

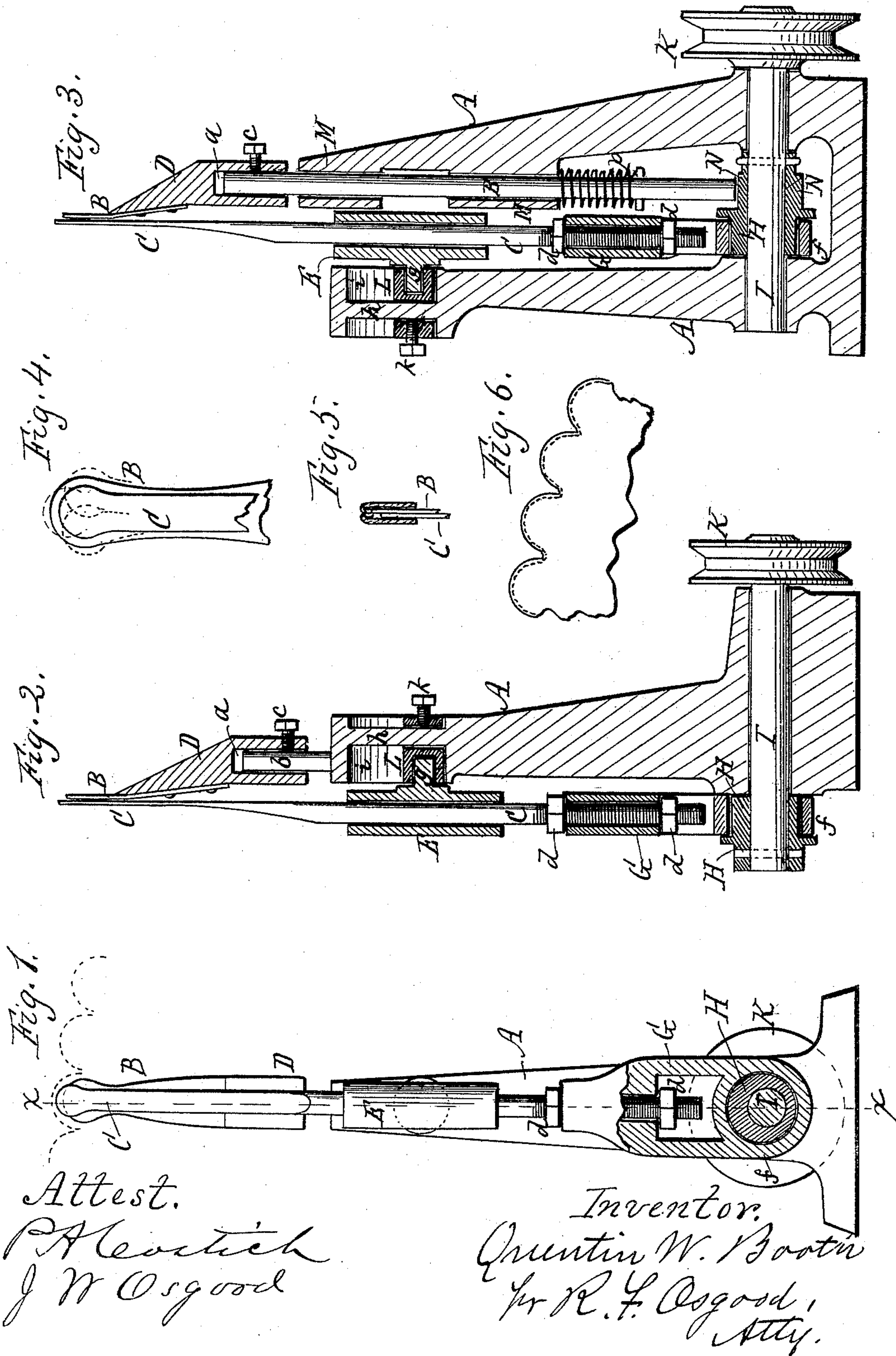
(No Model.)

2 Sheets—Sheet 1.

Q. W. BOOTH.
LEATHER TURNING MACHINE.

No. 495,776.

Patented Apr. 18, 1893.



