

No. 782,487.

PATENTED FEB. 14, 1905.

G. A. CLARK.
BOBBIN HOLDER.
APPLICATION FILED OCT. 21, 1904.

Fig. 1.

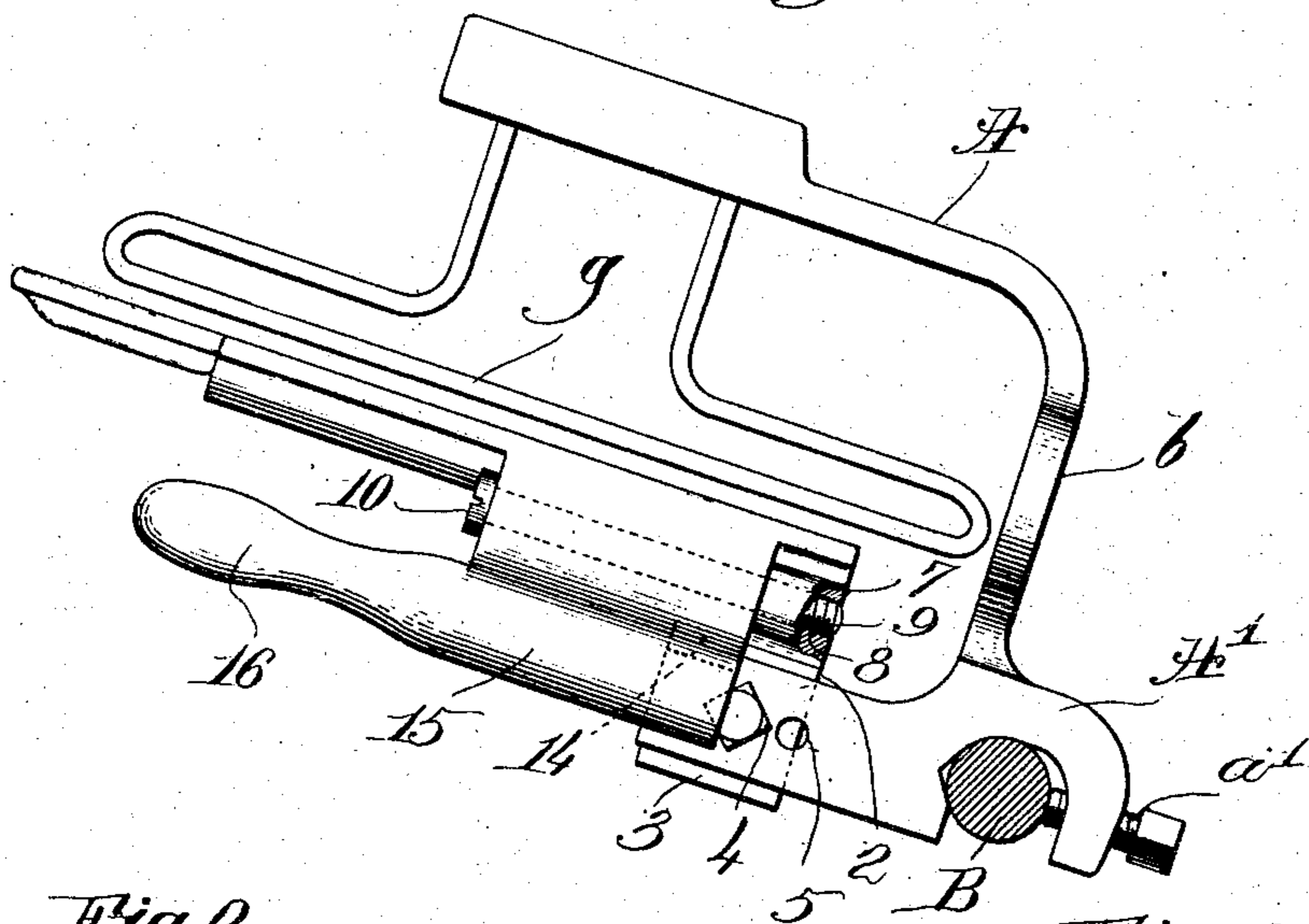


Fig. 2.

