

No. 801,003.

PATENTED OCT. 3, 1905.

W. GORDON.
BUFFING OR POLISHING ROLL.
APPLICATION FILED DEC. 21, 1903.

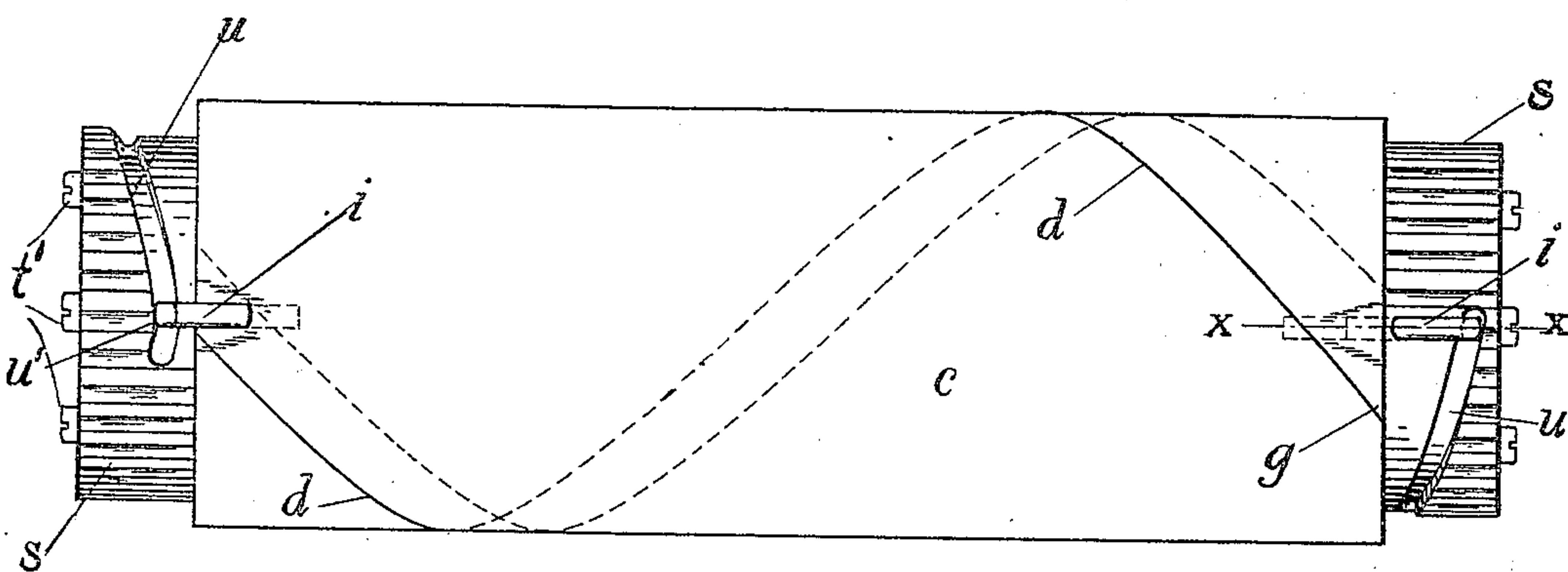


FIG. 1.

