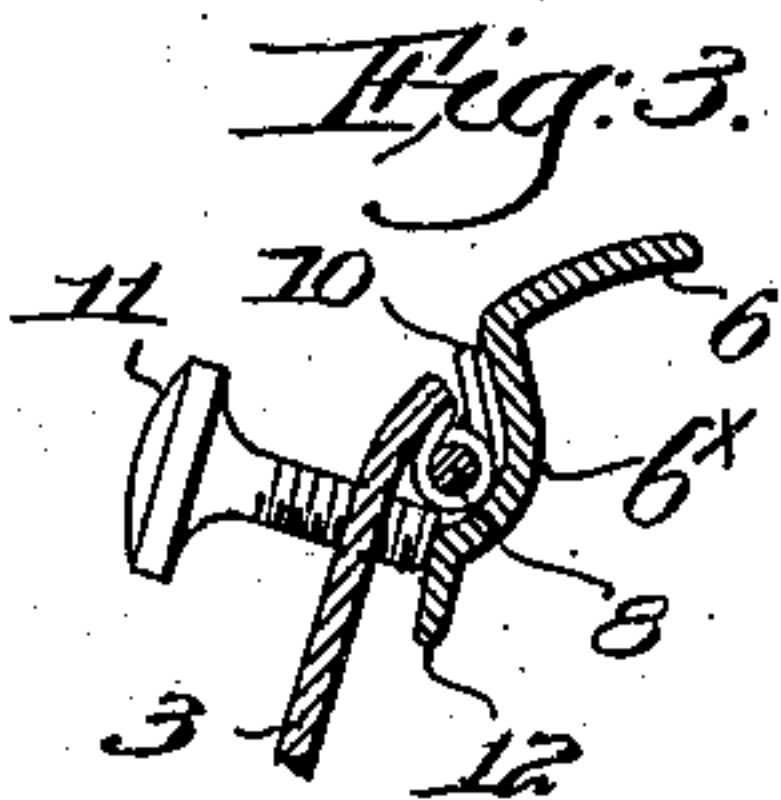
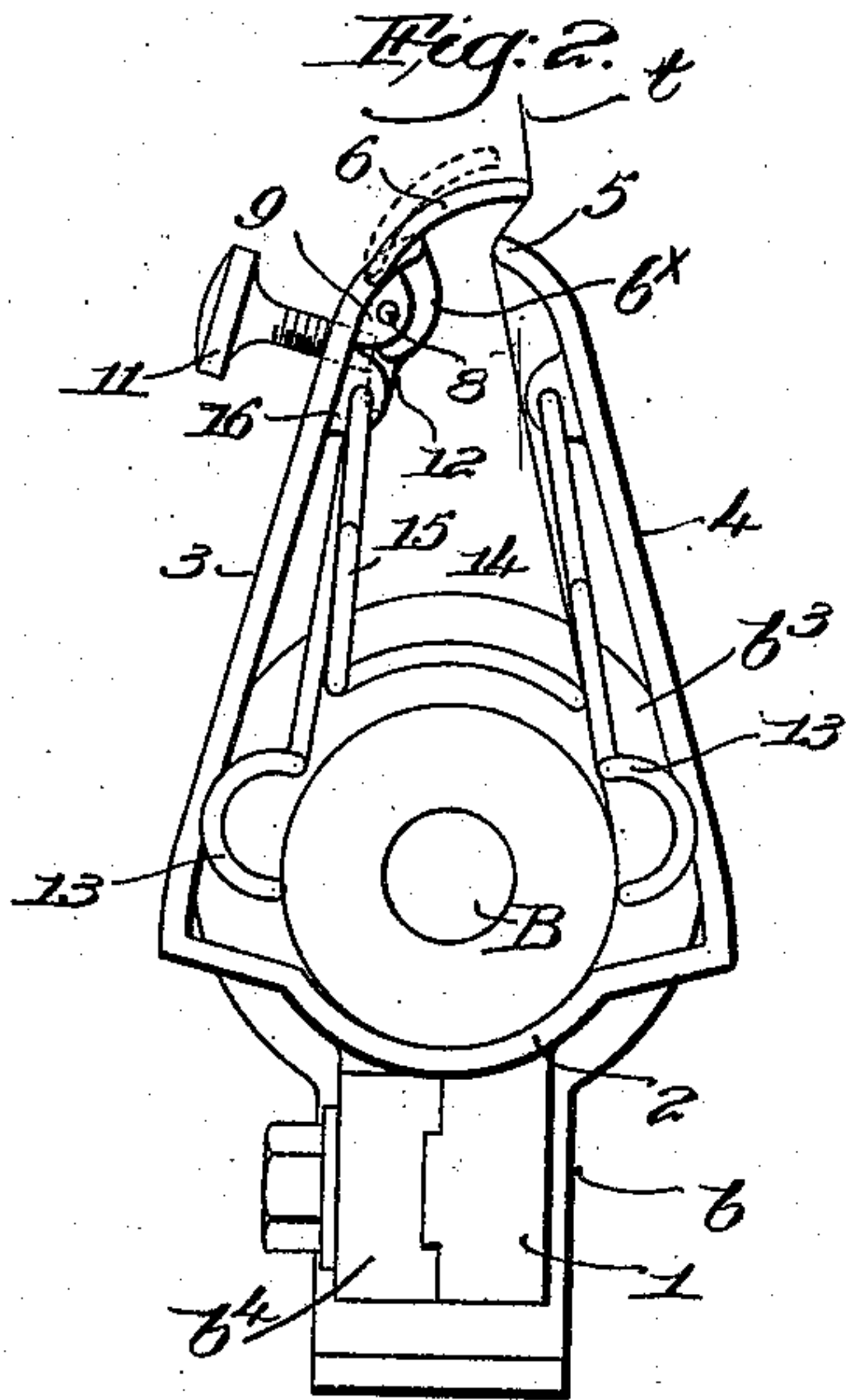
