

(Model.)

F. H. CHILTON.

EMBROIDERING ATTACHMENT FOR SEWING MACHINES.

No. 330.678.

Patented Nov. 17, 1885.

Fig. 1.

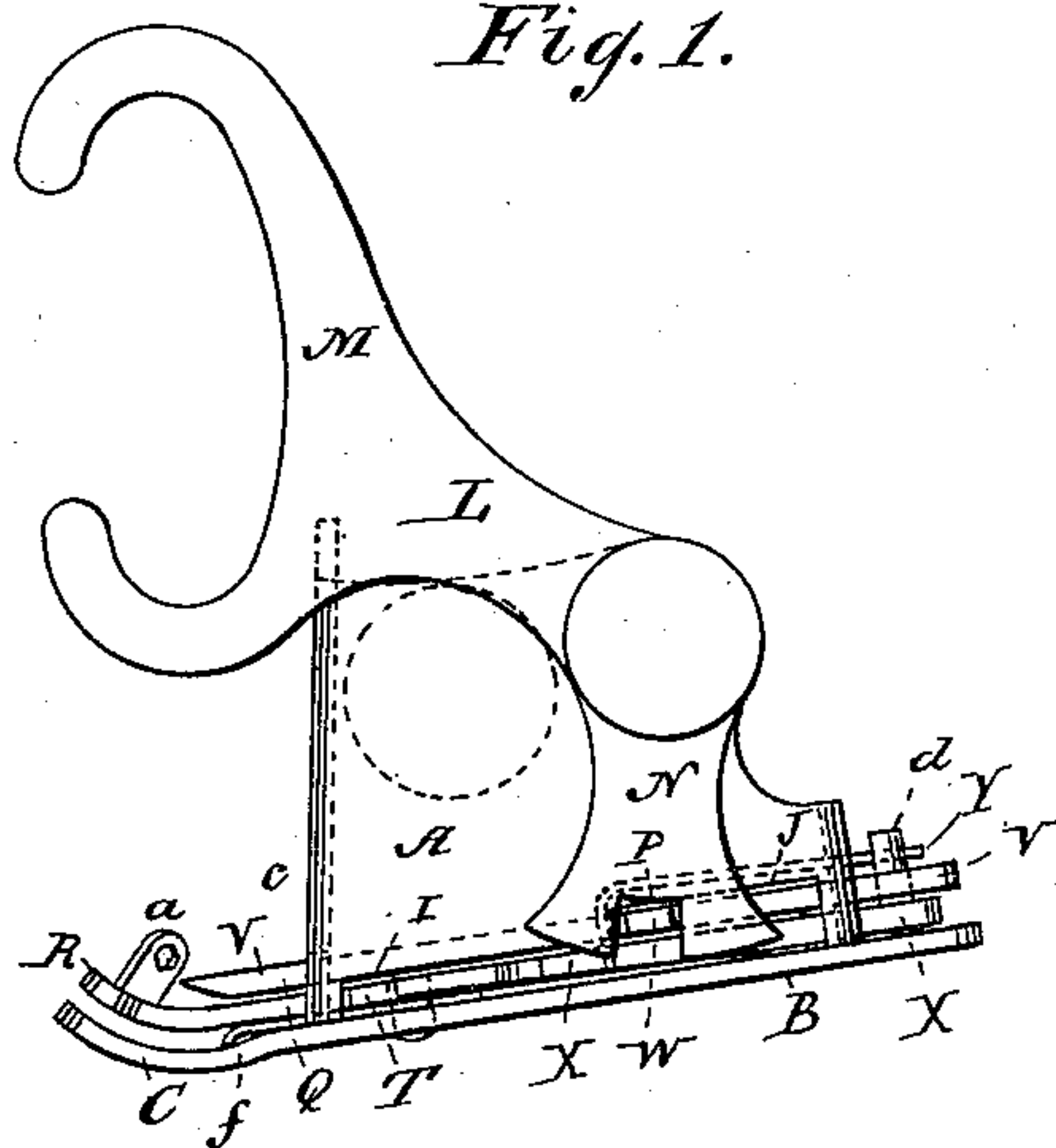


Fig. 2.