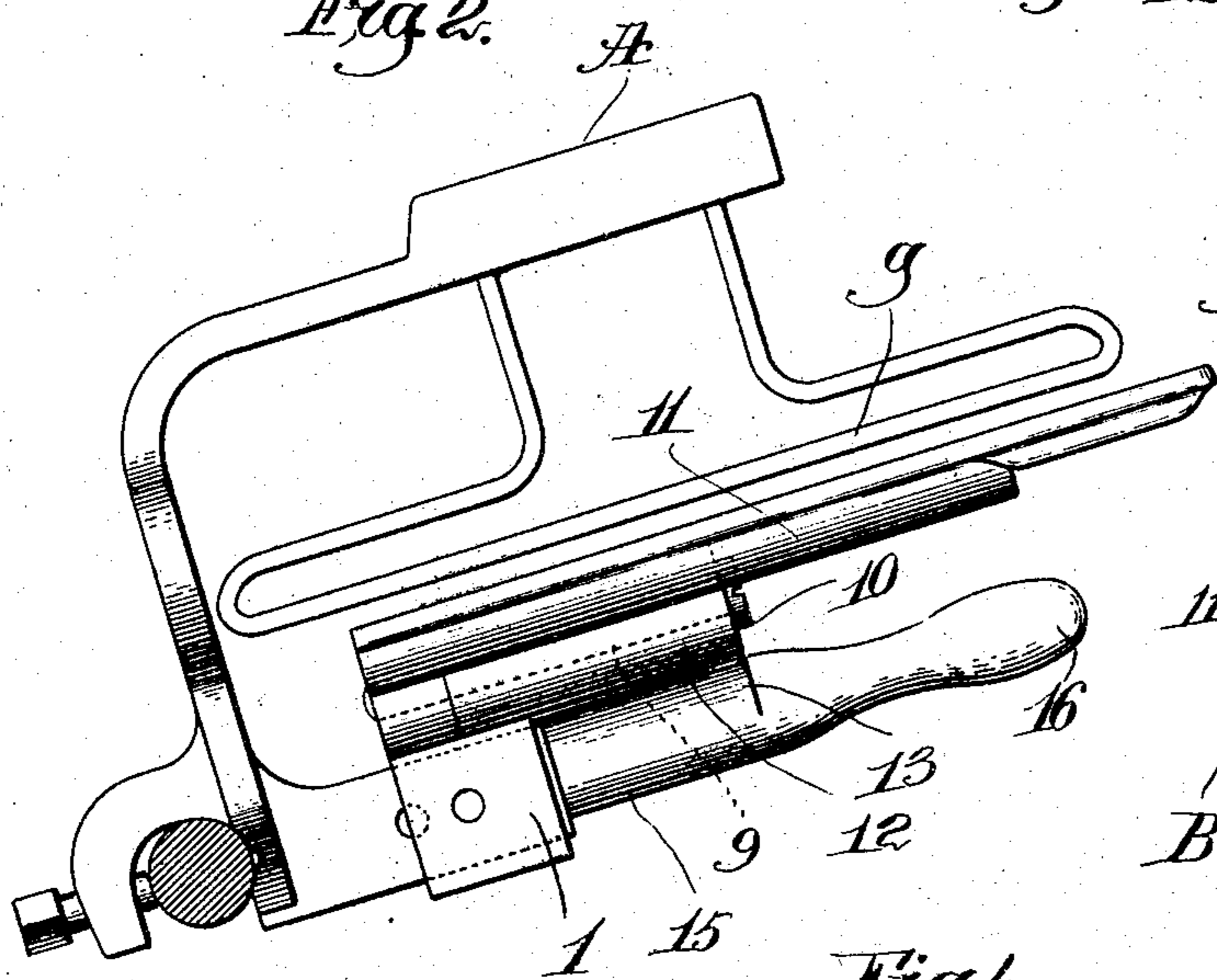


Fig. 3.

