

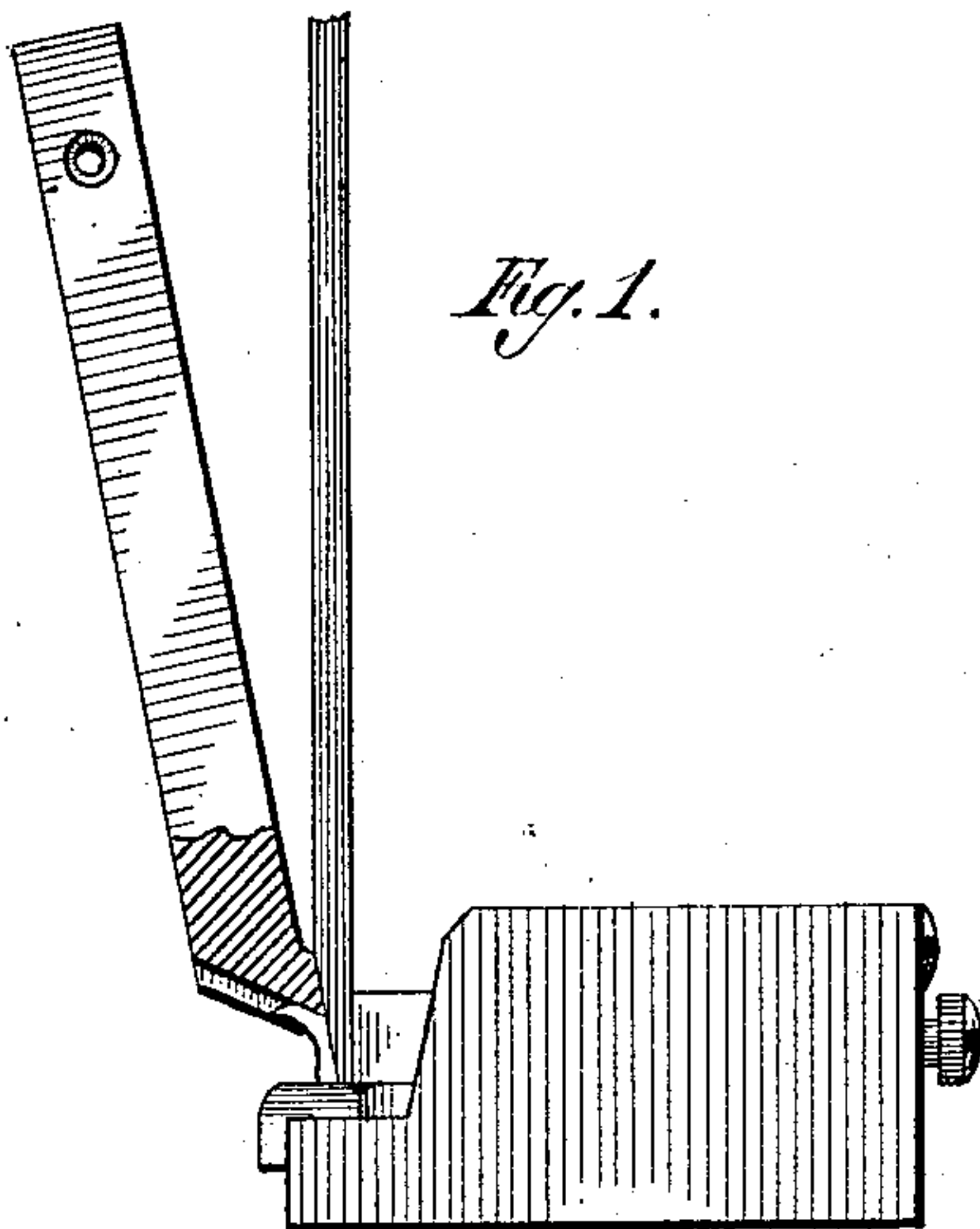
(No Model.)

J. H. DOOLITTLE.

CROCHET NEEDLE.

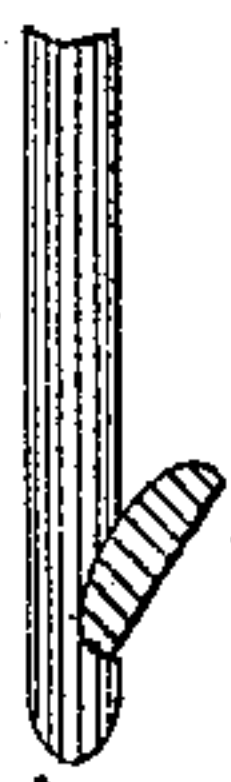
No. 287,109.

