

(No Model.)

W. DAY.
NEEDLE THREADER.

No. 328,296.

Patented Oct. 13, 1885.

Fig. 1.

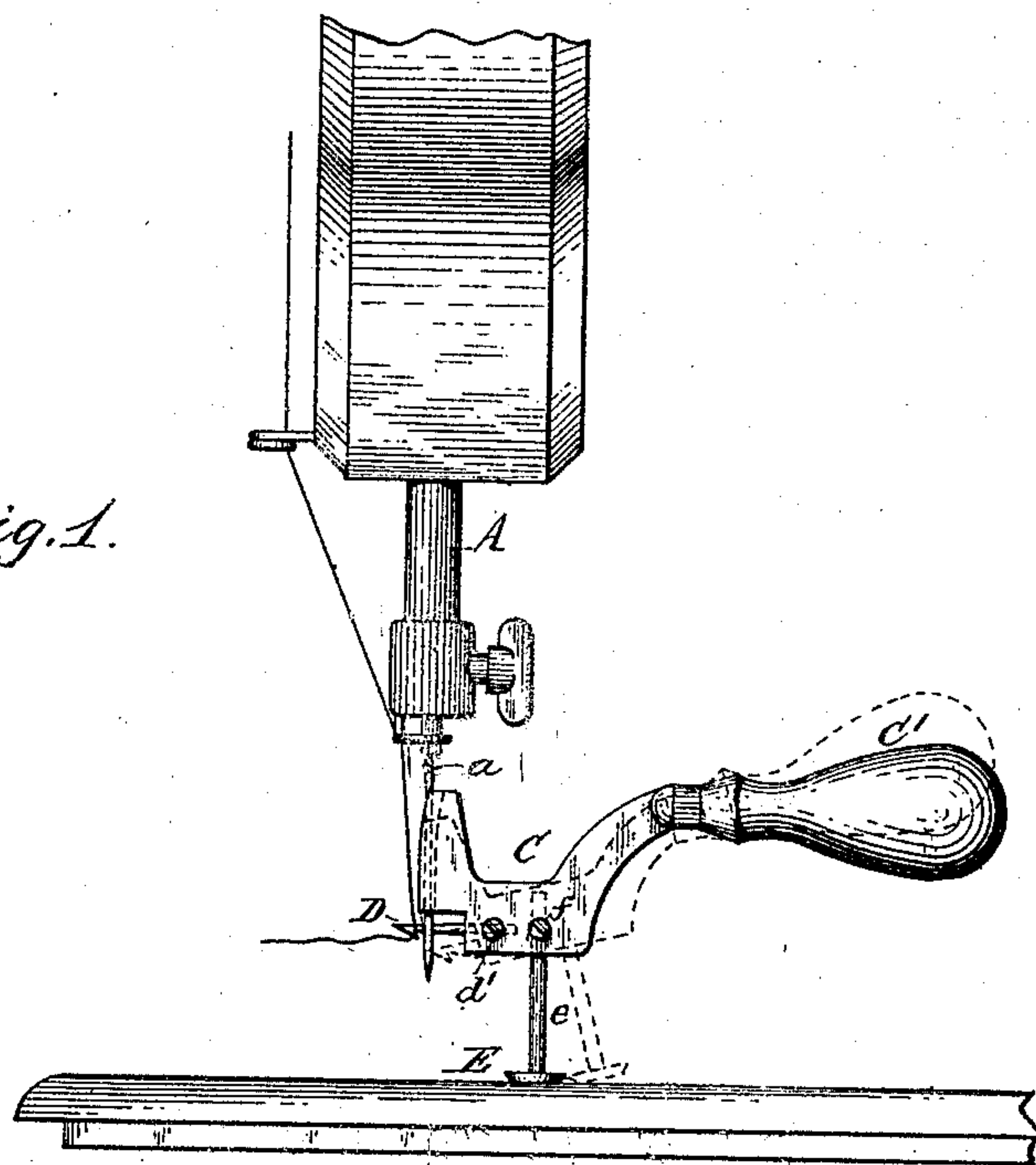


Fig. 2.

