

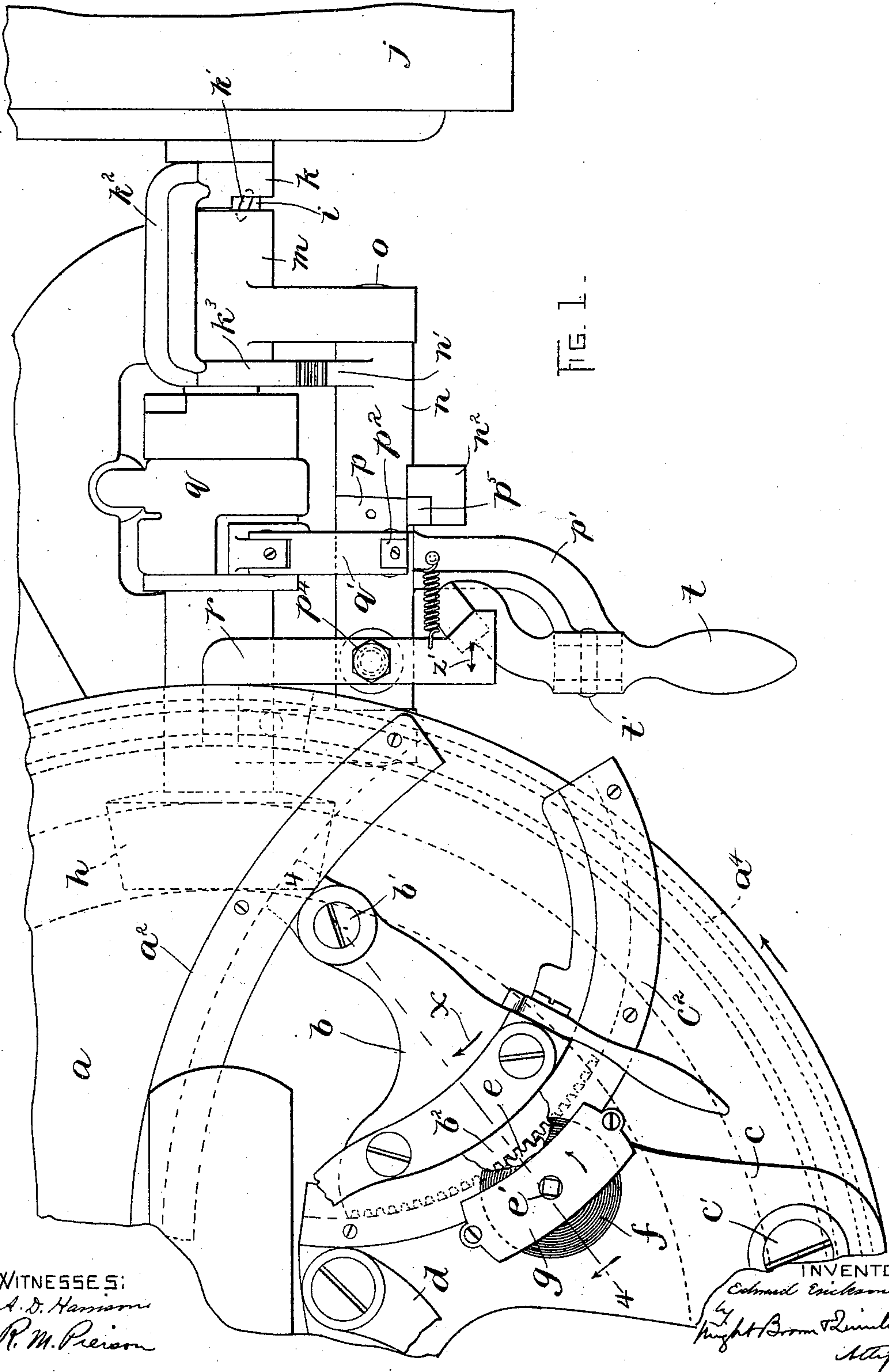
(No Model.)