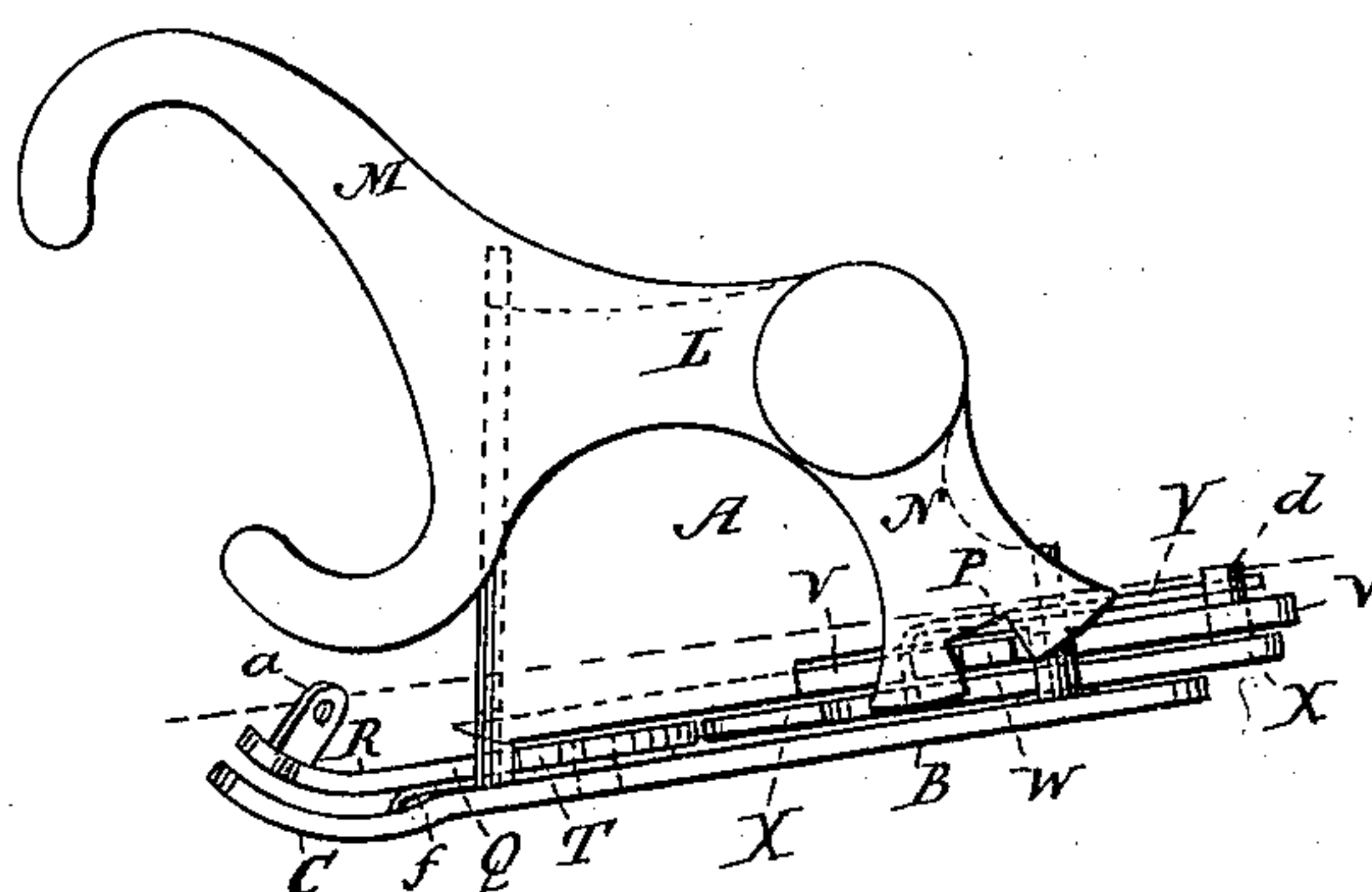


Fig. 3.

