

A. JOHNSTON.

Needle-Setters, Threaders and Cutters.

No. 135,479.

Patented Feb. 4, 1873.

Fig. 1.

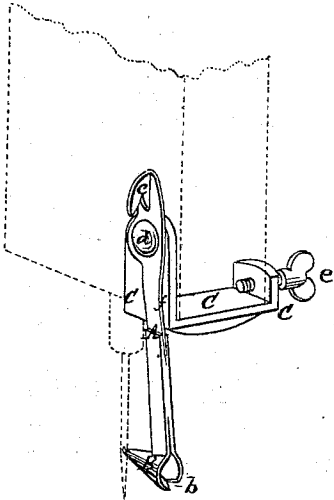
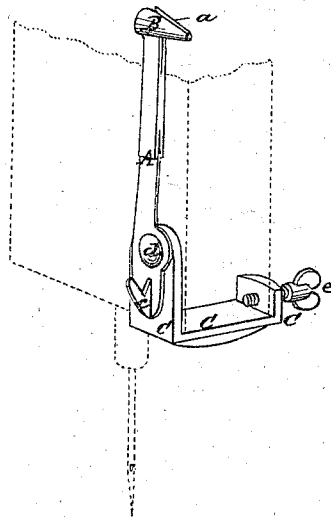


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

ALLEN JOHNSTON, OF OTTUMWA, IOWA.

IMPROVEMENT IN NEEDLE SETTERS, THREADERS, AND CUTTERS.

Specification forming part of Letters Patent No. 135,479, dated February 4, 1873.

To all whom it may concern:

Be it known that I, ALLEN JOHNSTON, of Ottumwa, Wapello county, Iowa, have invented a certain new and Improved Needle Setter and Threader and Thread-Cutter, of which the following is a specification:

The device in which this invention is comprised is at once a needle-setter, a needle-threader, and a thread-cutter. It consists of an arm carrying the needle threading and setting device and the thread-cutter, and pivoted to a frame or support adapted to be applied and fixed to the head of a sewing-machine.

The nature of my invention and the manner in which the same is or may be carried into effect can, however, be more readily explained by reference to the accompanying drawing, in which—

Figure 1 is a perspective view of the attachment, represented as applied to the head of a sewing-machine and in position to set or thread the needle. Fig. 2 is a like view of the attachment, with the threader and setter turned up out of the way of the needle and needle-bar.

A is an arm or plate, carrying at one end a funnel-shaped bowl, B, open at both ends, the opening in the smaller end being about the size of the needle-eye. This end is also preferably notched vertically or in a vertical plane, so that it may fit partly around the needle. The bowl is split longitudinally, as seen at *a*, on that side which is under when the bowl is in position for setting and threading, as shown in Fig. 1. This slit, at the larger end of the bowl, is notched with a V-notch, as shown at *b*, Fig. 1, and this notch has an important office. The thread is passed through the bowl from the larger end, and thence through the smaller end into and through the eye of the needle, which is brought opposite to and so as to coincide with the opening in this smaller end; and the thread is then drawn out or disengaged from the bowl by being pulled down through the slit *a*. The edges of the bowl, at the slit, come together with a spring-pressure, and when, as has heretofore been the case, the edges are straight and parallel from end to end of the bowl, it is difficult to draw the thread into the slit, and the thread is frequently broken, frayed, or otherwise injured in the attempt. The object of the notch *b* is to over-

come this difficulty and to enable the thread to find the slit and pass into it without difficulty. This is accomplished by drawing down the thread at the rear or larger end of the bowl, when it will at once enter the notch and thence find its way into the slit, without danger of cutting or fraying it against any sharp corners. On the other side of arm A is a V-shaped thread-cutting blade, *c*, set at about right angles with the face of the arm and lengthwise on the same. The arm is pivoted at *d* to a clamp or jawed piece, C, which is adapted to clasp the head of a sewing-machine, as shown, one of the jaws carrying a set or clamping screw, *e*, by which the attachment may be readily fastened in place.

The arm can be turned upon its pivot to bring either the setter or threader B or the cutter *c* uppermost. The length of the whole arm and the location of the pivot *d* are such that after the frame C has been clamped in position on the head of the sewing-machine, and the arm A is vertical and the bowl is lowermost, the smaller end of the latter will be just about at the height to which the eye of the needle must come when the needle-bar is in its elevated position. This, therefore, is a guide for setting the needle, and of course, after it is thus set, the threading operation can be effected without difficulty. After the needle has been set and threaded, the arm A, to carry the bowl out of the way, is turned so as to bring the bowl uppermost, the thread-cutter *c* being thus brought into position, as shown in Fig. 2. The pivot *d* is so located that the part of the arm A on the side of the pivot toward the thread-cutter shall not be of such length as to extend below the bottom of the clamp or sewing-machine head, and the cutter is thus held entirely out of the way, while at the same time it is in a convenient position for use. The arm A is bent inward or toward the clamp, as seen at *f*, both to bring the bowl opposite to the needle-bar and to cause the arm to bear with a spring-pressure upon either the clamp, as seen in Fig. 1, or the sewing-machine head, as in Fig. 2, so that in either position it will remain firm or steady without liability of being caused to vibrate during the movement of the machine to which it may be applied.

The arm A may be held to the sewing-machine head by other means, if desired. It may, for instance, be mounted on a pivot or screw pin adapted to be inserted in a socket formed at the proper point for it in the sewing-machine head. I much prefer, however, the clamp.

The attachment here shown is for use with a "Singer machine," so called. The proportions of the clamp and arm may require to be varied in order to use the attachment with other machines. This, however, is necessarily the case, owing to the variety of machines in the market, and requires no change in the principle of my invention.

What I claim, and desire to secure by Letters Patent, is—

1. The pivoted arm or plate A, provided at

one end with a needle setting and threading bowl, at the other end with a thread-cutter, and adapted to be applied to the head of a sewing-machine, to operate substantially as shown and set forth.

2. A combined needle-setter, needle-threader, and thread-cutter, composed of an arm or plate carrying at one end the setter and threader, and at the other end the cutter, in combination with a jawed clamp, to which said arm is pivoted, the parts being arranged and adapted to operate substantially as shown and described.

ALLEN JOHNSTON.

Witnesses:

A. G. HARROW,
B. R. HAMILTON.