2 Sheets—Sheet 1.

E. ERICKSON.
SOLE ROUNDING MACHINE.

No. 599,693.

Patented Mar. 1, 1898.



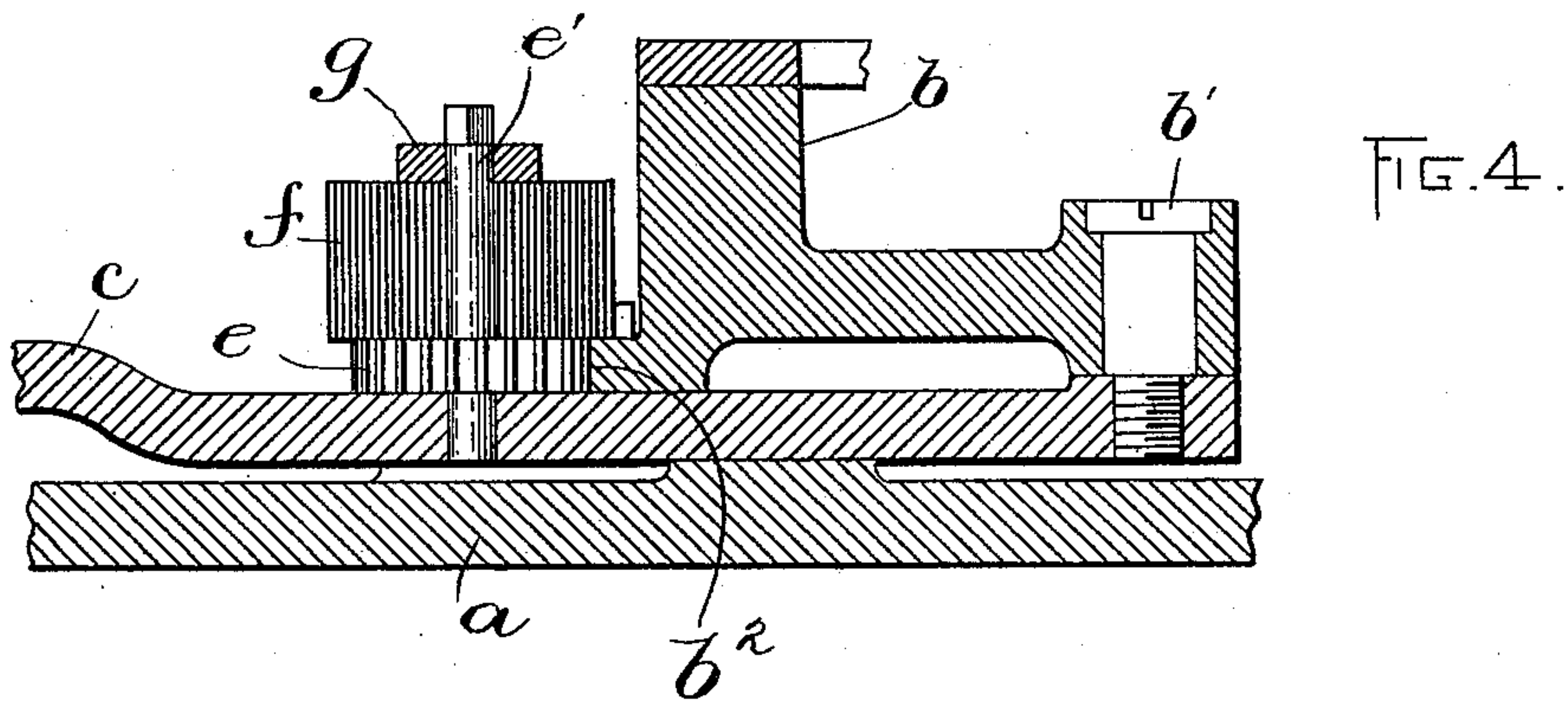
