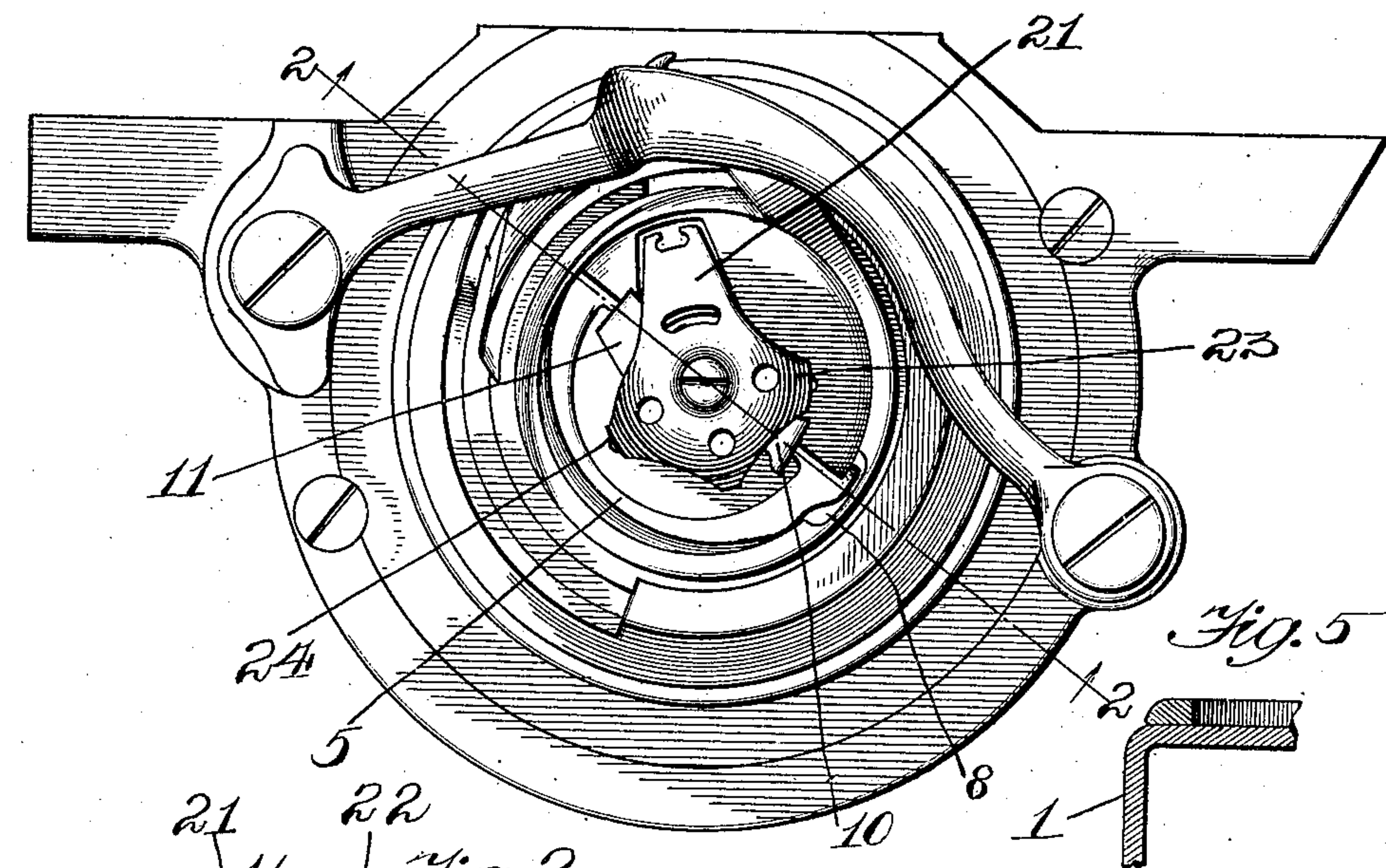


Fig. 5.

