

(No Model.)

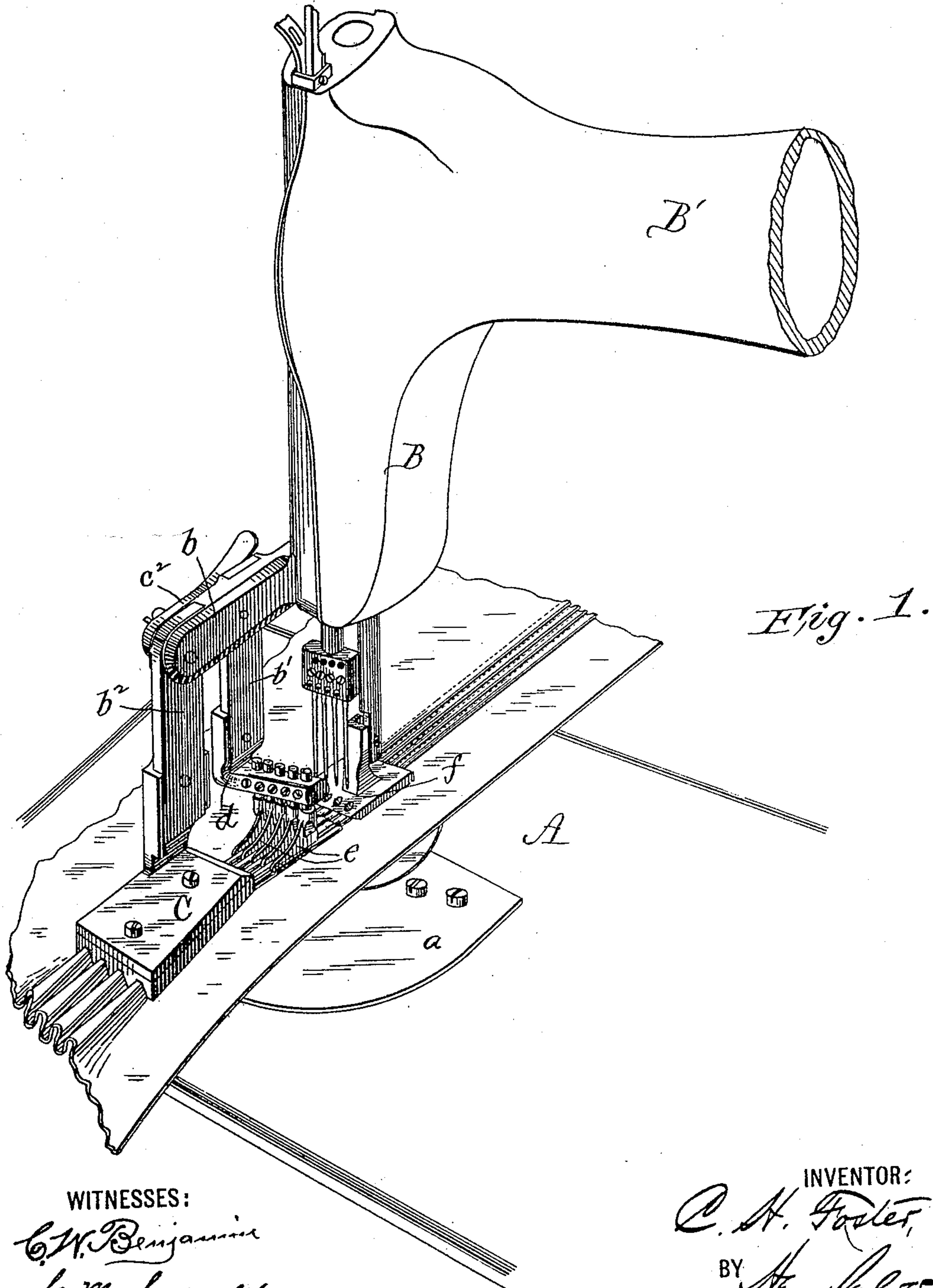
2 Sheets—Sheet 1.