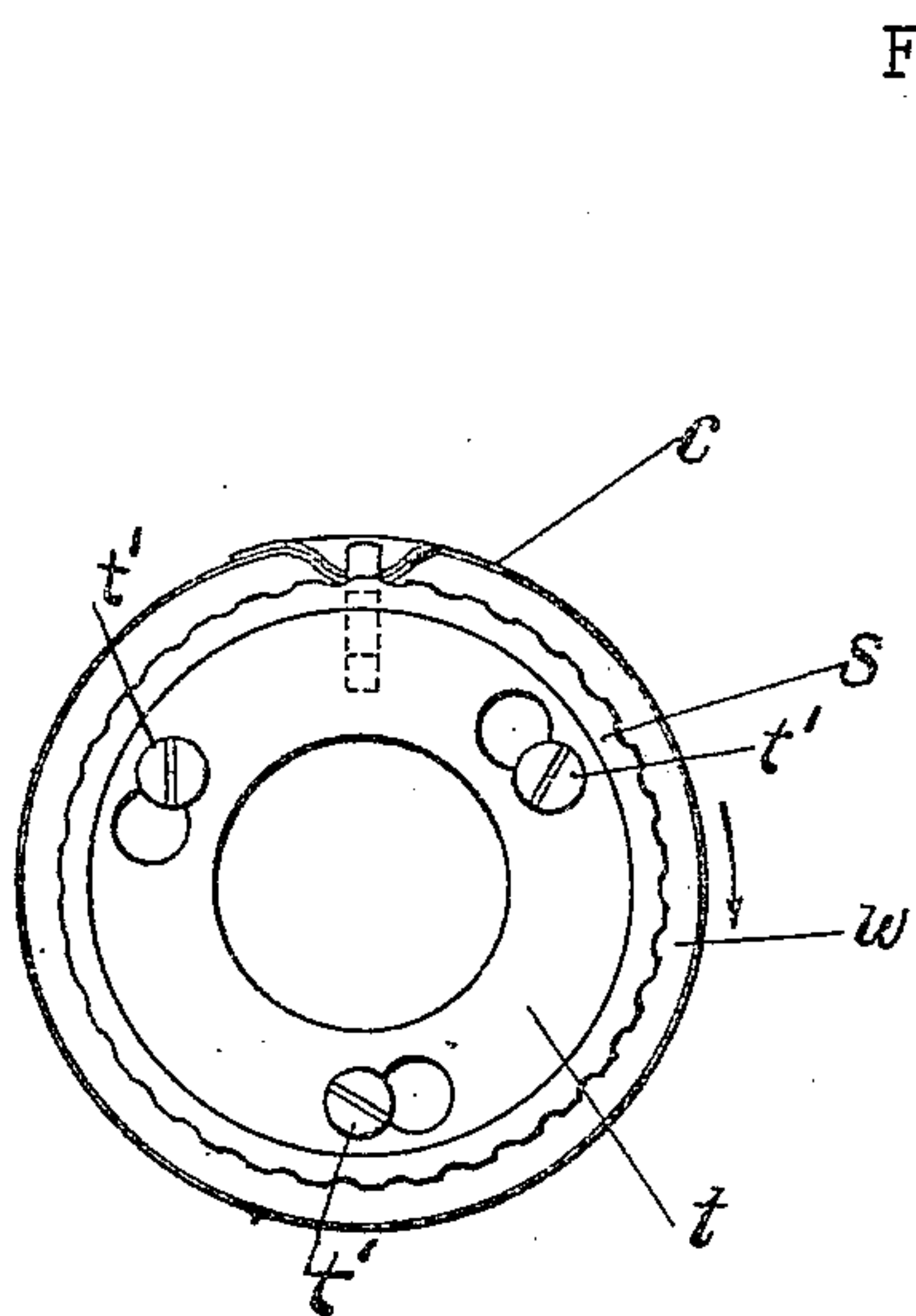


FIG. 2.

