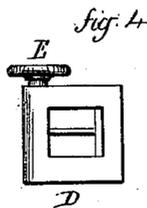
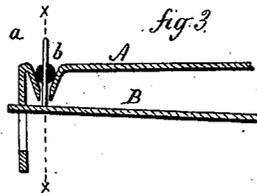
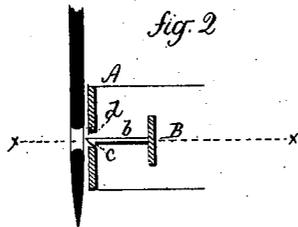
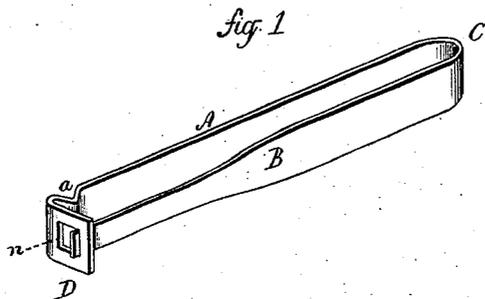


J. H. DOOLITTLE, G. W. HUBBELL, & W. R. STEELE.

Needle-Threaders for Sewing-Machines.

No. 148,192.

Patented March 3, 1874.



John H. Doolittle Geo. W. Hubbell
& Wm. Steele
Inventors.

Witnesses

J. H. Sumner
A. J. Roberts

By Atty

J. M. Earle.

UNITED STATES PATENT OFFICE.

JOHN H. DOOLITTLE, GEORGE W. HUBBELL, AND WILLIAM R. STEELE, OF
ANSONIA, CONNECTICUT.

IMPROVEMENT IN NEEDLE-THREADERS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 148,192, dated March 3, 1874; application filed
November 13, 1873.

To all whom it may concern:

Be it known that we, JOHN H. DOOLITTLE, GEORGE W. HUBBELL, and WILLIAM R. STEELE, of Ansonia, in the county of New Haven and State of Connecticut, have invented a new Improvement in Needle-Threader; and we do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view; Fig. 2, a transverse section on line *xx* of Fig. 3; Fig. 3, a longitudinal section on line *xx* of Fig. 2, and in Fig. 4 a modification.

This invention relates to an improvement in device for threading the needles of sewing-machines; and it consists in a pair of arms, one or both of which is made elastic, and in one a vertical groove, to sit upon the needle, the said groove perforated to permit the passage of a hooked feeler attached to the arm, as more fully hereinafter described.

A is one arm; B, the other arm, preferably formed in one and the same piece, and doubled at C to form a spring, but may be otherwise united, it only being necessary that an elasticity be applied the tendency of which is to force the arms asunder. The arm A is formed with a vertical groove, *a*, and perforated, as seen at *d*, Fig. 2, about midway of the groove. The other arm, B, is provided with a feeler, *b*, formed with a hook, *c*, as seen in Fig. 2, corresponding to the perforation in the groove, so that when the two arms A B are pressed together, as in Fig. 3, the said feeler *b c* will pass through the said perforation; but, when left free, the arm B will spring back, drawing the feeler with it.

The place of rest of the hook should be within the perforation *d*, as seen in Fig. 2, for the purpose more fully hereinafter described.

In order to insure the proper relative position of the arm B, that the hook may always move in the same path, we turn the forward end of the arm A at right angles, D, Fig. 1, and make a slot, *n*, through that portion, to receive the forward end of the arm B, which will allow its free movement to and from the arm A, and, at the same time, preserve its proper relative position thereto.

To use the threader, holding it in the finger of one hand, set the groove *a* upon the needle upon the grooved side, press the feeler *b* lightly into the groove of the needle, and move the threader up or down the needle, as the case may be, and, as soon as the feeler comes in line with the eye, the pressure will force it through the eye, as seen in Fig. 3. Then thread is placed upon the hook *c* of the feeler. Then, releasing the pressure upon the feeler, the elasticity of the arms will draw the hook and thread into the perforation, the hook being arranged to move close against one side of the perforation, and to rest in its backward position, as shown in Fig. 2, which thereby holds and effectually prevents the thread from slipping from the hook. In this condition the device is moved from the needle, taking the thread with it, until a sufficient length has been drawn through. Then release the thread by pressing the hook through the perforation, or drawing the thread therefrom.

If desirable, an adjustable guide, in the shape of a screw, E, Fig. 4, may be introduced into the end of the threader to set the threader, either by the point of the needle or needle-arm, so that, when placed upon the needle and adjusted by such guide, the barbed feeler will be directly in front of the needle-eye; but we prefer to dispense with such an adjusting device.

We claim as our invention—

1. In combination with the arm A, provided with the perforated groove *a*, and the arm B, with a corresponding barbed feeler, *b c*, the slotted guide D, substantially as and for the purpose set forth.

2. In a needle-threader in which a barbed or hooked feeler is made to pass through a perforation in the threader before entering the needle-eye, the arrangement of the said hook or barb in the relative position to the perforation in the threader as described, so that the said hook or barb will stand, when at rest, within the said perforation, and hold the thread, substantially as specified.

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