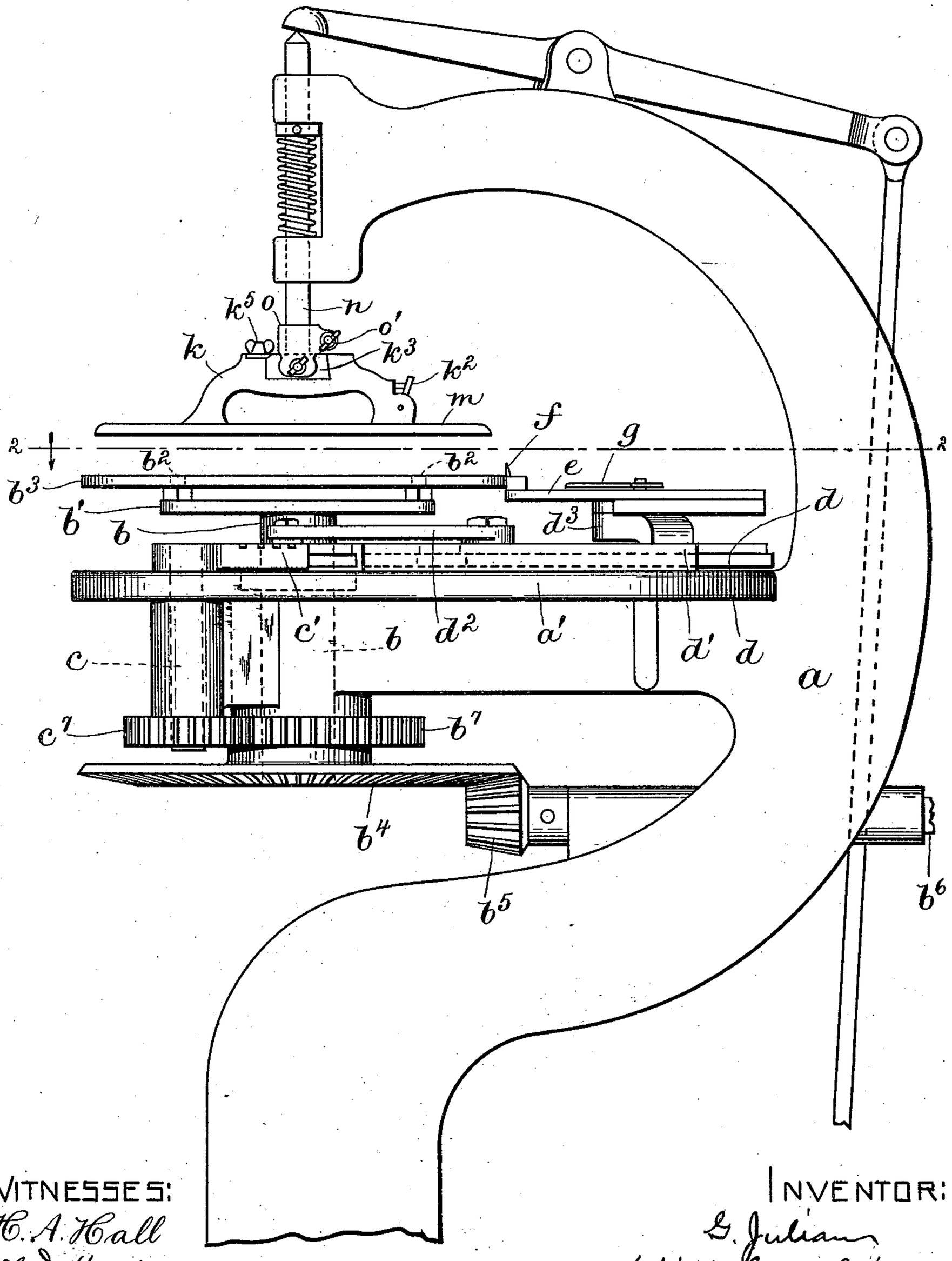
(No Model.) 4 Sheets—Sheet 1.

G. JULIAN.

SOLE ROUNDING MACHINE.

No. 547,955. Patented Oct. 15, 1895.

FIG. 1.



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(No Model.) 4 Sheets—Sheet 2.