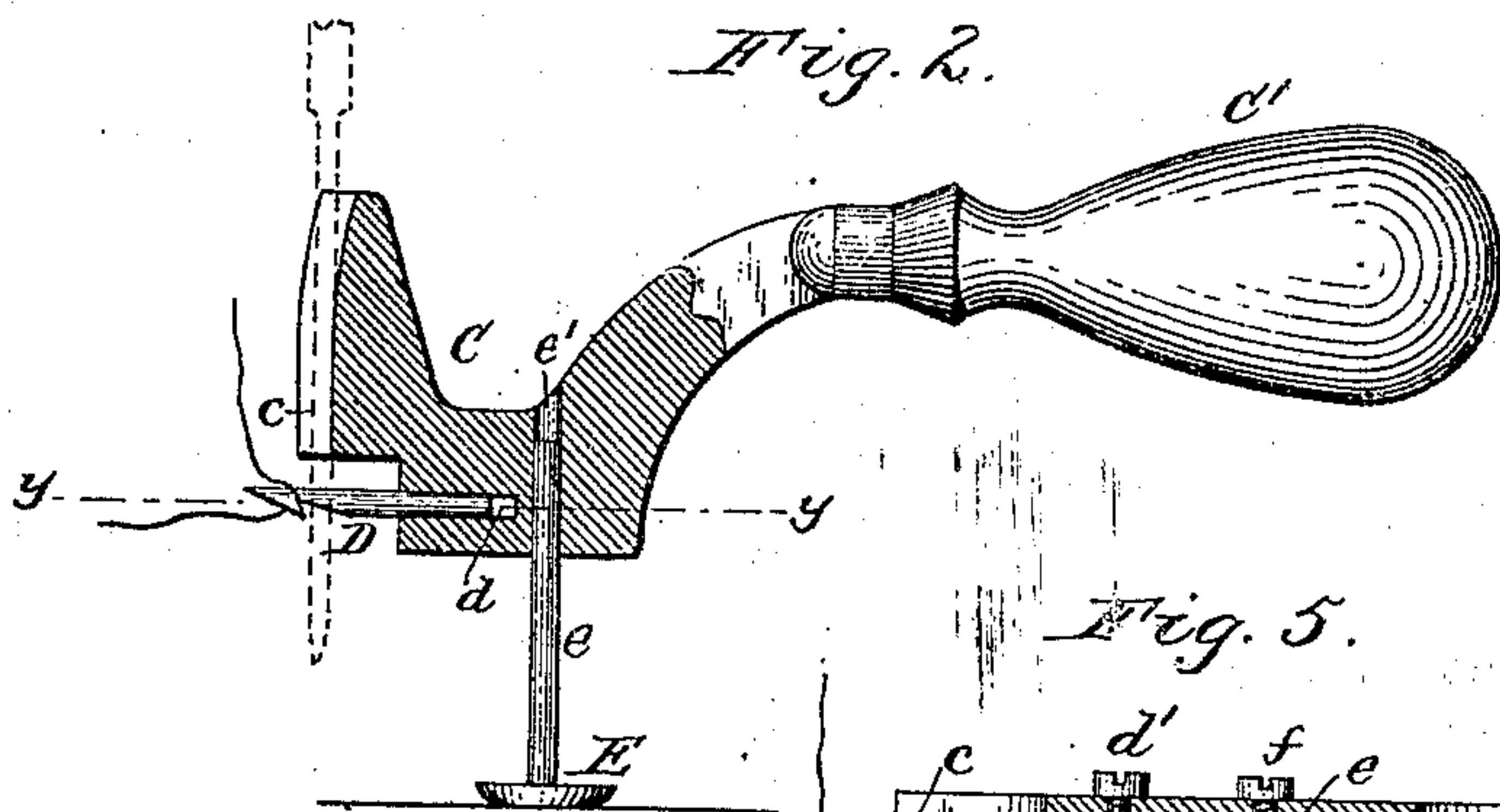


Fig. 3.

