

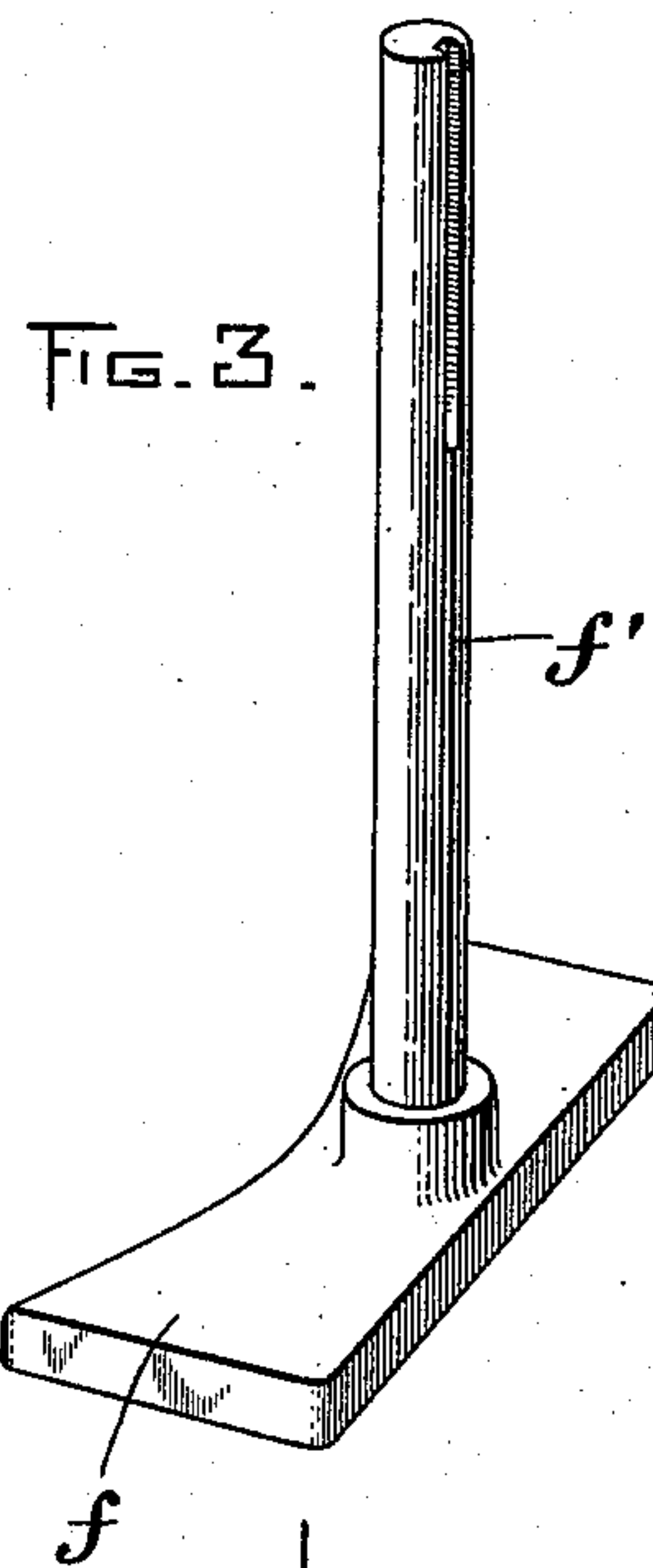
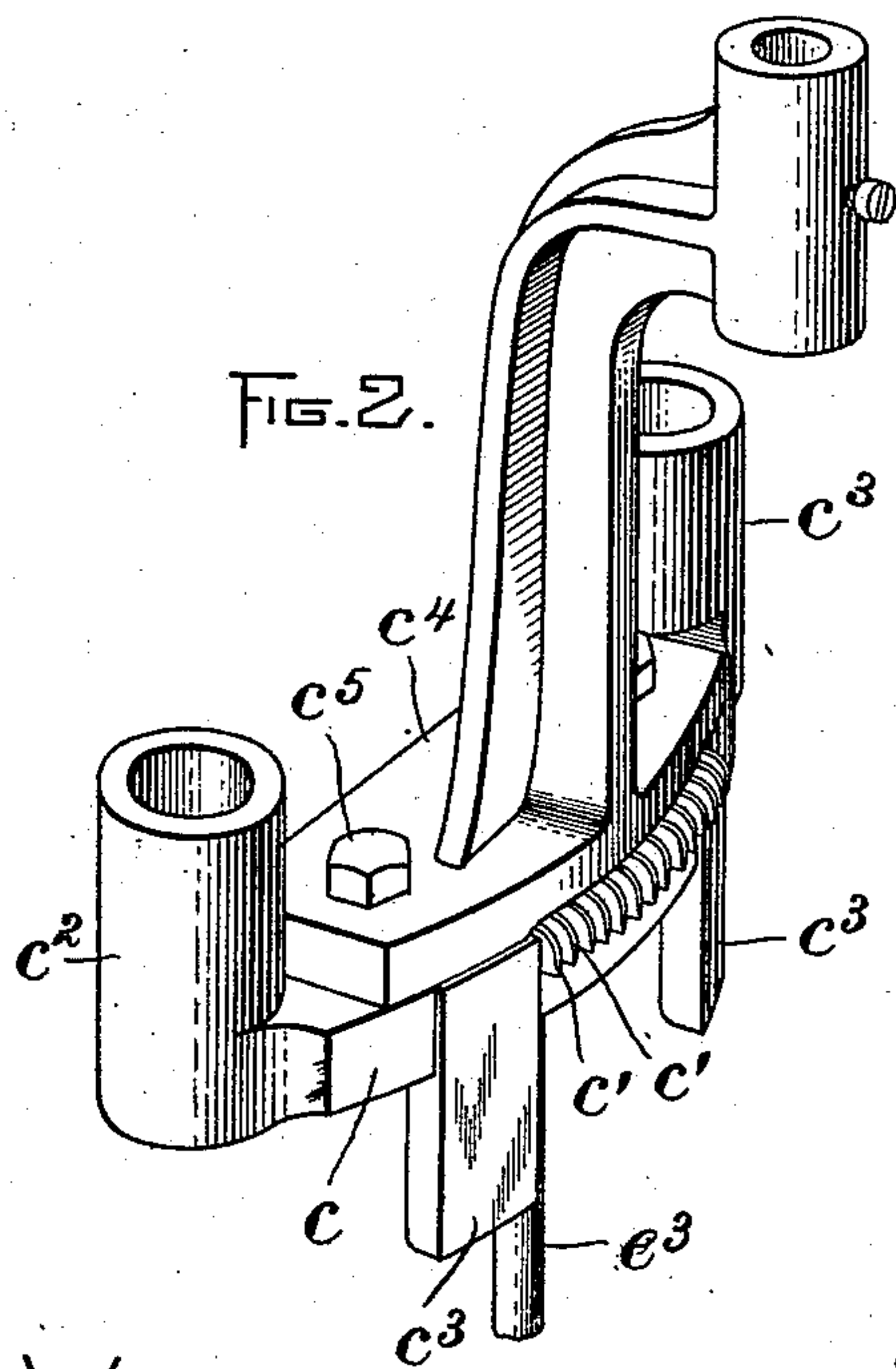