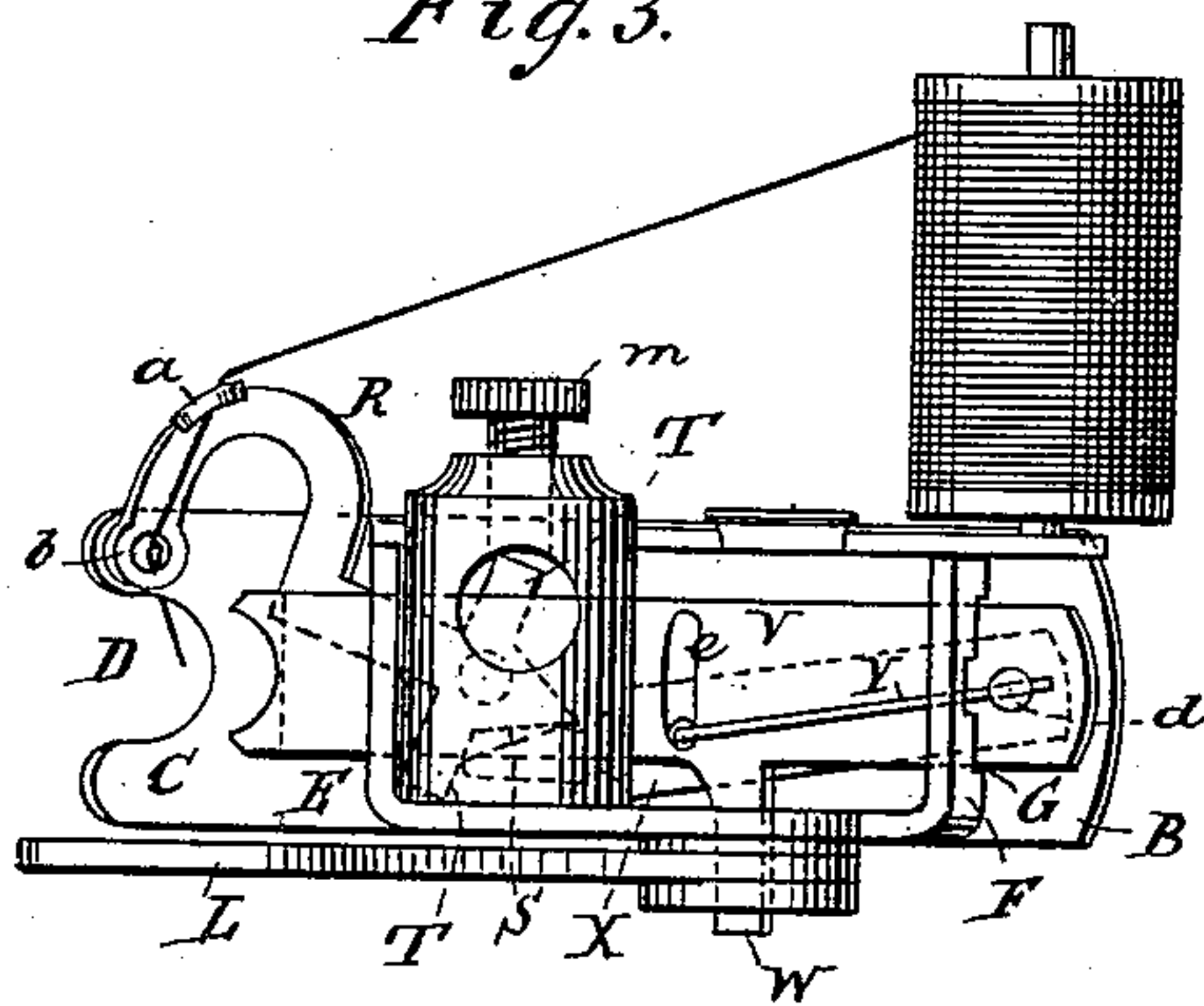
