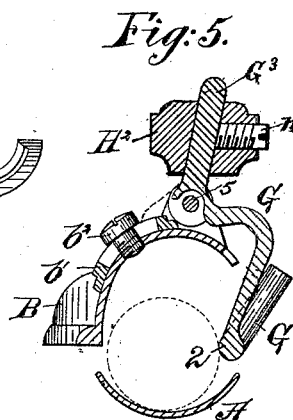
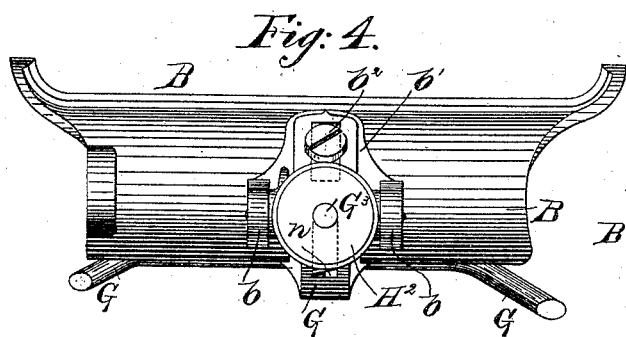
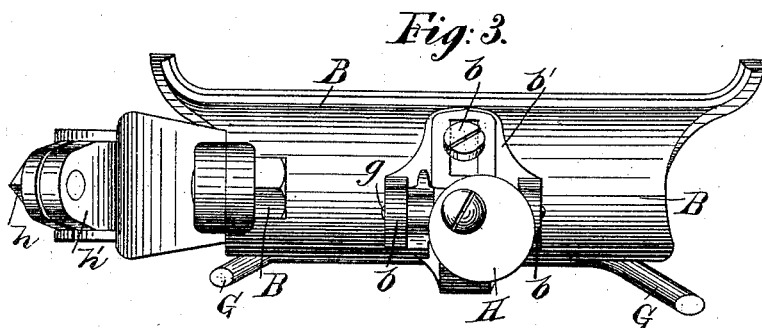
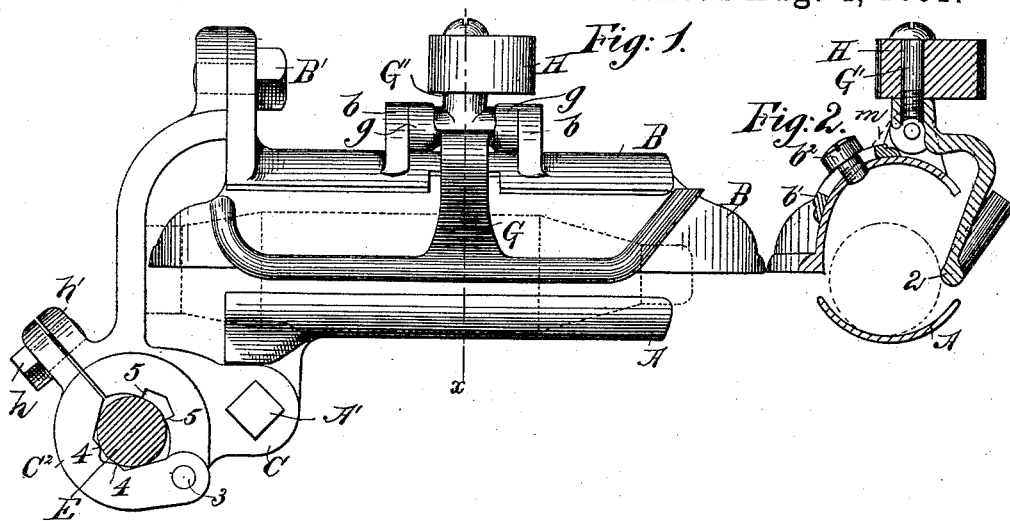


(No Model.)

J. S. RICHARDSON.
BOBBIN HOLDER FOR SPOOLING MACHINES.

No. 457,011.

Patented Aug. 4, 1891.



Witnesses:
Geo. C. Huntington
Frederick L. Emery -

Inventor
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by Lemuel Thigory attys

UNITED STATES PATENT OFFICE.

JOHN S. RICHARDSON, OF LOWELL, ASSIGNOR TO GEORGE DRAPER & SONS,
OF HOPEDALE, MASSACHUSETTS.

BOBBIN-HOLDER FOR SPOOLING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 457,011, dated August 4, 1891.

Application filed September 25, 1890. Serial No. 366,132. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. RICHARDSON, of Lowell, county of Middlesex, State of Massachusetts, have invented an Improvement in Bobbin-Holders for Spooling-Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to improve and simplify the construction of bobbin-holders in use in spooling-machines, whereby the said holders are better adapted to hold bobbins from which yarn is being unwound, so that this yarn may be reeled off without any injurious jumping of the bobbins.