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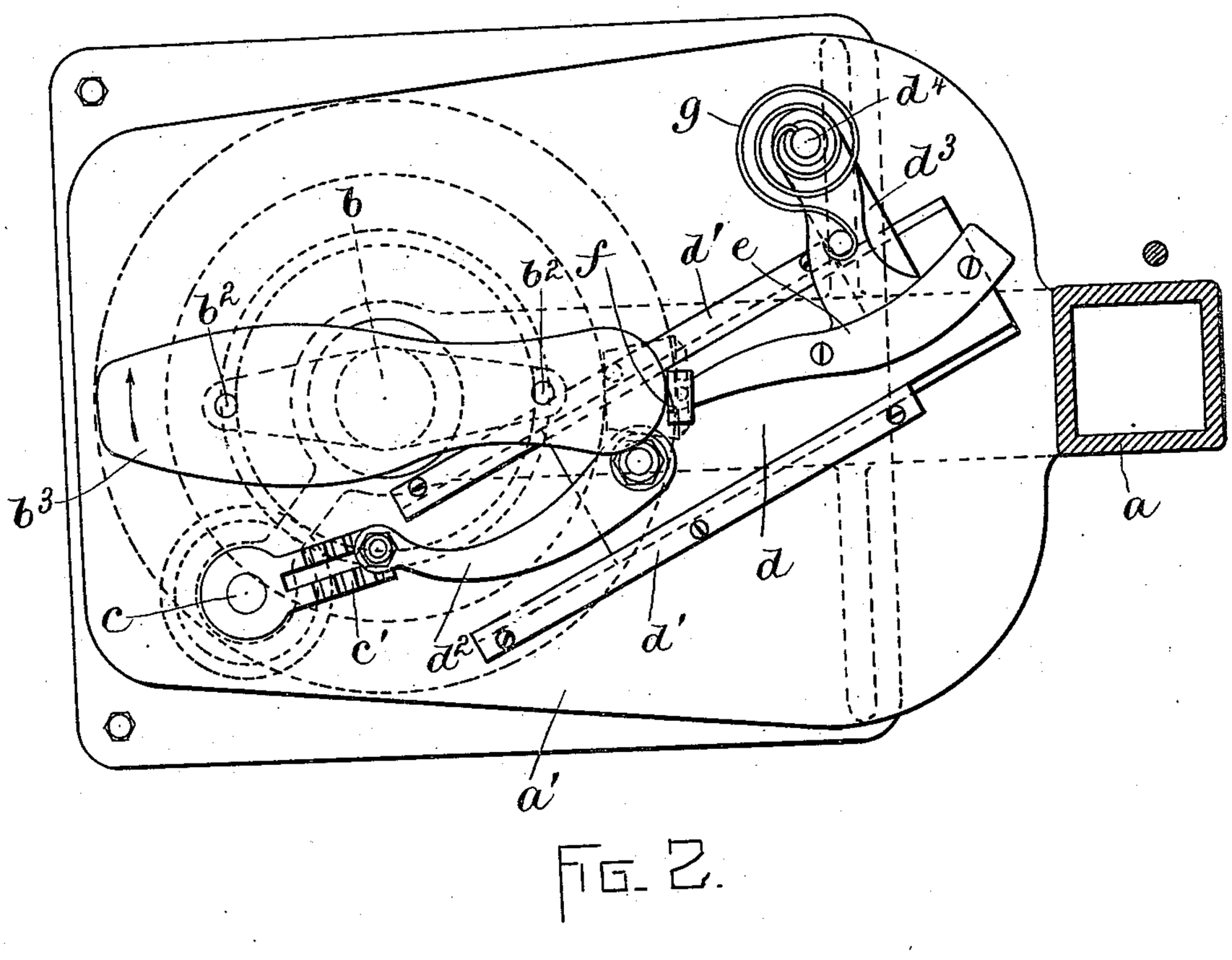

FIG. 2.