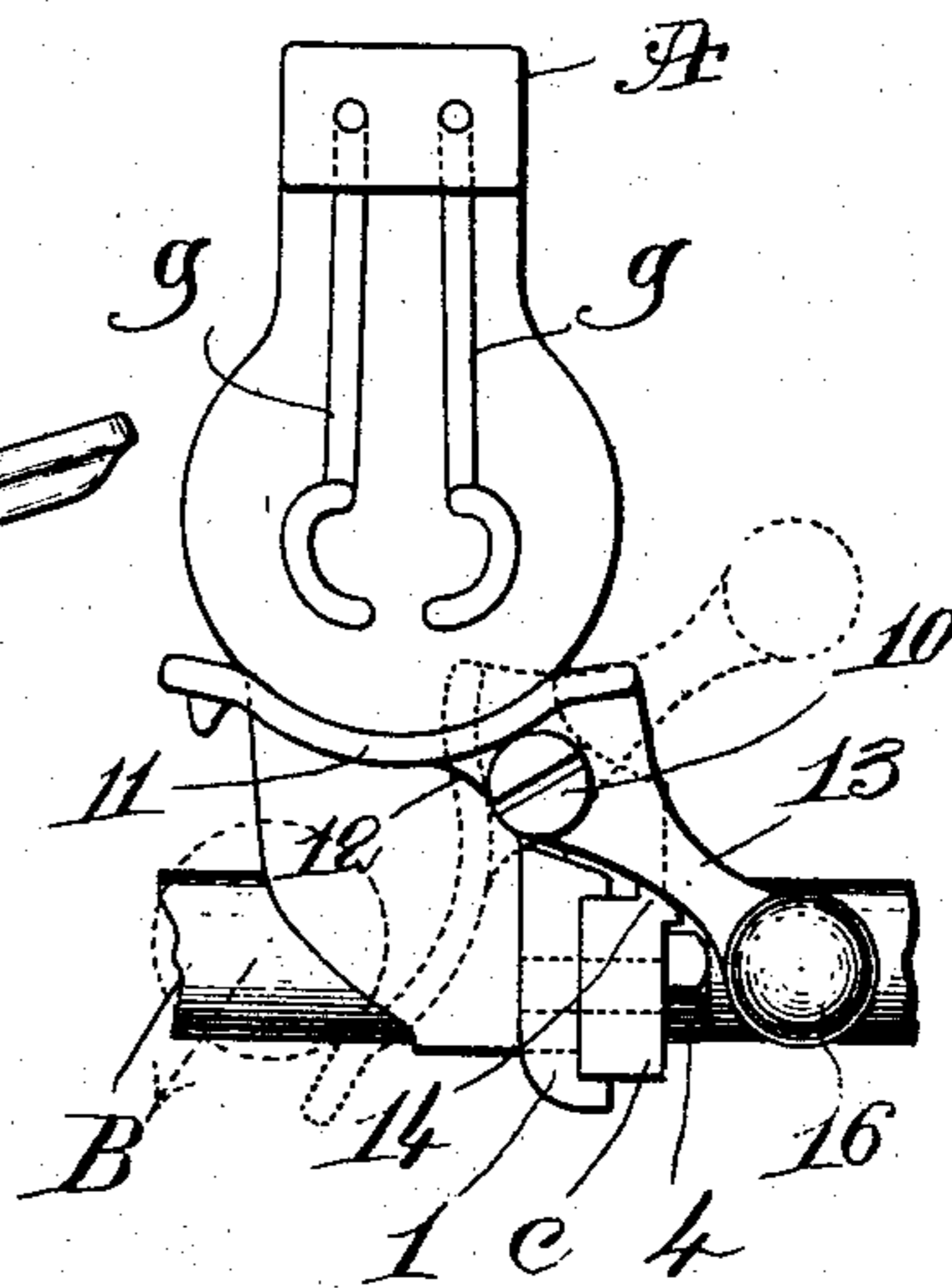
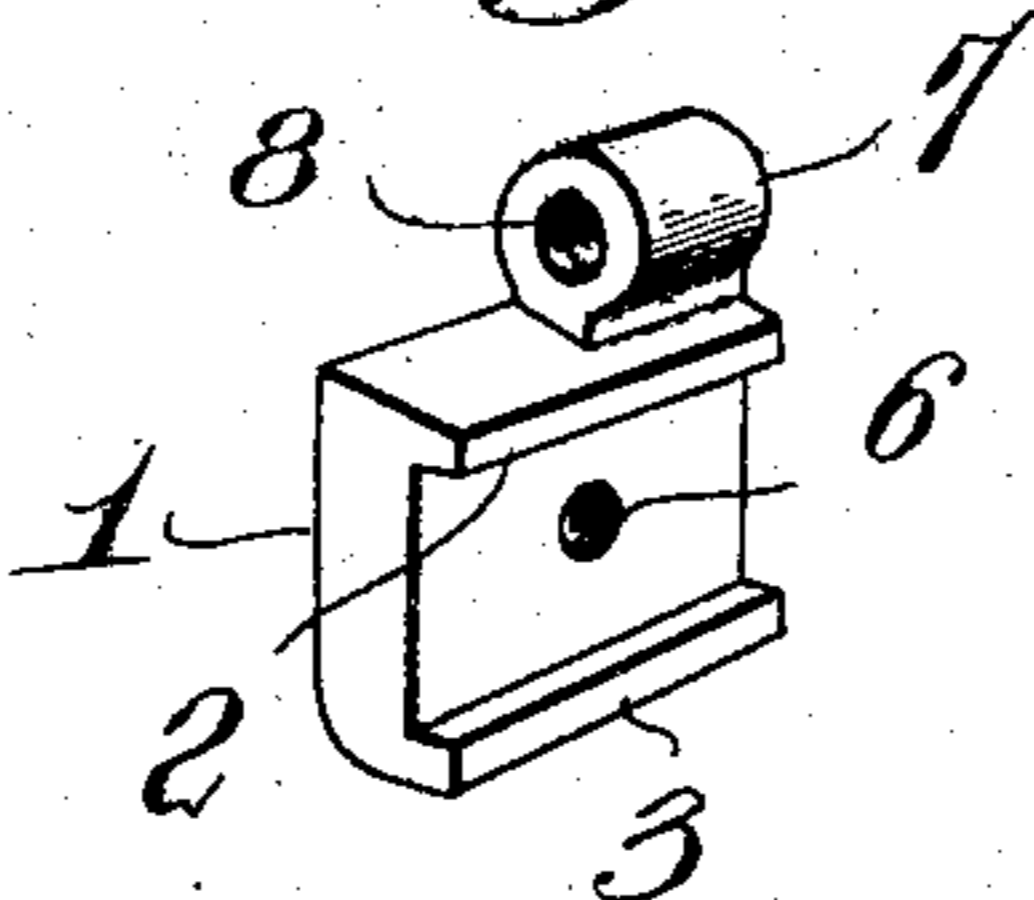


