C. & D. E. MARSH.

Bobbin-Holder or Ring-Slide for Sewing-Machines.

No. 227,696. Patented May 18, 1880.

Fig: 1.

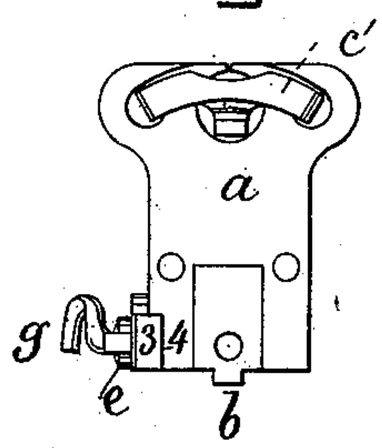



Fig: 2.

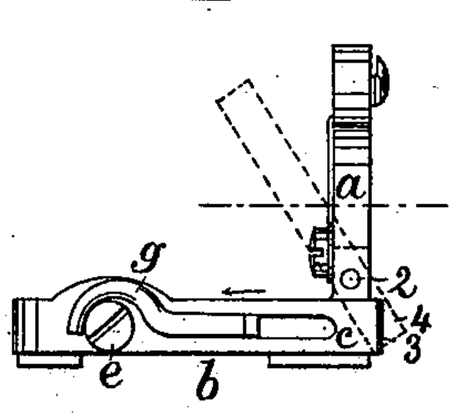



Fig: 3.

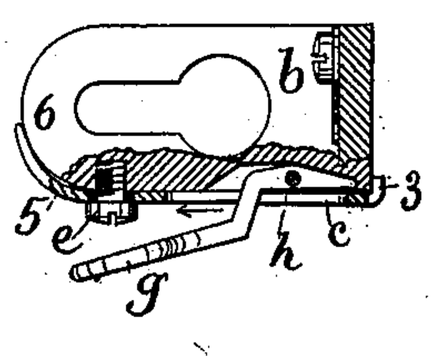
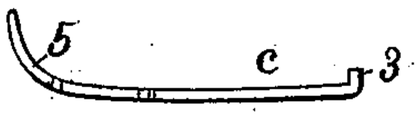



Fig: 4.




Witnesses.

Jos. P. Livermore

L. F. Connor

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Clark Marsh.

Daniel E. Marsh

by Crosby & Gregory Attys

# UNITED STATES PATENT OFFICE.

CLARK MARSH AND DANIEL E. MARSH, OF BRIDGEPORT, CONNECTICUT, ASSIGNORS TO WHEELER & WILSON MANUFACTURING COMPANY, OF SAME PLACE.

## BOBBIN-HOLDER OR RING-SLIDE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 227,696, dated May 18, 1880.

Application filed November 3, 1879.

*To all whom it may concern:*

Be it known that we, CLARK MARSH and DANIEL E. MARSH, both of Bridgeport, in Fairfield county, State of Connecticut, have invented an Improvement in Bobbin-Holders or Ring-Slides for Sewing-Machines, of which the following is a specification.

This invention relates to improvements in bobbin-holders or ring-slides such as are used in the Wheeler & Wilson sewing-machine, and is an improvement on United States Patent No. 207,400, dated August 27, 1878.

To insure the best operation of the Wheeler & Wilson machine the bobbin containing the under thread should be held in a uniform manner, and be acted upon steadily by the spring located between it and the upright part of the bobbin-holder. Consequently it becomes of importance to lock this upright portion, pivoted to the base, so that this upright portion cannot vibrate or turn on its hinge during the regular operation of the machine.

The aim of our invention is to prevent any looseness of the said upright portion, and, consequently, obviate irregularity of hold or pressure upon the disk-bobbin.

In this our invention we employ a hooked arm composed of quite rigid yet spring metal, one end of which, made as a hook, engages the upright portion of the ring-slide, while the other end is curved to embrace or rest against the rounded rear portion of the base of the ring-slide, the said spring-hook being adjustably connected with the said base by a screw or equivalent device. The rear end of the said spring-arm is of such curvature with relation to the curve of the said base, and the arm is of such length with relation to the length of the base, that were it not held distended by the action of the screw, which forces it against the said curved base, the said spring-arm would be too short for its hooked or front end to engage the lower part of the upright part of the ring-slide.

Figure 1 represents, in front view, a bobbin-holder or ring-slide provided with our improvements; Fig. 2, a side elevation thereof; Fig. 3, a sectional top view, a portion of the base being broken away to show the spring-arm and its operating-lever, and Fig. 4 a view of the spring-arm separated from the base and in its normal position.

The upright portion *a*, pivoted to the base *b* at 2, and the bobbin-pressing spring *c'* are all as commonly employed in the Wheeler & Wilson sewing-machine, and their action need not therefore be herein further described. The spring-arm *c*, made of quite stiff steel, has at its forward end a lip, 3, to engage the lower portion, 4, of the upright *a*. Its rear end is curved, as at 5, to extend about the curved end or rear part, 6, of the base *b*, as in Fig. 3, and is provided with a slot of greater diameter than the diameter of the shank of the screw *e*, which is employed to hold the said spring-arm up to the base *b*. The curve of the rear of the spring-arm is such, compared with the curve of the base, and its length is such, that as it is acted upon by the screw *e* to force the spring-arm against the side of the base the said spring-arm will be straightened.

With the parts constructed in this way, it is obvious that the more the said spring-arm is forced against the said base by the screw *e* the more it will be elongated, until the spring-arm and base come in close contact for the whole length of the arm.

To apply the parts, place the part *a* of the bobbin-holder in its upright position, place the lip 3 of the spring-arm against its outer face at 4, and insert the screw *e* into the hole in the arm and into the threaded hole made for it in the base, and then turn the screw *e* until the arm is clamped between the side of the base and the head of the screw. During the time the screw is being so turned in the curved end of the arm rides along over the differently-curved base, and the arm is drawn longitudinally in the direction of the arrow, causing the lip 3 to press the part 4 very firmly, holding the same so tightly that the upright part cannot get loose. To lift the spring-arm and permit the upright part to be turned back, as in dotted lines, Fig. 2, we have provided the lever *g*, pivoted at *h* to the base, so as to fall behind the arm.

If the part 4 of the upright becomes worn away by the action of the lip upon it, it is only

necessary to loosen the screw *e* and again turn it in, as before, when the lip will be drawn closely against the part 4.

Any suitable form of levers or other equivalent device may be employed to operate the arm and remove the lip from before the part 4.

We are aware that a spring connected with the base of the ring-slide and operated by a bolt has been used to maintain the ring-slide bracket in vertical position, as in United States Patent No. 207,400. Our spring-arm *c*, made rigid, shaped, and attached, as described, to the base of the ring-slide, is more positive in its operation than the like spring shown in the said patent.

We claim—

1. In a bobbin-holder or ring-slide, the spring-arm *c*, curved as described, and provided with lip 3, combined with the pivoted upright, the base, curved as described to receive against it the curved portion of the spring, and the screw to operate the said arm, as described, and cause the lip to engage and lock the upright.

2. The pivoted upright *a*, the base *b*, curved as described, the curved spring-arm *c*, having its bearing on the curved part of the base, as described, and provided with the lip 3, and the screw extended through the said spring-arm into the base, combined with the pivoted lever *g*, to operate all as and for the purpose described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

CLARK MARSH.
DANIEL E. MARSH.

Witnesses:
ISAAC HOLDEN,
THOS. H. HORTON.