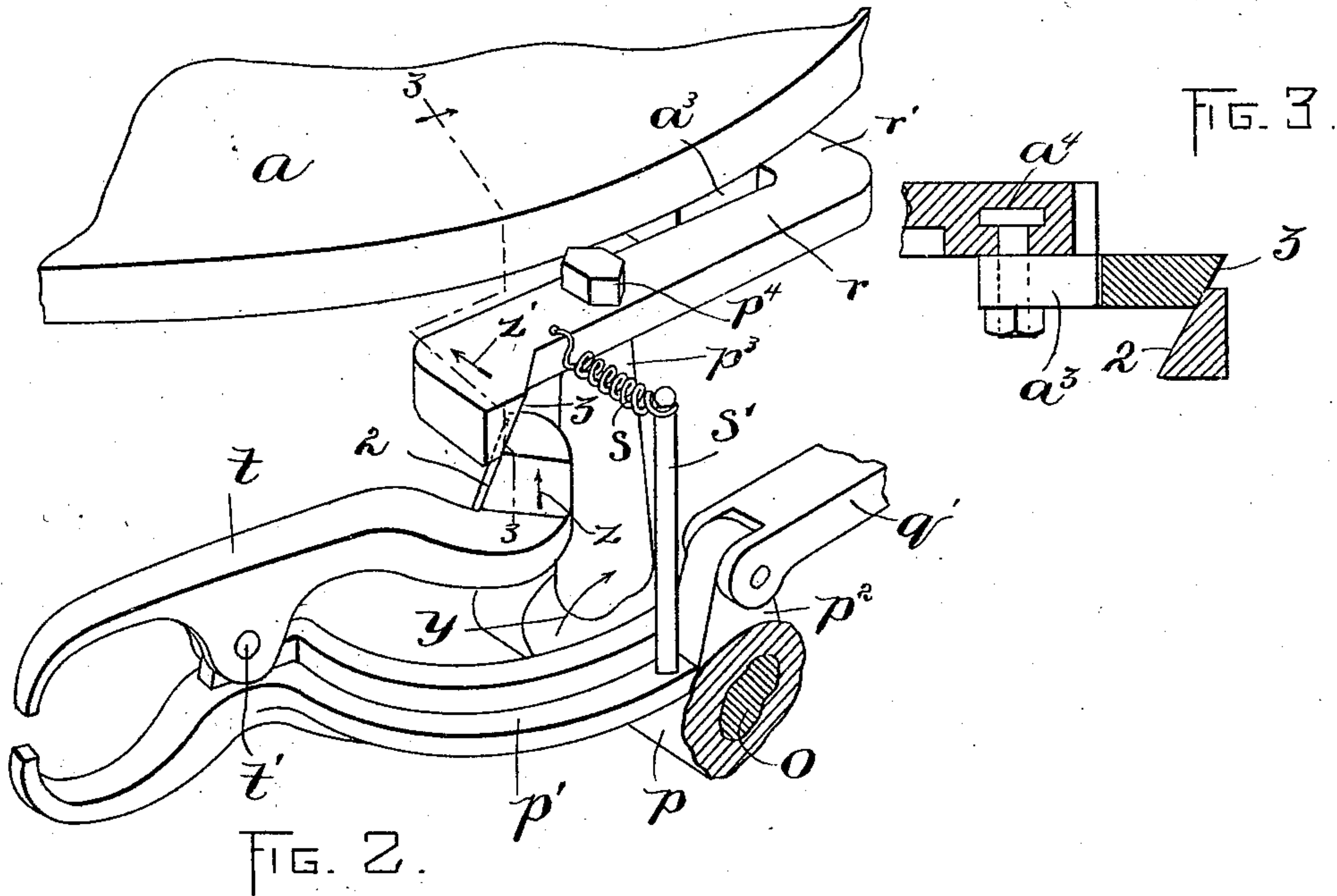
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WITNESSES:

