

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

No. 224,542.

Patented Feb. 17, 1880.

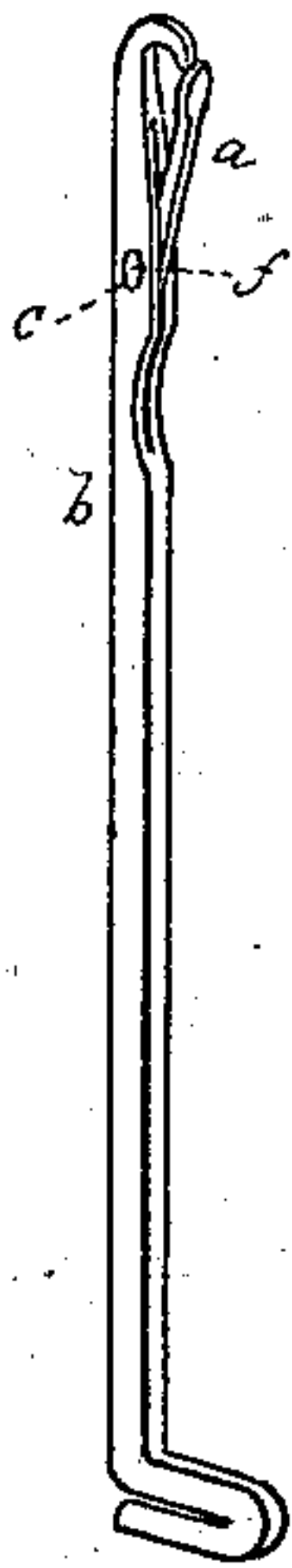


Fig. 1.

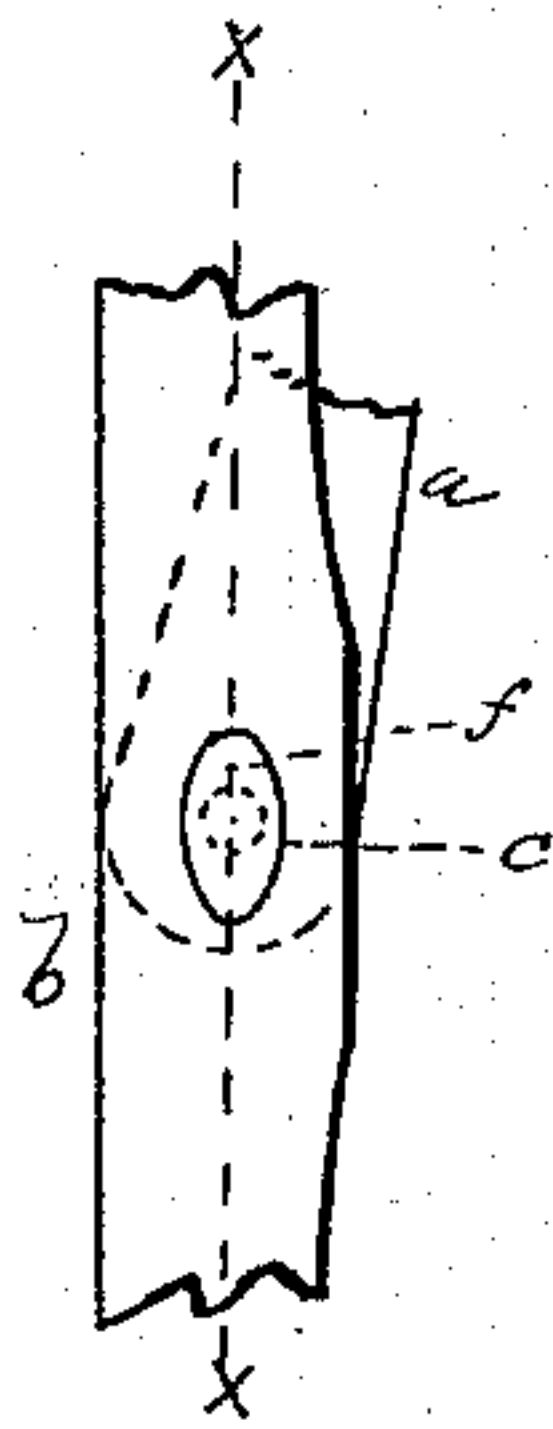


Fig. 2.