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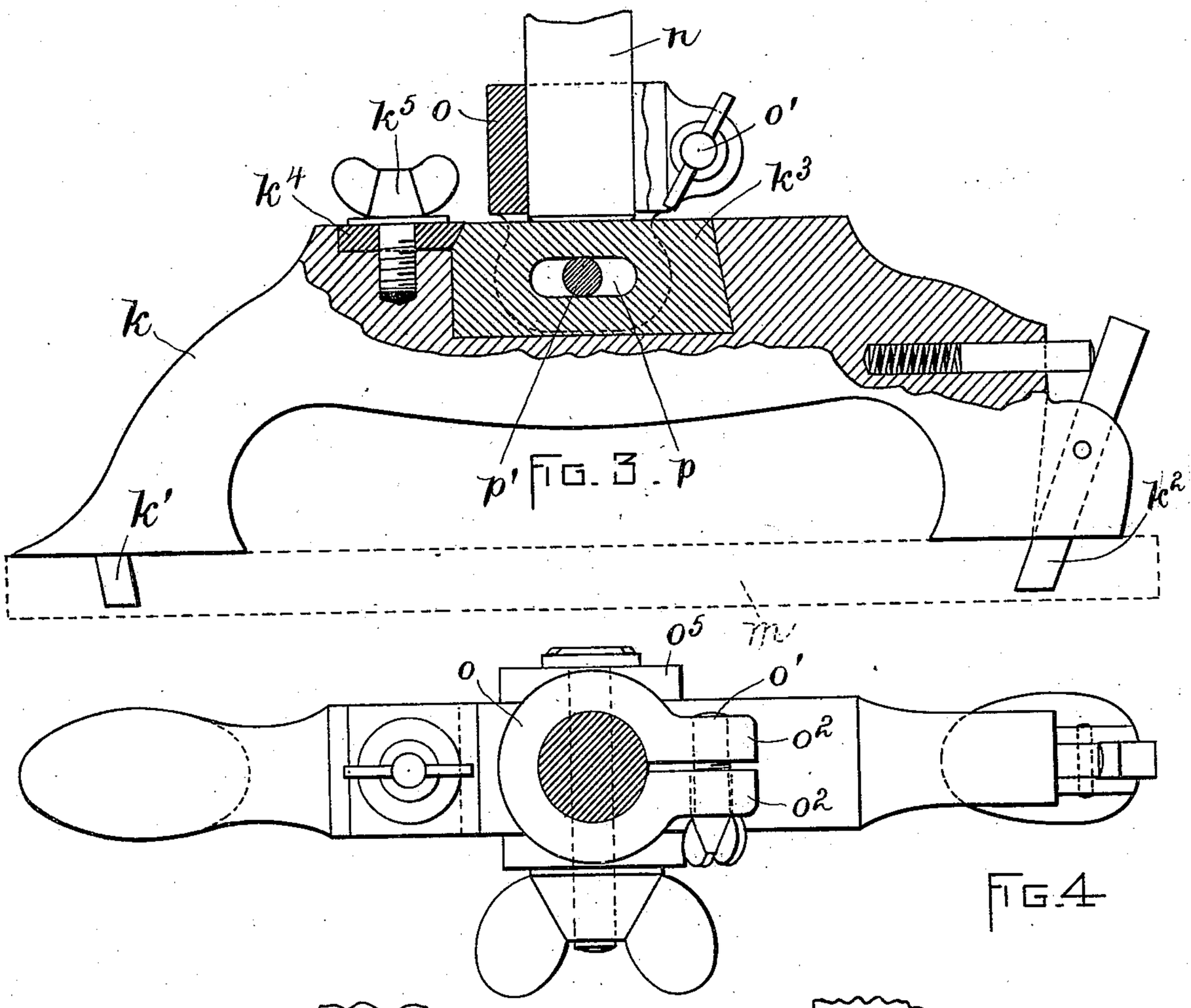

FIG. 3.