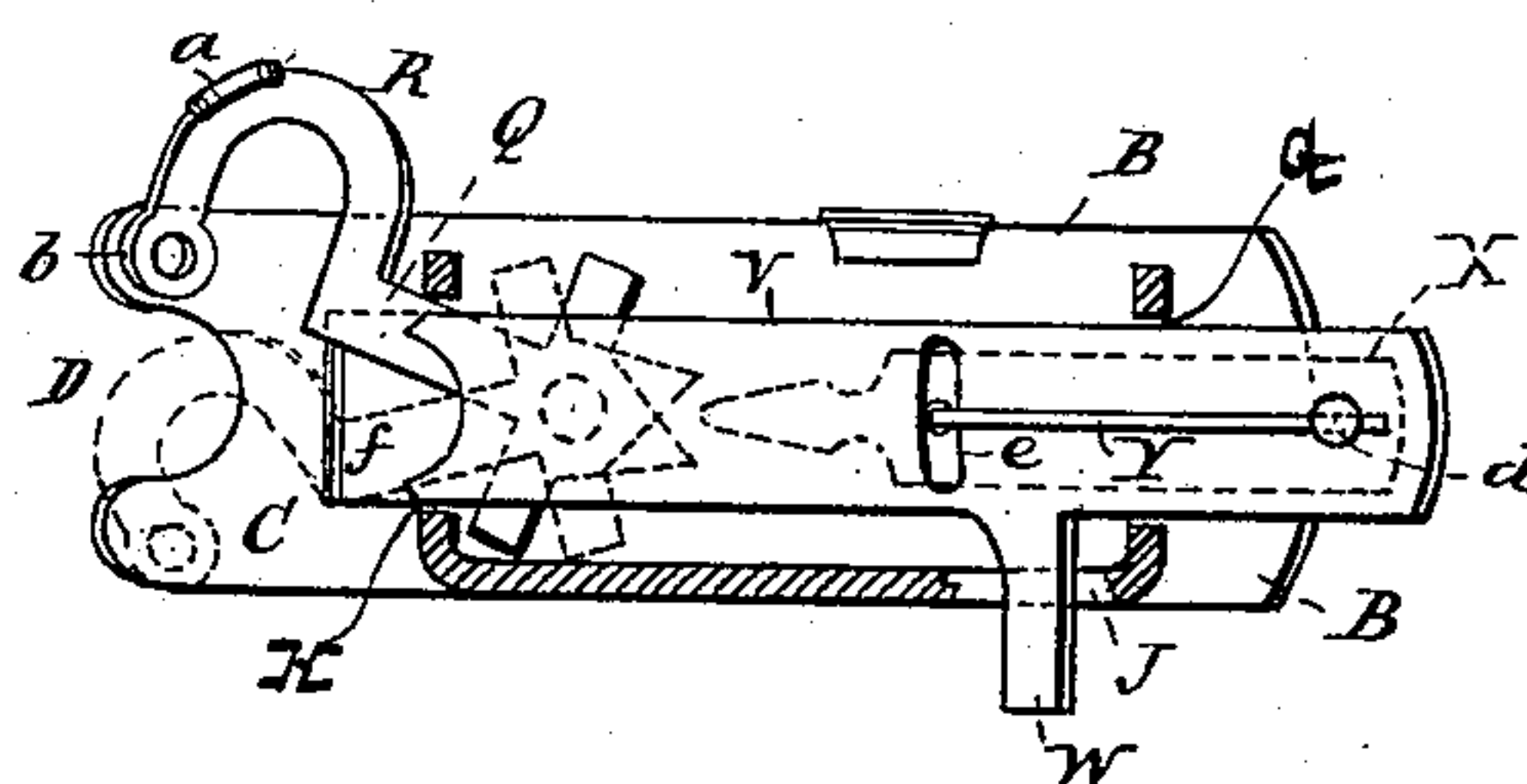


