

(Model.)

3 Sheets—Sheet 1.

T. S. HUNTINGTON.

EMBROIDERY ATTACHMENT FOR SEWING MACHINES.

No. 445,953.

Patented Feb. 3, 1891.

Fig. 1

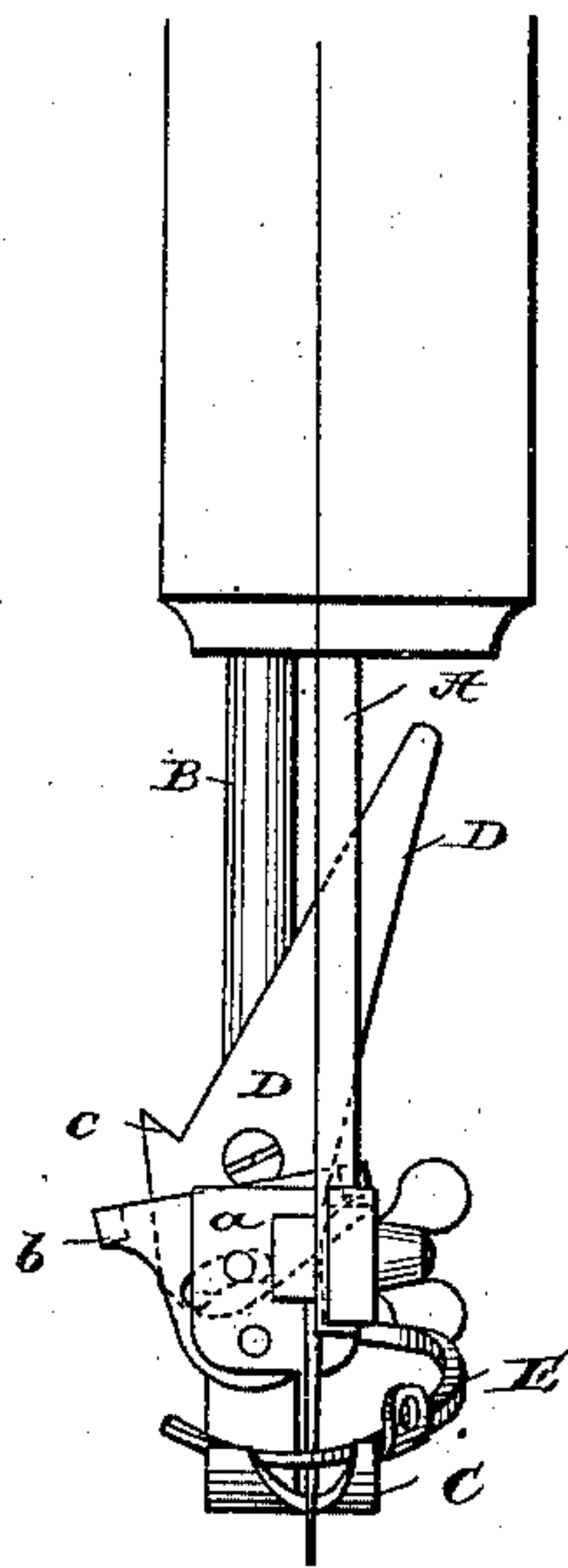


Fig. 2

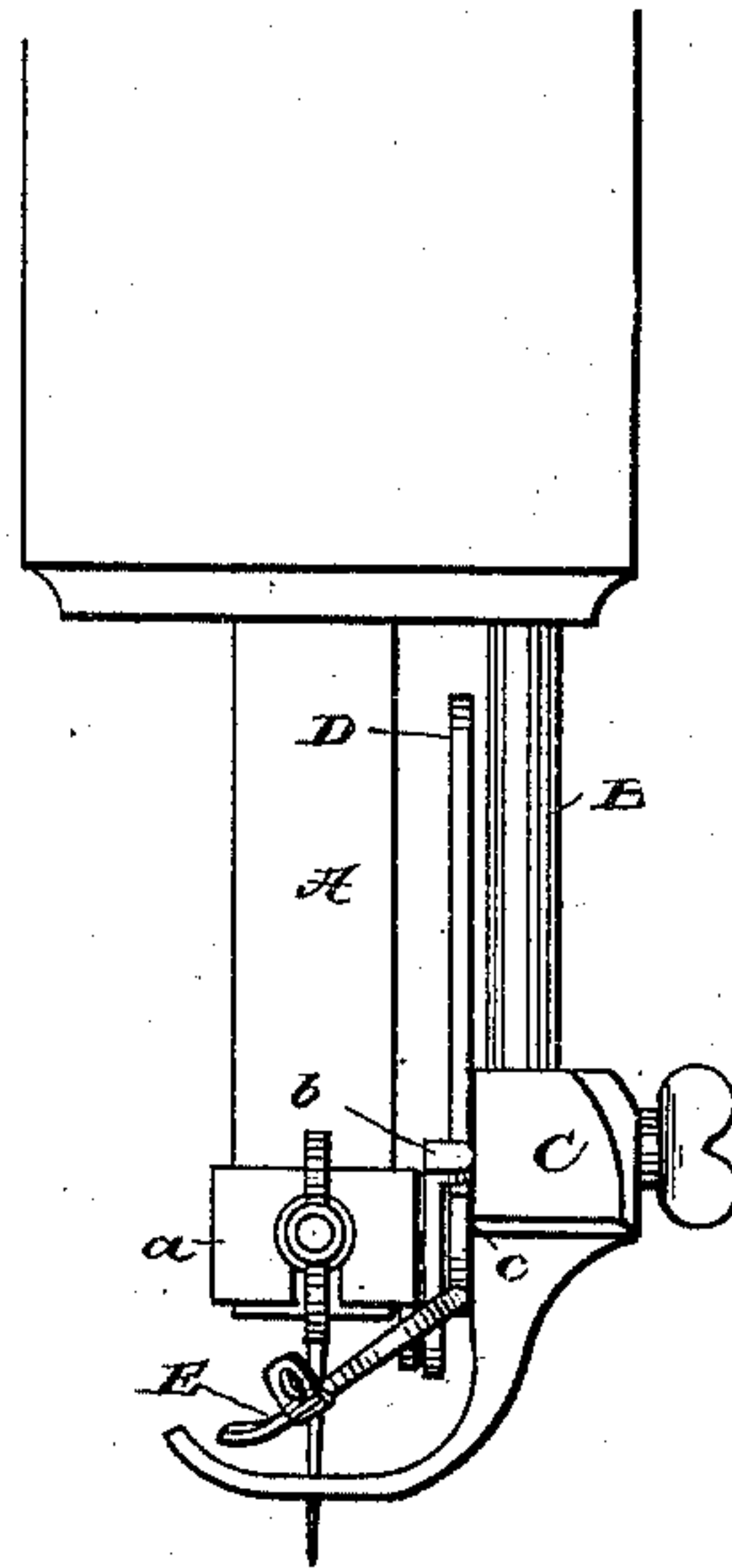


Fig. 3.

