

(No Model.)

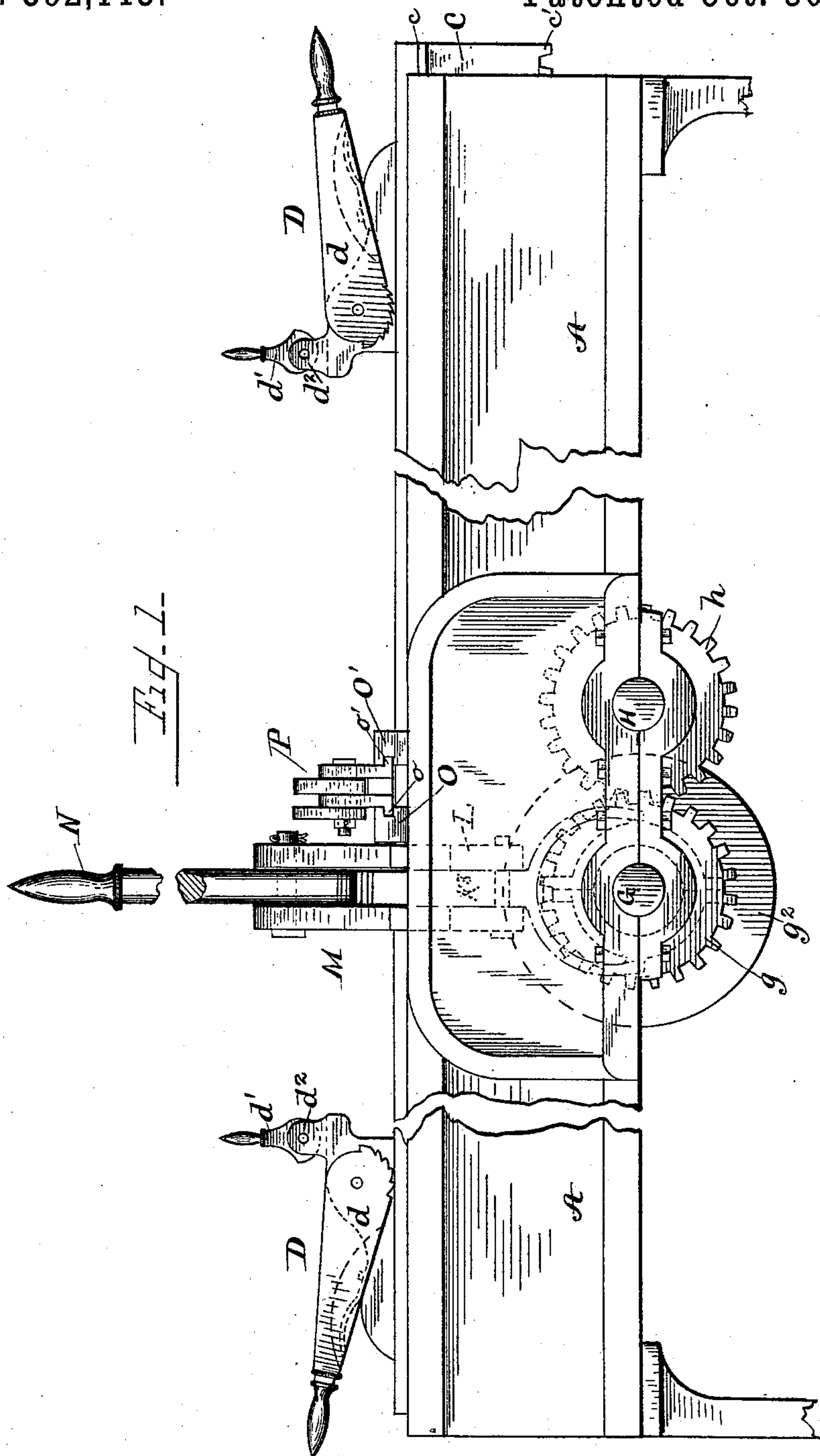
3 Sheets—Sheet 1.