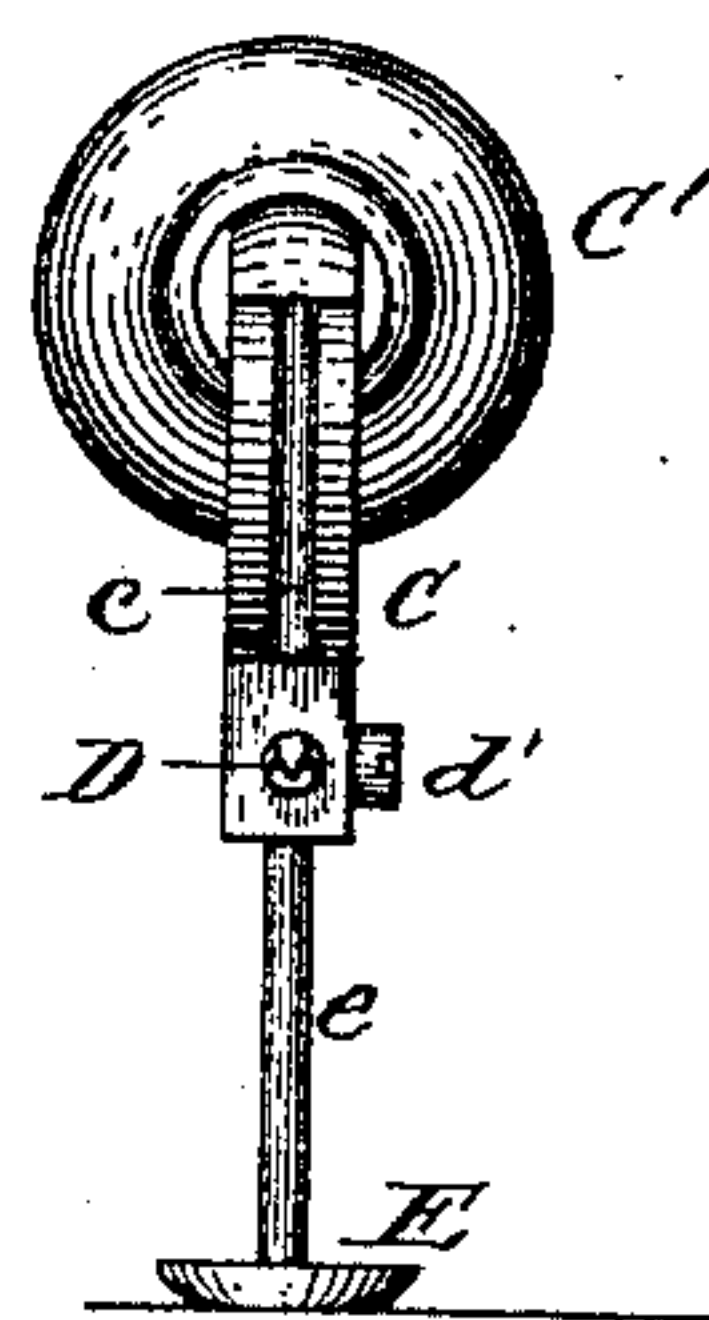


Fig. 5.