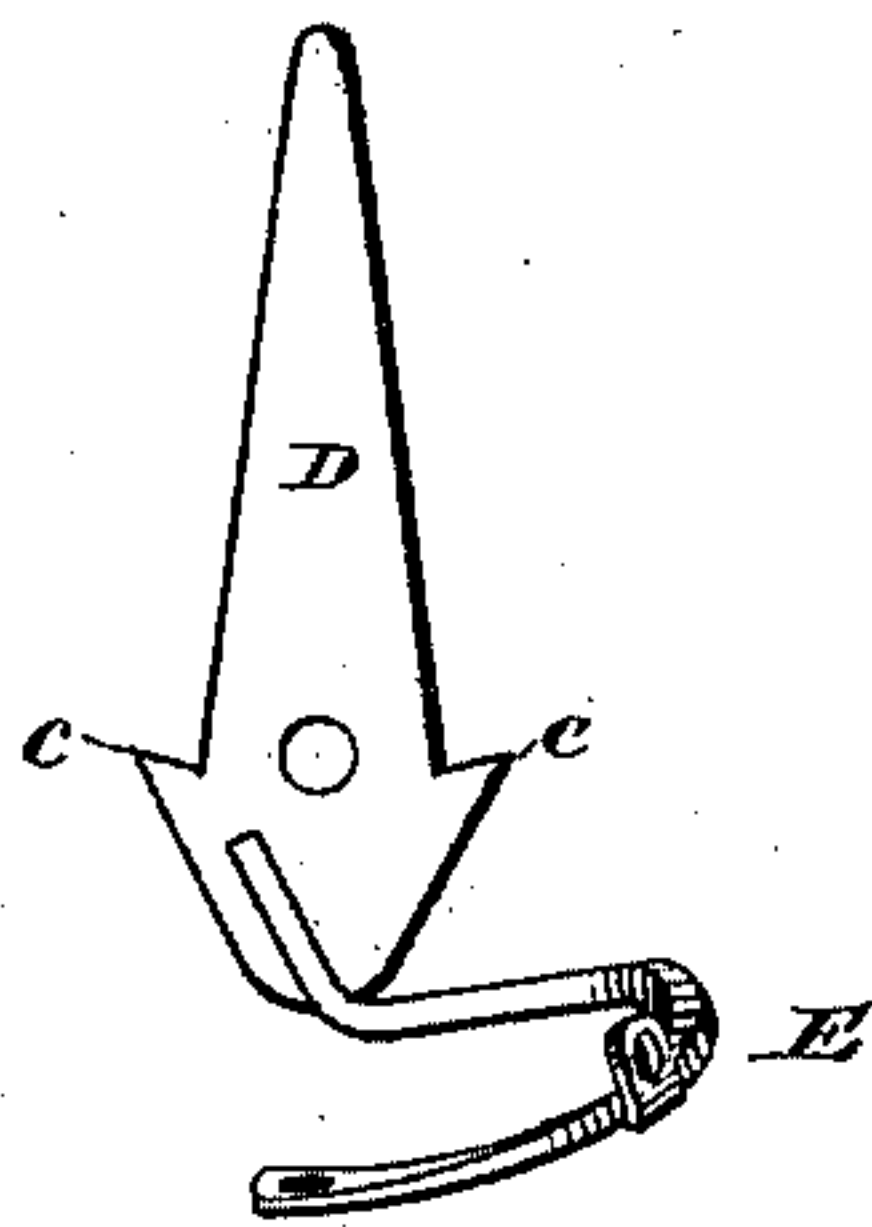
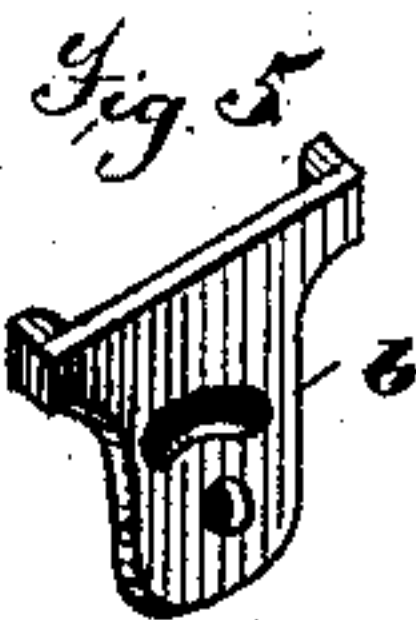
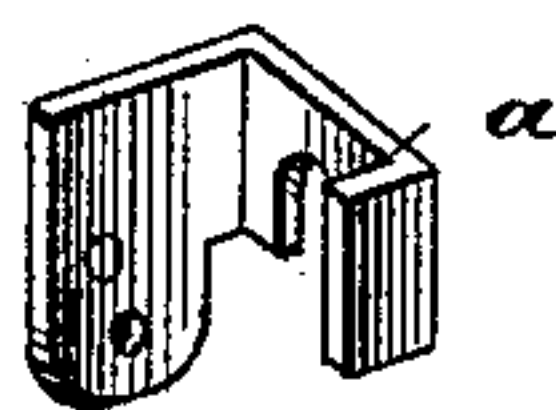


Fig. 4.



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his Atty:

(Model.)