W. FOGLESONG.

LEATHER ROUNDING MACHINE.

No. 392,113.

Patented Oct. 30, 1888.



WITNESSES

G. A. Tauberschmidt,
L. B. Whitaker.

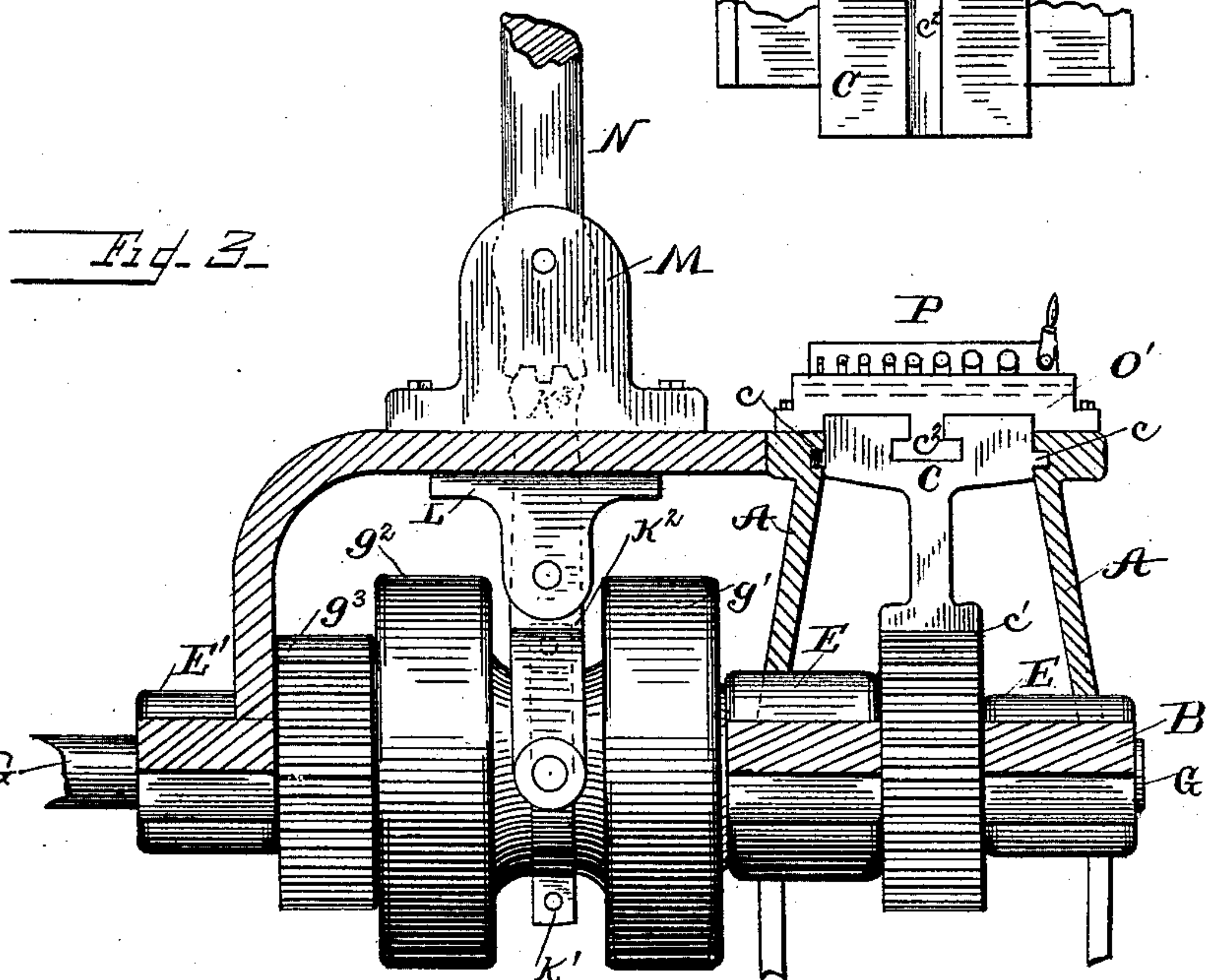
INVENTOR

Washington Foglesong.
By his attys.
Whitaker & Brewster.