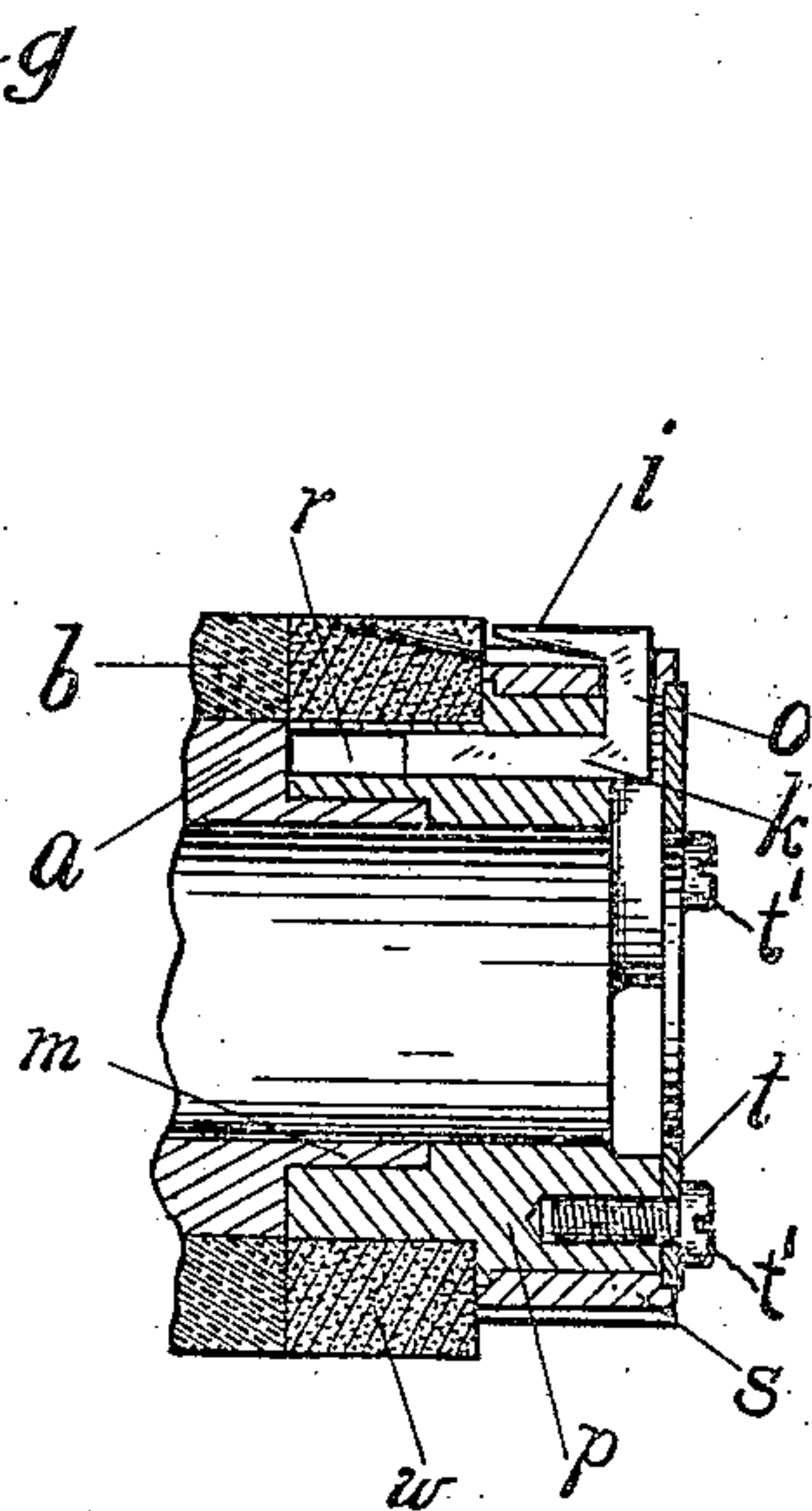


FIG. 4.

FIG. 3.

WITNESSES.

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WILLIAM GORDON, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, AND BOSTON, MASSACHUSETTS, A CORPORATION OF NEW JERSEY.

BUFFING OR POLISHING ROLL.

No. 801,003.

Specification of Letters Patent.

Patented Oct. 3, 1905.

Application filed December 21, 1903. Serial No. 186,008.

To all whom it may concern:

Be it known that I, WILLIAM GORDON, a citizen of the United States, residing at Boston, in the county of Suffolk and Commonwealth of Massachusetts, have invented certain Improvements in Buffing or Polishing Rolls, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to machines or devices for finishing leather, and particularly to rolls of the class used in such machines for buffing or finishing the bottoms of boot and shoe soles.

A buffing-roll of the kind referred to usually comprises a hub provided with a casing, which will afford a yielding support for a cover of sandpaper, emery-cloth, or silesia. The cover is detachably secured to the roll by clamps, so that it may be removed when it becomes worn or if it is desired to substitute for it a cover of a different material, a cover of sandpaper or emery-cloth generally being used for abrading and a cover of silesia for polishing.

The object of the invention is to provide improved means for detachably securing a cover to a roll.

The embodiment of the invention herein shown comprises a buffing-roll provided with clamps arranged for movement into and out of operative position in a direction longitudinally of the roll, means for actuating the clamps, and means for locking the clamps in operative position.

The invention is illustrated in the accompanying sheet of drawings, in which—

Figure 1 represents a plan view of a buffing-roll, to which a cover of some abrading or polishing material is secured. Fig. 2 is an end view of the same looking from the right in Fig. 1. Fig. 3 is a plan view of the cover detached from the roll; and Fig. 4 is a longitudinal sectional view of one end of the roll, taken on the line *x x* of Fig. 1.

Referring to the drawings, *a* designates the hub or shaft of a buffing-roll provided with a casing *b*, which may be formed of rubber, felt, or some similar material that will afford a yielding support for a cover *c*. Projecting longitudinally from the end of the hub or

shaft is a flange *m*, to which is rigidly fastened an annular sleeve *p*. The sleeve is provided with a guideway *r*, shown as extending parallel to the axis of the roll, and in this guideway a clamp is adapted to be moved into and out of operative position for engaging the cover to secure it to the roll. The clamp comprises a shank *k*, which moves in the guideway *r*, a clamping-finger *i* for engaging the cover, and a vertical shank *o*, which connects the shank *k* with the clamping-finger, the vertical shank *o* projecting through a cam-shaped slot *u* in a collar *s*. The collar *s* is shown as corrugated on its outer surface and is rotatably mounted on the sleeve *p*, said collar being held on the sleeve by a retaining-plate *t*, secured to the sleeve by screws *t'*.

