

C. S. DUNBRACK.

Stitch Imitations and Stitch Dividing Mechanisms.

No. 158,632.

Patented Jan. 12, 1875.

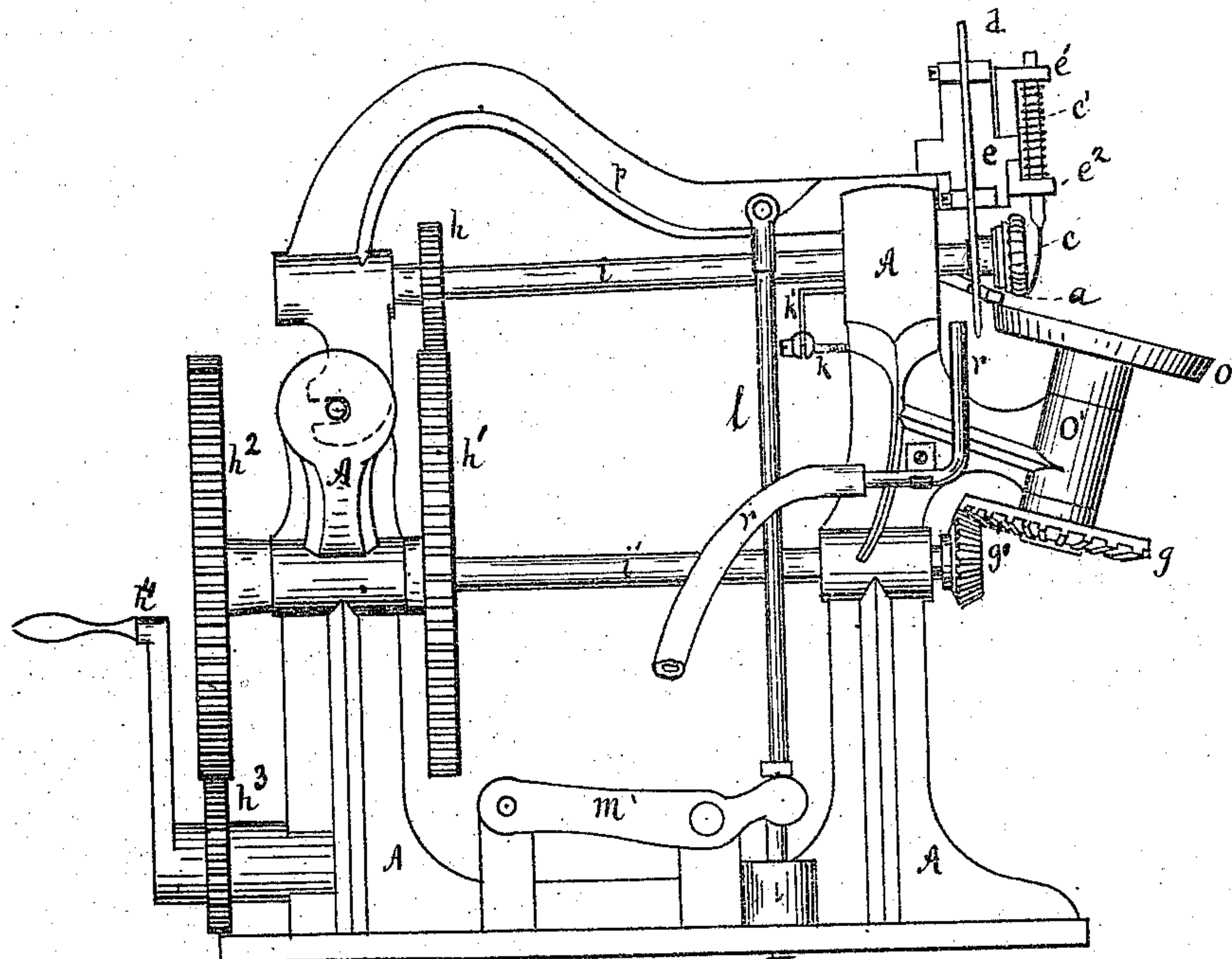


Fig. 1.