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R. M. Preison

INVENTOR:

Edward Enckmann
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UNITED STATES PATENT OFFICE.

EDWARD ERICKSON, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE
FLAGG MANUFACTURING COMPANY, OF SAME PLACE.

SOLE-ROUNDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 599,693, dated March 1, 1898.

Application filed March 25, 1897. Serial No. 629,146. (No model.)

To all whom it may concern:

Be it known that I, EDWARD ERICKSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Sole-Rounding Machines, of which the following is a specification.

This invention relates to sole rounding or trimming machines of that class known as the "Julian," employing a rotary table, a fixed pattern or form, a knife-holder adapted to move back and forth on the table, a carrier on which said knife-holder is mounted, and means for starting and stopping the rotary table.

The invention has for its object to provide an improved mechanism for starting and stopping the rotating table, while at the same time simplifying the same and reducing the number of parts therein.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a top plan view of the principal working parts of a sole-rounding machine embodying my invention. Fig. 2 represents a perspective view of parts of the starting and stopping mechanism. Fig. 3 represents a section on line 3 3 of Fig. 2. Fig. 4 represents a section on line 4 4 of Fig. 1.

The same reference characters indicate the same parts in all the figures.

Referring to the drawings, the letter *a* designates the rotating table, which is mounted to turn on a fixed column, at the top of which is the sole pattern or form upon which the untrimmed leather is placed to be cut. (The column and pattern are not shown in the drawings.) The knife-holder *b* is pivoted at *b'* to a carrier *c*, which is itself pivoted at *c'* to the table *a*. The rotation of the table carries the knife around the pattern, which properly guides it through the work. The said knife-holder is provided with a segmental guide *c²* on the carrier *c*, and the carrier is provided with a similar guide *a²* on the table *a*. A pitman *d*, actuated by a revolving crank, so operates the carrier *c* as to accelerate the speed of the knife when traversing the long sides of the sole-pattern and to retard the same when rounding the ends of said pattern. As

a means for holding the knife up to the carrier I provide mechanism comprising a segmental gear-head *b²*, a pinion *e*, meshing therewith and fixed to a vertical arbor *e'*, and a spiral spring *f*, secured at one end to the arbor *e'* and at the other end to the carrier *c*. The said arbor *e'* has a lower bearing in the carrier *c* and an upper bearing in a plate *g*, which forms a bridge over the spring. By this arrangement the knife-holder *b* is actuated in the direction of the arrow *x* in Fig. 1, so as to hold the knife constantly up to the sole-pattern around which it is moving, the spring *f* yielding to allow a backward displacement of the holder as the knife reaches the protruding portions of the pattern and immediately forcing the holder forward again as the knife reaches the recesses or depressions of said pattern. This construction dispenses with all weights and their cumbrous attachments as commonly employed in machines of this class and greatly simplifies the knife-actuating means.

The table *a* is provided on its under side with gear-teeth, which mesh with the teeth of a pinion *h*, (shown in dotted outline in Fig. 1,) the said pinion being fixed to a driving-shaft *i*. A driving-pulley *j*, which is loosely mounted on the shaft *i*, has a clutch member adapted to engage a corresponding clutch member formed on a spider, which is fixed to the shaft *i*, as described in Letters Patent No. 540,062, dated May 28, 1895. The clutch members are normally held out of engagement by means of a spring, which tends to separate the spider and the pulley. For moving the pulley into contact with the spider a movable collar *k* is employed, which is loosely mounted on the shaft between the hub of the pulley and a fixed abutment or bearing *m*, in which the shaft is journaled. A strut *k'* is interposed between the said collar and abutment, its ends fitting in sockets in the said two members, and is mounted diagonally, so that when the collar *k* is turned in one direction the strut forces the collar against the hub of the pulley *j* and thereby moves the pulley, so as to engage the clutch members, which are disengaged by turning the collar back in the other direction.

The collar *k* is connected by a yoke *k²* with

a gear-segment k^3 , loosely mounted on the shaft i , and the teeth of said segment mesh with those of another gear-segment n' , fixed to a sleeve n , which is mounted to rock on a shaft o . A collar p , fixed to said shaft o , is provided with means for engaging the sleeve n , consisting of an arm p^5 on the collar p , and two lugs n^2 on the sleeve n , (only one of said lugs being shown,) so that the collar and sleeve may be turned together. The collar is further provided with an arm or handle p' . By depressing said handle the operator may engage the clutch members of the pulley and the spider on the shaft i , and thus cause said shaft and the table a to rotate.