3 Sheets—Sheet 2.

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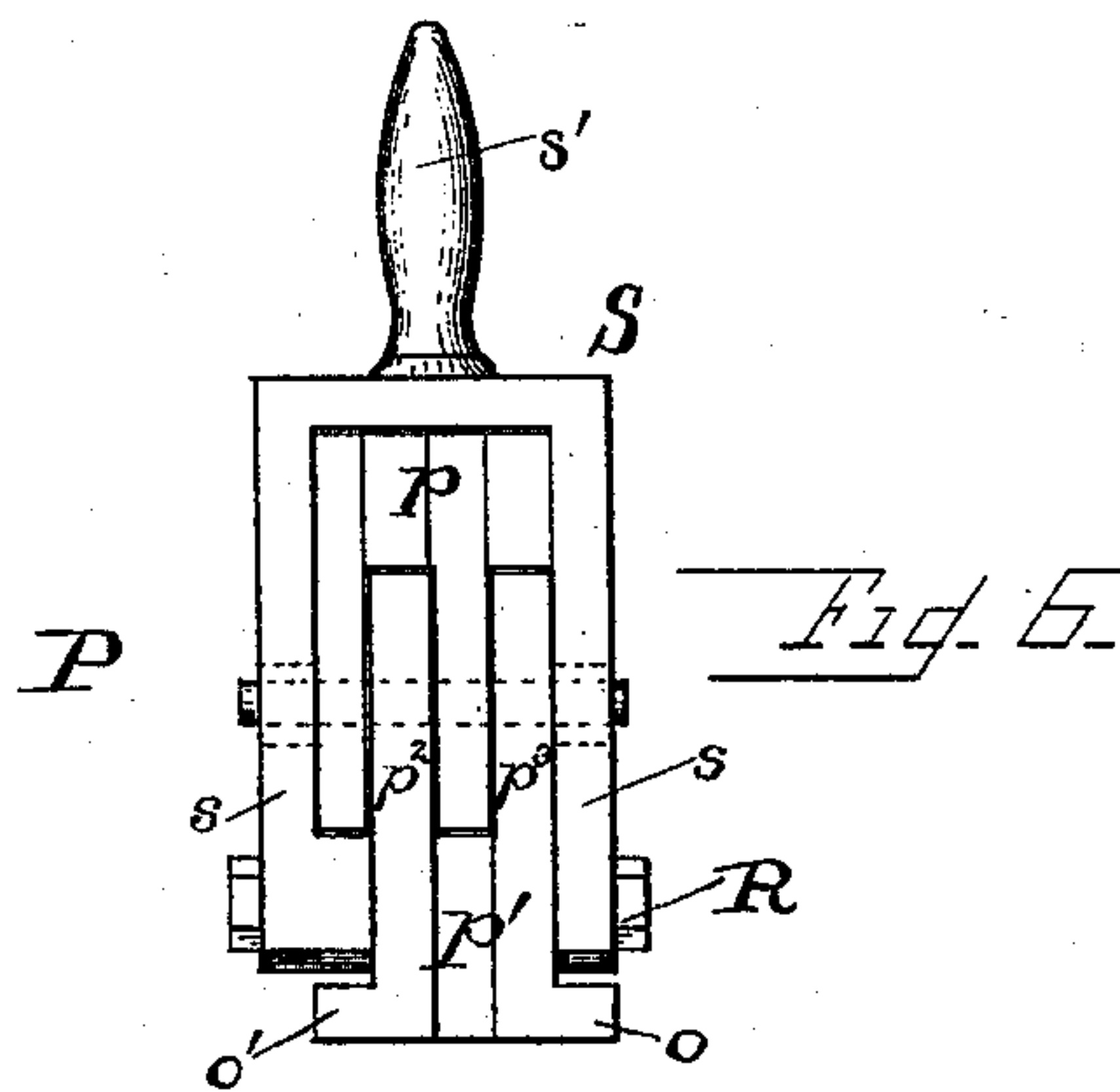
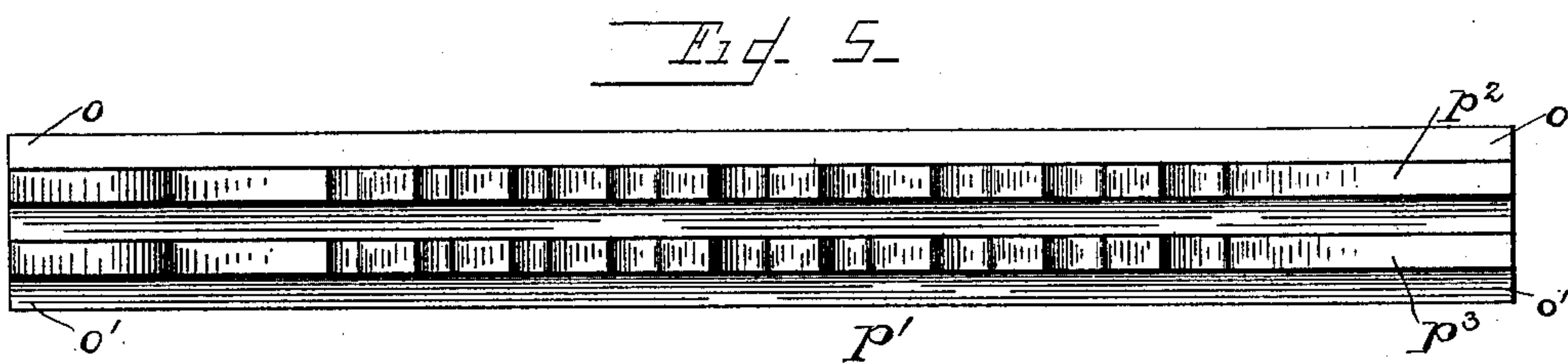