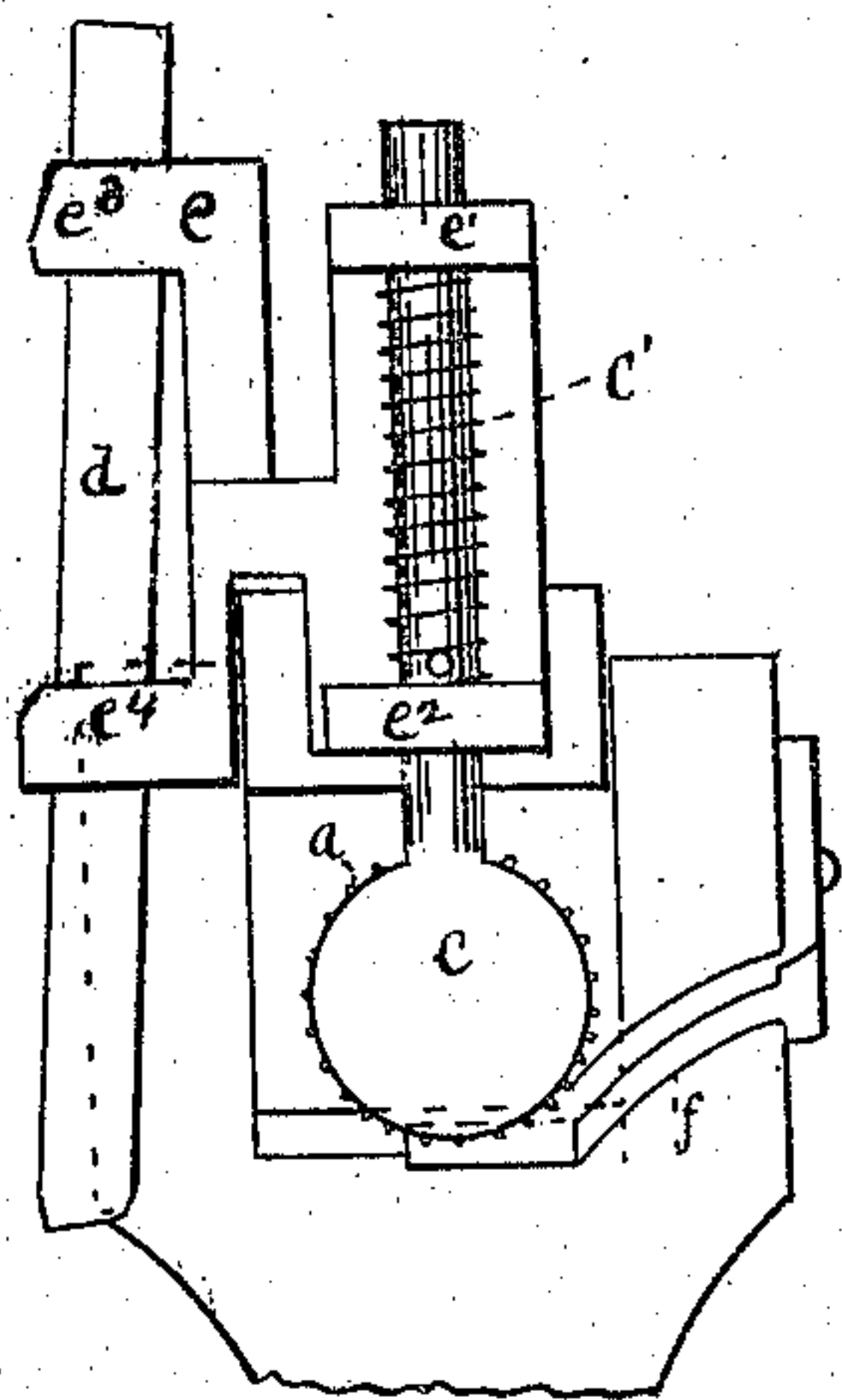


Fig. 2.