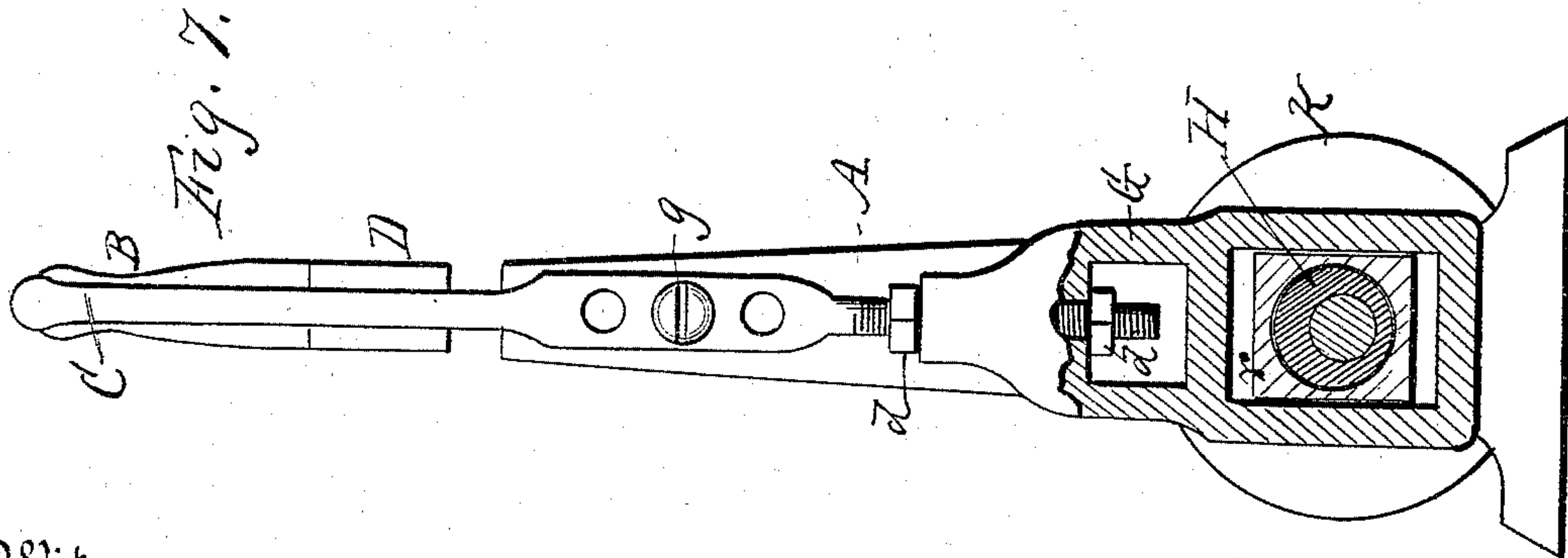
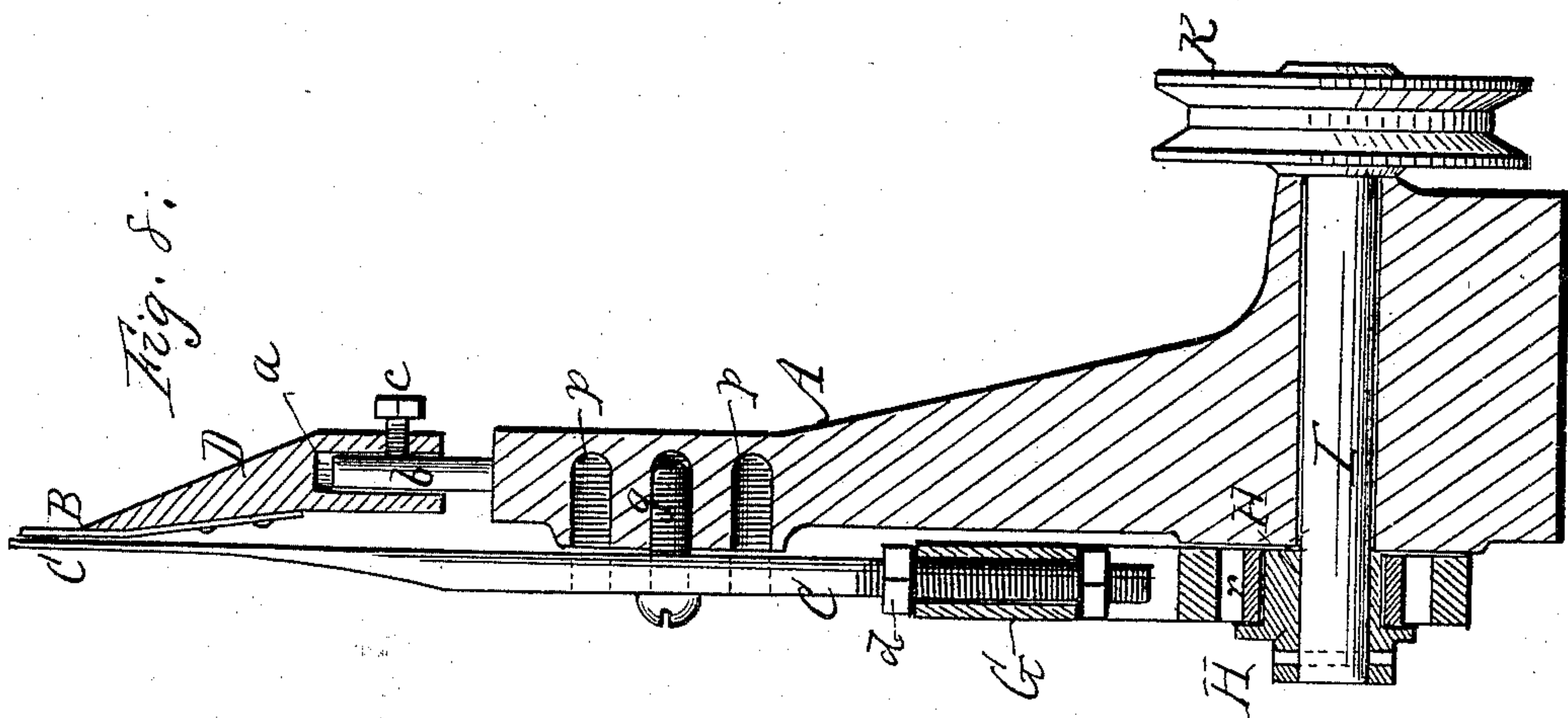
