

C. W. MARTIN.
SEWING MACHINE NEEDLE.
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1,060,107.

Patented Apr. 29, 1913.

Fig. 1.

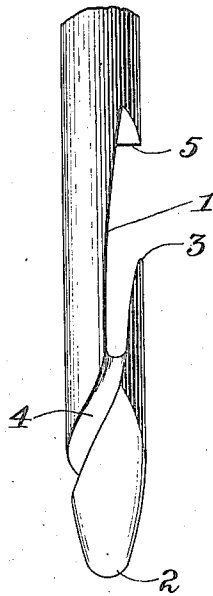
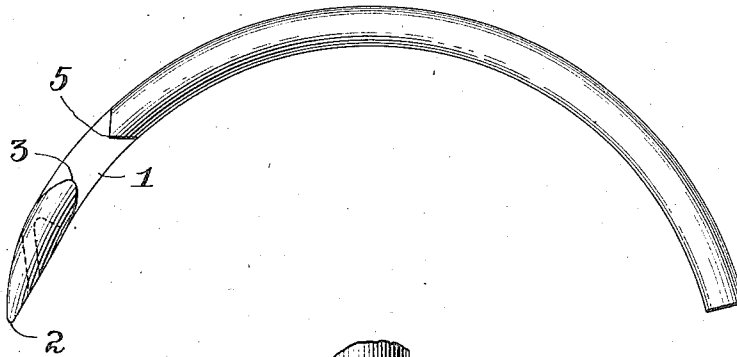


Fig. 2.

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UNITED STATES PATENT OFFICE.

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SEWING-MACHINE NEEDLE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES W. MARTIN, a citizen of the United States, residing at Mattapan, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Sewing-Machine Needles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to sewing machine needles, and more particularly to that type of needles used in sewing shoes.

It is well known that in the use of the ordinary hook-needle in sewing shoes, when the needle is retracted the hook or barb of the needle will catch on the fibers of the work, making it harder to pull the needle back through the work, and as the hook of the needle must tear these fibers, the life of the needle is considerably shortened. This difficulty is especially pronounced in sewing through the canvas of a Gem insole; the fibers of the canvas catching on the hook of the needle, and the wear and strain upon the needle in tearing out the fibers caught in the hook very soon causing the needle to break.

The object of my invention is to so construct a needle that the fibers which would be caught by the needle hook shall be cut away, thus allowing the needle to be pulled freely backward through the work.

With the above object in view, the present invention consists in the needle hereinafter described as defined in the claims.

A preferred embodiment of my invention is shown in connection with the usual curved hook needle in use on the Goodyear type of shoe sewing machines, but it is to be understood, however, that my invention is equally applicable to other types of needles.

In the drawings, Figure 1 is a side view of the needle, and Fig. 2 is an enlarged top view of the end of the needle.

The needle is formed with a notch 1 across its side near the point 2 of the needle. Upon the side or wall of the notch toward the point of the needle is formed the usual thread-engaging hook 3. The needle has the usual thread groove 4 running from the

hook 3 to the point 2. The side or wall of the notch 1 opposite the thread-engaging hook 3 is formed with a V-shaped shoulder 5 which constitutes a cutter for severing the fibers of the work adjacent the needle hook as the needle pierces the work.

When the needle penetrates the work, the fibers of the work which are stretched across the notched side of the needle, are cut by the V-shaped shoulder 5, so that when the needle is retracted from the work the hook 3 is pulled through the needle hole without catching these fibers, which it would otherwise catch if they had not been severed by the cutting shoulder 5. It will be seen that by forming the cutting shoulder 5 on the needle I have in a very simple manner provided a needle which will be more easily retracted through the work than the needles in present use, and which avoids the tear and strain on the thread-engaging hook, thereby greatly lengthening the life of the needle and causing less strain upon the needle actuating mechanism.

Having thus described my invention, what I claim is:

1. A needle provided with a thread-engaging hook and a work-cutting shoulder formed opposite and facing said hook for cutting the work during the work penetrating stroke of the needle, substantially as described.

2. A needle having a V-shaped work-cutting shoulder formed on the side thereof and directed toward the point of the needle for cutting the work during the work penetrating stroke of the needle, substantially as described.

3. A needle provided with a notch having a thread-engaging hook formed on one wall of the notch, and having a work-cutting shoulder formed on the wall of the notch opposite the said thread-engaging hook, substantially as described.

4. A needle provided with a thread-engaging hook and with a work-cutter located above the hook and having its cutting edge directed toward the point of the needle so as to cut the work during the penetrating stroke of the needle, substantially as described.

5. A needle provided with a notch across

the side of the needle shank, a thread-engag-
ing hook formed on one wall of the notch
to draw back a loop of thread upon the re-
traction of the needle, and a cutting shoul-
5 der formed on the other wall of the notch
opposite said hook to cut the work upon the

work penetrating stroke of the needle, sub-
stantially as described.

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Witnesses:

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