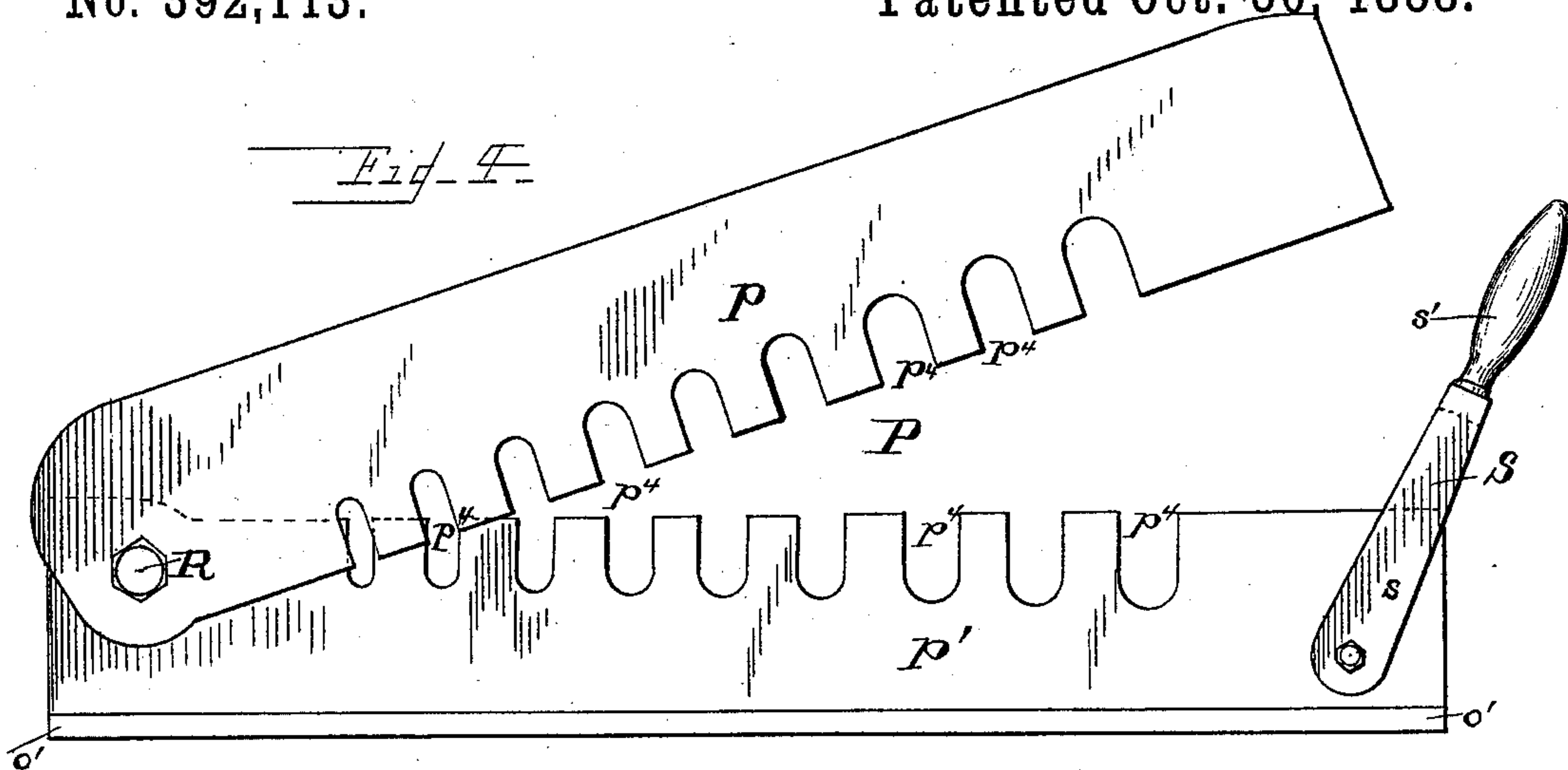
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UNITED STATES PATENT OFFICE.