Automatically-acting means are provided for releasing the clutch members and arresting the shaft i , the said means consisting of a brake-band q , surrounding the shaft, a link q' , connecting one end of said band with an arm p^2 on the collar p , a standard p^3 on said collar, a hooked arm r , supported on said standard, a hook r' on said arm, and an abutment a^3 on the table a . The arm r is pivoted at p^4 to the standard p^3 and is normally held by a spring s , connected with said arm and with a lug s' on the collar p in position to be engaged by the abutment a^3 . When said abutment strikes against the hook r' , it moves the collar p and the sleeve h in the direction indicated by the arrow w in Fig. 3, thereby moving the gear-segments and the collar k , so as to permit the disengagement of the clutch members. At the same time the link q' forces the brake-band q into engagement with the driving-shaft i and arrests the rotation of the same, the action of the brake being cushioned, if desired, by a spring or springs applied after the manner described in the patent above referred to. Upon depressing the arm p' to engage the clutch mechanism again and start the table a in rotation it is necessary to disengage the hooked arm r from the abutment a^3 , and this is accomplished by means of a handle or lever t , pivoted at t' to the arm p' and provided with a beveled face 2, engaging a complementary beveled face 3, formed on a rear extension of the arm r . Before depressing the arm p the outer end of the handle t is depressed, thereby raising its inner end, as indicated by the arrow z , Fig. 3, and displacing the rear end of the arm r in the direction of the arrow z' by the reaction of the beveled faces. The hook r is thus moved so as to release the abutment a^3 , and the arm p' is then depressed to engage the clutch mechanism and start the table a in rotation. The clutch members remain in engagement until the table has completed a rotation, when the abutment again strikes against the hook and releases the clutch. The table may of course be stopped by the operator at any desired point by raising the arm p' . The abutment a^3 is bolted in a slot a^4 ,

extending around the edge of the table, and is adjustable therein to any desired position along said edge.

The abutment a^3 and the hooked arm r may be said to constitute complementary stop members.

I claim—

1. In a sole-rounding machine, the combination with a rotary table carrying a knife-holder and provided with gear-teeth, of a shaft, a pinion on said shaft meshing with said gear-teeth, a clutch-pulley loosely mounted on said shaft, members on said shaft adapted by their partial rotation to move said pulley longitudinally into engagement with the shaft, and mechanism for automatically turning said members in a clutch-releasing direction, consisting of a sleeve mounted on an auxiliary shaft and having gear-teeth which mesh with corresponding gear-teeth on one of the before-mentioned members, a collar mounted on said auxiliary shaft and adapted to turn said sleeve, a stop member on said collar, and a complementary stop member on the rotary table adapted to engage the first-mentioned stop member and thereby rotate the said collar and sleeve.

2. In a sole-rounding machine, the combination with a rotary table carrying a knife-holder and provided with gear-teeth, of a shaft, a pinion on said shaft meshing with said gear-teeth, a clutch-pulley loosely mounted on said shaft and adapted to be moved longitudinally into or out of engagement with a complementary clutch member fixed to the shaft, a clutch-operating mechanism including a collar mounted on an auxiliary shaft and having an arm or handle and connecting devices between said collar and the clutch-pulley whereby opposite movements of the collar are caused to connect and disconnect the clutch-pulley and the clutch member on the shaft, a shaft-arresting mechanism connected with the collar and operated thereby, a pivoted arm carried by said collar and having a stop member, a stop member on the rotary table adapted to engage the arm and thereby turn the collar in its clutch-disconnecting direction, and means for disengaging said stop members, consisting of a lever pivoted to the before-mentioned arm or handle and having a beveled face adapted to engage a corresponding beveled face on the pivoted arm, whereby a movement of the lever on its pivot causes the pivoted arm to swing.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 19th day of March, A. D. 1897.

EDWARD ERICKSON.

Witnesses:

C. F. BROWN;
G. H. P. FLAGG.