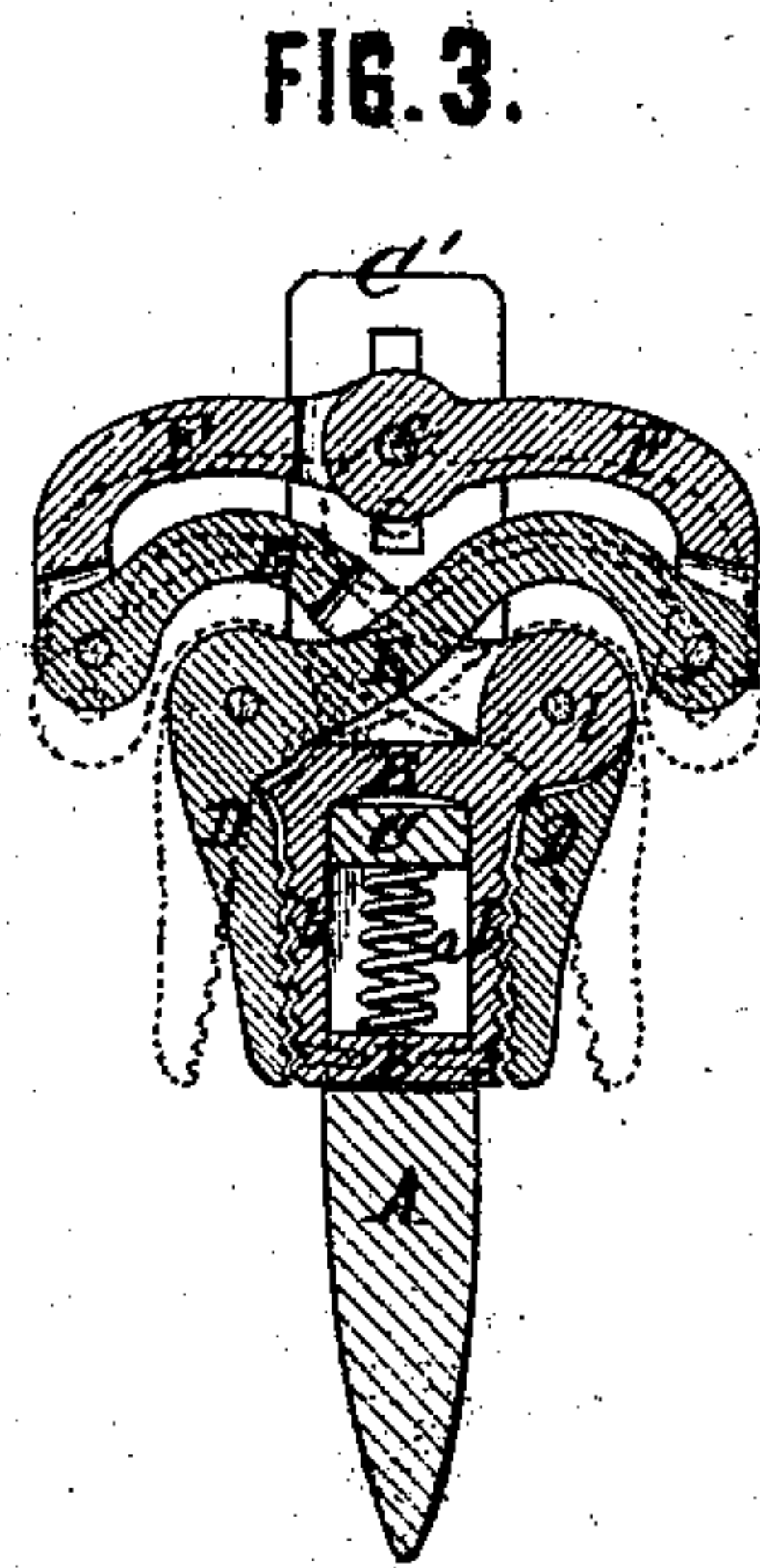