FIG. 4

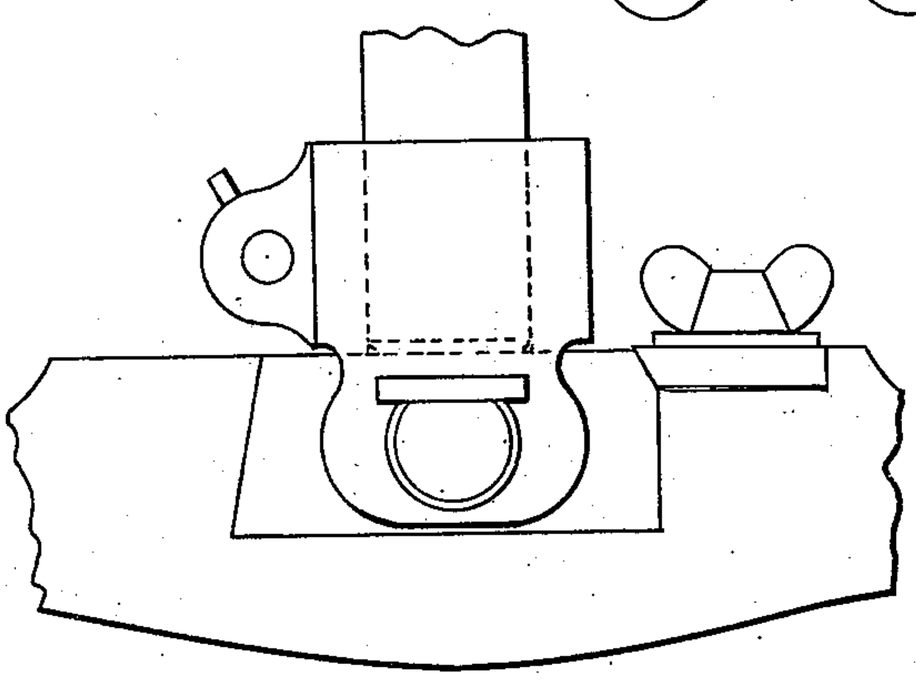

FIG. 5.

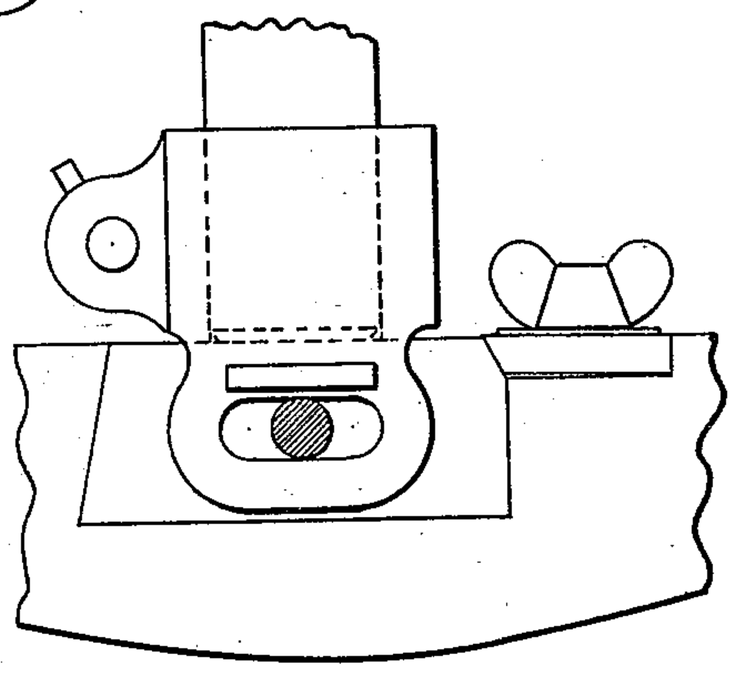

FIG. 6.

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(No Model.) 4 Sheets—Sheet 4.

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SOLE ROUNDING MACHINE.