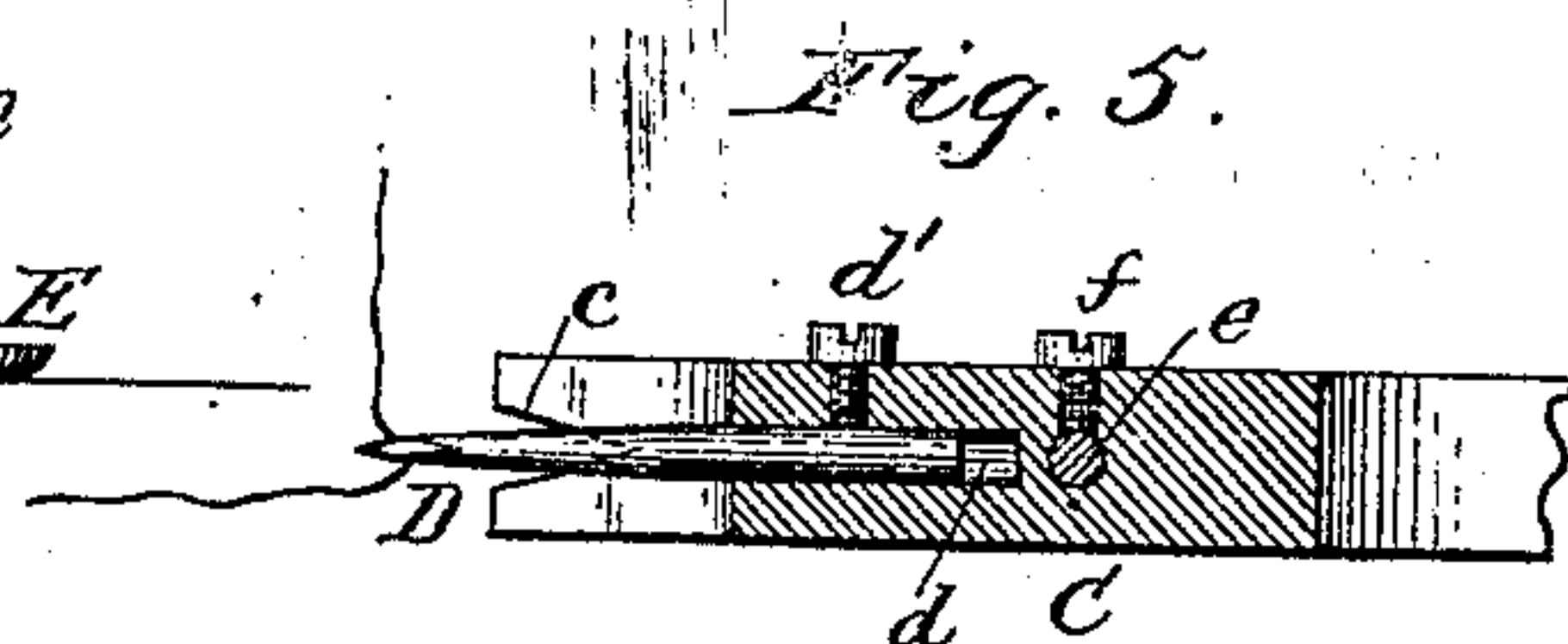
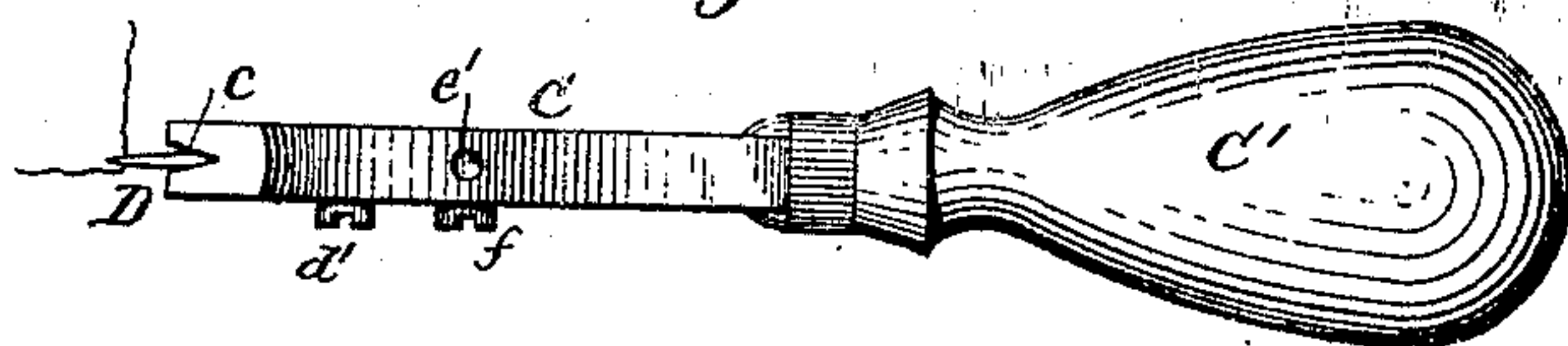


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM DAY, OF BUFFALO, NEW YORK.

NEEDLE-THREADER.

SPECIFICATION forming part of Letters Patent No. 328,296, dated October 13, 1885.