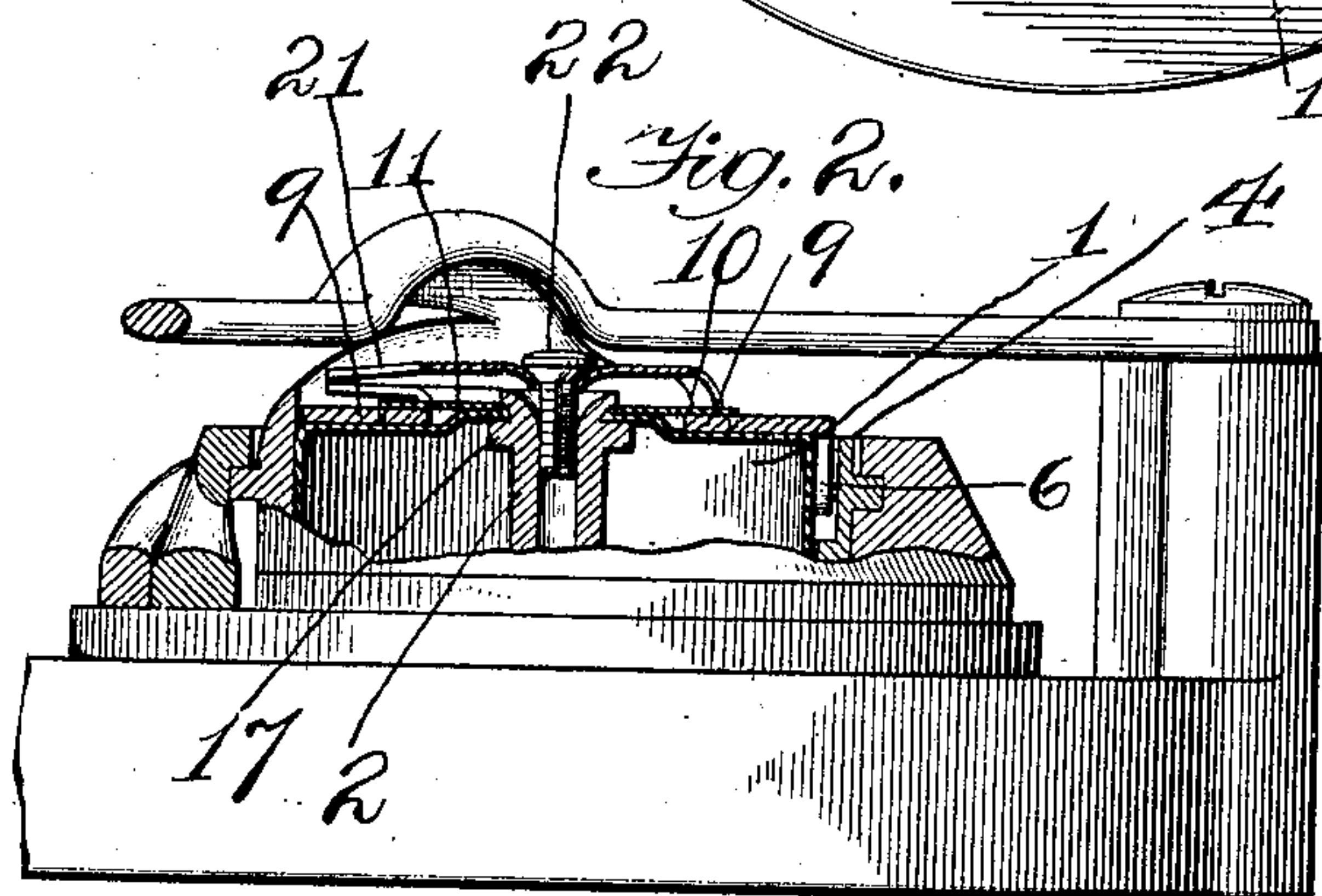


Fig. 2.