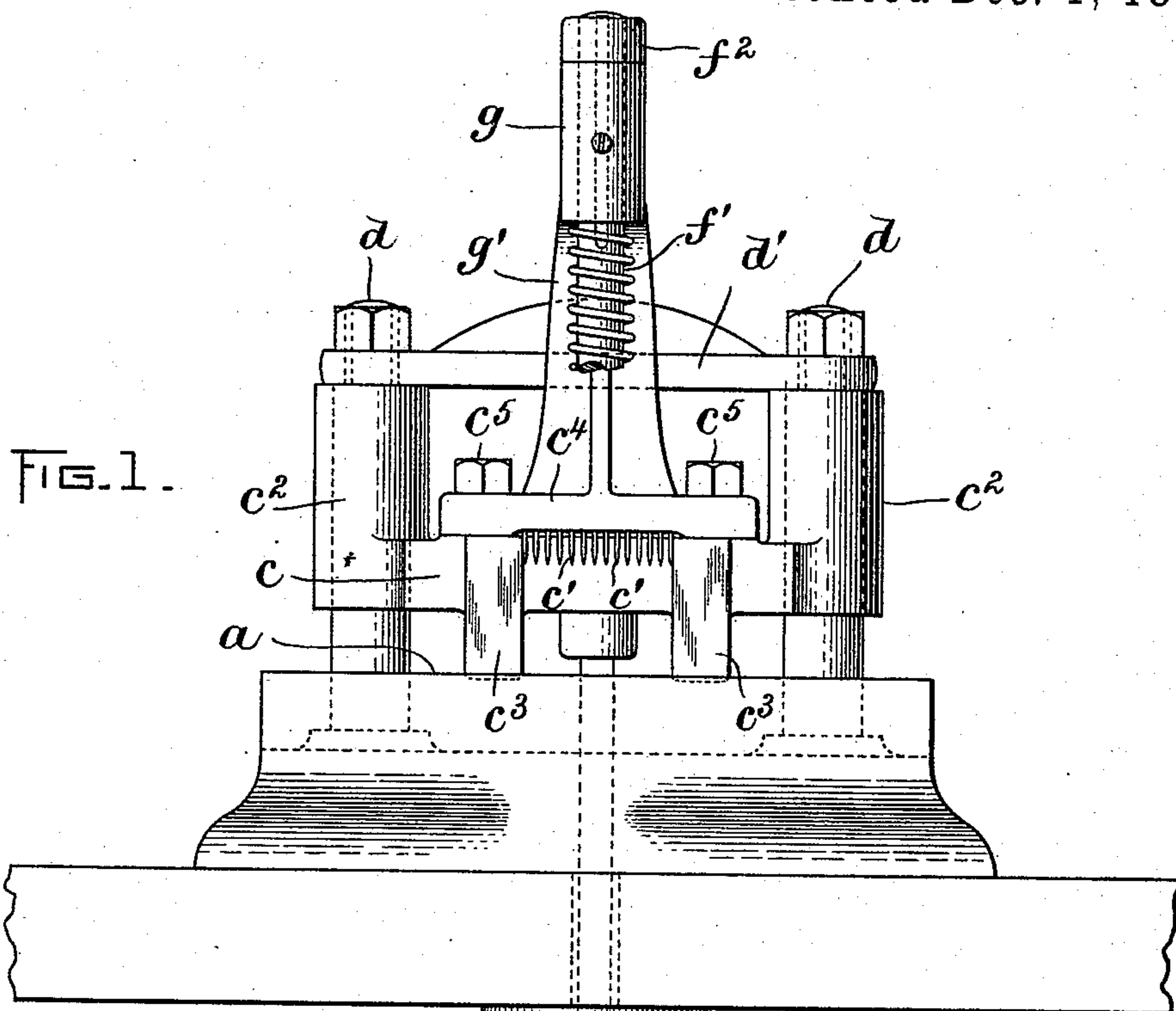
(No Model.)