C. H. FOSTER.

TUCK OR PLAIT FORMING ATTACHMENT FOR SEWING MACHINES.

No. 575,342.

Patented Jan. 19, 1897.



WITNESSES:

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(NO MODEL.)

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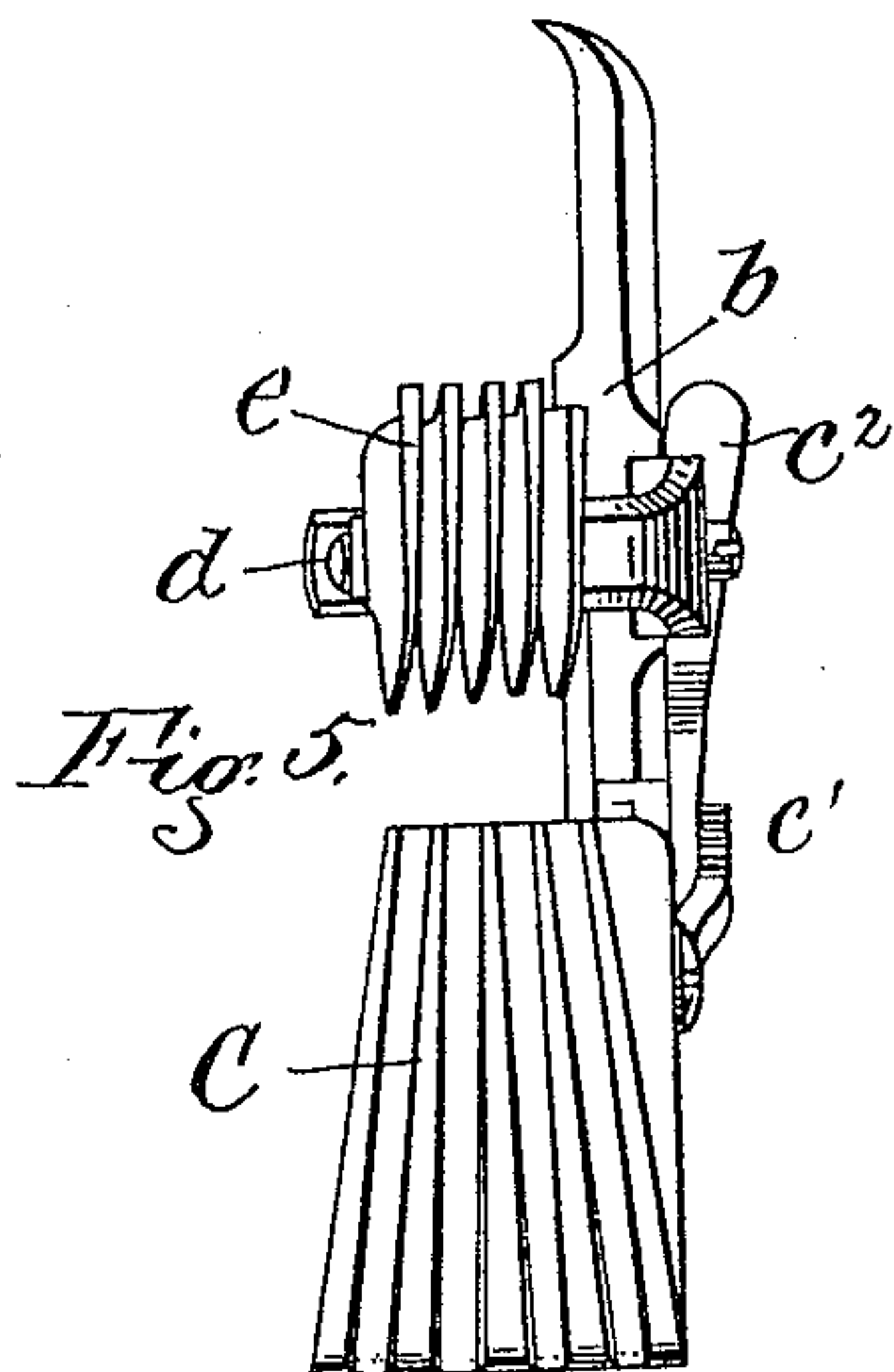