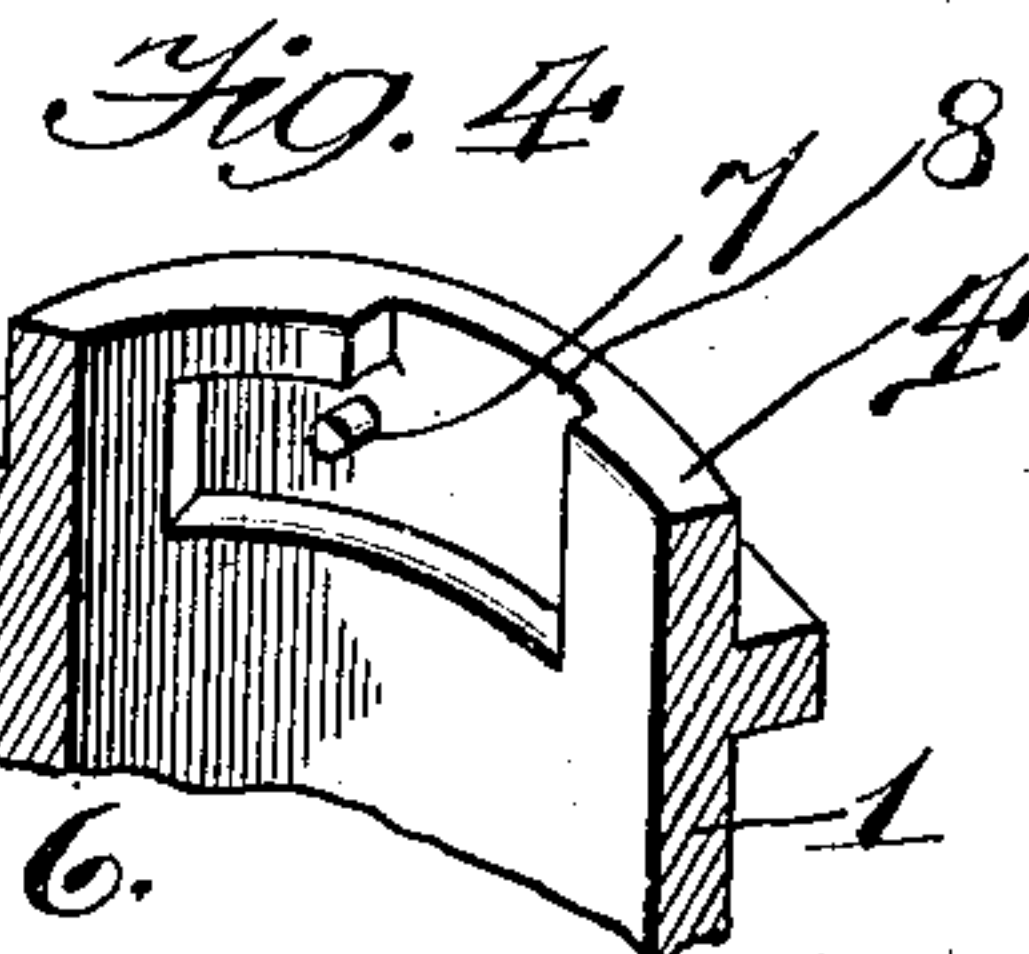


Fig. 4.

Fig. 6.

Fig. 7.

