April 21, 1931. A. RIPPER 1,801,691

METHOD OF MAKING SEWING NEEDLES

Filed Aug. 12, 1927

Fig. 1.

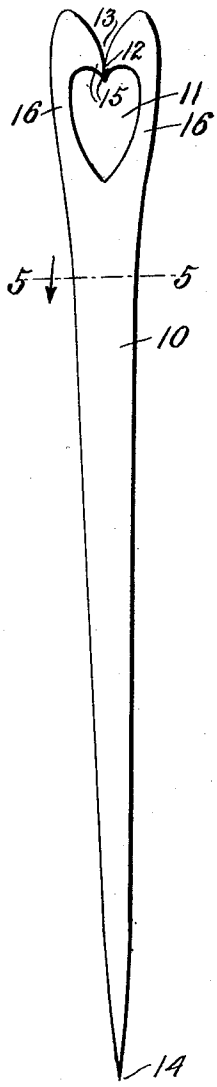


Fig. 3.



Fig. 4.

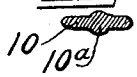


Fig. 5.

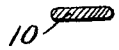
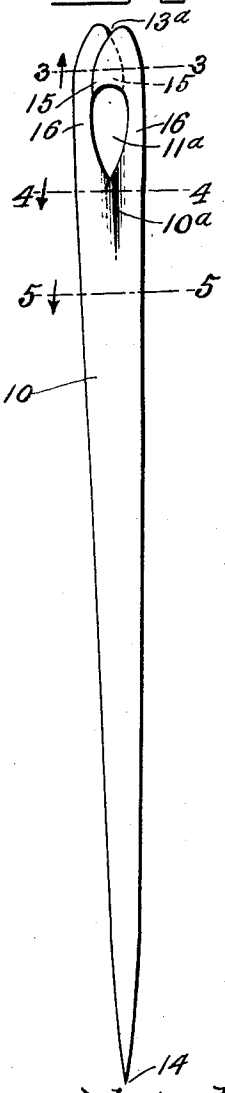


Fig. 2.



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UNITED STATES PATENT OFFICE

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METHOD OF MAKING SEWING NEEDLES

Application filed August 12, 1927. Serial No. 212,521.

This invention relates to sewing needles, and especially to an improved needle of the self-threading type.

One object of this invention is to provide a self-threading needle which is exceedingly easy to manufacture, and capable of being produced at a comparatively low cost.

Another object is to provide an improved needle which is very easily threaded and which positively and securely holds the thread against becoming disengaged from the eye of the needle.

Another object is to provide a needle which is relatively flat and thin in cross section, so it presents exceedingly wide gripping surfaces by which the fingers of the user can easily push the shank and pull the threaded eye through the goods being sewed, so a thimble is unnecessary in using such needle.

Other objects and important features are pointed out or implied in the following details of description, in connection with the accompanying drawings in which:

Fig. 1 is a side view showing one form of the needle, which form also constitutes a blank from which another form of the needle may be developed.

Fig. 2 is a side elevation of the developed form mentioned in the foregoing.

Fig. 3 is a sectional view along the line 3—3 of Figure 2.

Fig. 4 is a sectional view along the line 4—4 of Figure 2.

Fig. 5 is a sectional view along the line 5—5 of Figures 1 and 2.

Referring to these drawings in detail, in which similar reference characters correspond to similar parts in the several views, the invention consists in the details of construction which will now be specified as follows:

The shank or body of the needle is indicated at 10, the same being stamped of elastic sheet metal, preferably steel or the like, with a heart-shaped opening 11 which communicates with a closed slit 12 which terminates in a V-shaped notch 13 in the end opposite to the entering point 14. It will be seen that a needle of this kind can be quickly and easily threaded with a coarse thread, and that such thread will be engaged by one or both of the hooked points 15 which project into the opening 11 from the slit 12. It will be understood that the elastic arms 16 will move in opposite directions towards and from the observer, so as to permit the thread to pass through the notch 13 and slit 12 into the opening or eye 11, and the elasticity of these arms will return them to their normal position for closing the slit 12.

In this form of the invention, it should be noted that the thinness of the needle compensates for its breadth at the needle's eye, so the looped thread which extends over the hooked and pointed portions 15 presents the minimum resistance against being pulled through the fabric or material being sewed.

Referring to the modified form shown in Figures 2, 3 and 4, it will be seen that the arms 16 are nearer one another than in Figure 1, and that the pointed hooked portions 15 overlap one another, so their curved or concaved inner edges combine to form the thread-engaging end of the eye 11*a*, this eye being considerably narrower than the eye 11 shown in Figure 1. Instead of the slit 12, the lapped parts 15 form a normally closed joint 12*a*, and the slit 12 is also a normally closed joint but of a different form. The V-shaped notch 13*a* is smaller than the notch 13, but sufficiently large to engage with the thread in such relation as to separate the pointed hooked parts 15 and permit the thread to pass between them into the eye 11*a*. This developed form of needle has a thickened middle portion 10*a* which is formed by heavy pressure against the opposite edges while this part of the needle is held in a suitable die for the purpose of narrowing the needle at this point and thereby bringing the parts 15 into the lapped relation shown. Because of this lapped relation of the oppositely extending hooks 15, it will be seen that the thread can not accidentally pass laterally from the eye of the needle.

Although I have described these embodiments of my invention in detail, I do not intend to limit my patent protection to these exact details of construction and arrangement of parts, but changes may be made with-

in the scope of the inventive ideas as implied and claimed.

What I claim as my invention is:

The method of forming a sewing needle, consisting in providing a flat blank which includes a sharp-pointed body and two elastic arms including hooks facing towards one another, and subjecting opposite edges of said body to opposing inward pressures in a plane which passes through both of said arms and is of sufficient force to swage said body and thereby move and hold said hooks in lapped relation to one another, substantially as described.

In testimony whereof I affix my signature.

ADAM RIPPER.