3 Sheets—Sheet 2.

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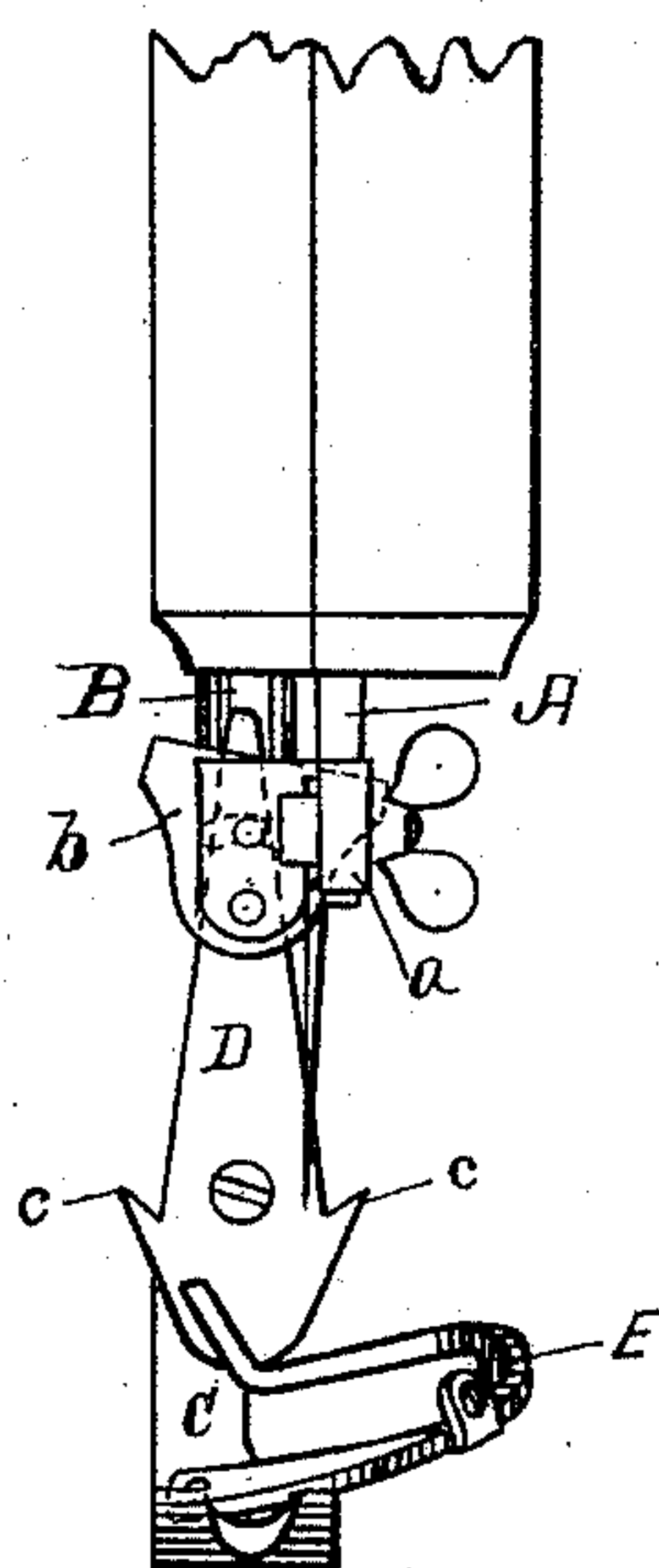


Fig-6-

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Inventor:

Thomas S. Huntington
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John D. Kane Jr

(Model.)