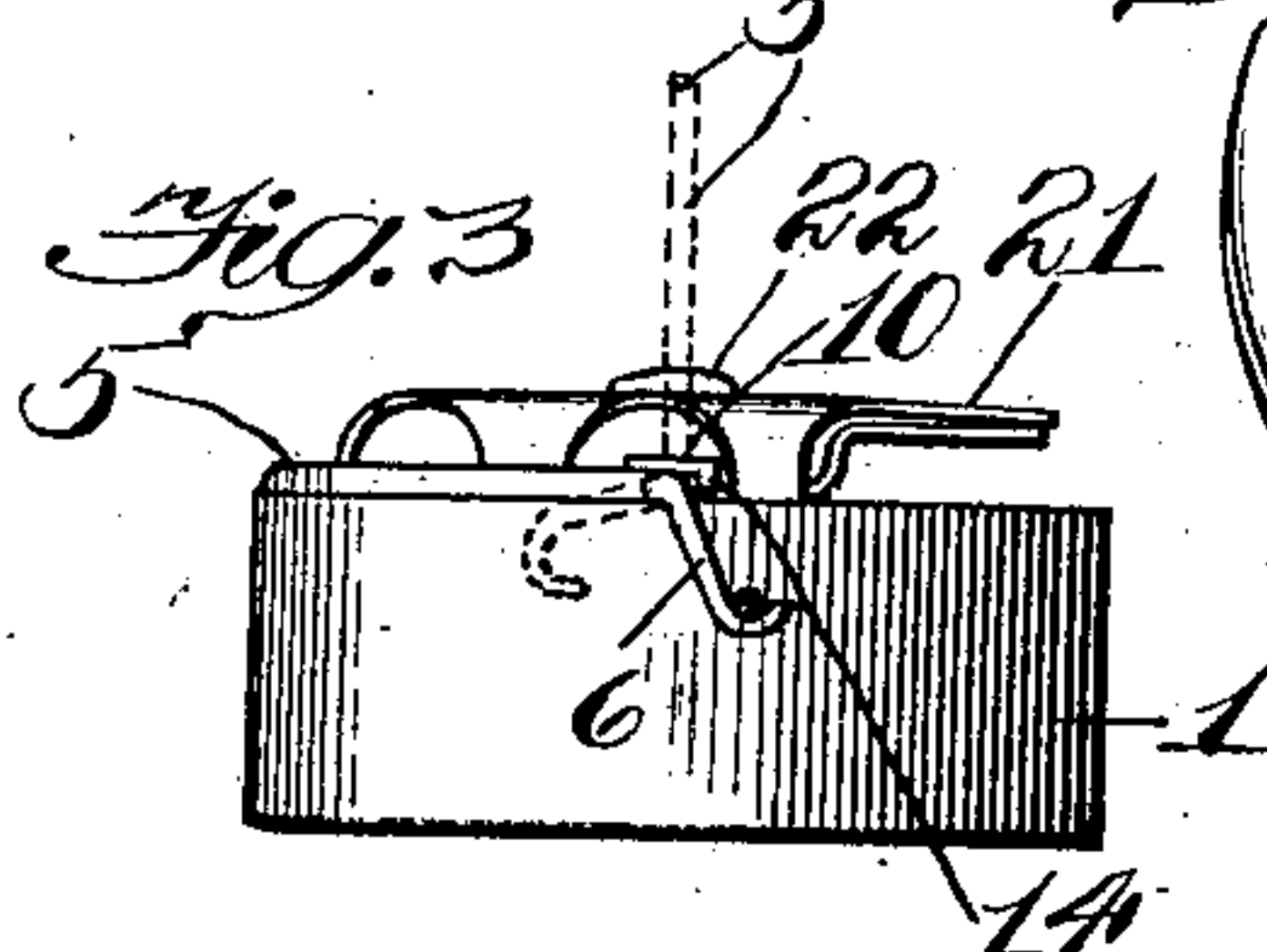
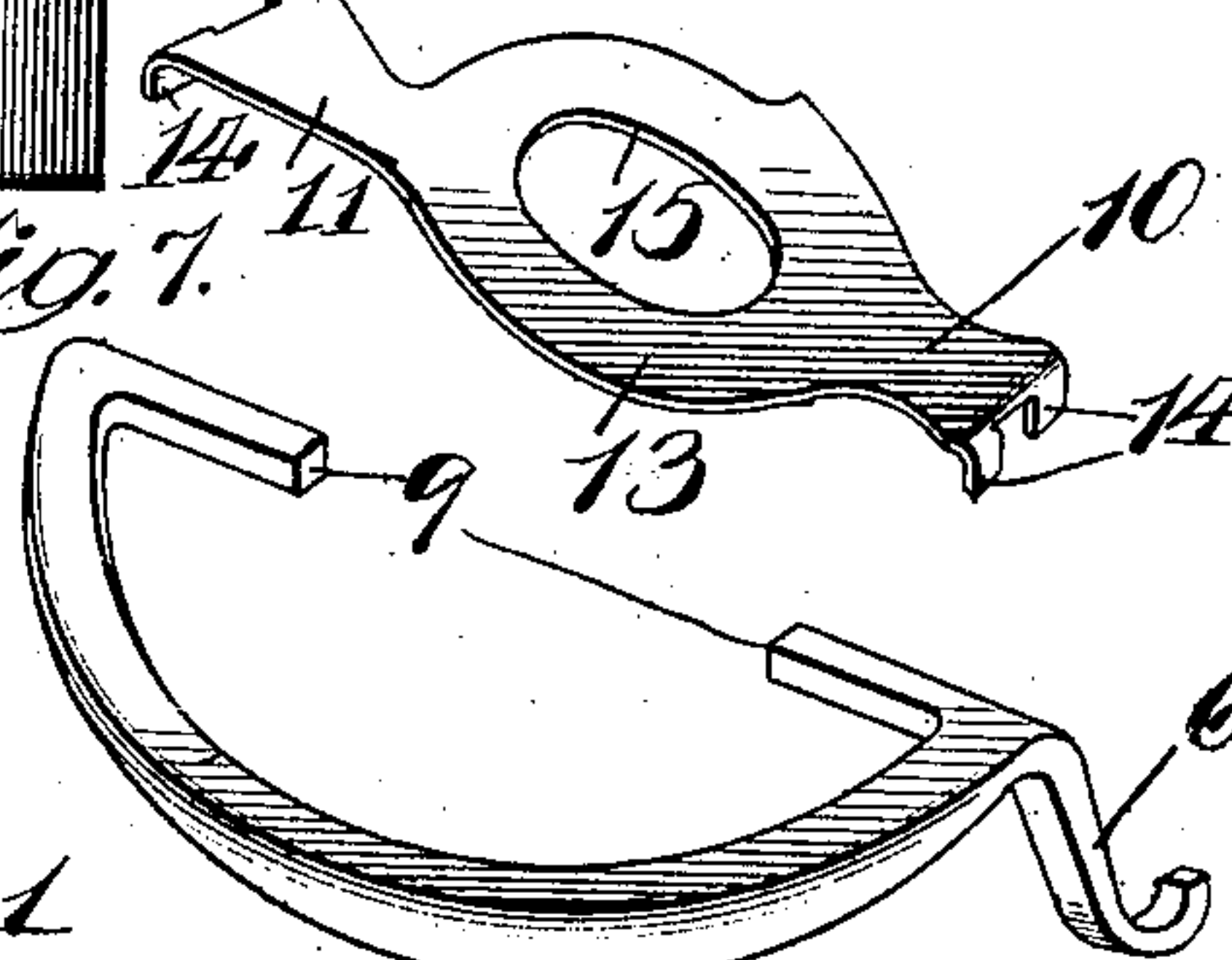


