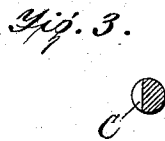
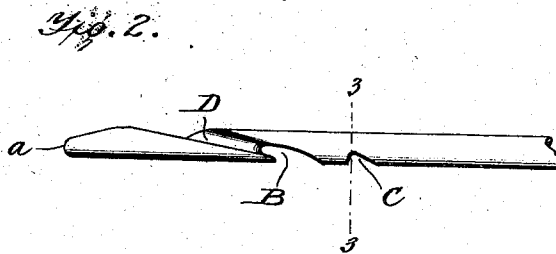
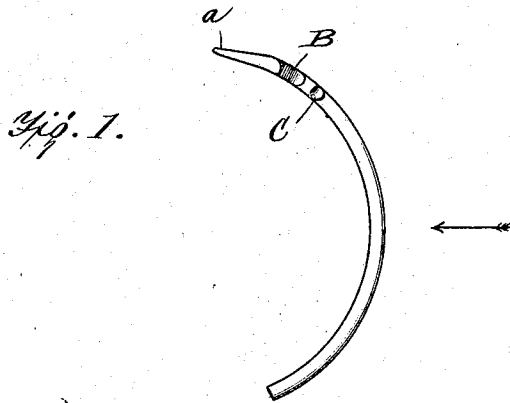


W. F. LEWIS.
SEWING MACHINE NEEDLE.
APPLICATION FILED MAR. 13, 1909.

937,310.

Patented Oct. 19, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM F. LEWIS, OF LYNN, MASSACHUSETTS.

SEWING-MACHINE NEEDLE.

937,310.

Specification of Letters Patent.

Patented Oct. 19, 1909.

Application filed March 13, 1909. Serial No. 483,144.

To all whom it may concern:

Be it known that I, WILLIAM F. LEWIS, a citizen of the United States, residing at Lynn, in the county of Essex and Commonwealth of Massachusetts, have invented a new and useful Sewing-Machine Needle, of which the following is a specification.

It is well known among Goodyear workers that the ordinary needles used on Goodyear shoe-stitching machines are unable long to withstand the required wear and strain of use, and frequently break, even in the stitching of a single case of shoes; and that the cost of furnishing new needles is a considerable item of expense to shoe manufacturers.

When the ordinary needle is being withdrawn from the hole which it has made in the leather or fiber which is being stitched, the hook thereof unavoidably engages and breaks certain portions of the leather or fiber, and the constant strain caused by the repetition of this process, together with the strain of carrying the thread, weakens the hook and eventually breaks the same.

The object of my invention, therefore, is to provide, when stitching shoes by the Goodyear process, a needle peculiarly constructed so that the leather or fiber of the material operated upon is broken before the strain or pressure thereof comes upon the hook, whereby is presented a needle fully capable of withstanding the strain of use on a Goodyear machine, avoiding the necessity of frequently changing needles. I attain this object by the device illustrated in the accompanying drawing, in which—

Figure 1 is a side view of my needle; Fig. 2 is a top view, *i. e.* looking in the direction of the arrow in Fig. 1; and Fig. 3 is a sectional view on the line 3—3, Fig. 2.

Referring, now, in detail to the drawing: *a* designates the usual point, and B the usual hook, of the ordinary and well known Goodyear needle, and D the usual worm or groove running from the hook B to the point *a*.

Preferably directly above the hook B, I provide the needle with a notch or recess C, constituting a secondary and minor hook.

In using the ordinary needle not provided with the second hook C, all the strain of breaking the fiber or leather and of carrying the thread comes upon the hook B; but, when using my improved needle, the secondary hook C engages and breaks the fiber or leather and takes the strain from the hook B, thus lengthening many times the life of the needle.

Stated in other words, the hook B of the ordinary needle, while the latter is being withdrawn from the perforation which it has made in the leather or fiber being stitched, unavoidably engages and breaks certain portions of the leather or fiber, and the constant strain caused by the repetition of this process, together with the strain of carrying the thread, weakens the hook and eventually breaks the same. The secondary hook C of my improved needle is provided to take the strain of breaking the leather or fiber from the hook B, and thus leave the hook B free to carry the thread without other strain: In operation, the hook C, being disposed above the hook B, is the first hook to catch and engage with the leather or fiber, and breaks the same, thus clearing a passage for the exit of the hook B, enabling the hook B to carry the thread without other strain.

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

A shoe-machine needle of the Goodyear type, provided with the usual thread-carrying hook, and with a notch disposed above said hook and constituting a secondary hook, and, upon withdrawal of the hook from the leather or fiber of the material operated upon, engaging with the leather and breaking the same, to afford a free passage for said thread-carrying hook.

In testimony whereof I hereunto set my hand.

WILLIAM F. LEWIS.

Witnesses:

ELSA M. SMERLING,
CHARLES W. LOVETT.