

(134.)

THOMAS HARRIS.

Improvement in Needle Sharpeners.

No. 121,940.

Patented Dec. 19, 1871.

Fig. 1.

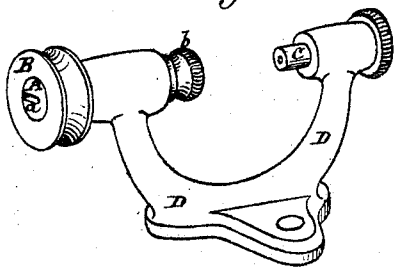


Fig. 2.

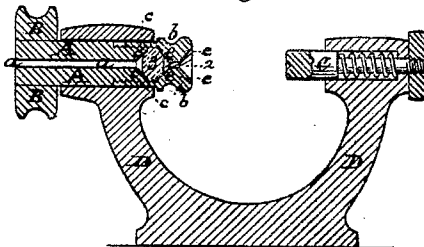


Fig. 3.

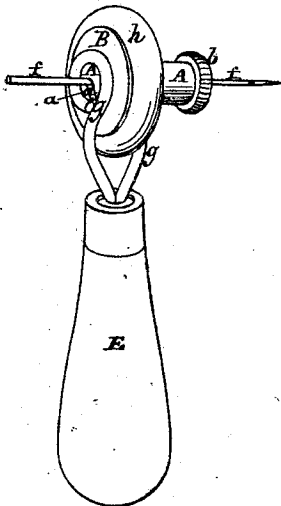


Fig. 4.

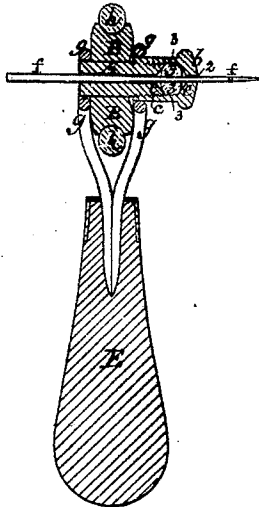


Fig. 5.

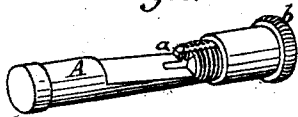


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS HARRIS, OF COTE ST. PAUL, CANADA.

IMPROVEMENT IN NEEDLE-SHARPENERS.

Specification forming part of Letters Patent No. 121,940, dated December 19, 1871.

To all whom it may concern:

Be it known that I, THOMAS HARRIS, formerly of Ansonia, in the county of New Haven and State of Connecticut, now residing at Cote St. Paul, Canada East, Province of Quebec, have invented certain new and useful Improvements in Needle-Sharpener; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 represents in perspective my needle-sharpening mechanism applied to the common bobbin-winder of a sewing-machine. Fig. 2 represents a vertical section through the same. Fig. 3 represents in perspective my needle-sharpening mechanism applied to a handle, in and by which the mandrel is caused to be revolved by frictional contact and thus revolve the needle. Fig. 4 represents a section through the same. Fig. 5 represents the mandrel for holding the needle to be sharpened, separate from any other mechanism, and so that it may be twirled by the thumb and finger and thus revolve the needle held in it. Fig. 6 represents a section through the same.

My invention relates more particularly to a mandrel in which a needle may be conveniently placed and held, and whether a straight or a curved needle, and revolved against a stone or other abrading substance to sharpen it.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawing.

A represents a mandrel having an opening or slot, *a*, therein extending from the center to the perimeter thereof, and a perforated cap, *b*, screwed onto its end. A recess, *c*, is made in the end of the mandrel A, and also in the end or interior of the cap, as seen at *e*. Both recesses are shown as made conical or tapering. That at *e* should be so, so that the needle to be sharpened may be readily passed and projected through the cap *b*, such tapering form guiding the needle-point to the hole 2 in said cap. The slot *a* is made in preference to a simple round opening through the center of the mandrel, for the rea-

son that said slot will admit a curved as well as a straight needle, and a round hole simply might not. The recesses *c e* in the mandrel and cap form a chamber easily accessible, in which I place rubber, cork, or any other suitably elastic material, 3, through which the needle is passed, and by which it is held while being sharpened, and the screw-cap serves to compress this material 3 in the chamber so as to make it of suitable solidity to hold without being too hard to puncture in inserting the needle to be sharpened.

This sharpening mechanism, Figs. 1 and 2, is represented as applied to a bobbin-winder for a sewing-machine, B being the pulley by which the mandrel A is rotated; *c*, the opposite spring-mandrel for receiving one end of the bobbin-spindle; and D, the frame for supporting the parts, and which may be connected in any of the usual ways with the sewing-machine.

In Figs. 3 and 4 the sharpening or needle-holding and rotating mechanism is represented as attached to a handle, E, in or on which there are bearings *g g* for supporting the mandrel while it is revolved, and revolves the needle *f*, passed through and held in it. In this case the pulley B may have a rubber or other flexible holding or frictional pad, *h*, around its perimeter, which, by pressing against any turning mechanism of the sewing-machine or otherwise, will receive and impart to its mandrel a corresponding rotary motion.

In Figs. 5 and 6 the mandrel is not connected to any turning mechanism, but may be twirled between the thumb and fingers to give it and the needle in it a rotating motion. In this modification, however, as in the others, the mandrel is slotted at *a*, has the screw-cap *b*, the chamber or recesses *c e*, the rubber, cork, or other pad 3, and hole 2 for the point of the needle to pass through.

The operation is the same in all of the modifications.

The needle is passed point foremost through the slot *a*, the holding-pad 3, and the hole 2, and allowed to project far enough to conveniently bring a stone, emery-wheel, or other abrading material in contact with it. The mandrel and

the needle, held in it by the friction of the elastic pad 3, is then revolved against such grinding or abrading surface, and the needle is accurately pointed or sharpened.

Having thus fully described my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

A turning mandrel, A, provided with the slot *a*, cap *b*, pad 3, and needle-hole 2, substantially

as and for the purpose described and represented.

THOMAS HARRIS.

Witnesses:

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GEORGE CARTER,
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