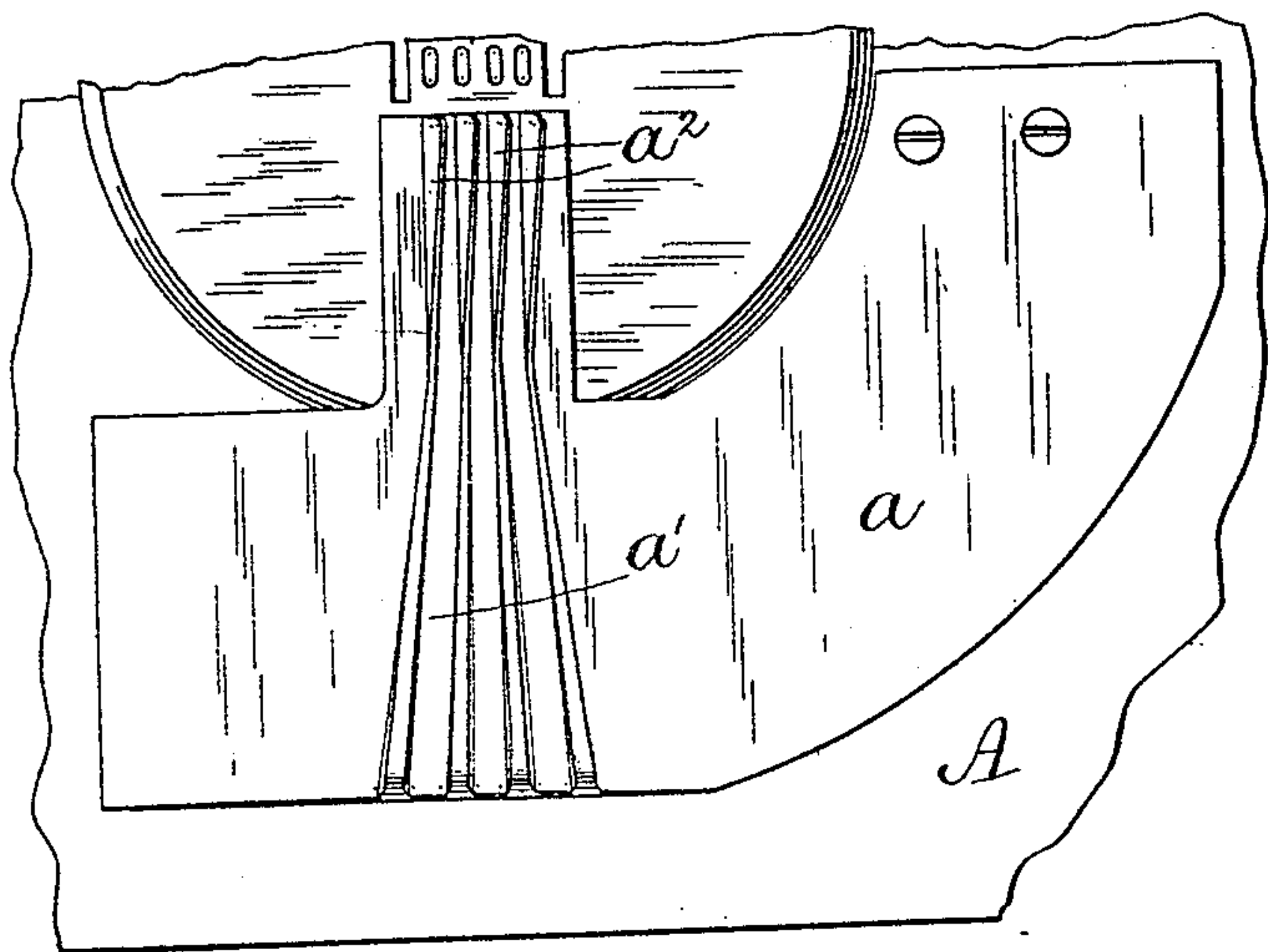
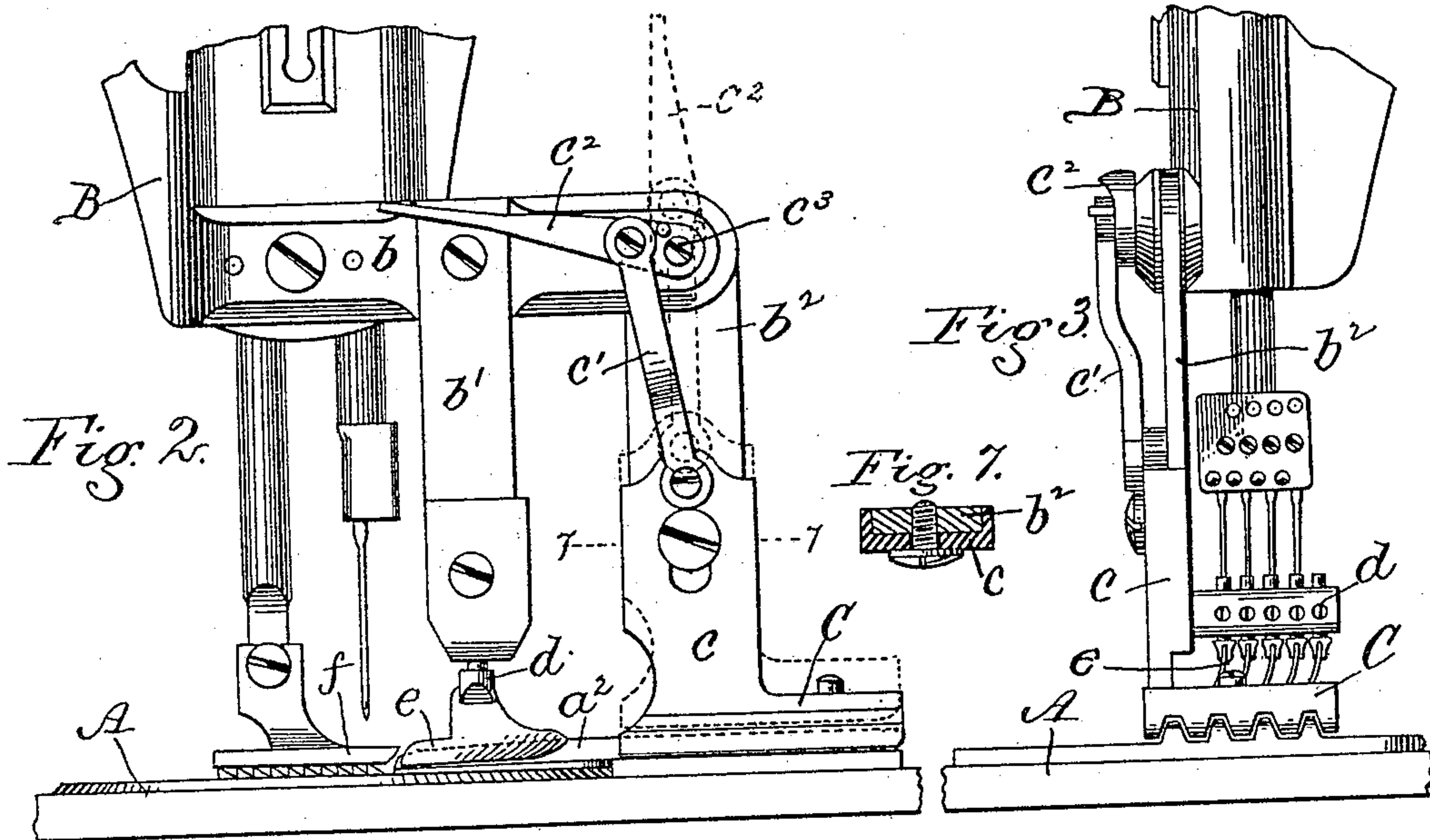
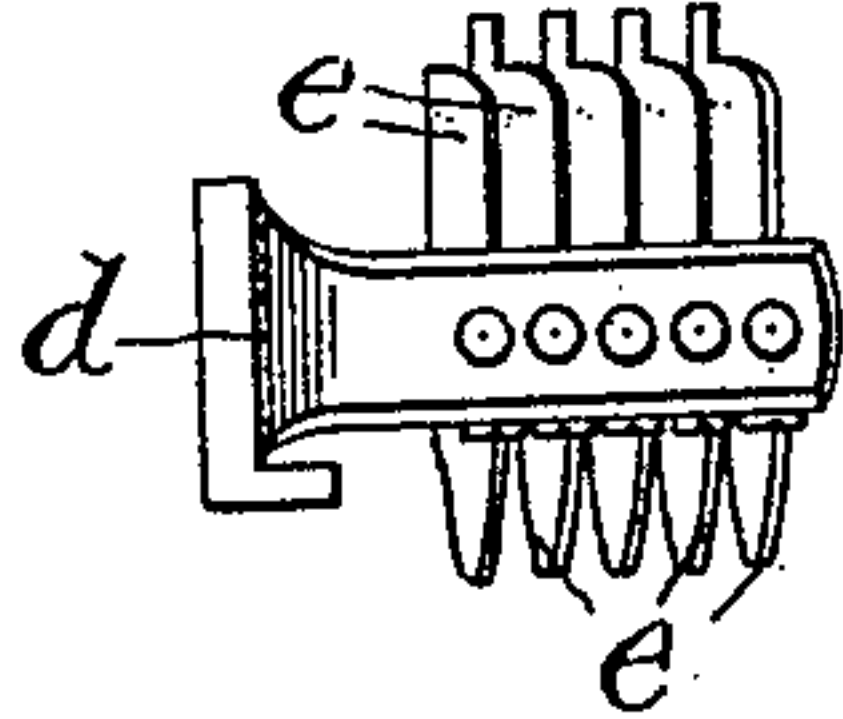


