

No. 79,983.

PATENTED JULY 14, 1868.

G. M. ISBELL.
NEEDLE FOR SEWING MACHINES.

Fig. 2.



Fig. 1.

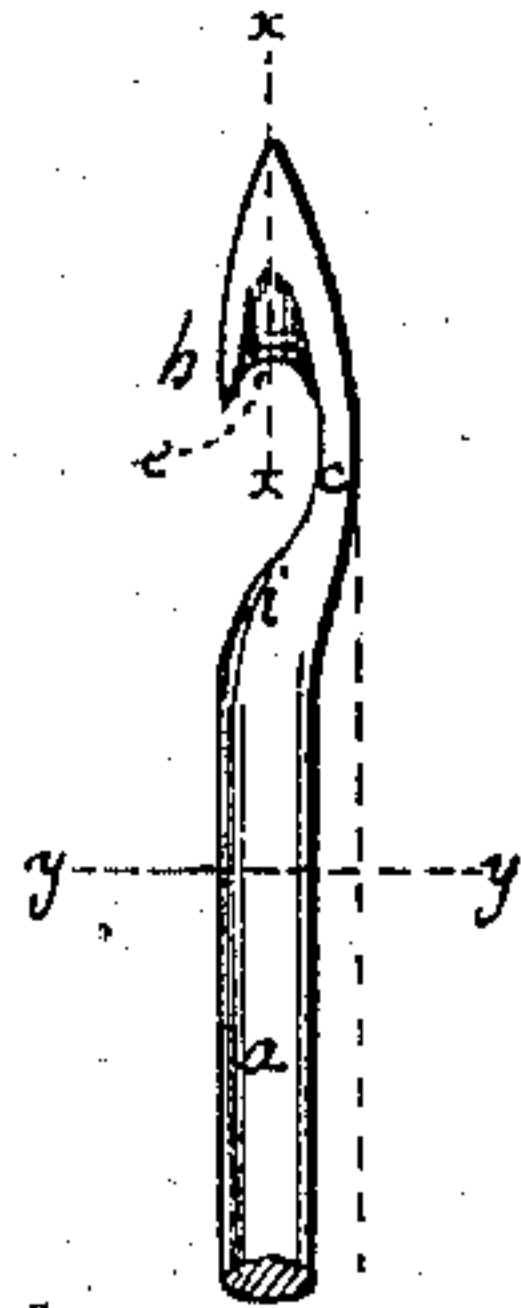


Fig. 3.



Witnesses

Chas. H. Smith

Geo. T. Prickney

Inventor

George M. Isbell

per L. W. Serrell
Att'y

UNITED STATES PATENT OFFICE.

GEORGE M. ISBELL, OF TORRINGTON, CONNECTICUT.

IMPROVEMENT IN NEEDLES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 79,983, dated July 14, 1868: antedated July 3, 1868.

To all whom it may concern:

Be it known that I, GEORGE M. ISBELL, of Torrington, in the county of Litchfield and State of Connecticut, have invented, made, and applied to use a certain new and useful Improvement in Needles for Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is an elevation of said needle. Fig. 2 is a section through the hook at the line *x*. Fig. 3 is a section through the shank at the line *y y*. These figures are shown two or three times the usual size of the needles.

Heretofore a hooked needle has been used in machines for sewing boots and shoes. The body of the needle has generally been cylindrical and a hook formed at the end. The perforation made by the needle has generally been so large that the threads drawn in do not fill the hole, and are therefore more liable to move and chafe and cut off than would be the case if the threads were drawn tightly into the hole. Besides this, the boot or shoe is not tight on account of the size of these holes.

The object of my invention is to shape the needle so that while the strength required is maintained the hole perforated by it shall be as small as possible. I effect these objects by reducing the body *a* of the needle as much as consistent with the strength required and flattening the same, as shown sectionally in Fig. 3, so that the hole will not be extended widthwise unnecessarily, as the flattening extends down from the sides of the hook *b*.

In order to maintain the necessary strength in the part *c*, that connects the body of the needle with the hook, and at the same time give as much space as possible in the hook for the thread, I form a curvature or swell at the back of the hook, as represented in Fig. 1. By lengthening the distance between the edge *e* of the hook and the inclined inner surface, *i*, of the hook the thread can draw into an elliptical sectional shape at the part where it passes around the hook. Thus by my construction the hook is capable of being used with a larger thread than in needles where there is not as much space within the hook. The edge *e* of the hook is made as a half-circle, from which extend the grooves and taper of the point. (See Fig. 2.) With this circular shape to the edge of the hook the thread is not liable to be cut or injured as it is drawn out by the needle.

This needle is especially adapted to use in sewing-machines for boots and shoes.

What I claim, and desire to secure by Letters Patent, is—

A sewing-machine needle formed, as specified, with the flattened body, the circular edge to the hook, the lengthened opening in the hook, and the curvature or swell at the back of the hook, as and for the purposes set forth.

In witness whereof I have hereunto set my signature this 19th day of July, A. D. 1867.

GEO. M. ISBELL.

Witnesses:

CHAS. H. SMITH,
GEO. T. PINCKNEY.