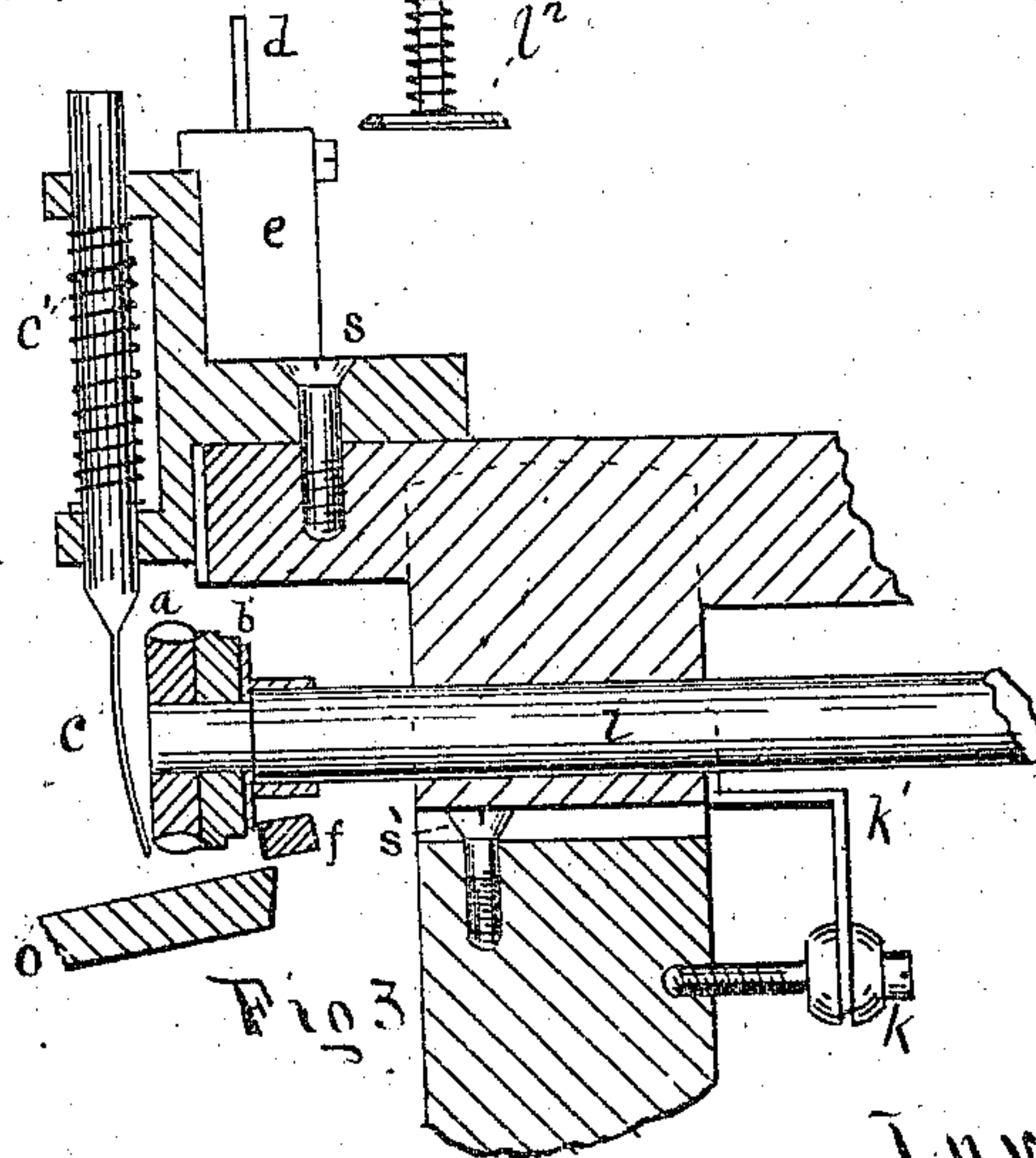


Fig. 3.

Witnesses

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN STITCH-IMITATION AND STITCH-DIVIDING MECHANISMS.

Specification forming part of Letters Patent No. 158,632, dated January 12, 1875; application filed  
February 28, 1874.

*To all whom it may concern:*

Be it known that I, CHARLES S. DUNBRACK, of Swampscott, in the county of Essex and State of Massachusetts, have invented a Stitch-Imitation and Stitch-Dividing Machine, of which the following is a specification:

The invention relates to a machine for marking leather in imitation of stitches, and for dividing stitches sewed in leather; and has for its object the ornamenting of the upper surface of the projection of the soles of boots and shoes with impressions resembling stitches, and also for dividing and evening stitches sewed in leather.

The machine consists of a frame, A, (see Figure 1 in the accompanying drawings,) having a movable jaw, *p*. Said jaw *p* has attached to it the shaft *i*, with gear upon one end of said shaft meshing into the gear *h'* upon the shaft *i'*. Upon the other end of said shaft *i* is the impressing or marking wheel *a*; and said wheel *a* has its teeth convex in their outer edges, and the hollows or furrows in the wheel between the teeth are concave, making the impressions upon the leather convex, resembling real stitches. (See particularly Fig. 3.) Said shaft has also a collar, *b*, next the wheel *a*, which also has concave furrows, corresponding with the concave furrows in the said wheel *a*. The impression made by this collar forms an outer border to the imitation stitch, and also prevents the leather from curling up outside of the stitch impression. Above the impression-wheel *a* is a double head-piece, *e*, upon the end of the jaw *p*. Said head-piece is movable and adjustable by a screw, *s*. (See Fig. 3.) Said head-piece also bears a yielding circular guard, *c*, whose shaft is held between the perforated arms *e'* and *e''* of the head-piece, (see Fig. 2,) with a pin in the shaft playing into a slot in the head-piece. (Said slot is not seen in drawings.) Between the arms *e'* and *e''*, and surrounding the shaft, is a spiral spring, *c'*.