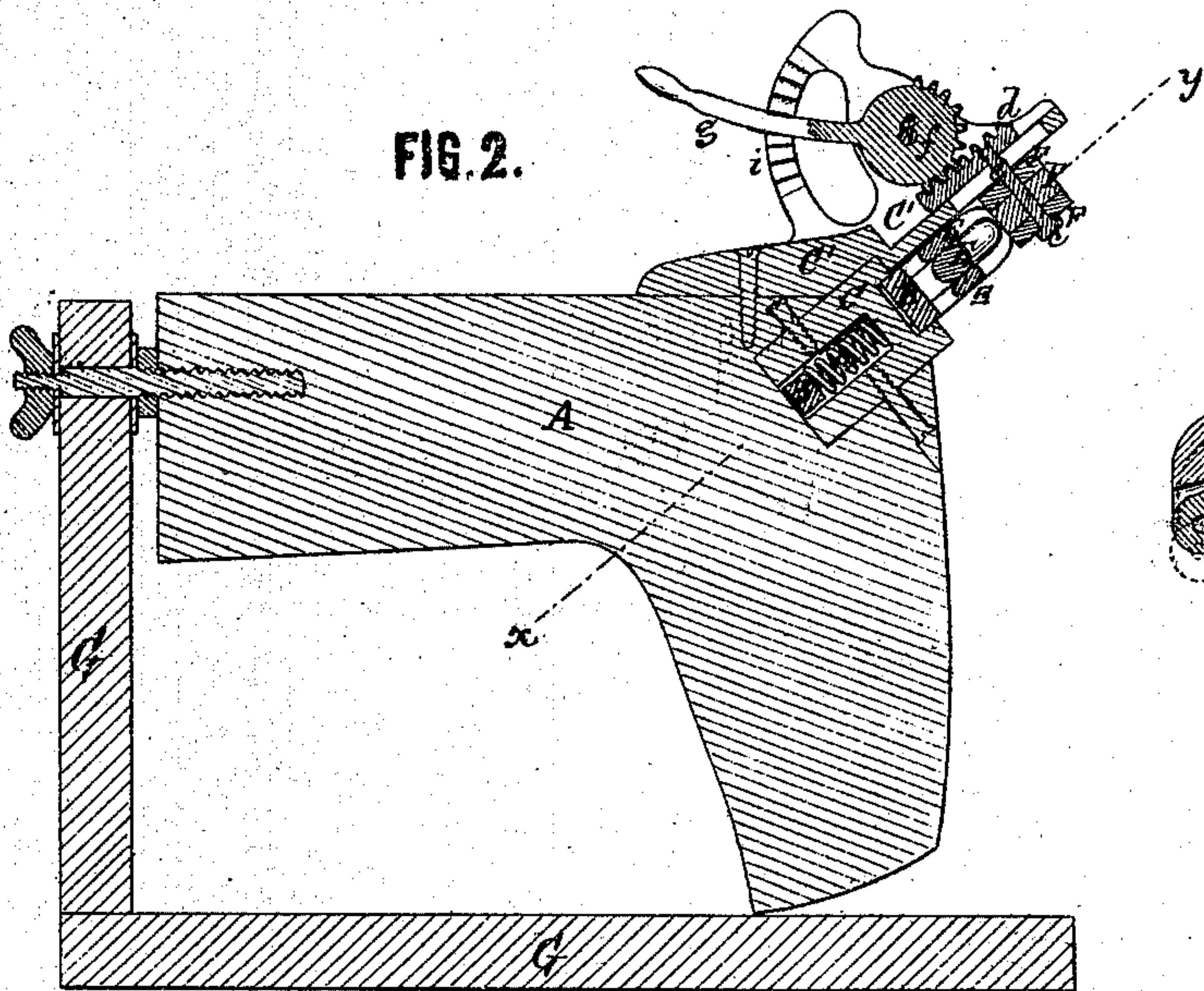