Fig. 4.



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EMBROIDERING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 330,678, dated November 17, 1885.

Application filed July 25, 1885. Serial No. 172,603. (Model.)

To all whom it may concern:

Be it known that I, FRANKLIN H. CHILTON, a citizen of the United States, and a resident of New Rochelle, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Embroidering Attachments for Sewing-Machines, of which the following is a specification.

The invention relates to improvements in 10 embroidering attachments for sewing-machines; and it consists in a novel construction hereinafter described, and particularly pointed out in the claims, for making what is known as the "cross-stitch."

15 The invention will be fully described hereinafter, and is shown in the accompanying drawings, in which—

Figure 1 is a side elevation of the attachment, the operating-lever being shown in an 20 elevated position. Fig. 2 is a similar view showing said lever depressed. Fig. 3 is a top view of the attachment as represented in Fig. 1; and Fig. 4 is a like view, partly in section, of same as represented in Fig. 2.

25 Referring to the drawings, A designates a supporting bracket or frame, to the lower edges of which is rigidly affixed the inclined plate B, terminating at its front end in the foot C, and having in said end the needle- 30 opening D. At the front and rear ends of the frame A are the transverse extensions lettered E F, respectively, which are slotted at G H, close to the upper surface of the inclined plate B. The frame A at its lower edge, and 35 in line with its length, is provided with the recesses I J, the former extending nearly the entire length of the frame, and the latter being over and opening into the rear portion of the former. Upon the upper rear portion of 40 the frame A is mounted the operating-lever L, having two arms lettered, respectively, M N, the former of which is bifurcated on its front end, and adapted to pass over the head of the needle-screw of the sewing-machine, 45 while the shorter arm N extends downward in near relation to the plate B, and has an engaging notch, P, on its lower edge. Upon the upper surface of the forward portion of the plate B is pivoted a lever, Q, the front por- 50 tion of which passes through the slot H, and

terminates in a hook-shaped thread-carrying arm, R, extending over the foot C, and provided with eyes *a b*, to receive the embroidering-thread. The opposite vertical edges of the rear end or short arm of the lever Q con- 55 verge toward each other, and meet at a point on a line with the pivot securing the lever in position, forming thereby a wedge-shaped projection, S, from each side of the wider end of which extends a lateral arm, T. 60 Centrally over and in line with the length of the lever Q and plate B is a sliding bar, V, having a lateral extension or arm, W, which projects through the recess J, and is engaged by the notch P, formed in the short arm of the 65 operating-lever L. The bar V has a longitudinally-sliding motion through the slots G H, when actuated by the lever L, and carries on the under side of its rear portion, in close relation to the upper surface of the plate B, 70 the pivotally-secured arm X, whose front end is beveled on opposite sides, and which is engaged by a spring, Y. The rear end of the spring Y is affixed to the pivot *d*, which se- 75 cures the arm X to the sliding bar V, while the front end of said spring is bent downward through the transversely-elongated slot *e* in said bar and enters the arm X. The purpose of the spring Y is to return the arm X to a 80 central position with relation to the plate B after said arm has been freed from contact with the short arm of the lever Q by being carried rearward with the bar or slide V during the downstroke of the lever L. Below 85 the front portion of the lever Q is arranged a flat bar-spring, *f*, the purpose of which is to exert a slight upward tension against said lever in order to prevent the same and the thread-carrier R from moving too freely or having a loose lateral play during the opera- 90 tion of the attachment.