3 Sheets—Sheet 3.

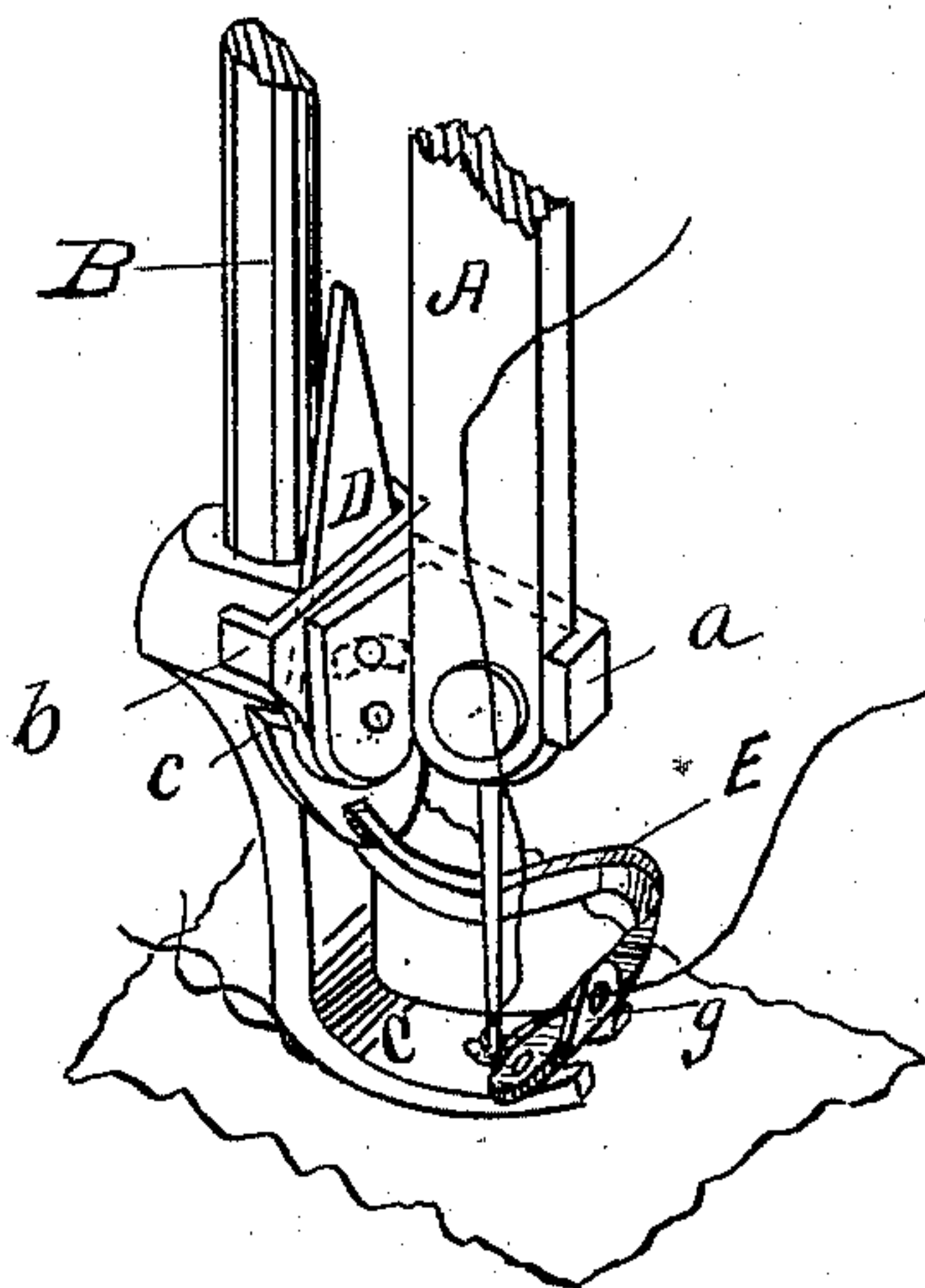
T. S. HUNTINGTON.

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Patented Feb. 3, 1891.

Fig. 7.



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UNITED STATES PATENT OFFICE.

THOMAS S. HUNTINGTON, OF NEW YORK, N. Y., ASSIGNOR TO THE DOMESTIC SEWING MACHINE COMPANY, OF OHIO.

EMBROIDERY ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 445,953, dated February 3, 1891.

Application filed March 8, 1886. Serial No. 194,410. (Model.)

To all whom it may concern:

Be it known that I, THOMAS S. HUNTINGTON, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Embroidery Attachments for Sewing-Machines, of which the following is a specification.

My invention relates to embroidery attachments of the class adapted for use in conjunction with the usual family sewing-machine; and it consists in the combination of sundry parts, of which the presser-foot, vibrating arm, and lever are the principal features directly united as a unit, which lever is operated through the medium of pivotal connection attached to the needle-bar, all of which will be hereinafter more fully explained, and pointed out in the claim.

The object is to simplify the construction, arrangement, and operation of such attachment, and by such simplification in number of parts and their arrangement and mode of operation a cheap, effective, and desirable embroiderer may be produced.

Referring to the drawings, Figure 1 represents a front view of my improved attachment connected to the presser and needle bars of a sewing-machine, and Fig. 2 represents an edge or side view of the same. Fig. 3 represents the thread-carrier guide and lever connected, although detached from the other parts, which together form my improvements. Figs. 4 and 5 represent parts separated, which when united form the pivotal device adapted to be secured to the needle-bar, which form means for operating the lever of the embroiderer. Fig. 6 represents a front view of my improved attachment, with the needle at its highest point. Fig. 7 represents a perspective view of my attachment in its proper relative position on the presser and needle bars.

In the drawings, A and B respectively represent needle and presser bars of a sewing-machine, and C the presser-foot, in this instance serving as a frame, to which most of the operative parts are secured.