2 Sheets—Sheet 1.

C. A. BONNEY.
LEATHER SNIPPING MACHINE.

No. 572,352.

Patented Dec. 1, 1896.



WITNESSES:
A. D. Harrison.
A. D. Adams.

INVENTOR:
C. A. Bonney
By *Wm. B. Smith*
Atty.

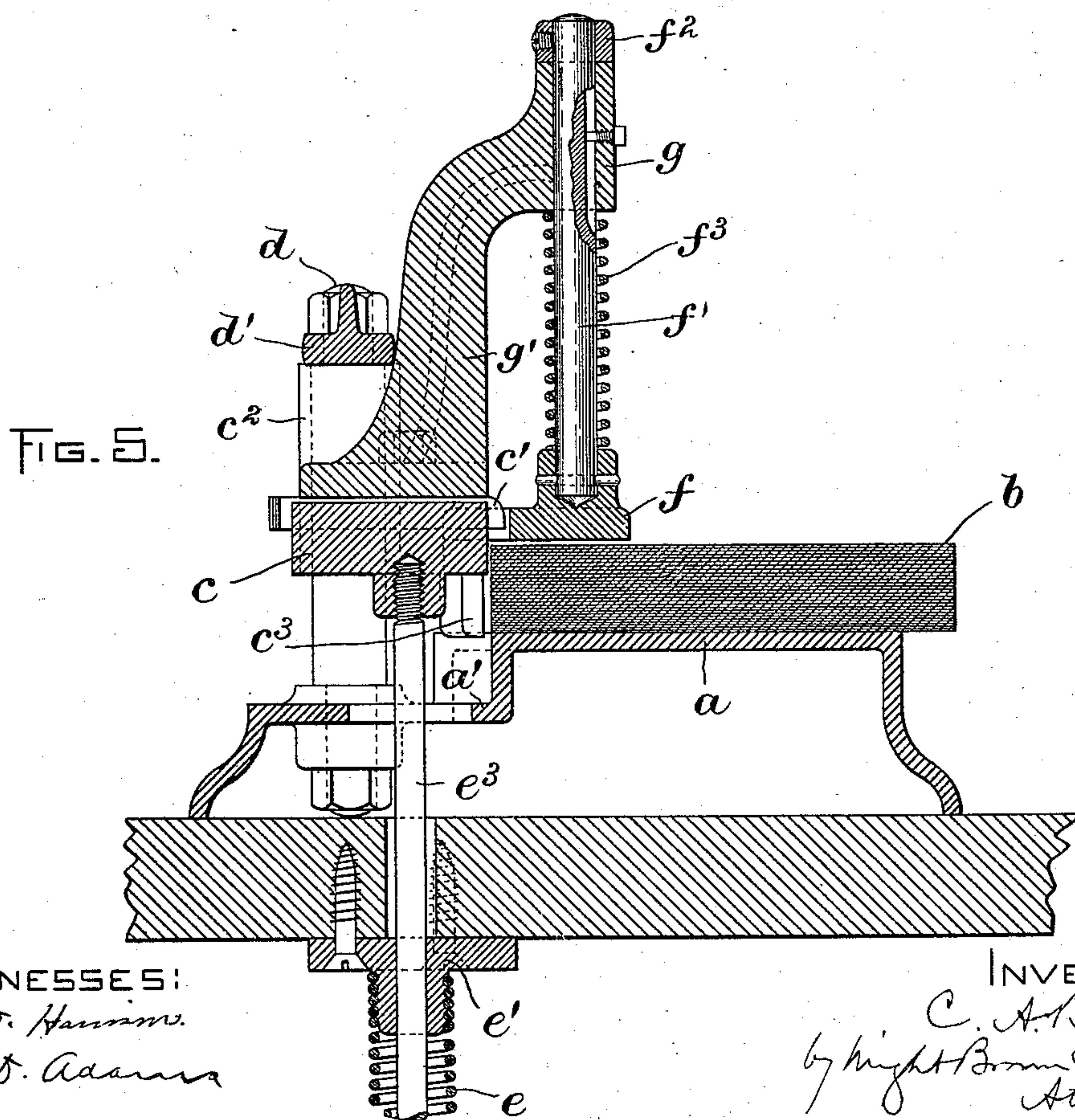