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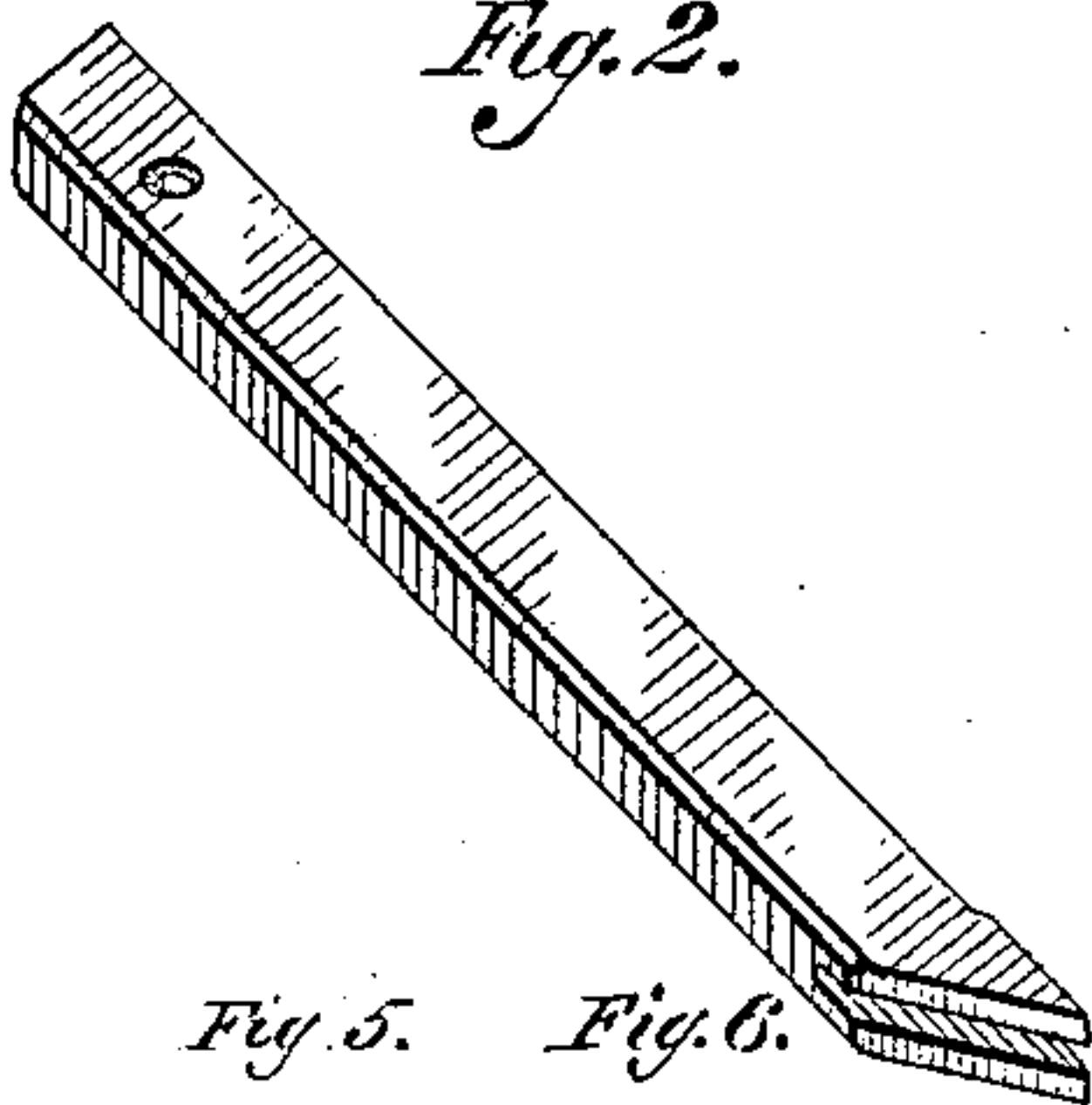


*Fig. 1.*

*Fig. 9.*



*Fig. 2.*



*Fig. 10.*



*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



*Fig. 7.*



*Fig. 8.*



*Fig. 11.*



*Fig. 12.*



*Fig. 13.*



*Fig. 15.*



*Fig. 16.*



*Inventor:*

*John H. Doolittle*

*By*

*Wooster Smith*

*Attys:*

*Witnesses:*  
*M. N. Mortimer,*  
*S. S. Williamson*

# UNITED STATES PATENT OFFICE.

JOHN H. DOOLITTLE, OF GREYSTONE, CONNECTICUT.