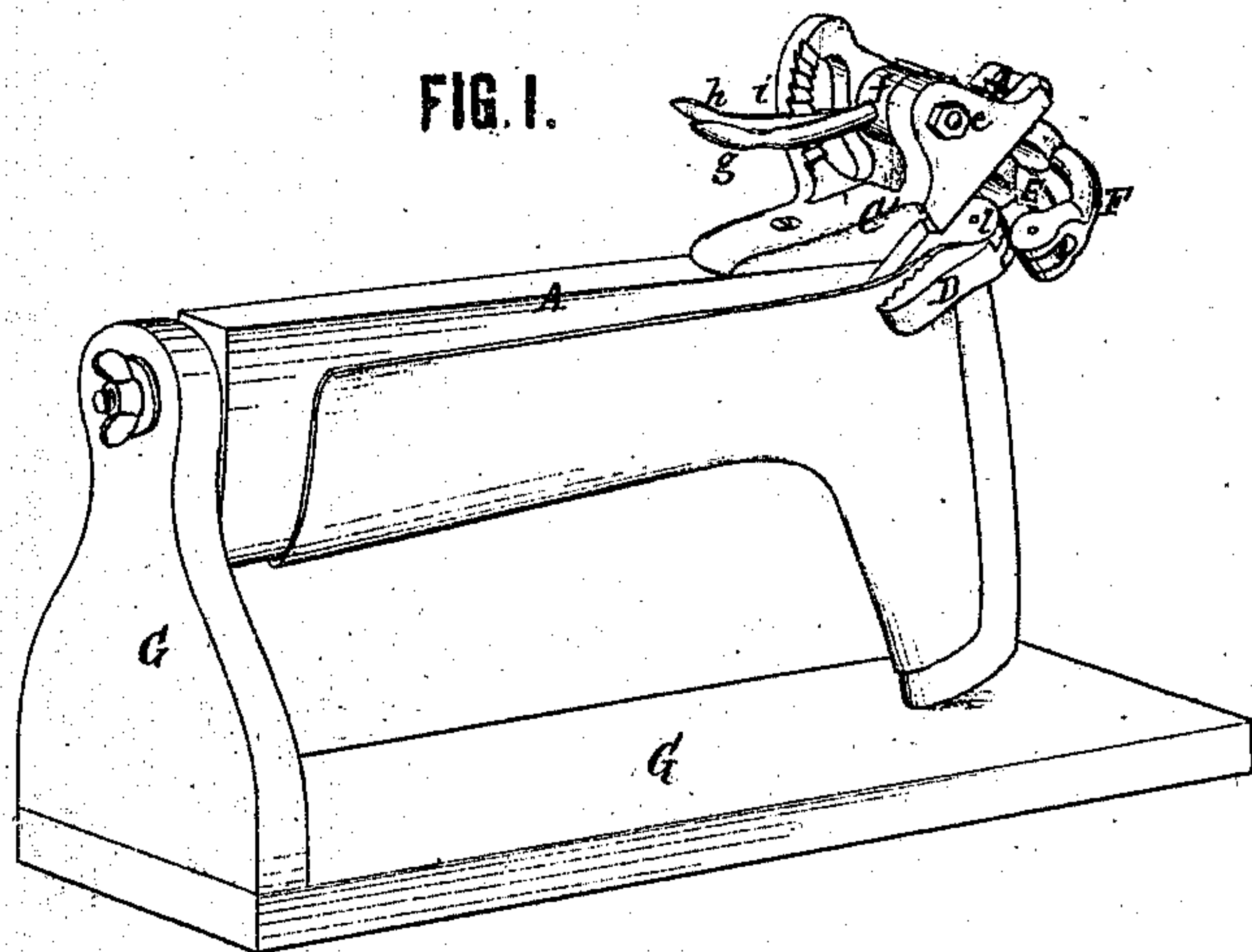