Fig. 4.

Fig. 6.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES H. FOSTER, OF NEW YORK, N. Y., ASSIGNOR TO THE SINGER
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TUCK OR PLAIT FORMING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 575,342, dated January 19, 1897.

Application filed November 18, 1895. Serial No. 569,322. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. FOSTER, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Tuck or Plait Forming Attachments for Sewing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to that class of plaiting attachments for sewing-machines adapted to form a plurality of parallel plaits or tucks simultaneously, and has for its object to provide a novel and simple attachment for effecting this result.

My new plaiting device is intended to be applied to a sewing-machine having a plurality of needles and complementary stitch-forming devices to form a plurality of independent seams simultaneously, and my invention is carried into effect by means of a cloth crimping or corrugating device arranged at some little distance in front of the needles, and a series of guiding and plait-turning blades which extend between the ribs of cloth formed by the corrugating device and which partially turn the same over in such a manner that when they pass beneath the presser-foot of the machine they will all be laid over evenly and folded down as plaits, so as to be properly stitched by the multiple-needle sewing-machine.

In the accompanying drawings, Figure 1 is a perspective view showing my invention applied to a four-needle "Singer" sewing-machine and as it appears in operation. Fig. 2 is a partial front end view of the machine, showing the attachment in side view. Fig. 3 is a front view of the attachment as applied to the machine. Fig. 4 is a partial plan view showing the lower crimping and guiding devices. Fig. 5 is a bottom view of the upper crimping and guiding devices. Fig. 6 is a detail plan view of the upper guiding-blades and the bracket by which they are supported, and Fig. 7 is a detail section on line 7 7 of Fig. 2.