## CROCHET-NEEDLE.

SPECIFICATION forming part of Letters Patent No. 287,109, dated October 23, 1883.

Application filed June 18, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN H. DOOLITTLE, a citizen of the United States, residing at Greystone, in the county of Litchfield and State of Connecticut, have invented certain new and useful Improvements in Crochet-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.

My invention relates to a new and useful form of hook for crochet-needles, and has for its object to provide a form of hook as perfectly adapted as possible for use, and at the same time capable of being rapidly, cheaply, and perfectly reproduced in all sizes, and especially in the very finest sizes, which are exceedingly difficult to make at all by the crude processes heretofore known.

With these ends in view I have invented a form in which the inner side of the hook, against which the yarn is drawn, is a perfect "half-round," without corner or edges to cut or fray the yarn. The interior angle of the hook is perfectly sharp, so that the hook may be perfectly clear in the finest needle to hold the finest thread or hair. The hook itself is thinner laterally than the wire of which it is made, to allow the yarn to lie closely and draw through easily, and the back of the hook made the full width of the diameter of the wire for the sake of strength, to prevent the pulling off of the necessarily deeply-cut hooks in the finest sizes of needles.

In order that those skilled in the art to which my invention appertains may understand and be able to make use of my improved hook, I will proceed to describe the same and my device for making it in detail, in connection with the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation, with the cutting-tool partially broken away and sectioned, and illustrating my improved hook in process of manufacture; Fig. 2, a perspective view of the cutting-tool; Fig. 3, a view in elevation of my improved hook when completed; Fig. 4, a similar view, showing the hook as produced by the cutting-tool and before the needle has been ground. Figs. 5, 6, 7, and 8 are modifications of various styles of needles which are

entirely different from my improvement; Fig. 9, a modification showing the manner of forming the hook by a half-round file, the latter being shown in cross-section; Fig. 10, a front elevation of the cutting-chisel used in manufacturing my improvement. Figs. 11, 12, 13, and 14 are cross-sections of the hooks shown at Figs. 3, 4, 5, and 7, respectively; Fig. 15, a side elevation, illustrating my improved hook in process of manufacture before the sides have been completely cut away; and Fig. 16, a front elevation of my hook in the form shown at Fig. 15.

From these drawings it will be seen that my hook is straight, round-edged, inclined, and extends above the horizontal plane of the wire, its base forming a sharp angle with the body of the needle, instead of being truncated, as is usual, and that the whole hook is of equal thickness, instead of being grooved longitudinally along each side of its base in the usual manner.

In the manufacture of crochet-needles great difficulty has been experienced in getting the hooks perfect by means of files or revolving cutters, because in raising the teeth on the two sides of a sharp-edged file-blank the edge of the file is thickened as much as the teeth are raised; and in revolving cutters, if made perfectly sharp-edged, the cutting of a few needles will dull the edge enough to spoil the hook, as shown in Fig. 6, and it is a difficult and costly matter to keep them sharp enough to make a perceptible hook. In my new form of hook this trouble is avoided by making a form which can be cut by a chisel-edge that can be quickly ground when dull, as explained above.

One of the special advantages of my improvement is that the hook is raised above the horizontal plane of the wire, and this is more appreciable in the smaller-sized needle, where it is desirable that the hook should be very clear. This cannot be effected by files, or by the use of revolving cutters, since both of these devices cut away the wire to form the hook, while I simply raise a chip from the wire and grind away the surplus stock.

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

1. A crochet-needle having a new form of



hook, in which the inner face is made half-round, the angle at the bottom perfectly sharp, and the raised part of the hook of equal thickness throughout, substantially as set forth.

- 5 2. A crochet-needle having a hook extending above the horizontal plane of the wire, and with the under face and sides thereof rounded, the angle formed by the hook and the body of

the needle being perfectly sharp, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN H. DOOLITTLE.

Witnesses:

LEONARD N. BURR,  
JAMES O'NEILL.