

(No Model.)

J. M. FARMER.
SEWING MACHINE NEEDLE.

No. 517,853.

Patented Apr. 10, 1894.

Fig. 1.

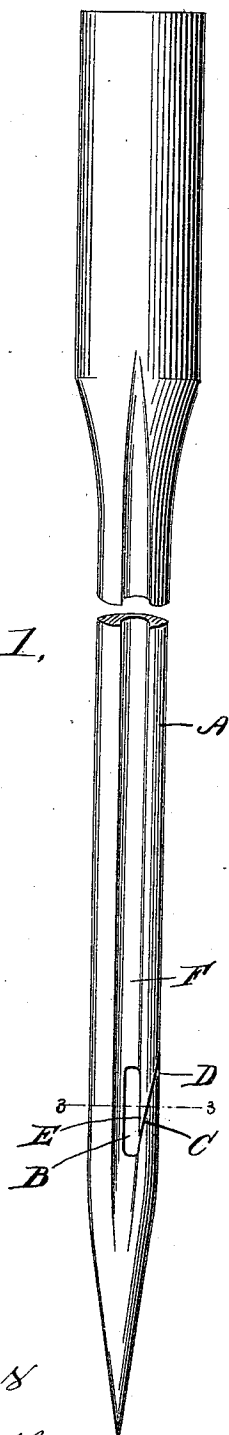


Fig. 3.

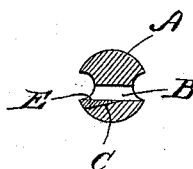
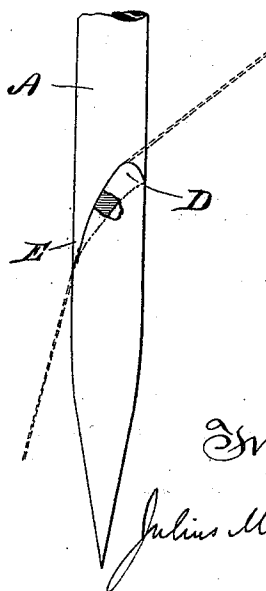


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JULIUS M. FARMER, OF MILWAUKEE, ASSIGNOR OF ONE-HALF TO HENRY REUTER AND ALEXANDER L. REUTER, OF RICH LAKE, WISCONSIN.

SEWING-MACHINE NEEDLE.

SPECIFICATION forming part of Letters Patent No. 517,853, dated April 10, 1894.

Application filed July 3, 1893. Serial No. 479,440. (No model.)

To all whom it may concern:

Be it known that I, JULIUS M. FARMER, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Sewing-Machine Needles; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to new and useful improvements in sewing machine needles, and consists in the matters hereinafter described and pointed out in the appended claim.

In the accompanying drawings: Figure 1 is a side elevation of my improved form of needle. Fig. 2 is a side elevation of the lower part of the needle, taken at right angles to Fig. 1. Fig. 3 is a transverse sectional view of the same, taken on line 3—3 of Fig. 1.

In said drawings, A represents the shaft of the needle provided near its point with the usual eye B. A slot C is formed in one side of the needle and extends obliquely into the side of the needle as illustrated in the drawings, and communicates with the eye B, this slot commencing a little above the level of the top of the eye, and extending downwardly and obliquely inward until it intersects the eye in the manner shown. By thus forming the slot C, a thin lip D is provided at the upper edge of the slot and at the opposite lower edge of said slot, where it enters the eye, a similar lip E is formed upon the inner face of the wall of the eye.

In threading the needle, the thread may be readily drawn over the lip D as shown in dotted lines in Fig. 2, so as to spring said lip inwardly to admit the thread to the slot C, and then, by pulling upon the thread, it will follow the slot C, raising the lip D slightly as it passes beneath it, and will finally slip through the slot into the eye. After the thread enters the eye B, it will be drawn up by the tension device upon the machine, so as to engage with the upper part of the eye above the lip E.

The shaft A of the needle is preferably provided with the usual longitudinal groove F which extends upwardly from the eye, and the thread extends upward through said groove at the side of the needle in the ordinary manner.

By my improved construction, the needle

may be very easily and quickly threaded by drawing the thread sidewise through the slot in the side of the needle and the necessity of passing the end of the thread through the eye of the needle is thus entirely obviated.

My improved needle will pass freely through the goods without catching upon the fiber or threads of the same, and will therefore operate in the usual manner when placed in the needle bar of a sewing machine.

By the particular construction of the slot C so as to commence a little above the level of the eye B, the lip D is caused to rest against the body of the shaft A and is firmly supported thereby against inward pressure, while at the same time being free to spring outwardly to permit the thread to enter, said lip normally resting snugly against the body of the needle so as to present a smooth and uniform surface.

By reason of the hereinbefore described inward oblique cut of the slot C, shown particularly in Fig. 3, with the upper termination of said slot above the top of the eye in the needle, as shown in Fig. 1, a great advantage is obtained in the use of my needle over needles wherein the slot, although diagonal or oblique from one side to the other, is yet cut through to the eye on a straight line at right angles to the length of the needle, or wherein the diagonal slot does not extend above the top of the eye of the needle, as, in both classes of devices just named the tendency of the needle in use is for the metal above and below said slot to yield or spring slightly inward and outward and thereby to catch in the threads of the fabric being sewed. With my improved needle, by reason of the inward oblique under cut of the said diagonal or oblique slot, the part of the metal at the cut toward the point of the needle rests upon and is supported by the part of the metal at the cut toward the other end of the needle, and as this oblique under cut begins above the top of the eye of the needle, the said lower part of the needle at the cut is effectually guarded from any yield or inward spring, and further as the adjacent edges of the metal, at said cut, are perfectly true and parallel, and the exterior surface of the needle smooth and uniform above and below said cut, it follows that (as there is no possibility of any inward

or outward spring of the needle in use, for reasons already given) there are no irregularities, either normal or created by use, to cause any catching or interference of the needle with the fabric being sewed through. On its downward stroke, the lower part of the needle, being under cut, as stated, protects the upper part of the metal lying beneath it, and on the return or upward stroke of the needle there is no outwardly projecting or outwardly sprung portion of the metal, nor any inequality of surface to offer resistance.

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

A sewing machine needle provided with an eye near the point thereof and a threading slot communicating with said eye formed by a cut, the said cut being in a plane oblique to the longitudinal axis of the said needle and

at the same time diagonal to the said axis, starting from a point in the body above the eye on the one side of the needle and terminating at a point below the center of the eye on the other side of the needle, whereby the part of the metal at the cut continuous with the lower or point end of the needle overlies and rests upon the part of the metal continuous with the body of the needle for the entire length of said cut, and also rests upon the under cut metal of said body above the top of the eye, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

JULIUS M. FARMER.

Witnesses:

JOHN E. WILES,
H. G. UNDERWOOD.

Correction in Letters Patent No. 517,853.

It is hereby certified that the residence of the assignees in Letters Patent No. 517,853, granted April 10, 1894, upon the application of Julius M. Farmer, of Milwaukee, Wisconsin, for an improvement in "Sewing-Machine Needles," was erroneously written and printed "Rich Lake"; that said residence should have been written and printed *Rice Lake*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 8th day of May, A. D. 1894.

[SEAL.]

Countersigned:

JOHN S. SEYMOUR,
Commissioner of Patents.

JNO. M. REYNOLDS,
Assistant Secretary of the Interior.