The improved holder to be herein described consists, essentially, of a concaved rest or support, over which is located a convexed cap, one longitudinal edge of which is extended down nearly to one edge of the rest, and an adjustable bearing mounted on said cap, the cap supporting a gravitating lip, which acts against the bobbin at a point substantially opposite the lower edge of the cap, and an eccentrically-mounted weight for said lip. I have shown the lip as mounted on a pin or stud of a bearing made adjustable on the cap to thus better adapt the holder to bobbins of different diameter. An arm of the lip has an adjustable weight eccentrically mounted.

Figure 1 in side elevation represents a bobbin-holder embodying my improvements; Fig. 2, a section thereof in the line *x*; Fig. 3, a plan view of the holder shown in Fig. 1; and Figs. 4 and 5 represent a modification to be described.

Referring to the drawings, A represents a concaved rest for the bobbin, and above it is a convexed cap having one of its longitudinal sides B extended downwardly nearly to one edge of the rest, the said extension serving to arrest the escape of the bobbin from that side of the weight above which it is located. As shown, the rest is joined by screw A' to a stand C, having a semi-hub and an upright, the latter receiving the screw B', used to attach the cap B to the stand. The lip G is so shaped and supported as to bear by gravity against the wound bobbin. (Shown by dotted lines as lying on the rest A.) This gravitat-

ing lip has an upwardly-extended arm G' and lateral hubs or projections *g*, which fit over a fulcrum-pin *g'*, held in ears *b* of a bearing-plate *b'*, placed on the cap and made adjustable thereon by a screw *b*² in a slot of the bearing-plate. The arm G' receives upon it a weight H, which is adapted to be moved therein in such manner as to cause the edge 2 of the lip to act with more or less force on the wound bobbin. This weight H (see Figs. 1 to 3) is mounted eccentrically on the upwardly-extended arm G', which is shown as composed of two parts, one being a screw screwed into a boss on the arm, the boss serving as a shoulder, between which and the head of the screw the eccentrically-bored weight may be clamped in an adjustable position. It will be understood that by the partial rotation of the weight H or its adjustment circularly on the arm G' the pressure exerted by the lip will be more or less.

In Figs. 4 and 5, showing a modification, the upwardly-extended arm G³ is inclined, and by adjusting the weight H² thereon up or down the force of the weight is thrown more or less to one side of the pivot 5 of the lip, so as to increase or decrease, as desired, the gravity or pressure of the edge of the lip against the wound bobbin. Adjustment of the weight by the screw *n* enables the tension to be varied quickly to the number of the yarn.

To accommodate for bobbins of different diameter the saddle or plate *b'* may be adjusted on the cap by loosening the screw *b*² and be then again clamped in place. It will be noticed that the entire weight of the bobbin is supported by the rest and that the bobbin has but one point of contact as a tangent with the rest, and consequently the bobbin rotates more freely and with less strain on the yarn than would be the case if the bobbin-rest was substantially V shape in cross-section, so that the periphery of the bobbin when resting therein would touch the rest at two points. The hubs of the lips will be provided with a stop *m* to prevent the lip from being accidentally turned too far from the wound bobbin. The semi-hub of the stand has two shoulders 5, and to the stand is pivoted at 3 a semi-clamp C², having projections

4. A screw *h*, inserted through an ear of the semi-clamp and through an ear *h'* of the stand, serves to bind the holder firmly upon the rod E, a number of said holders being
5 clamped on the rod side by side, said projections 4 and 5 aiding very materially or acting as teeth to maintain the holder in any desired position, or so firmly that it will not drop or sag or be easily turned about the rod.
10 Prior to this invention a frame supported by a weight has been employed to act against and produce tension upon a bobbin during its rotation, so a weighted lip is not herein claimed broadly.

15 I claim—

1. The concave rest A to support the bobbin, and the cap B, surrounding the upper side of the bobbin and having an adjustable bearing mounted on said cap, combined with a gravi-

tating downwardly-extended lip carried by 20 said bearings to contact with the bobbin opposite where the cap contacts therewith, and a weight to keep the lip pressed against the bobbin, substantially as described.

2. In a bobbin-holder, a rest, its cap, and 25 bearings thereon, combined with a gravitating lip pivoted in said bearing and having an upwardly-extended arm and a weight mounted eccentrically thereon, to operate substantially as described.

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

JOHN S. RICHARDSON.

Witnesses:

PETER A. FAY,
JAMES F. OWEN.