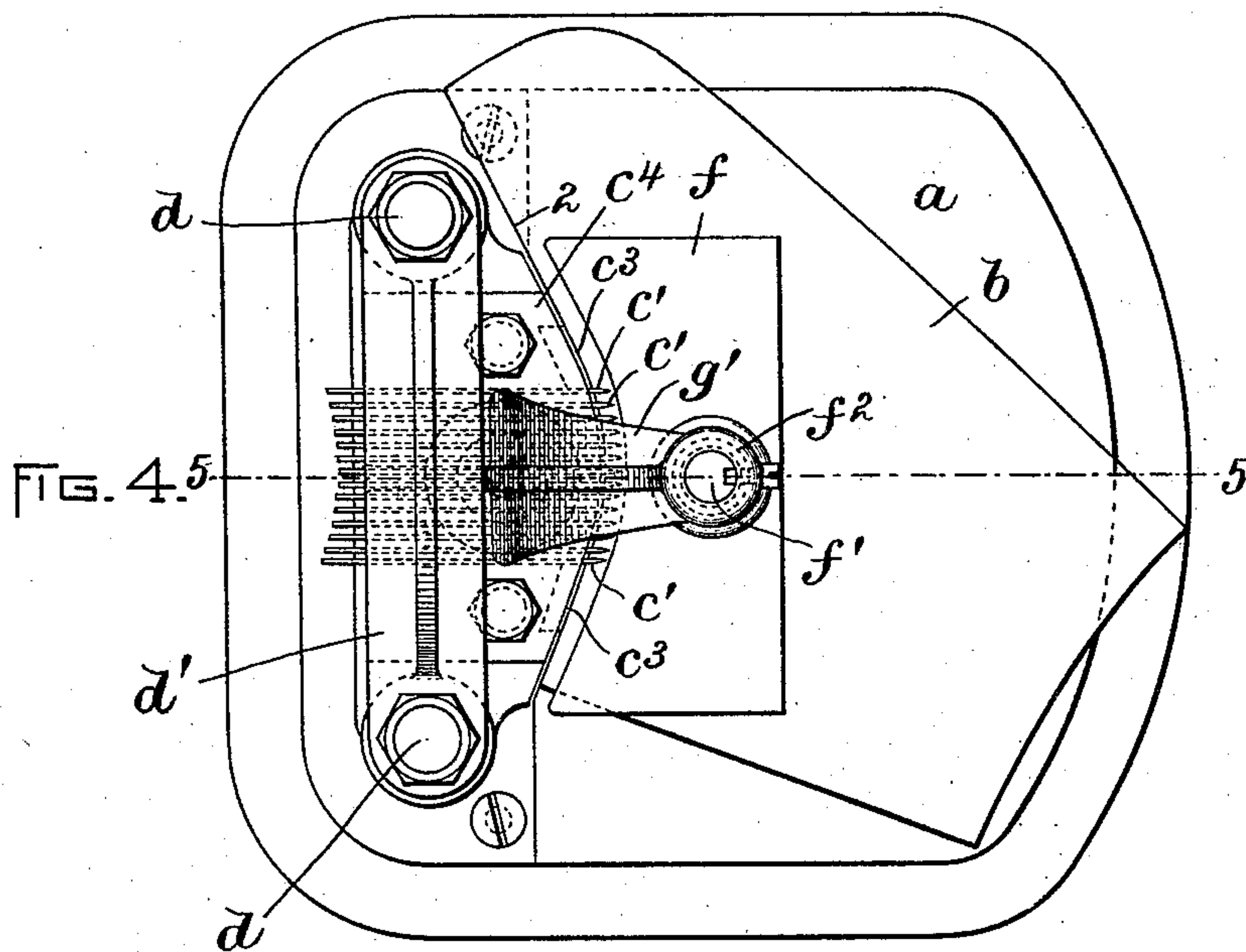
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A. D. Harrison.
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INVENTOR:
C. A. Bonney
by Knight, Brown & Dunsen
Attys.