WASHINGTON FOGLESONG, OF DAYTON, OHIO.

LEATHER-ROUNDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 392,113, dated October 30, 1888.

Application filed March 6, 1888. Serial No. 266,369. (No model.)

To all whom it may concern:

Be it known that I, WASHINGTON FOGLESONG, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Leather-Rounding Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to harness-machines; and its object is to provide an improved machine for curving or rounding reins and other leather articles.

The peculiar features of construction and combination which constitute my invention are illustrated in the accompanying drawings, and said invention is fully described in the following specification and claims.

In the drawings, Figure 1 represents a side view of my improved machine. Fig. 2 is a plan view of the mechanism for transmitting motion to the table of the machine with parts in section. Fig. 3 is an elevation of the same with one of the shafts removed, and showing the top plate of the machine in section. Fig. 4 is a side view of my leather-rounding device. Fig. 5 is a bottom view of one of the jaws of the same, and Fig. 6 is an end elevation showing the jaws closed.

The main frame of my improved machine consists of the side pieces, A A, joined together at their lower edges by the base-plate B, which is mounted upon suitable supporting-legs. The upper portions of the side pieces, A A, are provided with grooves along their inner edges to receive the flanges *c* on either side of the movable table C. This table is provided with a rack, *c'*, on its lower side, which engages with the mechanism for imparting motion thereto, as will be hereinafter more fully described. In the upper face of the movable table is a groove, *c''*, having the form in cross section of an inverted T, which groove receives similarly-shaped projections from the base of the leather-holding blocks D D. These blocks are provided with the levers *d d'*, which are pivoted to the sides of the blocks. The short end of each of these levers is semicircular in shape and is provided upon its lower side with ratchet-