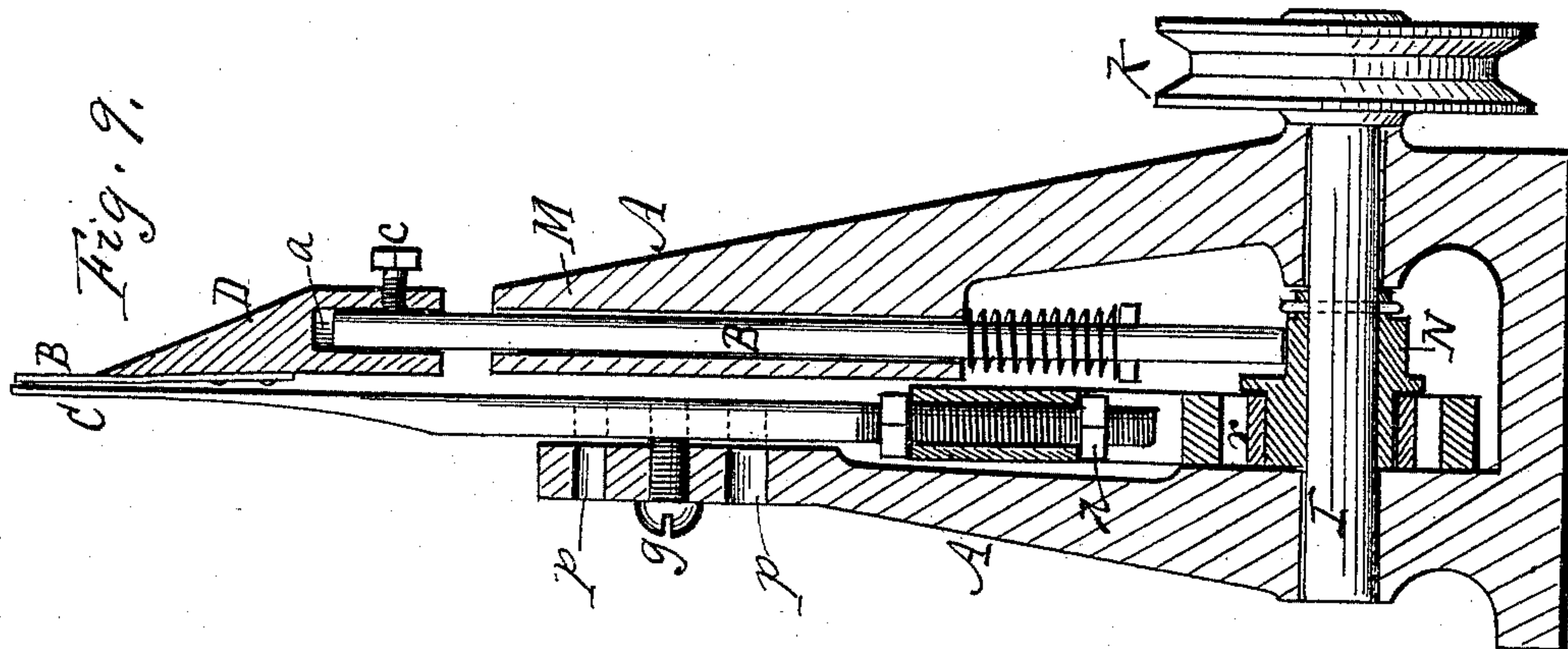
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Witnesses