D represents an arm serving as a lever, presenting a tapering wedge-shaped front, as clearly shown in the drawings. Said arm or lever is pivoted and secured to the shank of

the presser-foot by a screw, whereby it may be tightened up so as to always have a certain amount of frictional contact therewith for obvious reasons, and the sides of said arm or lever are at an angle with the center line thereof. This lever, as before explained, is pivotally attached to the shank of the presser in a position to be oscillated by a flanged device secured to the needle-bar, to which flanged device is pivoted another device, provided with projections at each side thereof. The said devices are represented at *a* and *b* in the drawings, and will be described more fully hereinafter. The lower end of the arm or lever D is provided with a curved thread carrying and directing arm, more clearly shown in Fig. 3 of the drawings, which arm is provided with an eye for the thread at or near its free end. I sometimes form another eye or opening near the central part of the curve in said thread-carrier, as shown in Figs. 1, 2, and 3. Said parts *a* and *b* are in this particular instance united and secured to the needle-bar as the means for operating the arm or lever D when in use. The part *a* (see Fig. 4) is (so to speak) three-sided, forming a sort of bracket adapted to straddle the needle-bar, and is provided with an opening in one side thereof for the purpose of admitting or receiving the needle-clamping screw, by which it is held in position, as shown in Fig. 2. The part *b* (more clearly illustrated in Fig. 5) is provided with two lugs or projections arranged thereon, as more clearly shown in said Fig. 5, and is pivoted to the part *a* by pins or other means at points or openings indicated by the lower small circles in parts shown in Figs. 4 and 5, adapted to vibrate and alternately engage with projections *c c*, located on either side of the said lever D to operate the latter and its thread-carrying arm, as will be described more fully hereinafter. The said vibrator part *b* is also provided with a curved slot or opening (clearly shown in Figs. 1 and 5) within which a pin projecting from the part *a* extends and operates, adapted to check and limit the throw of the said vibrating piece *b*, which controls the vibration of the thread-carrier and lever D in their operation, as will be hereinafter more fully explained.

The several parts which together constitute

my improvement may be modified in various ways without departing from the spirit of my invention.

It should be understood that the means for imparting motion to the lever D may be secured to the needle-bar by means of other contrivances than the needle-clamping screw or nut, and that the respective parts may be modified in form, and the means for limiting the throw of the part *b* may be reversed—that is, the curved slot may be placed or formed within the part *a*, or suitable stops might be located at points outside of the edges of the vibrating part *b*. These methods, as well as various others, would serve the requisite purpose of limiting the vibration thereof.

The operation of my improved attachment is as follows: The presser, which serves as a frame in this instance, is attached to the presser-bar with the toe part thereof toward the needle. The part *a*, which supports the pivotally-secured part *b*, is secured to the needle-bar, as hereinbefore described, and with the face of the part *b* with its lugs embracing the lever D, as more clearly shown in Fig. 2. One end of the material to be carried by the controller-arm to be stitched upon the article to be embroidered is passed through the eye or eyes with which the carrying-arm is provided, and by it presented beneath the needle in operation.

The lever D and its carrying-arm are actuated as follows: Being supported by the needle-bar, as described, at the downward stroke of the latter one of the lugs or projections on the part *b* engages with one of the shoulders or projections *c* on the lever D. The pivoted vibrator-piece *b* being secured to and carried by the needle-bar, as hereinbefore described,

at the downward stroke of the latter one of the lugs or projections on said vibrator-piece engages with one of the shoulders *c* on the lever D and tilts or throws the upper end of the same over to that side, or in the position as shown in Fig. 1, and at the upward stroke of the needle-bar the engaging lug or projection on the vibrator-piece pushing against the edge of the lever D serves to push the same nearer a vertical position, and at the same time tilts the vibrator-piece over to that side (until checked by its stop-pin) in a position to bring one of the lugs or projections thereon in a position directly over the shoulder located on that side of the lever opposite the one just engaged, in order in its downward movement to catch it and tilt the lever D to that side, thereby actuating said lever and its thread-carrying arm.

Having thus set forth my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

An embroidery attachment for sewing-machines, consisting of a presser-foot serving as a frame, a pivoted lever and thread-carrier arm, and an actuating device carried by the needle-bar, consisting of the plate *a*, adapted for detachable connection with the needle-bar, and a pivoted actuating-plate *b*, having connection therewith, the latter plate being provided with arms or projections for engagement with said pivoted lever, and an engaging pin or projection adapted to engage with a slot in said pivoted plate *b* to limit the throw thereof, substantially as described, and for the purpose set forth.

THOS. S. HUNTINGTON.

Witnesses:

JOSEPH M. CRANE,
JOHN DANE, Jr.