S. W. Jamison,
Boot Crimper.
No. 104,596. Patented June 21, 1870.



Samuel W. Jamison
by his Attorney.
A. Collier

WITNESSES.

Wm. H. H. H. H.
Wm. H. H. H. H.

United States Patent Office.

SAMUEL W. JAMISON, OF NEWARK, NEW JERSEY.

Letters Patent No. 104,596, dated June 21, 1870.

IMPROVEMENT IN BOOT-CRIMPERS.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

Be it known that I, SAMUEL W. JAMISON, of Newark, county of Essex and State of New Jersey, have invented certain new and useful Improvements in Apparatus for Stretching the Uppers or Fronts of Boots and Shoes, of which the following is a specification.

My invention relates to an apparatus designed with special reference to its use in connection with a crimping-machine, or machine for crimping the uppers of boots and shoes, such, for instance, as described in Letters Patent recently granted me, No. 99,906, dated February 15, 1870.

In crimping the uppers of boots and shoes, I find it necessary, in many cases, to oil or grease the leather after the first operation of crimping, and while it is still wet, soft, and in such condition that the crimp may be easily pulled out. In order to oil or otherwise manipulate the leather while in this condition, without injuring the crimp, I employ a form or tree which corresponds in shape with the crimping-form, and with the form combine a pair of double-acting jaws or pincers, so arranged that when the leather is placed on the form the jaws may be closed upon the corners or heel of the front, and, at the same time, drawn back, so as to gently, but powerfully, draw down the leather and stretch it over the form, thus removing all danger of injuring or pulling out the crimp, which, on the contrary, is made much better and firmer.

The apparatus is also of great service when the leather is hard and stubborn, and difficult to stretch or bring down to its proper place, without again putting it through another operation on the crimping-machine. In such cases the machine may be used to stretch to the required length the leather, which, in this condition, can be quickly and easily greased, and with much less labor than has been the case heretofore.

The jaws are made self-adjusting to any thickness of leather, and are so arranged that one corner of the leather on the form may be stretched or pulled down, while the other is left free, which is of advantage in case one side of the front, when placed on the form, should be longer than the other.

The nature of my invention, and the manner in which the same is or may be carried into effect, will be readily understood by reference to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a perspective view of an apparatus made in accordance with my invention.

Figure 2 is a longitudinal central section of the same.

Figure 3 is a section on the line *x y*, fig. 2.

A is the tree or form, having that portion over which the leather is stretched, shaped to correspond with the shape of the crimping-form, or with the shape which it is desired to impart to the leather.

That portion of the apparatus by which the leather is clamped and stretched is attached to the heel of the tree, and is arranged as follows:

A sliding block, B, is provided, which is supported in guide-pieces, or a frame, C, suitably mounted in or upon the tree, and is held in its lowest position, as shown in figs. 2 and 3, by a spiral spring, *a*, or other elastic body, interposed between the base of the block B and the top of the frame C. This spring is not absolutely necessary, but its use is productive of advantage in insuring the return of the blocks to the position shown in the figures referred to, after its upward or backward movement, as hereinafter explained, and I therefore prefer to employ it.

The block is corrugated, scored, or roughened on its two faces *b*, and opposite each face is an oscillating or movable jaw, D, the inner face of which is similarly scored or corrugated, the two pieces or parts D *b* on each side forming a pair of jaws, between which the corners of the leather are clamped and held, as shown in fig. 1.

The jaws D are pivoted to ears *l* formed on the block B, and are attached to or made in one piece with levers or arms E, each lever and its jaw approximating in shape to a bell-crank lever, the pivotal point being at the angle. The levers are so formed that they may cross each other and work up and down, without interfering with one another.

To the outer end of each lever E is pivoted or jointed a lever, F, and the two levers F extend inward or toward each other, and are hung upon a common pivot or axis, *c*, which is located centrally or midway between their outer ends, where they are pivoted to the levers E.