The edge of the slot *u* in the collar being in engagement with the shank *o* of the clamp will cause the clamp to be moved longitudinally of the roll as the collar is rotated. For moving the clamp inwardly into operative position the workman turns the collar *s* in the direction of the arrow in Fig. 2, the clamp arriving at its innermost position when the inner end of the slot engages the shank *o*, and for moving the clamp into inoperative position the collar is rotated in the opposite direction. The slot near its inner end is deflected to one side, thereby forming a cam-surface *u'* in the edge of the slot, as shown at the left-hand end of Fig. 1, so that when the clamp is in its innermost position the inner end of the slot will engage one side of the shank *o* and the other side of the shank will be engaged by the cam part *u'*, which has been forced past the shank in the rotation of the collar. Consequently there is no liability of the collar being accidentally rotated in the opposite direction, so as to move the clamp outwardly, as the cam part *u'* engages the shank which is seated in the deflected end of the slot, and as the collar is held against accidental movement the clamp will be locked in operative position.

An annular pad *w*, of compressible material, such as felt, surrounds the inner end of the sleeve *p* adjacent the end of the casing *b* and forms a yielding bearing-surface into which the clamping-finger *i* may embed itself and the portion of the cover engaged by it, the finger *i* being beveled on its lower face, so that the pressure on the cover will increase gradually as the clamp is moved inwardly.

Although I have described but one clamp and actuating mechanism therefor, it will be understood that in practice a clamp is provided for either end of the roll, as shown in 5 Fig. 1.

The preferred form of cover consists of a sheet of substantially rhomboidal shape, which is wound helically upon the roll with its edge *d* overlapping its edge *e*, the ends of the cover 10 being held in place by the clamping-fingers at either end of the roll; but I do not wish to be understood as limiting myself to this form of cover, as covers of tubular form or of various other forms may be used.

15 One of the principal advantages secured by my invention is that when the clamping-fingers are in an inoperative position they afford unobstructed access to the cover, facilitating removal of the old cover and appli- 20 cation of a new one. Among the other advantages of the invention is that the clamping-fingers are kept always within the periphery of the roll, whether the fingers are in an operative or in an inoperative position.

25 The present embodiment of my invention is the preferred form; but it may be modified in various ways without departing from the spirit of my invention.

Having described my invention, what I 30 claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a buffing-roll, a hub, in combination with clamps arranged to bear on an acting face of the hub and adapted for movement 35 longitudinally of the hub to secure in position a cover carried by the roll.

2. In a buffing-roll, a hub having an acting peripheral face adapted to support a detachable cover, in combination with clamps 40 arranged for movement longitudinally of the hub along said face and within the periphery of the roll.

3. In a device of the class described, a hub,

clamps carried by said hub, and means for moving the clamps longitudinally of the hub 45 along its peripheral face.

4. In a buffing-roll, a hub, clamps carried by said hub, means for moving the clamps longitudinally of the hub to secure in posi- 50 tion a cover carried by the roll, and means for locking said clamps in operative position.

5. In a buffing-roll, a hub, a clamp carried by said hub and movable thereon, and a collar rotatably mounted on said hub, and adapted to reciprocate the clamp longitudi- 55 nally thereof.

6. In a buffing-roll, a hub provided with a guideway, a clamp movably mounted in said guideway, and a collar rotatably mounted on the hub, said collar being provided with an 60 inclined surface which is adapted to engage and reciprocate the clamp longitudinally of the hub.

7. In a buffing-roll, a hub, a clamp mounted thereon, and a collar rotatably mounted 65 on the hub for moving the clamp longitudinally of the roll, said collar being provided with a portion for preventing accidental rotation of the collar, whereby the clamp is locked in operative position. 70

8. In a device of the class described, a hub for supporting a cover of flexible material, a clamp arranged to bear on an acting face of said hub to hold the cover in position on said face, and means permitting the acting part of 75 said clamp to be moved to one side of the position given the cover on said hub to permit application and removal of the cover.

In testimony whereof I have signed my name to this specification in the presence of two sub- 80 scribing witnesses.

WILLIAM GORDON.

Witnesses:

WELLS L. CHURCH,
ARTHUR L. RUSSELL.