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J. H. Osgood

Inventor
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UNITED STATES PATENT OFFICE.

QUENTIN W. BOOTH, OF ROCHESTER, NEW YORK.

LEATHER-TURNING MACHINE.

SPECIFICATION forming part of Letters Patent No. 495,776, dated April 18, 1893.

Application filed December 24, 1888. Serial No. 294,483. (No model.)

To all whom it may concern:

Be it known that I, QUENTIN W. BOOTH, of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Leather-Turning Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this specification.

My improvement relates to machines for turning seams and scallops of leather articles after they have been sewed, and is particularly adapted to turning the scallops and seams in shoe uppers.

The invention consists in the construction and arrangement of parts hereinafter described and claimed.

One of the principal features of the invention is a turning iron having a combined vertical and lateral motion. Another is the combination, with the working parts, of an eccentric to give a rapid rocking or lateral motion to a turning iron. Another is a varying of the amount of lateral motion of the turning iron by altering the relative position of the pivot about which it turns. These features are shown and described in different combinations and arrangements of parts.

In the drawings,—Figure 1 is a front elevation of the machine, partially in section. Fig. 2 is a vertical section of the same in line x, x , of Fig. 1. Fig. 3 is a view similar to Fig. 2, but showing a modification. Fig. 4 is a diagram showing the upper ends of the turning irons, and exhibiting in full and dotted lines the various positions said parts assume in the act of turning the leather. Fig. 5 is an edge elevation of Fig. 4. Fig. 6 is a view showing the scallops of a button-fly after they have been operated on by the machine. Figs. 7, 8 and 9 are views similar to Figs. 1, 2 and 3, but showing modifications.

The leather to be turned is first stitched wrong side out, and then is turned right side out by the machine.

The construction of the machine is as follows:

A is a standard or frame bolted or otherwise secured to a bench or table.

B and C are the two turning irons mounted in said frame, by which the work is performed. The upper ends of these irons are made thin so as to enter easily between the two thicknesses of leather, and are preferably rounded, as shown, so as to present a smooth surface to the leather and not injure the same during the operation.

As shown in Figs. 1 and 2 the iron B is stationary, being attached to a tip D, having a socket a at its lower end which fits over a pin b on the upper end of the frame and is secured by a set screw c . By this means said stationary iron can be adjusted higher or lower, as occasion may require. The other iron, C, passes loosely through a pivoted block E, and at its lower end passes through a yoke G and is secured fast thereto by means of nuts d, d , which screw onto its threaded end. The yoke G has a circular strap f that rests on an eccentric H, secured fast to a shaft I, driven by a pulley K, or by other suitable means. When the shaft is driven the turning iron C receives rapid motion. The block E has a pivot pin g that rests and turns in a slide L, which is adjustable up and down on a pin h resting in a slot i of the frame A, and is secured at any adjustment by a set screw k . The object of this adjustment is to vary the amount of lateral motion of the iron C, to adapt the machine to different sizes of scallops. It is obvious that as the slide L is lowered the lateral motion of the operating end of the turning iron is increased, and as the slide is raised the lateral motion is diminished. It will be seen that as the turning iron C is moved up and down in the block E, it will receive a laterally rocking motion by reason of said block turning on its pivot, and therefore the upper end of the turning iron will have a compound vertical and lateral motion, as indicated by the full and dotted lines in Fig. 4. It will be thrown up vertically to the extent of the throw of the eccentric by which it is operated, and will be thrown laterally on each side by the throw of said eccentric, thus producing a sort of circular movement of the top of the turning iron. The leather seamed together wrong side out as

usual, is placed over the stationary iron and drawn down by hand, which punches or pushes it right side out, and the rapidly moving turning iron C then works the leather out smoothly, proper pressure being applied to the leather by drawing it down by hand. The combined vertical and lateral movements of the operating iron are especially effective in turning and straightening out the scallops of the flies, as its edges come in contact with all of the edges of the scallop, at the sides as well as at the top, thereby pressing out and smoothing the seam. It is equally effective in operating on a straight seam, as the rapid motion of the iron driven by machinery brings contact to all parts of the seam, and enables rapid work to be done.

