

E. JACKMAN & F. FLANDERS.
Manufacture of Latches for Knitting-Machine Needles.

No. 224,541.

Patented Feb. 17, 1880.

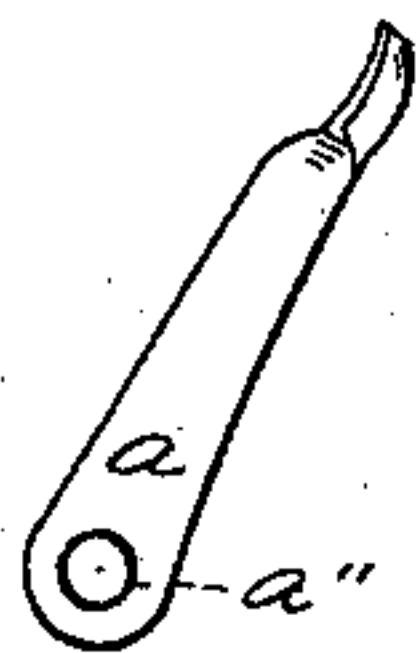


Fig. 2.

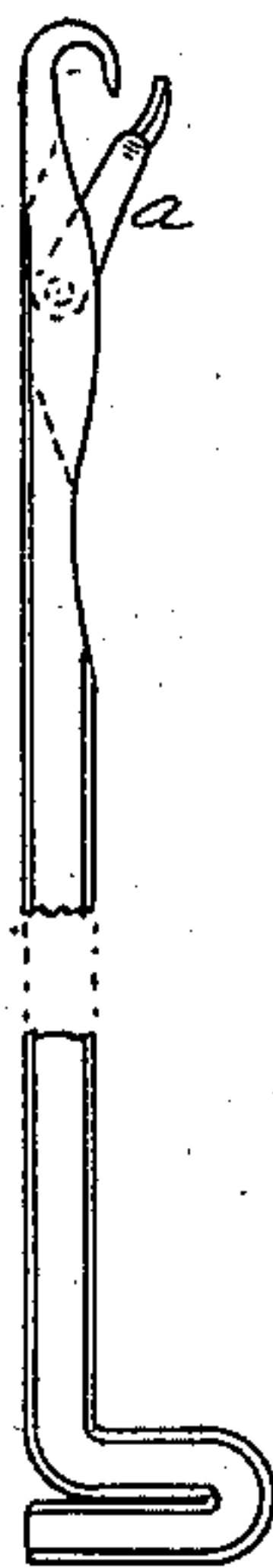


Fig. 1.

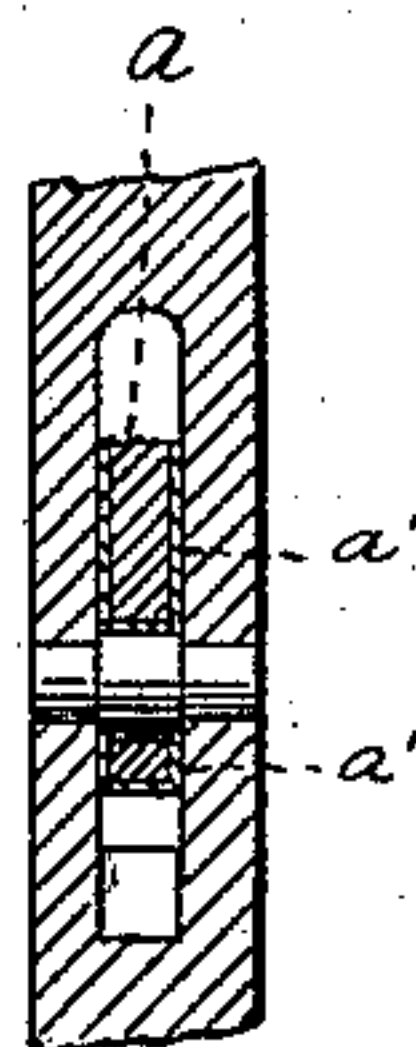


Fig. 3.

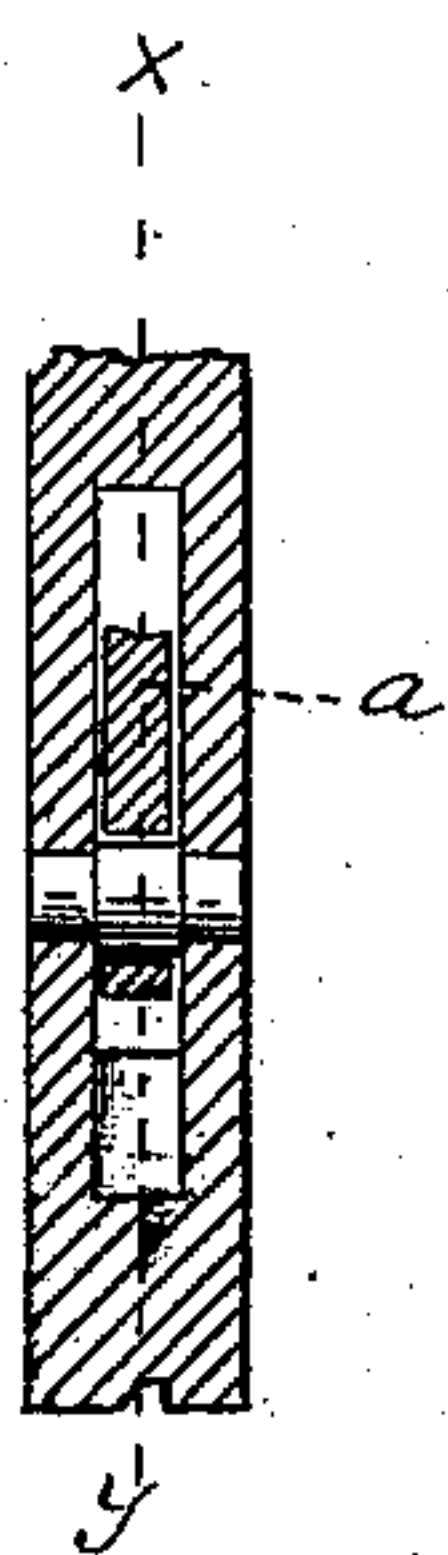


Fig. 4.

