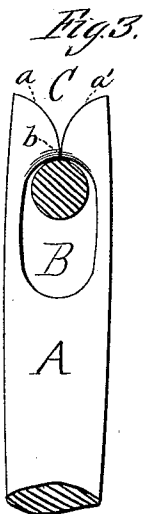
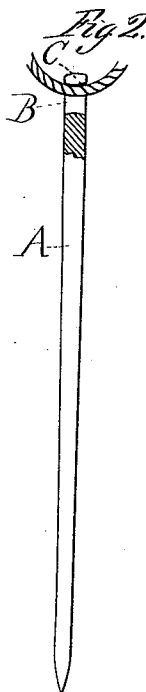
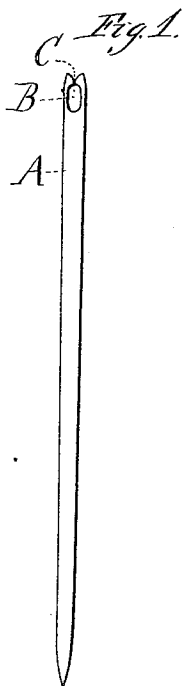


(No Model.)

I. BENJAMIN.
Needle

No. 234,371.

Patented Nov. 9, 1880.



Witnesses:
F. B. Townsend
F. W. Kasehagen.

Inventor:
Isaac Benjamin.
per
Latz & Dyer,
Attorneys.

UNITED STATES PATENT OFFICE.

ISAAC BENJAMIN, OF CHICAGO, ILL., ASSIGNOR OF THREE-FOURTHS OF HIS
RIGHT TO MOSES BENJAMIN AND HARRIS BENJAMIN, OF SAME PLACE.

NEEDLE.

SPECIFICATION forming part of Letters Patent No. 234,371, dated November 9, 1880.

Application filed August 4, 1880. (No model.)

To all whom it may concern:

Be it known that I, ISAAC BENJAMIN, of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Needles, of which the following is a specification.

The object I have in view is to produce a needle of the class that are split at the butt to allow the thread or cord to be forced laterally into the eye, the construction of which will be practicable for use in all kinds of needles having eyes in their butt-ends, including the common sewing-needles of large and small sizes and will be such that the thread or cord cannot pull laterally out of the eye in use, and can be readily and easily forced into the eye to thread the needle, and the eye will have sufficient strength to resist the strain of the thread or cord.

My invention consists in the peculiar construction of the needle to accomplish this purpose, as fully hereinafter explained.

In the accompanying drawings, forming a part hereof, Figure 1 is an elevation of a needle embodying my invention; Fig. 2, an elevation of the needle turned quarter-way around, the eye being in section; and Fig. 3, an enlarged elevation of the butt of the needle.

Like letters denote corresponding parts in all three figures.

A is a needle, which may be any one of the various kinds that have eyes in their butt-ends. The eye B of the needle is of usual shape, or, if desired, it may be somewhat elongated to give greater elasticity to the sides of the eye. The butt-end of the needle is provided with a central split or cut, C, leading into the center of the rear end of the eye B, and the sides *a a'* of the split C are beveled outwardly or flared on convex lines, so as to serve as a guide for directing the thread or cord into such split, and permitting the split to be forced open by the thread to allow such thread to enter the eye laterally. The sides of the split C meet each other just before such split enters the eye B, as shown by *b*, so that the eye is complete, and is not broken at any point. The split C is made before the needle is tempered, so that its sides can be forced closely together at *b*, and will always remain

in that position. The split C, by entering the center of the rear end of the eye B, cannot be forced open by the strain of the thread in sewing, since the thread will bear upon the end of the eye on both sides of such split, and the eye at the end conforming to the shape of the thread, there will be no tendency to spread the eye in sewing.

It will be seen that the eye forms substantially a square shoulder on each side of the split, so that the thread cannot be pulled laterally out of the eye.

In forcing the thread into the eye both sides of the eye will spring outwardly to the same extent, so that there will be much less liability of breaking than if the slot entered the eye to one side of the center.

By making the flaring sides of the slot convex in form, such sides can be more readily forced apart by the thread, and the eye of the needle is also made much stronger than if the sides of the slot were concave, by reason of the additional metal which is thus obtained to resist the strain of the thread.

I am aware of the patent granted April 3, 1866, to Oscar Low for a tag-needle. Such patent shows and describes a needle split from its butt-end into the eye on one side of the center. A needle constructed in that manner would be impracticable for general use, for the reason that the weaker and elastic side of the eye would be broken in a short time by the forcing of the thread into the eye of the needle, in addition to other reasons about to be stated. I am also aware that in Low's specification it is stated that the head of the needle might be split axially; but a needle split axially and constructed in accordance with his specification would also be impracticable for general use, by reason of the fact that his eye would not form a square shoulder on each side of the central split, but would be an acute angle at that point, against both sides of which the thread in sewing would bear with a wedging action, and have a tendency to spread open the split and pull out of the eye. Low's needle would also be impracticable for the reason that his notch for directing the thread into the eye has concave sides. This con-

struction would make it more or less difficult to force the thread into the eye. The eye would be greatly weakened, since it would have very little support at the center where the strain
5 of the thread in sewing has to be taken, and in small needles sharp points would be formed at the bottom of this notch, which would cut the thread when it is being forced into the eye.

10 What I claim as my invention is—
The needle described, having the eye B in

its butt-end, and provided with the longitudinal flared split C, entering the rear end of the eye centrally, and closed together at the point b, where it enters the eye, such eye forming
15 a square shoulder on each side of the split, and the said split having convex sides, substantially as and for the purposes set forth.

ISAAC BENJAMIN.

Witnesses:

HARRIS BENJAMIN,
F. W. KASEHAGEN.