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE A. CLARK, OF AMBLER, PENNSYLVANIA, ASSIGNOR TO DRAPER COMPANY, OF HOPEDALE, MASSACHUSETTS, A CORPORATION OF MAINE.

BOBBIN-HOLDER.

SPECIFICATION forming part of Letters Patent No. 782,487, dated February 14, 1905.

Application filed October 21, 1904. Serial No. 229,376.

To all whom it may concern:

Be it known that I, GEORGE A. CLARK, a citizen of the United States, and a resident of Ambler, county of Montgomery, State of Pennsylvania, have invented an Improvement in Bobbin-Holders, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to bobbin-holders wherein a bobbin is supported on a rest or pan during the unwinding of the yarn therefrom; and it has for its object the production of means whereby a spent or empty bobbin can be instantly ejected or discharged from the side of the rest. The yarn can draw off from either side of the bobbin, as is most convenient, without any tendency to discharge or eject the bobbin prematurely, the construction and arrangement being such that by a simple movement of the hand the attendant can at once discharge the empty bobbin, the parts concerned in such discharging action returning automatically to normal operative position.

The various novel features of my invention will be fully described in the subjoined specification and particularly pointed out in the following claims.

Figure 1 is a side elevation, partly broken out, of a bobbin-holder embodying my invention. Fig. 2 is an opposite side elevation thereof to more clearly show the pivotal connection between the bobbin-rest and the body portion or bracket. Fig. 3 is a front elevation of the bobbin-holder illustrated in Figs. 1 and 2, the bobbin-rest being shown in discharging position by dotted lines; and Fig. 4 is a perspective view of the fulcrum-carrying member detached.

The bobbin-holder is herein shown as having a clamp A' provided with a set-screw a', an upturned arm laterally widened to form a back-stop b, (see Fig. 1,) and having a forwardly-extended or overhanging portion A, from which depend laterally movable or swinging guards g for the sides of the bobbin, and a rigidly-attached foot or support c, extended forward from the bracket, the parts

referred to being in general substantially of well-known construction. In practice the clamp is secured to a supporting-rod, as B, Fig. 1, on the spooler or other frame, so that the bobbin-holders extend outward substantially in the position shown in Figs. 1 and 2. In my present invention the bobbin-rest is mounted to tilt about a fulcrum parallel to its longitudinal center to thereby eject a bobbin from the side of the rest. The support c has mounted upon it a fulcrum-carrier (shown separately in Fig. 4) and consisting of a block 1, having lips 2 3 at its top and bottom to receive between them the support, a screw 4 passing through one of the holes 5 in the support, being screwed into a threaded hole 6 in the block. When the screw is tightened, the fulcrum-carrier is clamped on the support c, the two holes 5 providing for adjustment of the carrier thereon. An upturned boss 7 projects from the top of the block and has a threaded hole 8 to receive the threaded end of a fulcrum pin or rod 9, shown herein as having a nicked head 10 at its outer end.