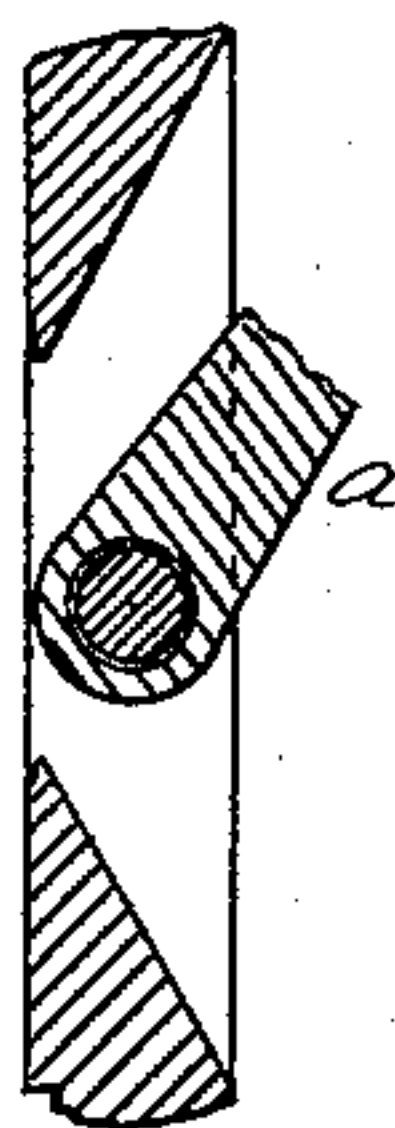


Fig. 5.

WITNESSES.

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UNITED STATES PATENT OFFICE.

ENOCH JACKMAN, OF CONCORD, AND FREDERICK FLANDERS, OF
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MANUFACTURE OF LATCHES FOR KNITTING-MACHINE NEEDLES.

SPECIFICATION forming part of Letters Patent No. 224,541, dated February 17, 1880.

Application filed June 27, 1879.

To all whom it may concern:

Be it known that we, ENOCH JACKMAN, of Concord, in the county of Merrimack and State of New Hampshire, and FREDERICK FLANDERS, of Franklin, in said county and State, have invented a new and useful Improvement in the Manufacture of Latches for Knitting-Machine Needles, of which the following is a specification.

10 In manufacturing latches or tongues for knitting-machine needles by our invention the latch or tongue is provided with a coating, or constructed from coated wire, so that when attached to the needle, and after having been
15 secured in the slit thereof, the coating may be removed by the application of heat, thus preventing the needle from binding the latch, and allowing it to turn easily and freely upon its pivot as it opens and closes in the operation of knitting.

20 In the accompanying drawings, Figure 1 is a view of the needle constructed in the ordinary manner, with the latch in position. Fig. 2 is a view of the latch. Fig. 3 is an enlarged section, showing the latch and its coating, the
25 needle, and the rivet. Fig. 4 is a similar section with the coating removed. Fig. 5 is a section upon line *x y*, Fig. 4.

30 The latch *a* is coated or made from wire coated with a suitable metallic substance, such as zinc, antimony, lead, copper, or other substance, alloy, or composition hard enough to resist the pressure of the rivet and sides of the needle while the latch is being secured in
35 the slit, soft enough to be capable of removal by heat, and of proper thickness.

40 The latch, provided with the coating *a'*, has its rivet-hole *a''* made slightly larger than the rivet-holes in the needle, and is placed within the slit and the rivet driven in thoroughly, so as to upset in the latch-hole *a''* and form a shoulder just within the slit, so as to prevent the rivet from working out. Heat is then applied to the latch, and the coating melts off
45 from the latch, thus leaving a space on both sides thereof, and also around the rivet. By means of these spaces (seen in Figs. 4 and 5) the latch is allowed to freely move. Of course,

were the coating not melted off the latch would bind, and the more thoroughly the rivet was upset the more inoperative the latch would become.

By means of our device the rivet may be thoroughly hammered down, and by varying the thickness of the coating the width of the spaces between the latch and the sides of the slit regulated.

Our improvement is a great advantage over the method of placing paper or other foreign, separate, unattached substance between the latch and needle, as our coating is integral with the latch, and hence the difficulty and expense of inserting a foreign substance is entirely obviated.

Another advantage possessed by our improvement over the old method of applying a shim of paper or similar substance to the latch is, that the coating upon the latch is thinner than any practicable shim of paper can be, and hence the undue looseness of the latch after the paper is removed by heat is avoided.

Again, the coating is hard enough to be reliable, and yet easily penetrated by the rivet.

Other advantages of this method of manufacture might be named.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

In the manufacture of latches or tongues for knitting-machine needles, the application to and employment upon such latch or tongue of a suitable metallic or other coating, such coating being applied to the latch, or to the material of which the latch is made, before the insertion of the latch in the slit of the needle, and said coating being designed to be removed by the application of heat after the latch has been permanently placed in the needle, substantially as and for the purpose hereinbefore set forth.

ENOCH JACKMAN.
FREDERICK FLANDERS.

Witnesses:

HENRY W. WILLIAMS,
DANIEL BARNARD.