Under the arrangement thus far described, it will be seen that, by depressing or pushing forward the central axis or pivot *c* of the levers F, the effect will be to depress the levers E F and open the jaws D to the position shown in dotted lines in fig. 3.

If, now, supposing the corners of the leather to be placed between the jaws, the axis or center *c* be raised, the jaws D will close upon the leather, which will be clamped most firmly between the two pairs of jaws.

The jaws now will have closed upon the leather as tightly as possible, and if the axis or center *c* be still further lifted or drawn back, the result will be to retract the levers, oscillating jaws, and sliding block, bodily and together, thus stretching the leather and drawing it as tightly as desired over the form.

It will be noticed that, owing to the arrangement of the levers and the oscillating jaws D, the latter are self-adjusting to any thickness of leather, and will work equally well, whether the corners of the leather held between the jaws are of equal or unequal thickness; also, if one side of the front is longer than the other,

the short corner can be drawn down to the desired length by clasp ing it in the jaws, while the other corner is left free.

The levers and jaws, together with the sliding block, which forms a part of the jaws, may be actuated to perform the above-described movements by any suitable mechanism. The devices which I prefer to employ for the purpose are shown in the drawing, and consist of a sliding rack, *d*, which moves back and forth in a way formed for it in a supplemental or auxiliary frame, *C'*, fixed to the tree, and is actuated by a pinion or toothed segment, *f*, hung upon an axis or pin, *e*, supported in the frame *C'*, as shown in figs. 1 and 2.

This rack is connected with the central pin or axis *e* of the lever system, which passes up through a slot formed in the frame *C'* beneath the rack, and the toothed segment *f* has a handle, by which it is revolved.

A spring catch, *h*, is fixed to the handle, which engages with ratchet-teeth, or a series of catches, *i*, on a raised portion of the frame *C'*, whereby, when the handle is pressed downward, and so as to move back the rack, and thereby retract the levers and jaws, for the purpose of clamping and stretching the leather, the engagement of the spring *h* with one of the teeth *i* opposite, which it may happen to be, will hold all parts securely in position.

By pressing back the spring *h*, the handle will be released, and the recoil of the spring *a* in the block will suffice to open the jaws and release the leather.

It will be noticed that by one continued movement of the handle, the jaws can be closed and then drawn back to any extent, so as to stretch the leather more or less, as desired.

In order to allow the apparatus to be used to the best advantage, I pivot the form or tree *A* to the bench *G*, or other fixed or stationary part, in the manner shown in figs. 1 and 2, or in an equivalent manner, so that the form may be freely turned upon its pivot,

thus giving the workman the same facilities for working on either side.

The form or tree should be made of wood. The jaws and other working parts I prefer to make of iron, or other suitable metal.

The arrangement of levers for actuating the jaws may be considerably varied without departing from the principle of my invention, but I prefer that which is herein shown and described, as I am thereby enabled to obtain a gentle, but very powerful movement of the jaws.

Having now described my invention, and the manner in which the same is or may be carried into effect,

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

1. The combination with the boot-form, of the corrugated sliding block, the oscillating jaws, pivoted to said block, and the levers, whereby the block and jaws are actuated, when the said block and jaws, and mechanism for operating the same, are mounted upon and make part of the form, substantially as shown and described.

2. The combination with the form and the corrugated block, mounted and sliding in the form, of the spring, interposed between the said form and block, substantially as and for the purposes set forth.

3. An apparatus for stretching the uppers of boots and shoes, composed of the pivoted or rotary form, the sliding block mounted upon said form, the oscillating jaws, pivoted to said block, and the levers, rack, pinion, and handle, for operating said jaws and block, said parts being arranged for joint operation, as shown and set forth.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

S. W. JAMISON.

Witnesses:

J. D. ENGELBRECHT,
THOMAS GORDON.