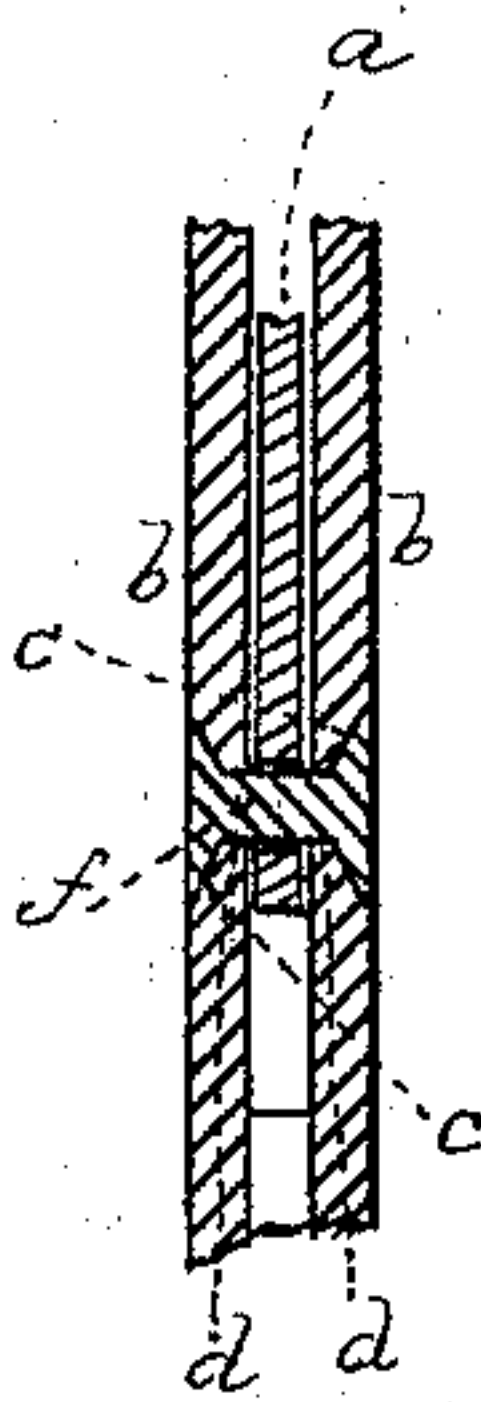


Fig. 3.

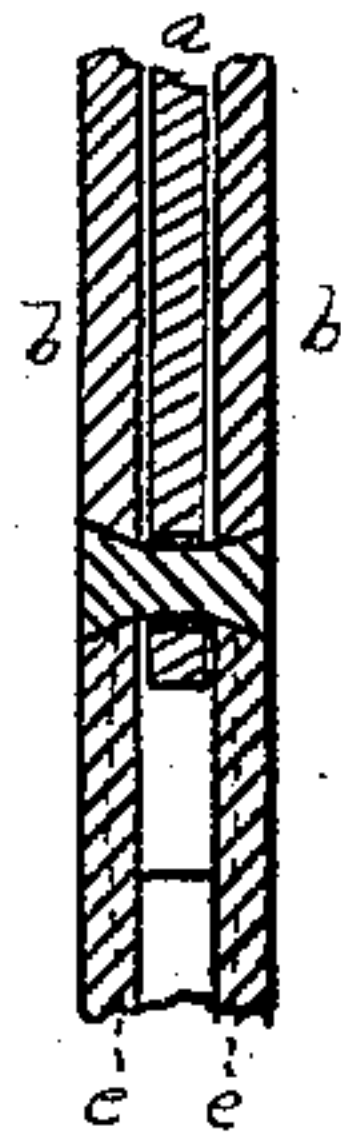


Fig. 4.

WITNESSES

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# UNITED STATES PATENT OFFICE.

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

SPECIFICATION forming part of Letters Patent No. 224,542, dated February 17, 1880.

Application filed October 23, 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 Knitting-Machine Needles, of which the following is a specification.

Considerable difficulty is experienced in the use of knitting-machine needles on account of the tendency of the rivets holding the latches to become loose, and hence to turn in their sockets. The result of the turning of a rivet is to cause rough or serrated edges on the ends thereof to project beyond the surface of the sides of the needle and catch the fibers of the yarn, thus materially defacing the knitted fabric.

The object of this invention is to obviate this difficulty.

In the accompanying drawings, Figure 1 is a view, in perspective, of a knitting-machine needle embodying our improvement. Fig. 2 is an enlarged view of a portion of the same. Fig. 3 is a section upon line *xx*, Fig. 2. Fig. 4 is a similar section of a variation.

The ordinary way of placing the latch or tongue in the needle is to drill a round hole in each and secure the latch in the needle by means of a rivet. The result is the difficulty above stated.

In our improvement we produce a round hole in the latch *a*, as usual, while in the sides of the needle *b*, flanking the latch, we punch, press, or otherwise produce countersinks *c*, such countersinks being of any shape other than circular, such as elongated, oval, rectangular, three-sided, polygonal, &c., and produced by means of a tool or tools suitably shaped for the purpose. The rivet *f* is placed in the latch-hole

and in suitable holes *d* in the needle extending from the countersinks *c*, and hammered so that it fits into and conforms to the shape of the countersinks, and hence cannot possibly turn. The rivet-head remains stationary and has a hard smooth surface, which so remains.

One or both of the needle's sides may be countersunk, as desired.

The drilling may be done before or after the countersinking.

A variation of the invention would be to provide a hole, whether countersunk or not, as beveled, for example, or of even size throughout its length, but of irregular shape—*i. e.*, shape other than circular—as shown in Fig. 4. In this figure the rivet is hammered into the hole *e*, which is other than circular in shape, and hence the same result is produced as described in connection with a countersunk hole.

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

The hereinbefore-described improvement in the art of making knitting-machine needles, such improvement consisting of punching, pressing, or otherwise producing holes or slots in the sides of the needle next the latch, a portion or the whole of one or both of said holes being made other than circular in shape, applying the rivet to said holes and latch and hammering it until it conforms to the shape of said holes, for the purpose of securing the latch in the needle and rendering the rivet immovable, as set forth.

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Witnesses:

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