UNITED STATES PATENT OFFICE.

CHARLES A. BONNEY, OF BROCKTON, MASSACHUSETTS, ASSIGNOR TO THE
BROCKTON FOLDING MACHINE COMPANY, OF SAME PLACE.

LEATHER-SNIPPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 572,352, dated December 1, 1896.

Application filed February 6, 1896. Serial No. 578,214. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. BONNEY, of Brockton, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Leather-Snipping Machines, of which the following is a specification.

This invention has for its chief object to provide a machine adapted to cut a plurality of slits or incisions in one edge of a piece of leather, such as a boot or shoe upper.

It is a common practice to fold inwardly one edge of an upper and cement the inwardly-turned portion against the inner side of the body of the piece to conceal the raw edge of the piece. Said edge having a reëntrant curve, it is customary to cut a plurality of slits from the edge a short distance into the body along said curve in order that the fold may be evenly formed.

My invention relates to a machine for making the slits above mentioned; and it consists in the several improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a front elevation of my improved slitting-machine, the presser-foot being removed. Fig. 2 represents a perspective view of the knife-carrier. Fig. 3 represents a perspective view of the presser-foot. Fig. 4 represents a top plan view of the machine. Fig. 5 represents a section on line 5 5 of Fig. 4.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents a work-supporting bed having a flat upper surface adapted to support a pile of pieces *b* of substantially the form shown in Fig. 4, each piece having an edge 2, which has a reëntrant curve.