teeth which engage the upper face of the table C by frictional contact. The pivot which holds the lever to the side of the block is located eccentrically to the curve of the ratchet-teeth, and upon pressing the lever downward the ratchet-teeth are disengaged from the face of the table, and the block may be moved to any desired position along the groove *c''*. The long arm of the lever *d* is recessed on its inner side, and the upper edge of said recess engages a spring attached to some part of the block, which tends to keep the lever raised and its ratchet-teeth in engagement with the face of the table. The block D is also provided with the leather-holding clamp *d'*, which consists of a cam-segment mounted in ears or projections *d''* formed upon the upper portion of the block, the cam-segment being provided with a handle. When the leather to be operated upon is placed in said holding-clamp and the handle moved until the surface of the segment bears against the leather, any further strain to which the leather may be subjected will only serve to tighten the grip of the segment upon the leather. This cam-segment may also be provided with transverse corrugations, if found desirable, to give it a still firmer hold upon the leather.

The base-plate B is provided with half-bearings E E' and F F', and corresponding half-bearings are bolted upon the lower face of the base-plate to form bearings for the shafts G and H, respectively, and these shafts have also bearings E' F' in another portion of the frame. In the central portion of the base-plate B is a slot, J, which permits of two cog-wheels, *g* and *h*, being mounted upon the shafts G and H. These cog-wheels are of such diameter that they both engage the teeth of the rack *c'* on the lower side of the movable table C.

The gear-wheel is loose upon its shaft G, and is provided with a sleeve, which connects it with the hollow cone *g'* of a friction-clutch. The clutch K is provided with two cones, *k*, which are joined together by a neck which revolves with the shaft G, but movable longitudinally thereon. One of said cones is capable of engaging with the hollow cone *g'* and the other with a similar hollow cone, *g''*, which is loose on the shaft and is joined to the gear-

wheel g^2 , also loose on the shaft. The neck of the clutch is provided with a collar, K^1 , loose thereon, to which is pivoted the yoke K^2 . The yoke K^2 is provided with a lever, K^3 , which is pivoted to the bracket L , which depends from the under side of the main frame, and the upper end of the lever is provided with a number of gear-teeth.

Above the frame of the machine is a bracket, M , in which is mounted the hand-lever N , the lower end of which is provided with gear-teeth to engage with the teeth on lever K^3 , thus forming a toggle-lever, by means of which the clutch K may be moved longitudinally upon its shaft and made to engage with either of the hollow cones g^1 g^2 , as may be desired.

The gear-wheel h is mounted fast upon its shaft, and the shaft H is also provided with a gear-wheel, h' , which meshes with gear-wheel g^3 on shaft G . Power is applied to shaft G by means of suitable band-pulleys, and by moving hand-lever N in such direction as to cause the cone k of the clutch to engage the hollow cone g^1 motion will be imparted to the hollow cone g^1 and to its sleeve and gear-wheel g , which will move the table C in the direction toward which the shaft is turning. The gear-wheel g^3 being loosely mounted upon its shaft, gear-wheels h and h' and g^3 will turn and permit the rack to be moved by gear-wheel g . When the motion of the table is desired to be reversed, a reverse movement of the lever N will throw the clutch into engagement with the hollow cone g^2 , which, being fast with gear g^3 , will cause the same to turn with the shaft G . The gear g^3 , being in engagement with the gear h' , will cause the latter to rotate with its shaft H in a reverse direction from that of shaft G , and the gear-wheel h on the other end of shaft H will move the table in a reverse direction from that imparted to it by gear g . The said gear, being mounted loosely on shaft G , will simply be rotated by the rack passing over it.

Upon some portion of the machine, preferably about midway between the ends of the side pieces, $A A$, of the frame, I provide the upper face of said side pieces with the guides $O O'$, which are provided on their inner faces with longitudinal grooves. In these guides is mounted the leather-rounding device P which I employ with my machine, the base of which is provided with the flanges $o o'$ to engage the grooves of the guides. This device consists of the two jaws $p p'$, which are hinged together by a bolt or screw at R . One of these jaws is composed of two parallel plates having a space between them equal in width to one of the plates, and the other jaw may consist of one plate adjusted so as to fall in and lie in the space between said parallel plates; or the other jaw may consist of two parallel plates, one of said plates being capable of lying between the parallel plates of the opposing jaw. The plates are provided with the recesses p^1 , which have semicircular bottom portions, and the plates are so adjusted that when they are brought to-

gether the semicircular portions of both sets of recesses will form continuous circular openings extending transversely through the plates. These recesses are of different widths, so that the circular openings decrease regularly in size from one end of the jaws to the other.

