J. B. BLANCHARD.

Needle.

No. 113,010. Patented Mar. 28, 1871.

Fig. 4

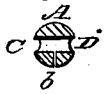


Fig. 1

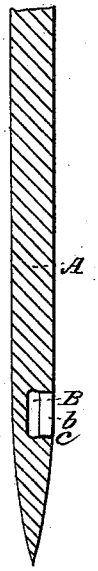


Fig. 2

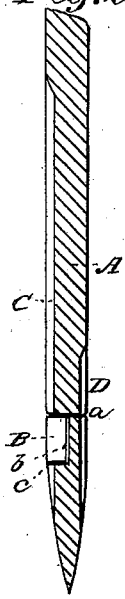
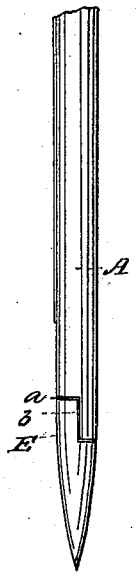


Fig. 3



Witnesses:
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Inventor:
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JOSEPH B. BLANCHARD, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 113,010, dated March 28, 1871.

IMPROVEMENT IN NEEDLES FOR SEWING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all to whom these presents shall come:

Be it known that I, JOSEPH B. BLANCHARD, of Boston, in the county of Suffolk and Commonwealth of Massachusetts, have made an invention of a new and useful Improvement in Open-eyed Sewing-Needles; and do hereby declare the following to be a full, clear, and exact description thereof, due reference being had to the accompanying drawing making part of this specification, and in which—

Figures 1 and 2 are longitudinal sections;

Figure 3, a side elevation; and

Figure 4, a horizontal section of a needle embodying my improvements.

This invention, which adds another to several now in existence of analogous character, is designed to produce an efficient, strong, and durable "open-eyed" needle, so called; that is to say, such a one as permits the thread to be introduced into the eye through a side passage thereto, rather than by passing the end of such thread directly through it; and to this end—

My present improvement consists in the peculiar formation of the orifice leading to the eye of the needle, or rather in the direction given such orifice, whereby accidental escape of the thread thereat and from out the eye is prevented under all circumstances.

The accompanying drawing represents at—

A the shank, and at

B the eye of a sewing-machine needle, the long or front thread-receiving groove thereof being shown at C, and the lesser or rear groove at D, such parts being of ordinary production.

In carrying out my invention, as herein expressed, I cut, through the metal of the needle which forms one side of the eye, an irregular orifice or saw-kerf, E, as shown in fig. 3, such orifice consisting of a lateral or side portion, *a*, which extends from the periphery of the needle to its center, and horizontally, or substantially so, with respect to its longest axis; of a central portion, *b*, which is a prolongation of the former, and which extends parallel, or practically so, to the longest plane of the needle for a distance about equal to its diameter, more or less; and, lastly, of a second side portion, *c*, which, being a continuation of the portion *b*, extends from the latter to the periphery of the needle, and is a counterpart of the first-named portion *a*.

In a needle of ordinary size a thread may be readily passed into the eye through the orifice E, while the form of this orifice, as seen in its axial portion *b*, entirely prevents accidental escape of thread thereat.

Care should be taken in manufacturing the above needle that the lowermost side portion *c* of the orifice should be situated upon that side of the needle containing the long groove, in order that the thread, which upon this side draws away from the point of the needle in sewing, shall be as remote as possible from it, the groove.

A needle such as above described is strong, inasmuch as any great strain upon its point, which would deflect it materially from a straight line, would cause the opposite sides of the lateral portions of the orifice E to meet, and thus give additional means of safety against fracture.

The orifice E may be easily obtained by means of a machine mounting three rotary saws or cutters, onto cut the central portion *b*, and two oppositely-disposed ones to cut the side portions *a* and *c*.

Claim.

I claim—

A sewing-machine needle, having the eye slotted substantially as described and shown.

JOSEPH B. BLANCHARD.

Witnesses:

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