The attachment hereinbefore described will be secured in the usual manner to the presser-foot bar of the sewing-machine by means of a hub, *m*, and set-screw. 95

During the use of the attachment the up- stroke of the lever L moves, through its short arm and the lateral extension W, the sliding bar V, and the arm X forward, during which movement the point of said arm passes down 100

one side of the projection or guide S and strikes the lateral arm T, whereby the lever Q is caused to swing on its pivot, throwing the thread-carrier R across and in front of the vertical path of the sewing-needle. The succeeding downstroke of the lever L operates to move the bar V and arm X rearward from contact with the projection S, while the spring Y returns the said arm to its former position in line with the center of the bar V. The following upstroke of the lever L moves the bar V and arm X forward, as before, the point of the arm at this time, however, moving down the opposite side of the projection or guide S, and causing the thread-carrier R to recross the path of the sewing-needle to its former position. At each upstroke of the lever L the thread-carrier crosses the path of the sewing-needle, first to one side and then back to the other, laying the embroidering-thread, which is sewed to the fabric by the usual sewing-thread of the machine in the customary manner of applying the cross-stitch.

During the operation of the attachment the inclined opposite edges of the rear end of the lever Q serve to guide the point of the arm X to the arms T first to one and then to the other, and the pressure of the arm X thus alternately applied on the respective arms T operates to move the front end of the lever and embroidering-thread across and in front of the path of the sewing-needle. It will be noted that the slide V covers the arm X, the wedge-shaped projection or guide S, a portion of the arms T, and a portion of the lever Q forward of its pivot, and thereby not only renders the construction very compact, but prevents the said covered parts (which are of thin metal) from being bent or not coming into proper contact with each other during use.

The attachment is specially adapted to use arrassene, chenille, tinsel, and worsteds, as well as silk, for embroidery, and its parts are few, simple in construction, and readily arranged in their relative positions.

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

1. In an embroidering attachment for sewing-machines, the supporting-bracket having upon its lower edges the plate B and foot C, and the operating-lever adapted for connection with the needle-bar of the sewing-machine, combined with the lever Q, pivotally secured to

said plate and constituting at its front end the thread-carrying arm and at its rear end the guide projection with the transverse arms T, the slide V, connected with the operating-lever and arranged over a portion of the lever Q in line with the length of plate B, the arm X, pivoted to the under surface of the slide V in line with its length, and having its front end in suitable relation to alternately engage the opposite arms T during the upstroke of the operating-lever, and the spring for returning the arm X to its normal position during the downstroke of said lever, substantially as set forth.

2. In an embroidering attachment for sewing-machines, the supporting-bracket having upon its lower edges the plate B and foot C, and the operating-lever adapted for connection with the needle-bar of the sewing-machine, combined with the lever Q, pivotally secured to said plate, and having at its front end the hook-shaped thread-carrying arm and at its rear end the guide projection S and transverse arms T, the slide V, in connection with the operating-lever, and arranged over a portion of the lever Q, the transverse slot *e* in the slide, the arm X, pivoted to the under surface of the slide and having its front end in suitable relation to alternately engage the respective arms T during the upstroke of the operating-lever, and the spring Y, whose rear end is held by the pivot *d*, while its front end passes through the slot *e* and is connected with the arm X, substantially as set forth.

3. In an embroidering attachment for sewing-machines, the supporting-bracket, operating-lever, and foot, combined with the pivotally-secured lever constituting the thread-carrying arm, guide projection, and transverse arms, the longitudinally-reciprocating slide, the arm pivotally secured to said slide and adapted to engage alternate sides of said cam during the upstroke of said lever, the spring for returning said arm into position during the downstroke of the lever, and the tension-spring beneath the thread-carrier, substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 24th day of July, A. D. 1885.

FRANKLIN H. CHILTON.

Witnesses:

CHAS. C. GILL,
GEO. A. BOWMAN.