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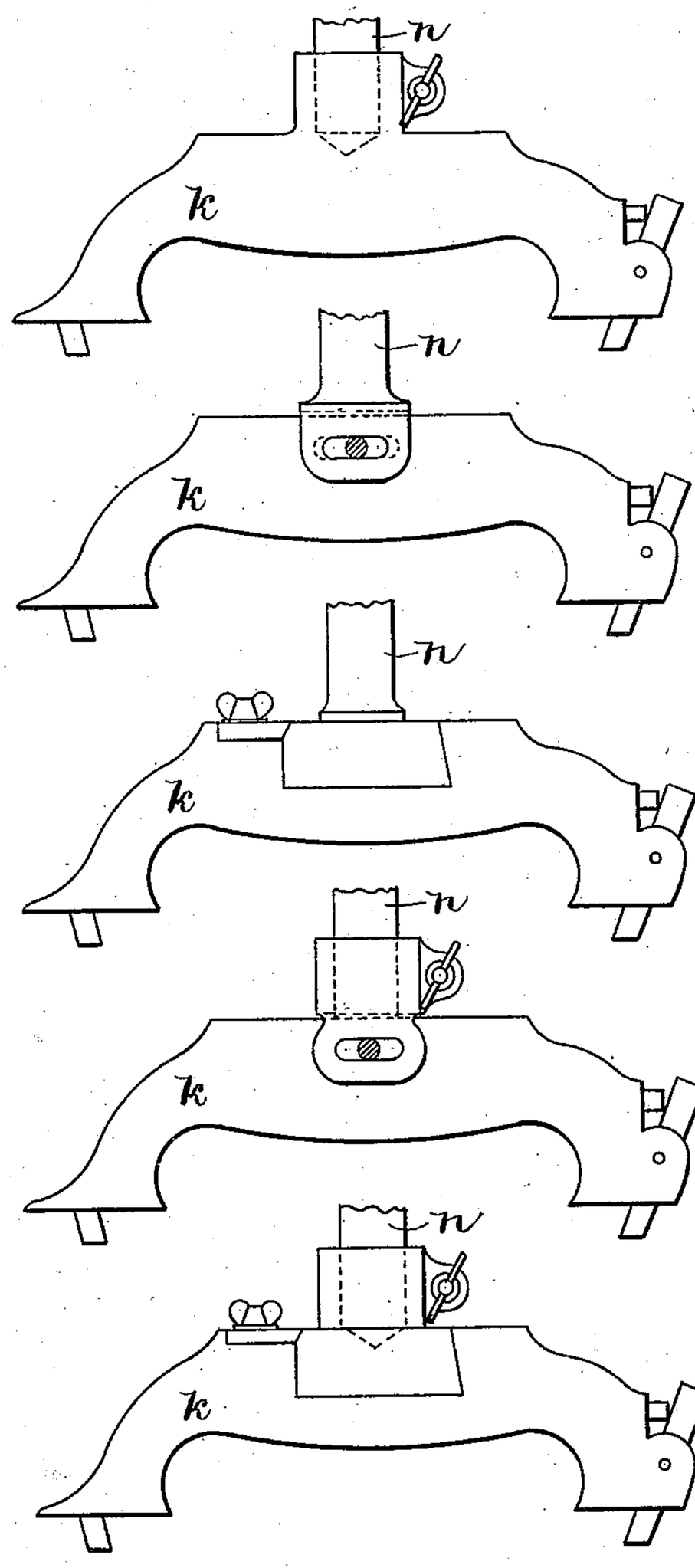

FIG. 7.

FIG. 8.

FIG. 9.

FIG. 10.

FIG. 11.

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UNITED STATES PATENT OFFICE.

GIDEON JULIAN, OF BOSTON, ASSIGNOR, BY MESNE ASSIGNMENTS, TO CHARLES F. BROWN, TRUSTEE, OF READING, MASSACHUSETTS.

SOLE-ROUNDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 547,955, dated October 15, 1895.

Application filed May 15, 1895. Serial No. 549,399. (No model.)

To all whom it may concern:

Be it known that I, GIDEON JULIAN, 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 machines which operate to cut pieces of sole-leather into a shape determined by a pattern with which a trimming-knife co-operates; and the invention consists in certain improvements in means for clamping or holding the leather upon the pattern, such improvements being recited in the appended claims.

The drawings which accompany and form part of this specification illustrate embodiments of the invention.

Figure 1 shows a side view of a sole-rounding machine embodying my invention. Fig. 2 shows a section on line 2 2 of Fig. 1 and a plan view of the parts below said line. Fig. 3 represents a side elevation, partly in section, showing the improved clamp-holder. Fig. 4 represents a top view of the construction shown in Fig. 3. Figs. 5 to 11, inclusive, represent modifications of the construction shown in Figs. 3 and 4.

In the drawings, *a* represents the supporting-frame, having a fixed table or horizontal portion *a'*, in which are formed bearings for two vertical shafts *b c*, said shafts projecting above the table *a'*.

b' represents a pattern-holder, which is affixed to the shaft *b* and is provided with means, such as studs b^2 b^2, for engaging and holding the pattern b^3, which supports the leather, the edge of said pattern constituting a track for the trimming-knife. The shaft *b* is rotated by suitable mechanism, such as a bevel-gear b^4, affixed to the lower end of the shaft, and a bevel-gear b^5, meshing with the gear b^4 and affixed to the driving-shaft b^6, the pattern being therefore continuously rotated while the machine is in operation. The shaft *c* is also continuously rotated, preferably by means of intermeshing gears b^7 c^7, affixed, respectively, to the shafts *b* and *c*.