A denotes the work-plate, and B the depending "head" at the forward end of the arm B' of the machine. Attached to the work-plate

A is a plate *a*, provided with a corrugated or ribbed and grooved portion *a'*, and rearward of the said corrugated portion *a'* are slightly-twisted guiding-blades *a*², equal in number to the ribs of the part *a'* and preferably formed as continuations of said ribs, as more clearly shown in Fig. 4. Secured to the head B is an arm or bracket *b*, having two depending rigid arms *b'* *b*².

C is a plate or foot arranged above the corrugated part *a'* of the plate *a*, said plate C having a corrugated or ribbed and grooved under surface the ribs of which are so located as to register with the grooves of the corrugations beneath it. The plate or foot C is provided with a shank *c*, having a sliding connection with the arm *b*², said shank being joined by a link *c'* with a lever *c*², pivoted at *c*³ to the bracket *b*, so that the said plate or foot C may be readily raised or lowered. The ribs and grooves of the parts C and *a'* extend approximately in the direction of the feed of the material, but preferably converge slightly toward each other rearwardly or toward needles.

Attached to the arm *b'* is an angular bracket *d*, the horizontal part of which supports a series of guiding and turning blades *e*, which are so arranged as to intermesh or extend between the blades *a*² and closely adjacent to the presser-foot *f* of the machine. These blades *a*² and *e* are so placed as to extend between the ribs of cloth formed by the corrugating devices and are slightly twisted, so that their rear portions are rather more inclined relative to a vertical plane than their front portions, so that the said ribs of cloth will be somewhat inclined over as they pass beneath the presser-foot, and will thus all be pressed down flat in one direction by the latter to be stitched down by the needles and their co-operating stitch-forming devices.

In the operation of my invention the corrugating plate or foot C is first lifted by means of the lever *c*², and the work is then inserted beneath it, and when the foot has been lowered the work is drawn forward to the presser-foot, and then when the machine is started a series of closely-placed parallel plaits or tucks will be formed by the folding and guiding devices and will be stitched down by the sewing-

ing mechanism. The rearwardly-converging arrangement of the ribs and grooves of the corrugating devices serves to permit the cloth to be drawn together properly in forming the
5 tucks or plaits, these ribs and grooves as they converge being somewhat tapering or of gradually-diminishing size in cross-section rearwardly.

Having thus described my invention, I
10 claim and desire to secure by Letters Patent—

1. A tuck-forming attachment for sewing-machines consisting of upper and lower flat corrugated plates having rearwardly-converging intermeshing ribs and grooves extending in the direction of the feed of the
15 work, or approximately so, combined with upper and lower intermeshing and partially-twisted guiding-blades arranged between the
20 said corrugated plates and the presser-foot and stitch-forming devices of the machine.

2. A tuck-forming attachment for sewing-machines consisting of upper and lower corrugated plates the upper one of which is vertically movable, said plates having rearwardly-converging intermeshing ribs and grooves ar-

ranged to extend in the direction of the feed of the work, or approximately so, combined with upper and lower intermeshing and partially-twisted guiding and plait or tuck turning blades located between said corrugated
30 plates and the presser-foot and stitch-forming devices of the machine.

3. A tuck-forming attachment for sewing-machines consisting of the combination with
35 the plate *a* having the corrugated portions *a'* and the blades *a''*, of the supporting arm or bracket *b* having the depending arms *b'*, *b''*, the plate or foot *C* having a corrugated lower face and provided with the shank *c* having a
40 sliding connection with the said arm *b''*, the link *c'* and lever *c''* for raising and lowering said plate or foot *C*, and the bracket *d* attached to the arm *b'* and provided with a series of guiding and turning blades *e*.
45

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES H. FOSTER.

Witnesses:

GEO. A. PRIEST,
J. A. REID.