As the impression-wheel settles into the leather the guard rises, but is pressed upon the leather by the spring. This circular guard forms a bead or line impression on the inside of the imitation stitch. Said circular guard also, being thin, bends in close up to the up-

per leather in marking soles. The head-piece *e*, with or without removing the wheel *a* and guard *c*, may be turned so as to bring the adjusting stitch-divider *d* over the table or disk *o*, and the same be adjusted to the work to be done, setting the gage *f*, &c. By operating the treadle *m'* with the foot, the workman can raise the arms *m* and *l*, lifting the movable jaw *p*, so that the divider *d* may be brought down between sewed stitches, which require evening in order to make the work more ornamental and perfect. With practice, the workman may operate this part of the ornamentation with rapidity.

The form of the divider *d* is seen in Figs. 1 and 2. Upon the lower end of the rod *l* is a spiral spring, *l'*, and a nut, *l''*, underneath the frame A. The spring steadies the treadle motion, as well as assists in bringing down the divider, and presses, also, a constant pressure upon the jaw *p*. Under the end of the jaw *p*, near the wheel *a*, (see Fig. 3,) is a screw, *s'*, which may serve to raise or depress the head *a*. *f* is an adjustable gage, (see Figs. 2 and 3,) against which the leather is held, the gage serving to guide the marking nearer or more remote from the edge of the leather. K is a screw, and K' a slotted clamp, (see Figs. 1 and 3,) the former being attached to the frame A, and the latter to the jaw *p*, and they together serve to move the head of the marking or dividing mechanism lengthwise. *o* is a revolving table or disk, upon which the leather to be marked is held, whether under the wheel or divider.

It will be observed (see Figs. 1 and 3) that said table or disk *o* is inclined at an obtuse angle to the wheel *a* and the divider *d*. The revolution of the table *o* and the wheel *a*, being in the same direction and by the same power that moves the table, carries the leather up under and along with the wheel; but, on account of its inclination, the tendency to carry the leather away from the wheel ceases at a point at the center of the wheel, or at the highest point of the table. The table operates as a feed-wheel, with the advantage of a better surface on which to hold the leather to be marked or the work to be done under the



wheel *a* or divider *d*, the support *o'* and beveled gear *g* and *g'* operating the revolution of the table, as seen in Fig. 1.

There is also a gas-tube, *r*, attached to the machine. The heat of the flame is carried under the shaft *i*. This serves to warm the wheel *a*, and it is well known that the impression made by a heated tool upon leather is firmer and more even and lasting, on account of the hardening effect of heat upon leather. The machine is operated with power applied at *h*<sup>4</sup> by means of the gear-wheels *h* *h*<sup>1</sup> *h*<sup>2</sup> *h*<sup>3</sup>.

I am aware that machines have been used for marking stitch-like impressions upon leather. In this application I do not claim any invention in use; but

What I do claim as my invention, and desire to secure by Letters Patent, is the following:

1. An imitation-stitch impressing-wheel, *a*, having concave furrows, for the purpose shown and described.

2. The combination of the imitation-stitch

impressing-wheel *a* and the collar *b*, having concave furrows, for the purpose shown and described.

3. The combination of the imitation-stitch wheel *a*, the collar *b*, and the circular guard *c*, for the purpose shown and described.

4. The combination of the imitation-stitch impressing-wheel *a*, the collar *b*, the circular guard *c*, the gage *f*, and the disk *o*, all operating together substantially as and for the purpose shown and described.

5. The stitch-divider *d* upon the head-piece *e*, in combination with the movable jaw *p*, the rod *l*, and pedal *m* *m'*, all operating together with the disk *o* and the gage *f*, for the purpose shown and described.

6. The combination of the screw *K*, the clamp *K'*, and the movable jaw *p*, for the purpose shown and described.

CHARLES STORY DUNBRACK.

Witnesses:

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D. F. FLYNN.