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 8.

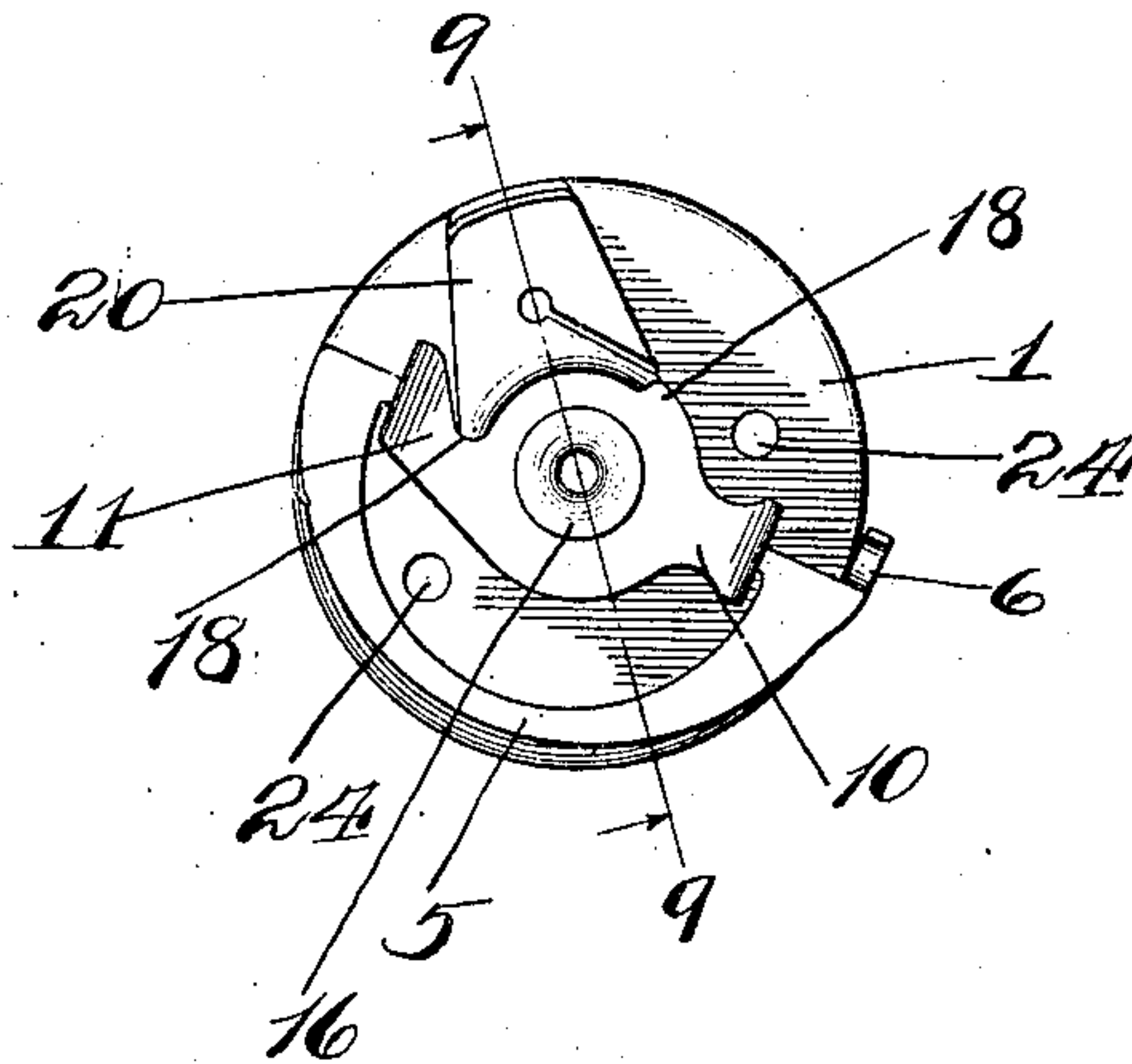


Fig. 9.