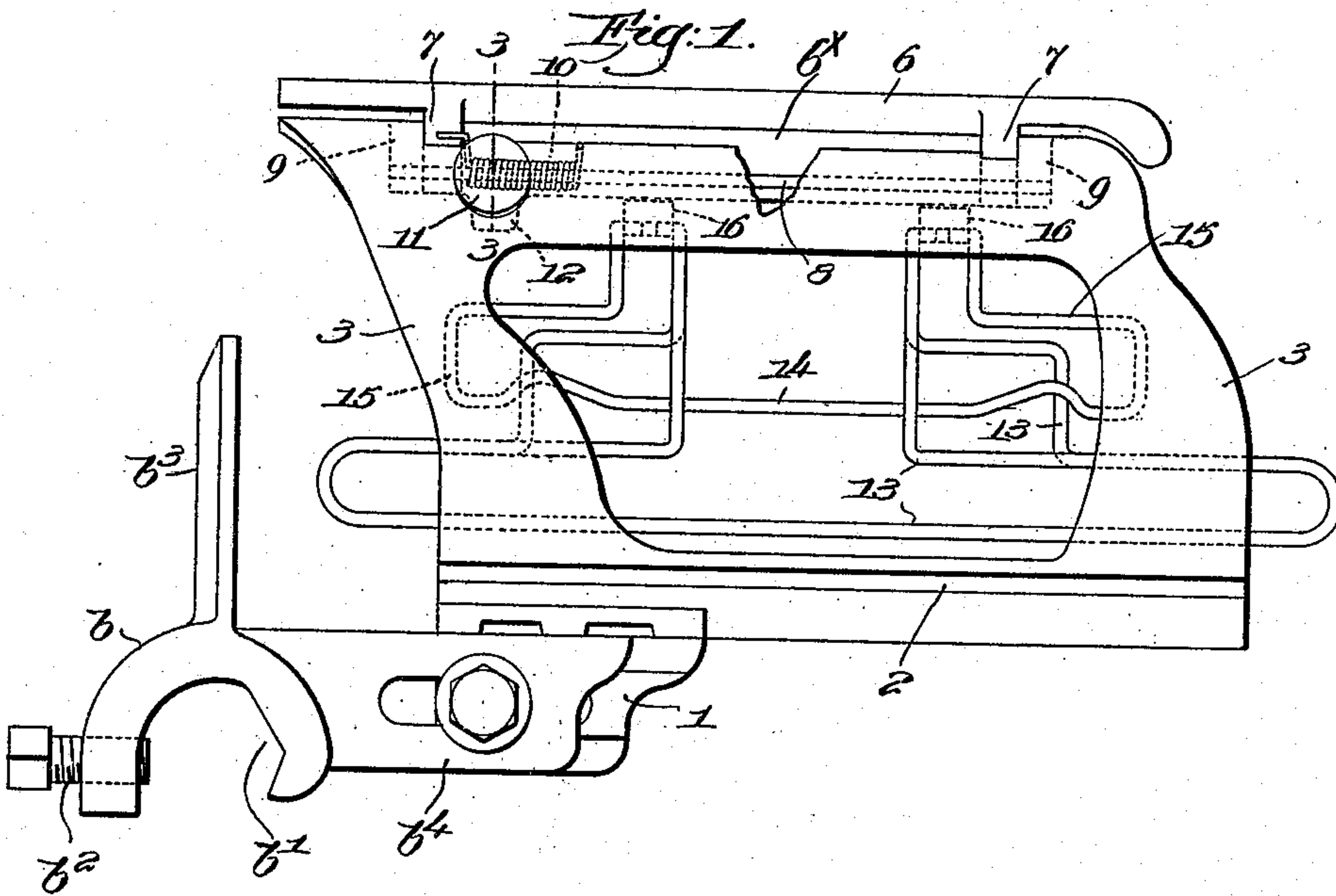


