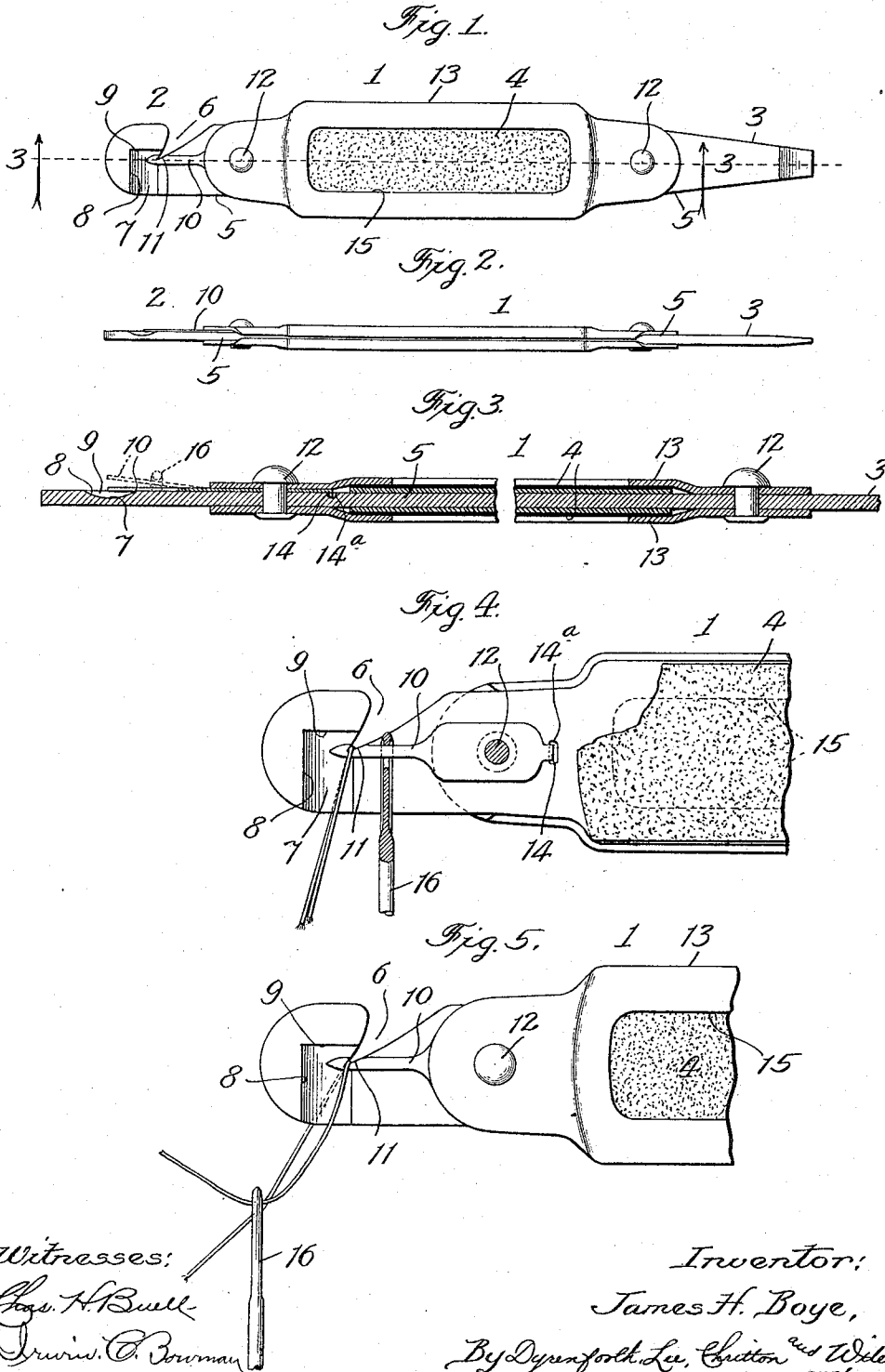


J. H. BOYE.
NEEDLE THREADER AND SHARPENER.
APPLICATION FILED AUG. 7, 1914.

1,175,504.

Patented Mar. 14, 1916.



UNITED STATES PATENT OFFICE.

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NEEDLE THREADER AND SHARPENER.

1,175,504.

Specification of Letters Patent.

Patented Mar. 14, 1916.

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To all whom it may concern:

Be it known that I, JAMES H. BOYE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Needle Threaders and Sharpeners, of which the following is a specification.

The present invention relates to devices for threading hand-needles and sharpening the same; and the primary object is to provide a very simple and cheap device of this character, so constructed as to enable the needle-threading operation to be performed with great facility, even by the old and infirm.

The invention is illustrated in its preferred embodiment in the accompanying drawings, in which—

Figure 1 represents an elevational view of a combination needle-threader, sharpener and screw-driver, constructed in accordance with my invention; Fig. 2, a plan view of the same; Fig. 3, a section taken as indicated at line 3 of Fig. 1; Fig. 4, a broken elevational view of the device, illustrating one step of the threading operation; and Fig. 5, a broken elevational view, illustrating the final step of the threading operation.