c' represents a crank affixed to the shaft *c*, said crank being connected, as in my former patent, with the knife-carrier in such manner as to impart a positive back-and-forth motion to said carrier.

d represents the knife-carrier, which is supported by the fixed table *a'* and is adapted to have a back-and-forth motion thereon, the carrier being here shown as fitted to slide between parallel guides or gibs *d' d'*, affixed to said table and connected by a rod or link d^2 with the crank *c'*. The carrier *d* is shown as formed with a laterally-projecting ear d^3, having a vertical stud d^4, on which is pivoted an angular arm *e*, which I term the "knife-holder," the said arm being formed at its inner end to receive and hold the knife *f*. A coiled spring *g* is placed around the stud d^4 and fastened at one end thereto, while at its other end it bears against a pin projecting from the arm *e*, said spring continuously pressing the knife-holder against the guiding edge of the pattern. The independent rotation of the crank gives the knife-carrier back-and-forth movements while the pattern is revolving, said movements taking place when the knife-holder is on the sides of the pattern, each movement being reversed while the knife-holder is at an end portion of the pattern, so that the movement of the knife is accelerated while it is forming the side portions of the sole and retarded while it is forming the end portions. The abrupt curves at the heel and toe and the angle or angles at the toe of a pointed or square-toed sole are therefore formed while the knife is moving slowly, and better work is produced than would be the case if the knife were moved as rapidly as is desirable along the side portions.

In Figs. 3 to 11, inclusive, I show an improved yoke for holding the clamp that confines the leather upon the pattern, said yoke being adjustable, so that the position of the clamp may be varied as may be required by the size and shape of the pattern. The yoke *k* is provided at its ends with studs or pins *k'* k^2 for engagement with holes in the clamp *m*, the latter being shown by dotted lines in Fig. 3; and my improvements consist in the means hereinafter described, whereby the yoke and clamp may be adjusted laterally and longitudinally.

n represents a standard secured to a suitable part of the machine, such as the lever c^2, shown in my above-mentioned patent, said standard being vertically movable, so that it can raise and lower the yoke and clamp.

In Figs. 3, 4, 5, 6, 9, and 11 I show the yoke provided with a dovetail block k^3, which is fitted in a corresponding recess in the yoke and is detachably connected with the yoke, so that the latter may be adjusted crosswise or laterally on the block, a clamping-plate k^4, held by a screw k^5, being employed to secure the yoke to the block in any position to which the yoke may be laterally adjusted.

In Figs. 3, 4, 5, 6, and 11 I show the block k^3, provided with a socket o, which receives the lower end of the standard n and is adapted to turn thereon, so as to vary the longitudinal direction of the yoke and clamp by moving one end in one direction and the other end in the opposite direction, the yoke turning on the standard. The collar is detachably connected with the standard, so that it may be secured thereto and released therefrom, preferably by means of a screw o', engaged with ears o^2 o^2 on the collar, the latter being divided between the ears, so that it may be clamped upon the standard.

In Figs. 3, 6, 8, and 10 I show the yoke longitudinally adjustable on the standard by means of a slot p and a stud p' passing through said slot, the slot being preferably formed in the block k^3 and the stud affixed to ears o^5 on the socket o, as shown in Figs. 3 and 4, although the ears may be slotted instead of the block, as shown in Figs. 6, 8, and 10, and the stud passed through a closely-fitting hole either in the block or in the body of the yoke.

I claim—

1. In a sole-rounding machine, the clamp-holding devices comprising a vertically movable standard, and a yoke adjustably secured thereto and provided with means for engaging the clamp.

2. In a sole-rounding machine, the combination of the vertically movable standard, the clamp-holding yoke, and means for adjusting the yoke laterally upon the standard.

3. In a sole-rounding machine, the combination of the vertically movable standard, the clamp-holding yoke, and means for adjusting the yoke longitudinally upon the standard.

4. In a sole-rounding machine, the combination of a vertically movable standard, a socket adjustably connected to said standard, and a yoke adjustably connected with the socket and having clamp-engaging devices.

5. In a sole-rounding machine, the combination of the vertically movable standard, the socket adjustably connected to said standard, the block adjustably connected to the socket, and the yoke adjustably connected to the block and provided with clamp-engaging devices.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 11th day of May, A. D. 1895.

GIDEON JULIAN.

Witnesses:

C. F. BROWN,

A. D. HARRISON.