c represents a knife-carrier, which is movable in fixed guides attached to the frame of the machine and is provided with a gang of slitting-knives *c'*, which project from one edge of the carrier and are arranged to form slits in the reëntrant curves of the pieces *b*, the carrier *c* being movable crosswise of the bed *a* and at right angles with the supporting-surface thereof, so that when the carrier is depressed from the position shown in Fig. 5 the knives will move across the pile of pieces

b and form a corresponding number of slits therein, the depth of the slits depending upon the projection of the blades from the carrier. The carrier is preferably guided by means of vertical rods *d d*, affixed to the frame of the machine and connected at their upper ends by a cross-bar *d'*, the carrier having sleeves *c² c²*, which are adapted to slide upon said guides, their upward movement being limited by the cross-bar *d'*. The carrier is normally raised to hold the knives above the pile of pieces on the bed, preferably by means of a spring *e*, interposed between a fixed bearing or support *e'* and a collar *e²*, affixed to a vertically-movable rod *e³*, the upper end of which is attached to the carrier *c*. The spring is arranged to normally contract, and thus raise the rod *e³*, holding the sleeve *c²* of the carrier against the cross-bar *d'*. The rod *e³* may be connected with a treadle (not shown) whereby it may be depressed to depress the carrier and cause the knives to act on the pieces *b*. The front side of the carrier *c*, from which the knives *c'* project, is curved to correspond to the curvature of the edge of the upper on which the knives act and is provided with downwardly-projecting arms *c³ c³*, which serve as gages or recesses against which the edges 2 of the pieces *b* bear. Said arms also serve to limit the downward movement of the carrier and knives by striking a shoulder *a'*, formed on the supporting-frame. The knives *c'* are preferably inserted in transverse slots formed in the upper surface of the carrier and are secured therein by a clamping-plate *c⁴*, affixed by bolts *c⁵* to the carrier.

f represents a presser-foot which is adapted to bear upon the upper surface of the pile of pieces *b* and to hold the same in close proximity to the points where the knives act on said pieces, one edge of the presser-foot being curved to conform to the curvature of the forward edge of the carrier, as indicated in Figs. 3 and 4. The presser-foot *f* is affixed to a bar *f'*, which has a limited sliding movement in a socket *g*, formed in a standard *g'*, which is secured to the carrier *c* preferably by being formed on or affixed to the clamp *c⁴*. The presser-bar *f'* has a collar *f²* affixed to its upper end, which bears upon the upper end of the socket *g* and limits the independ-

ent downward movement of the presser-bar, a spring f^3 being interposed between said socket and the presser-bar and permitting the presser-foot to yield upwardly.

5 The operation is as follows: The carrier c and presser-foot are normally held by the spring e in the position shown in Fig. 5, the presser-foot and knives being raised suffi-
 10 ciently above the bed a to permit the insertion of the pieces b between the presser-foot and bed. The operator then depresses the carrier c , thereby causing the presser-foot to bear upon the pile of pieces and securely hold them, the downward movement of the presser-
 15 foot being thus arrested, while the carrier continues to descend, the knives being thus caused to slit the edges of the pieces b . The arms c^3 are formed to arrest the downward movement of the carrier just as the knives
 20 have slitted the lowest piece in the pile and before they can come in injurious contact with the bed. The operator then releases the carrier, which is raised by the spring e , the presser-foot being raised with it, thus releas-
 25 ing the pieces.

I claim—

1. In a machine of the character described, the combination of a work-supporting bed, a knife-carrier movable at right angles thereto
 30 and across the end of the same and having a projection constituting a gage for the edges of the work to abut and also a stop to limit the movement of the carrier; and knives fas-

tened in said carrier and projecting over the bed.

2. In a machine of the character described, the combination of a supporting-bed, a carrier movable on fixed guides, a gang of knives affixed to the carrier, a rod affixed to the carrier and projecting downwardly therefrom, a
 40 retractile spring surrounding said rod and fastened at the lower end to the same and at the upper end to a fixed support, a guide affixed to the carrier and overhanging the supporting-bed, a presser-bar movable in said
 45 guide, a presser-foot affixed to said bar, and a spring interposed between the foot and guide.

3. In a machine of the character described, the combination of a work-supporting bed, a carrier movable across the end of the said
 50 supporting-bed and having transverse slots in its upper side; knives engaging said slots and projecting over the bed; a clamping-plate arranged over said knives and having an up-
 55 standing arm with a guide overhanging the bed; and a presser-foot whose stem engages said guide.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 14th day of 60
 January, A. D. 1896.

CHARLES A. BONNEY.

Witnesses:

WARREN A. REED,
 HENRY F. PARKER.