In order to secure the free ends of the jaws firmly together, I prefer to use a hasp, S , which consists of two legs or projections, s , the ends of which are bolted or otherwise secured to the lower jaw, and a cross-piece which engages an inclined portion, s^2 , of the jaw p , thus securing a firm connection. This hasp is provided with an ordinary handle, s' .

I may, if preferred, provide the jaws at each end with toggle-levers, whereby they may be moved toward and from each other, and in this case I should provide hasps at both ends to secure them firmly together.

The operation of my device is as follows: The table C is moved lengthwise until one of the blocks D is adjacent to the rounding device P and one end of the leather or other strip is placed in engagement with the clamp d' . The upper jaw, p' , of the rounding device is then raised and the leather or other material properly disposed in one of the larger recesses, p^1 , and the jaw dropped upon it and secured by the hasp S . The other end of the leather or other material is then placed in the clamp d' of the block D , the lever d depressed, and the block moved in a direction away from the rounding device until the strip to be operated upon is drawn tight, when the lever d is released and will be raised by the spring, causing the teeth to engage the upper face of the table. The lever N is then moved in a direction to cause the table to move longitudinally, as before described, carrying the leather strip and drawing it through the circular opening in the rounding device. When the rack has moved far enough to allow the whole length of the strip to pass through the said opening, the lever N is moved in the opposite direction and the direction of the rack and table reversed. If the rounded leather strip is not small enough, it may be passed into the next smaller recess of the rounding device by raising the jaw p and moving the device forward or backward in its supporting-guides, and the operation repeated until the required size of roll is secured.

I do not desire to be limited to the exact constructions herein described, as many variations therefrom may be made without departing from the spirit of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination herein described, with the table of a leather-machine, of a movable leather-holding device consisting of a block mounted in guides in said table, and provided with a leather-clamp, and an attaching-lever provided with a ratchet-segment.

2. A leather-rounding device consisting of jaws movable toward and from each other,

- the inner faces of said jaws being provided with recesses having semicircular bottom portions, said recesses being of greater depth than the radius of said semicircular portions,
- 5 one of said jaws being composed of parallel bars and the other consisting of one or more such bars, one of said bars passing between the two bars of the opposing jaw, substantially as described.
- 10 3. A leather-rounding device consisting of jaws movable toward and from each other, the inner faces of said jaws being provided with recesses having semicircular bottom portions, said recesses being of greater depth
- 15 than the radius of the circular portions, each of said jaws being composed of two parallel bars, one of said bars passing between the bars of the opposing jaw, substantially as described.
- 20 4. A leather rounding device consisting of bars hinged together at one end forming pivotal jaws, the inner faces of said jaws being provided with recesses having semicircular bottom portions, said recesses being of greater
- 25 depth than the radius of the circular portions, one of the bars being inclined at its outer end and the other provided with the hasp S, substantially as described.

5. The combination, with the main frame, of the movable table mounted therein, adjustable leather-clamping devices, substantially as described, at each end of said table, and a leather-rounding device connected to the main frame intermediate of the leather-clamping devices.

6. In a leather-rounding machine, the combination, with the main frame of the movable table, provided with a rack mounted therein, of a shaft provided with two gears rigidly mounted thereon, one of said gears engaging said rack, a power-shaft, a gear-wheel loosely mounted on said shaft and engaging said rack, a gear-wheel loosely mounted on said shaft and engaging one of the fixed gears of the other shaft, hollow cones connected with said loose gears, and a sliding double cone rotating with said power-shaft and adapted to engage with each of the hollow cones, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WASHINGTON FOGLESONG.

Witnesses:

BENJAMIN HARTER,
SUMNER T. SMITH.