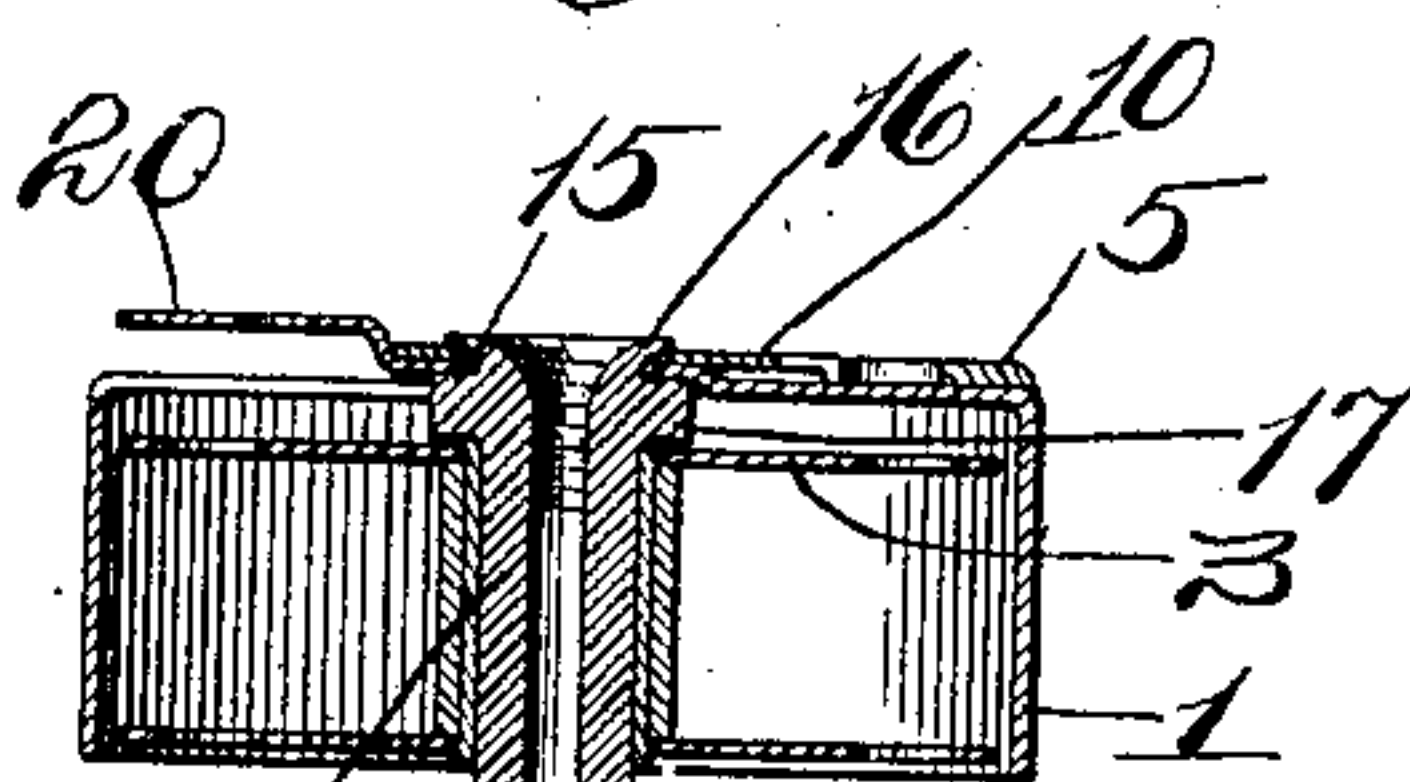
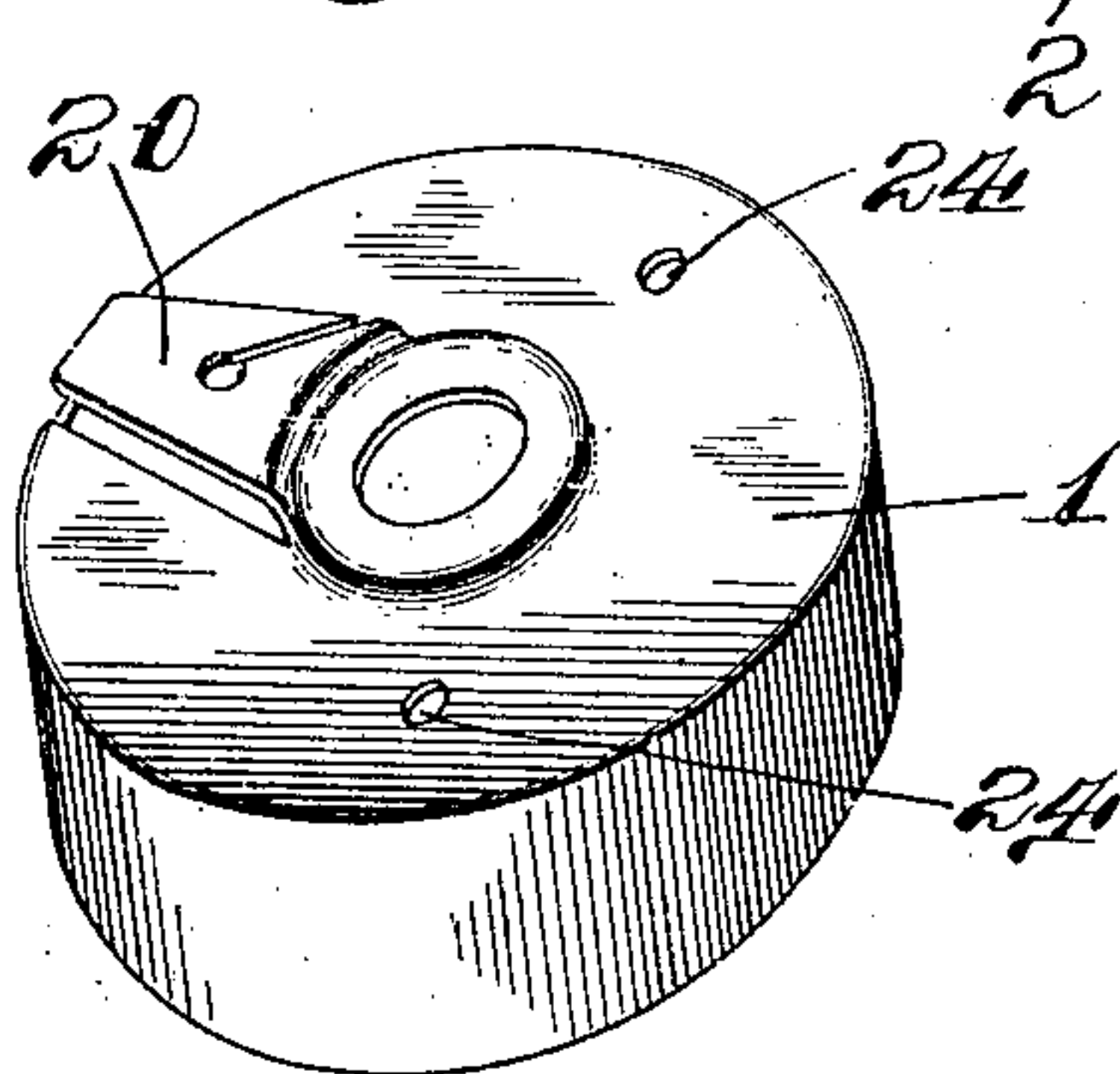


Fig. 10.