In some kinds of work it is desirable to give motion to but one iron and make the other stationary, as above described. In other kinds of work it is desirable to give motion to both irons.

Fig. 3 shows a modification in which both irons receive motion. In such case the iron B moves up and down in a stationary bearing M of the frame, and its lower end rests loosely on a second eccentric N, on shaft I, and it is pressed down by a spring *p*. The two cams or eccentrics are set side by side on the shaft I, and stand in reverse positions, that is, the eccentric faces stand in opposite directions so as to give an alternative movement to the upper ends of the irons. One iron receives a simply vertical movement, while the other receives the compound movement before described; but if desired both may be arranged to receive the compound movement.

I am aware that machines are known in which a lateral movement simply is produced by pivoting one iron to the other and giving it a rocking motion by means of a treadle operated by the foot. This simply works out the sides of the scallop while the top is pressed out only by the pressure on the top of the stationary iron. In this invention the top also is worked by reason of the vertical movement of the iron. The compound motion reaches all parts of the scallop, pressing out and stretching the leather and leaving the seam in a smooth and finished condition. The rapid motion given in this machine, by power, is also much more effective in producing finished work than the movement by treadle before in use.

Figs. 7, 8 and 9 show the iron *c* pivoted directly to the frame at *g*, said pivot *g* being changeable to different sockets *p, p*, to increase or diminish the throw of the top of the iron. In such case the eccentric H rests in a block *r*, which slides up and down in an opening in the yoke G, and allows the yoke to rock laterally without binding.

It is designed in this invention to run the

machine by power and give rapid motion to the turning iron, which is accomplished by the use of the eccentric herein described.

Having described my invention, I disclaim two turning irons one fixed and the other movable laterally around a pivot.

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

1. In a leather turning machine, two turning irons mounted in a suitable frame and lying face to face, one of said irons being a vertically and laterally moving iron, in combination with mechanism, substantially as set forth, for moving said iron vertically and laterally.

2. In a leather turning machine, a vertically moving turning iron, and a laterally moving turning iron, said irons being mounted in a suitable frame and lying face to face, in combination with mechanism, substantially as described, for imparting a vertical movement to one iron, and a lateral movement to the other.

3. In a leather turning machine, two turning irons mounted in a suitable frame and lying face to face, one of said irons being a laterally moving iron swinging on a pivot across the face of the other iron, in combination with said pivot, a power driven rotating shaft, and an eccentric on said shaft actuating said laterally moving iron, substantially as set forth.

4. In a leather turning machine, an adjustable pivot, in combination with two turning irons, mounted in a suitable frame and lying face to face, one of said irons being a laterally moving iron swinging on said adjustable pivot, substantially as set forth.

5. In a leather turning machine, an adjustable pivot block, in combination with two turning irons mounted in a suitable frame and lying face to face, one of said irons sliding in and swinging with said pivot block, and mechanism for imparting movement to said sliding and swinging iron, substantially as set forth.

6. In a leather turning machine, a vertically moving turning iron, and a vertically and laterally moving turning iron, said irons being mounted in a suitable frame, and lying face to face, in combination with a rotating shaft and two reversely placed eccentrics on said shaft co-operating with said turning irons respectively, substantially as set forth.

7. In a leather turning machine, a suitable frame, a slide adjustable on said frame, and a block pivoted in said slide, in combination with two turning irons mounted on said frame and lying face to face, one of said irons sliding freely through said pivoted block and swinging therewith, substantially as set forth.

8. In a leather turning machine, the combination of two turning irons mounted on a

suitable frame and lying face to face, a spindle at the top of the frame, and an adjustable tip secured to the spindle, and carrying one of said turning irons, substantially as set forth.

5 9. In a turning machine, the combination with a supporting frame, of a turning iron having a reciprocatory movement in the direction of its length, and a lateral vibratory

movement in the plane of the iron, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

QUENTIN W. BOOTH.

Witnesses:

R. F. OSGOOD,
P. A. COSTICH.