BOBBIN HOLDER.

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919,899.

Patented Apr. 27, 1909.



Witnesses,
Edward F. Allen.
James F. Ward.

Inverdon,
Charles E. Lovejoy,
by Crosby & Gregory
attys.

UNITED STATES PATENT OFFICE.

CHARLES E. LOVEJOY, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO DRAPER COMPANY, OF
HOPEDALE, MASSACHUSETTS, A CORPORATION OF MAINE.

BOBBIN-HOLDER.

No. 919,899.

Specification of Letters Patent.

Patented April 27, 1909.

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To all whom it may concern:

Be it known that I, CHARLES E. LOVEJOY, a citizen of the United States, and a resident of Lowell, county of Middlesex, State of Massachusetts, have invented an Improvement in Bobbin-Holders, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention has for its object the production of a novel and efficient bobbin-holder provided with means whereby the tension on the yarn as it is drawn off the bobbin may be easily and quickly adjusted. I have also provided the bobbin-holder with means to hold the bobbin down upon the stationary rest or pan and prevent improper jumping or lifting as the yarn is unwound.

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 one practical form of my present invention; Fig. 2 is a front elevation of the bobbin-holder, the bobbin and the yarn or thread leading therefrom being shown; Fig. 3 is a sectional detail of the movable member of the tension-producing guide, on the line 3—3, Fig. 1.

Referring to Fig. 1, a bracket *b* having an opening jaw *b'* to receive the usual supporting rod or bar (not shown), is provided with a set-screw *b²* to clamp the bracket thereon, the bracket having an upright, substantially circular enlargement *b³* to constitute a back-stop for the bobbin. To a forward extension *b⁴* of the bracket is bolted an ear 1 depending from the elongated, transversely concave rest or pan 2 upon which the bobbin B lies and is supported during the unwinding of the yarn therefrom, the rest being herein shown as provided with rigid, upturned open sides 3, 4, which converge or approach each other at a distance above the rest, as shown in Fig. 2. The upper edge of the side portion 4 is in-curved, as at 5, and extends the length of the part 4, forming one side of a combined yarn guide and tension device, the opposite side thereof being formed by an elongated, transversely curved flap 6 having a depending portion 6^x provided with ears 7 by which it is pivotally mounted on a rod or pintle 8 mounted in lugs 9 on the inner face