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UNITED STATES PATENT OFFICE.

CLARENCE B. ATWOOD, OF BELVIDERE, ILLINOIS, ASSIGNOR TO NATIONAL SEWING MACHINE COMPANY, OF BELVIDERE, ILLINOIS, A CORPORATION OF ILLINOIS.

BOBBIN-HOLDER FOR SEWING-MACHINES.

No. 891,028.

Specification of Letters Patent.

Patented June 16, 1908.

Application filed December 14, 1904. Serial No. 236,782.

To all whom it may concern:

Be it known that I, CLARENCE B. ATWOOD, a citizen of the United States, residing at Belvidere, in the county of Boone and State of Illinois, have invented certain new and useful Improvements in Bobbin-Holders for Sewing-Machines, of which the following is a full, clear, and exact specification.

My invention relates more particularly to bobbin holders for use in connection with rotary loop takers and the improvements are concerned more especially with the means for locking the bobbin holder in place and also providing for its removal. Devices of this character usually comprise a part known as the bobbin case and another part for receiving the case which is known as the bobbin case support, the bobbin being held directly in the bobbin case, and the case and support being provided with means whereby they are locked together during use.

The primary object of this invention is to provide a simple and efficient locking means for thus securing the case in place in the support and which lock will also serve as a means for readily withdrawing the case from the support when it is desired to remove the bobbin, and without requiring any special attention on the part of the user to see that the case is unlocked before attempting to remove it by the means provided for that purpose.

With a view to the accomplishment of this object and the attainment of certain other objects which will hereinafter appear, the invention consists in certain features of novelty in the construction, combination and arrangement of parts which will now be described with reference to the accompanying drawings and then more particularly pointed out in the claims.

In the said drawings—Figure 1 is a front elevation of a rotary loop taker specifically known as the hook form of loop taker, provided with my improvements. Fig. 2 is a cross section thereof on the line 2, 2, Fig. 1. Fig. 3 is a detail side elevation of the bobbin case and lock. Fig. 4 is a perspective view of a part of the inner side of the bobbin case support. Fig. 5 is an enlarged detail section of the edge of the bail and bobbin case. Fig. 6 is a detail perspective view of the bail spring. Fig. 7 is a perspective view of the bail. Fig. 8 is a plan or face view of the bobbin case with the tension spring removed. Fig. 9 is a section thereof on the line 9, 9 Fig.

8, and Fig. 10 is a perspective view thereof with the bail and bail spring removed.

1 is the bobbin case which is here shown in the form of a cup and is provided interiorly with an axle or pin 2 on which the bobbin 3 is journaled as usual, and 4 is the bobbin case support which is open at the front or outer side for the reception of the cup shaped bobbin case 1, the latter being inserted open side inwardly in the ordinary way. Pivotally mounted on the outer face of the bobbin case 1 is a bail or handle 5 which may be substantially C shape so as to conform to the circular edge of the bobbin case 1 and to lie flat thereagainst when not being used as a bail for removing or handling the bobbin case. One end of this bail or handle, at the side of the bobbin case, is formed with a hook or locking member 6 which projects inwardly into the bobbin case support 4 when the bail 5 is in its flat position against the face of the bobbin case and when so positioned it engages with a lug or pin 7 projecting from the inner face of the support 4. In order to accommodate the hook 6, the inner face of the support 4 is recessed as shown at 8 and the recess is of sufficient size or dimension to permit the hook 6 to swing entirely clear of the lug 7 while the bobbin case is still in place. Hence it will be seen that when the bail 5 is grasped and turned into a position perpendicular with relation to the face of the bobbin case, the lug 7 will be released and the bail 5 may then be utilized as a handle for the convenient removal of the bobbin case from its support 4; and it will also be seen that when the bobbin case is being returned to its place in the support 4 the recess 8 will receive the end of the hook 6 while still unlocked and act as a guide for determining the position of the bobbin case with relation to its support. By the means described it will be seen that the user is enabled to unlock and remove the bobbin case by simply grasping the bail 5, without paying special attention to the act of unlocking it, and the act of returning the bobbin case to its proper position in its support and throwing the bail down out of the way also accomplishes the locking of the case in place without further thought.

As shown in Fig. 1 the axis of the bail 5 is arranged at an angle with reference to the horizontal in preference to being arranged horizontally because in this angular position

the finger of the operator readily engages it as the finger is held in a natural position when introduced under the sewing machine table and the action of the finger in grasping and releasing the bail will be that of the natural closing movement of the hand and consequently the liability of the operator failing to at once discover the proper direction in which to turn the bail is reduced to the minimum.