The bobbin-rest 11 is transversely concaved to receive the bobbin and sustain the same while the yarn is being unwound therefrom, as is usual, and herein I have shown an elongated sleeve-like bearing 12 on the under surface of the rest and offset or eccentric to the longitudinal center thereof, as will be manifest from an inspection of Fig. 3. The fulcrum-pin 9 is passed through the bearing 12 and screwed into the hole 8 in the boss 7, the head 10 of the pin preventing separation of the parts. A counterbalance is formed by extending the metal of the bearing, as at 13, whereby the side of the rest 11 adjacent its fulcrum is made much heavier than the opposite side, the counterbalance 13 extending downward in a diagonal direction below the fulcrum. (See Fig. 3.) Normally the counterbalance rests upon a stop 14, formed on the support c, and serves to retain the rest in operative position, as shown in full lines, Fig. 3, even when a full bobbin is laid thereon. If the counterbalance is lifted, however, the rest will tilt on its fulcrum into dotted-line posi-

tion, (see Fig. 3,) and the bobbin will be ejected or discharged at the lower side of the rest. Such tilting is independent of the guards *g*, and as the rest is moved away from the guard
 5 nearest the descending side a free and open exit-passage is provided for the discharge of the bobbin. The outer end of the counterbalance is enlarged at 15, increasing the effectiveness thereof, and such enlargement is pro-
 10 longed to form a handle 16, by means of which the attendant can conveniently tilt the bobbin-rest. When the bobbin-rest is tilted, the counterbalance cannot be thrown past dead-center, as will be clear from an inspection of Fig.
 15 3, as the under side of the rest will engage the upper corner of the block 1 and further tilting will be arrested.

In practice the clamp, back-stop *b*, and arm *A* and support *c* will be made as a single casting, and so, too, the bobbin-rest, fulcrum-bearing, and counterbalance will be cast integral with each other, so that the construction is strong, durable, and simple and cheap to manufacture.

25 My invention is not restricted to the precise construction and arrangement herein shown and described, as the same may be modified in different particulars by those skilled in the art without departing from the spirit and scope
 30 of my invention.

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

1. A bobbin-holder having side guards, a
 35 tilting rest for the bobbin, movable independently of said guards to eject a spent bobbin laterally from said rest, and means to normally retain the rest in operative position.

2. A bobbin-holder having laterally-mov-
 40 able, depending guards at the sides of the bobbin, a tilting bobbin-rest below and movable independently of said guards to eject a spent bobbin from the side of the rest, and means to normally retain said rest in operative posi-
 45 tion.

3. A bobbin-holder having a rest for the bobbin, a support for and with which the rest is pivotally and loosely connected, an instrumentality movable independently of the rest
 50 and adapted to retain a bobbin thereon, and means to normally retain the rest stationary in operative position above its support.

4. A bobbin-holder having an upturned,

overhanging arm, laterally-movable guards depending therefrom, a bobbin-rest mounted 55 to tilt freely on a longitudinal fulcrum below it and rigidly connected with the lower end of the arm, and means to normally retain the rest stationary in operative position, manual tilting of the rest ejecting a bobbin therefrom 60 at the side.

5. A bobbin-holder having a clamp, an upturned, overhanging arm thereon, side guards for the bobbin depending from the overhang-
 ing portion of the arm, a bobbin-rest, a sup- 65 port therefor extended forward from the clamp, a loose pivotal connection between the support and the rest, eccentric to the longitudinal center of and beneath the latter, and a counterbalance for and to normally main- 70 tain the rest stationary, provided with a handle whereby said rest may be tilted to eject a bobbin sidewise therefrom.

6. A bobbin-holder having a clamp and a rigid support extended forward therefrom, a 75 member adjustable thereon and having an elongated fulcrum secured to it, a bobbin-rest having a longitudinal, offset bearing to receive and rock on said fulcrum, a counterbal- 80 ance on the rest at the side adjacent the bearing, to maintain the rest in operative position, and a fixed stop to normally cooperate with said counterbalance and maintain the rest sta-
 tionary.

7. A bobbin-holder having a tiltable bob- 85 bin-rest fulcrumed loosely at one side of its longitudinal center, a weighted handle at the same side of the rest, a fixed stop with which the weighted handle normally cooperates, to retain the rest stationary in operative posi- 90 tion, and side guards for the bobbin.

8. A bobbin-holder having a fixed back-stop, a support rigidly extended forward there-
 from, a bobbin-rest, fulcrumed loosely at one side of its longitudinal center on said support, 95 and above the same, a counterbalance on the fulcrum side of the rest, to normally retain the latter stationary in operative position, and a fixed stop for said counterbalance.

In testimony whereof I have signed my name 100 to this specification in the presence of two subscribing witnesses.

GEORGE A. CLARK.

Witnesses:

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