of the side portion 3. A spring 10 wound around the pintle 8 bears at one end against the fixed side 3 and at its other end bears on the adjacent ear 7, Fig. 1, and tends to swing the flap over above and toward the fixed side 5 of the guide. It will be understood from the foregoing that a long, open guide is formed, at the top of the bobbin-holder, by the fixed or movable portions 5, 6, the yarn or thread *t* as it leads upward from the bobbin passing through this open passage or guide and traversing the same as the unwinding proceeds.

Referring to Fig. 2, it will be seen that the edge portion 6 overhangs and is laterally offset from the edge portion 5 of the guide, so that the yarn is deflected from a straight path as it passes over and around such portions, the deflection exerting a drag or tension upon the yarn. By varying the deflection the tension is varied, and this is effected by means of an adjusting screw 11 mounted in the fixed side portion 3 of the bobbin-holder and bearing against a projection 12 depending from the part 6 of the flap or movable member 6 of the guide below its fulcrum. If the screw is set up the flap will be swung upward and away from the fixed side 5 of the guide, more or less, the greater such movement the less the deflection of the yarn, and consequently the less will be the drag or tension exerted thereon. The tension can be adjusted easily and quickly, and with great accuracy, the spring 10 holding the projection 12 against the adjusting screw. Swinging side-guards 13, made of stout wire and properly bent, are pivotally suspended from the upturned portions 3 and 4 of the rest to cooperate with the bobbin and limit undue lateral movement thereof on the rest 2, substantially as is common in bobbin-holders.

Sometimes the bobbin has a tendency to lift or jump up from the rest as the yarn unwinds, and to limit such lifting movement I provide a downhold, herein shown as made of a piece of stout wire bent at 14 to overhang the bobbin between the side-guards, the ends of the wire being bent up and inward, as at 15, Fig. 1, and then carried upward and inturned to loosely enter ears 16 on the fixed side 3, said ears also being shown as supporting the side-guard adjacent the side 3.

The downhold does not interfere with the

function of the side-guards as they follow in the constantly decreasing yarn mass on the bobbin, while any improper lifting or jumping of the latter is prevented by the
5 downhold.

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

1. In a bobbin-holder, having a rest for
10 the bobbin, swinging side-guards to cooperate with opposite sides of the bobbin, and a pivotally-mounted down-hold independent of the guards and overhanging the rest between the side-guards and adapted to
15 limit upward movement of the bobbin as the yarn is drawn therefrom.

2. In a bobbin-holder, a bobbin-rest, an overhead yarn-guide having opposed edges over which the yarn draws, one edge over-
20 hanging the other, and manually operated means to change the relative position of the edges of the guide and thereby alter the extent of the overhang, to vary the deflection of the yarn and adjust the tension
25 thereupon.

3. In a bobbin-holder, a stationary rest for the bobbin, an overhead guide having opposed fixed and movable opposite sides to oppositely engage and deflect the yarn
30 from a straight path, as it is drawn from the

bobbin, and means to change the position of the movable side with relation to the fixed side to vary the deflection due to the sides of the guide and thereby adjust and maintain adjusted the tension on the yarn. 35

4. In a bobbin-holder, a stationary rest for the bobbin, an elongated, overhead and open guide for the yarn, comprising oppositely acting sides to engage the yarn, and means to change the relative position of
40 said sides and maintain such change of position, to thereby vary the tension exerted by the sides of the guide on the yarn.

5. In a bobbin-holder, a stationary rest for the bobbin, having upturned sides, the
45 upper edge of one side forming an elongated, fixed side of a yarn-guide, a flap movably mounted on the other side of the rest and forming the opposed side of the guide, and means to change the position of the flap
50 and thereby vary the deflection of the yarn as it is drawn through the guide.

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

CHARLES E. LOVEJOY.

Witnesses:

H. T. WHALON,
ANDREW R. CURRIER.