As a means of journaling the bail and holding it in place, its extremities are provided with two inturned pivots 9 which are preferably square in cross section and engage under the ends 10, 11 respectively of a spring 13 secured to the outer end of the bobbin case 1. The extremities 10, 11 of the spring are each formed with a pair of lugs 14 engaging at the sides of the pivots 9 for holding them against lateral movement, the lugs being a sufficient distance apart to permit the pivots to turn. The spring extremities 10, 11 press the pivots 9 against the face of the casing and consequently hold the bail flat against said casing when once placed on or near the same, or in a position perpendicular with relation to the casing when placed in or near that position. The spring 13 is provided with a circular aperture 15 which fits over the outer end of the pin 2; the pin 2 is projected through the casing 1, as better shown in Fig. 9, and is then riveted or reamed down, as shown at 16 in Fig. 9, upon the spring 13 whereby both the spring and pin are secured, the pin 2 being provided with a shoulder 17 engaging against the inner face of the casing. The spring 13 is held against rotary movement on the casing by shoulders 18, 18 formed where the spring is cut away to make room for a tongue 20 which is struck up from the face of the casing and serves as one member of the tension, the other member of which tension is constituted by a removable spring 21 secured adjustably against the face of tongue 20 by tension spring screw 22 screwed into the outer end of pin 2. The tension spring 21 is held against rotary movement by projections 23 engaging in sockets 24 in the face of the casing 1, or by any other suitable means.

The particular form of bobbin case support and rotary loop taker and the way in which these parts are mounted are all immaterial so far as my invention is concerned and constitute no part thereof and consequently need not be described.

Having thus described my invention what I claim as new therein and desire to secure by Letters Patent, is:

1. In a device for the purpose described the combination with a bobbin case, and a bobbin case support having a wall, of a handle operatively related to the bobbin case for the removal of the case, and locking means operatively connected with said

handle and disposed between the periphery of the case and the wall of the support for locking the bobbin case in the support.

2. In a device for the purpose described, the combination with a bobbin case having a wall and a bobbin case support also having a wall, of an outwardly movable handle operatively related to the case, and locking means operatively related to the handle and disposed between the adjacent walls of the case and support for locking the case in the support.

3. In a device for the purpose described the combination with a bobbin case, and a bobbin case support, of a handle pivoted to the case on an axis substantially parallel with the outer end of the case and adapted to swing outwardly for removing the case from the support, and a locking means operatively related to said handle and adapted to engage the inner face of the support remote from the outer face of the case for locking the case in the said support.

4. In a device for the purpose described the combination with a vertical bobbin case, and a bobbin case support, of a bail pivoted to the bobbin case on an axis extending at an oblique angle to the horizontal, a spring for holding said bail against the face of the bobbin case, and means for holding the bobbin case against rotary movement in said support.

5. In a device for the purpose described the combination with a bobbin case, and a bobbin case support, of a spring actuated handle mounted on the bobbin case, and locking members connected one to said handle and the other to the inner face of said support, the member connected to the handle being adapted to stand between the adjacent faces of the case and support and to engage the other member when the handle is moved, said handle being adapted to be projected outwardly from the bobbin case for removing the case from its support.

6. In a device for the purpose described the combination with a bobbin case, and a bobbin case support, having a recess in the wall thereof, of a handle adapted to be turned outwardly away from the bobbin case whereby the bobbin case may be lifted, a hook operatively connected with said handle and adapted to enter said recess, and means in said recess with which said hook engages.

7. In a device for the purpose described the combination with a bobbin case, and a bobbin case support, of a bail having a squared pivot mounted on said case, a spring secured to said case and bearing against said pivot, and means operatively related to the bail for locking the case and support together.

8. In a device for the purpose described the combination with a bobbin case, and a bobbin case support, of a bail having in-

turned portion forming pivots, a spring engaging the case and having notched ends receiving said pivot and holding the same on the case, one of said pivots being squared, and means for locking the case and support together.

9. In a device for the purpose described the combination with a bobbin case, having a pin projecting therefrom, and a bobbin case support, of a spring secured on said pin and having a shoulder, a tongue struck up from said case for holding the spring against rotation, a bail having inturned ends confined between said spring and bobbin case, and means operatively related to the bail for locking the bobbin case and support together.

10. In a device for the purpose described, the combination with a bobbin case, and a bobbin case support, a radially projecting lug secured to the inner face of the support, a handle pivoted to the bobbin case, and a depending hook carried by the handle and operable adjacent the periphery of the bobbin case, said hook being adapted to be moved between the adjacent face of the case

and support and into engagement with the lug when the case is in position within the support.

11. In a device for the purpose described, the combination with a bobbin case, and a bobbin case support, of a bail having a non-circular pivot mounted on said case, a spring secured to said case and bearing against said pivot, and means operatively related to the bail for locking the case and support together.

12. In a device for the purpose described, including in combination a bobbin case, having a wall and a vertical bobbin case support comprising surrounding walls, of a bail pivoted to the bobbin case on an axis extending at an oblique angle to the horizontal, a spring for holding said bail against the face of the case, and means movable between the walls of the support and the case for holding said case against movement in the support.

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Witnesses:

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