In the construction illustrated, the improved device comprises a handle-portion 1 equipped at one end with a needle-threader 2 and at the other end with a screw-driver 3, the handle-portion being provided with sharpening-strips 4, of emery cloth, or the like. The device is preferably composed of a flat steel strip 5 having an enlarged central portion forming a part of the handle and having one extremity shaped to afford a part of the needle threader and having the other extremity shaped to afford the screw-driver blade 3. That end-portion of the member 5 which forms part of the needle-threader 2 has one edge provided with an undercut notch or recess 6, and the extremity of the member is rounded, thus giving the effect of a large hook. One lateral, flat surface of the member is provided with the vertical recess or depression 7, affording a vertical guide-shoulder 8 and a horizontal or top guide-shoulder 9. A small threader-hook 10 is disposed adjacent the recessed side of the member 5 and is provided with a small undercut notch 11 which corresponds or registers with the

inner end or crotch-portion of the notch 6. The extremity of the hook 10 projects over the recess 7. The shank of the member 10 is provided with a perforation through which passes one of the rivets 12, which serves to secure a pair of clip-plates 13 to the member 5. The rear end of the shank of the hook 10 is provided with a laterally-turned lug 14 which engages a recess 14^a in the side of the member 5. Thus, the threader-hook is held securely in place. The clip-plates 13 may be composed of very thin sheet metal, and are of a configuration to correspond with the central or handle-portion of the device of which they form a part. The clip-plates serve also the function of securing the emery-strips or fillets 4 at the sides of the member 5, and are provided with longitudinal slots 15, whereat the emery-strips are exposed, so that a needle-point may be drawn over an emery-strip for sharpening purposes.

In the use of the device as a needle-threader, a needle 16 is entered in the recess 7 and moved toward the base of the hook 10 until the eye of the needle engages the hook in the manner shown in Fig. 4; the thread is then looped over the large hook of the needle-threader, *i. e.*, is entered in the notch 6, and the thread is thereby guided to engagement with the diminutive notch 11 of the small hook 10; the needle is then withdrawn from the hook 10, and the thread thereby caused to pass through the eye of the needle. In the operation of bringing the eye of the needle into engagement with the hook 10 the vertical wall 8 serves first to guide the needle to a proper position, and the horizontal or top wall 9 then serves as a guide for the head of the needle, while the needle is moved parallel with itself until the hook is entered through the eye. The whole arrangement is such as to make it very easy to effect the threading operation, even though the eyesight may be poor and the hands unsteady. Moreover, the looping of the thread over the large hook serves to protect the delicate threader-hook against injury, it being observed that it is natural to draw downwardly on the looped thread; and, when used by a person whose hands tremble violently, there would be danger of destroying the threader-hook were not this provision made.

The foregoing detailed description has

been given for clearness of understanding, and no unnecessary limitation should be understood therefrom.

What I regard as new and desire to secure by Letters Patent is—

1. A needle-threader comprising a flat member having in one edge near one end a relatively large undercut notch, said member having, also, a longitudinal shoulder above the crotch of said notch adapted to serve as a guide for the head of a needle, a small threader-hook disposed below the plane of said shoulder and lying against the side of said first-named member and having a small undercut notch which registers with said first-named notch below the plane of said shoulder, and means securing the shank of said threader-hook to said first-named member.

2. A needle-threader comprising a member having a flat side and having in one edge near one end an undercut notch, said member having in said flat side a recess intercepting the crotch-portion of said notch presenting a vertical shoulder and a horizontal shoulder, and a small hook lying along said flat side and having an undercut notch registering with the crotch-portion of said first-named notch.

3. A needle-threader comprising a member having in one edge near one end an undercut notch, a small hook lying adjacent said member and provided near its extremity

with an undercut notch registering with the crotch-portion of said first-named notch, and a wall on said first-named member above said small hook and serving as a guide for the head of the needle when the needle is being moved into engagement with said hook.

4. A needle-threader comprising a device having a handle and a bar projecting from one end thereof, said bar provided near its extremity with an undercut notch, a small threader-hook having a notch registering with the crotch-portion of said first-named notch, clips flanking said bar, and rivets securing said clips to the bar, the shank of said small hook being disposed between one of said clips and said bar.

5. A device of the character set forth comprising a bar provided at one end with a large hook affording a notch, a pair of perforate clips embracing the intermediate portion of said bar and formed to afford a handle, a small threader-hook having a notch corresponding with the notch of said large hook and having a shank disposed between one of the clips and said bar, fillet-strips confined between said clips and said bar, and rivets securing the clips to the bar, one of said rivets passing through the shank of said small hook.

JAMES H. BOYE.

In the presence of—

NELLIE B. DEARBORN,
A. C. FISCHER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."