Application filed September 23, 1884. Serial No. 143,801. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM DAY, of the city of Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Needle-Threaders, of which the following is a specification.

This invention relates to an improvement in that class of needle-threaders which are composed of a handle carrying a hook, which is inserted through the eye of the needle, and to which the thread is attached, the needle being threaded by withdrawing the hook from the eye of the needle.

The object of my invention is to produce a needle-threader of this character whereby the needle can be easily and quickly threaded, and also to render the threader adjustable, so as to be applicable to all sewing-machines.

My invention consists to this end in the particular construction of the needle-threader, as will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved needle-threader applied to the needle of a sewing-machine. Fig. 2 is a vertical section of the same. Fig. 3 is a front elevation, and Fig. 4 a top plan view thereof. Fig. 5 is a horizontal section in line *y y*, Fig. 2, looking upward.

Like letters of reference indicate corresponding parts in the several figures.

A represents the needle-bar, and *a* the needle, secured to the lower end of the needle-bar in the usual manner.

C represents the body of my improved needle-threader, which is constructed of any suitable and convenient form, and provided at one end with a suitable handle, C'. The threader C is provided in its front end with a vertical V-shaped groove, *c*, which is adapted to rest against the needle and guide the threader on the same.

D represents the threading-hook, which is arranged horizontally in a socket, *d*, formed in the lower end of the body C, and which is adapted to be inserted through the eye of the needle. The hook D extends slightly beyond the groove *c*, so that the hook shall have passed through the eye of the needle when the inner end of the groove *c* rests against the needle. The hook D can be adjusted in its socket by means of a set-screw, *d'*, arranged

in a threaded opening formed in the side of the body C.

E represents a foot or support, which is adapted to rest upon the table of the sewing-machine and support the threader thereon, and also serves to steady the threader in inserting the hook through the eye of the needle. The foot E is provided with a stem, *e*, which is inserted through a vertical slot, *e'*, formed in the body C, and is adjustably secured therein by means of a set-screw, *f*.

In order to adjust the threader the needle-bar is raised to its highest position, and the threader, with its foot E resting on the table of the machine, is moved toward the needle until the vertical portion of the groove *c* is in line with the needle.

By loosening the set-screw *f* the foot E is adjusted so that the hook D will be opposite the eye of the needle, and when so adjusted the screw *f* is tightened, and the support E held in its proper position. When the support E has been once adjusted, the threader can be used as often as required on the same machine without requiring any further adjustment. By this means the threader can be easily adjusted so that the hook D will be opposite the eye of the needle when the needle is in its highest position on any machine, thus enabling the threader to be applicable to the different varieties of machines now in use.

The upper portion of the groove *c* is preferably curved, as shown in the drawings, so that by tipping the handle slightly upward, as shown in dotted lines in Fig. 1, the curved portion of the groove will engage with the needle before the point of the hook D is inserted through the needle-eye, whereby the threader is centered or guided, and by lowering the handle the hook is readily inserted through the needle-eye, and the threader guided in the vertical portion of the groove. By engaging the thread over the hook D and withdrawing the hook out of the eye of the needle the thread is drawn with the hook through the eye and the needle threaded.

I claim as my invention—

1. The combination, in a needle-threader, of a body provided with a vertical groove to rest against the side of the needle, a threading-hook rigidly secured to the body in the line of the vertical groove and adapted to pass

through the eye of the needle, and a foot secured to the body to rest on the bed-plate of a sewing-machine and support the threading-hook in line with the eye of the needle, substantially as set forth.

2. The combination, in a needle-threader, of a body provided with a groove to rest against the side of the needle, a threading-hook adapted to pass through the eye of the needle, and a foot secured to the body of the threader and provided with means for vertical adjustment, whereby the threader can be supported at different heights on the work-plate of a sewing-machine, substantially as set forth.

3. The combination, in a needle-threader, of the body C, having its front end provided with a groove, c, composed of a lower vertical portion and an upper backwardly-curved portion, a threading-hook, D, and a foot, E, which supports the threader on the table of the machine, substantially as set forth.

Witness my hand this 4th day of September, 1884.

WILLIAM DAY.

Witnesses:

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