

C. W. ROBERTS.
 BEADING TOOL FOR BOOTS AND SHOES.
 APPLICATION FILED DEC. 7, 1908.

925,387.

Patented June 15, 1909.

Fig. 1.

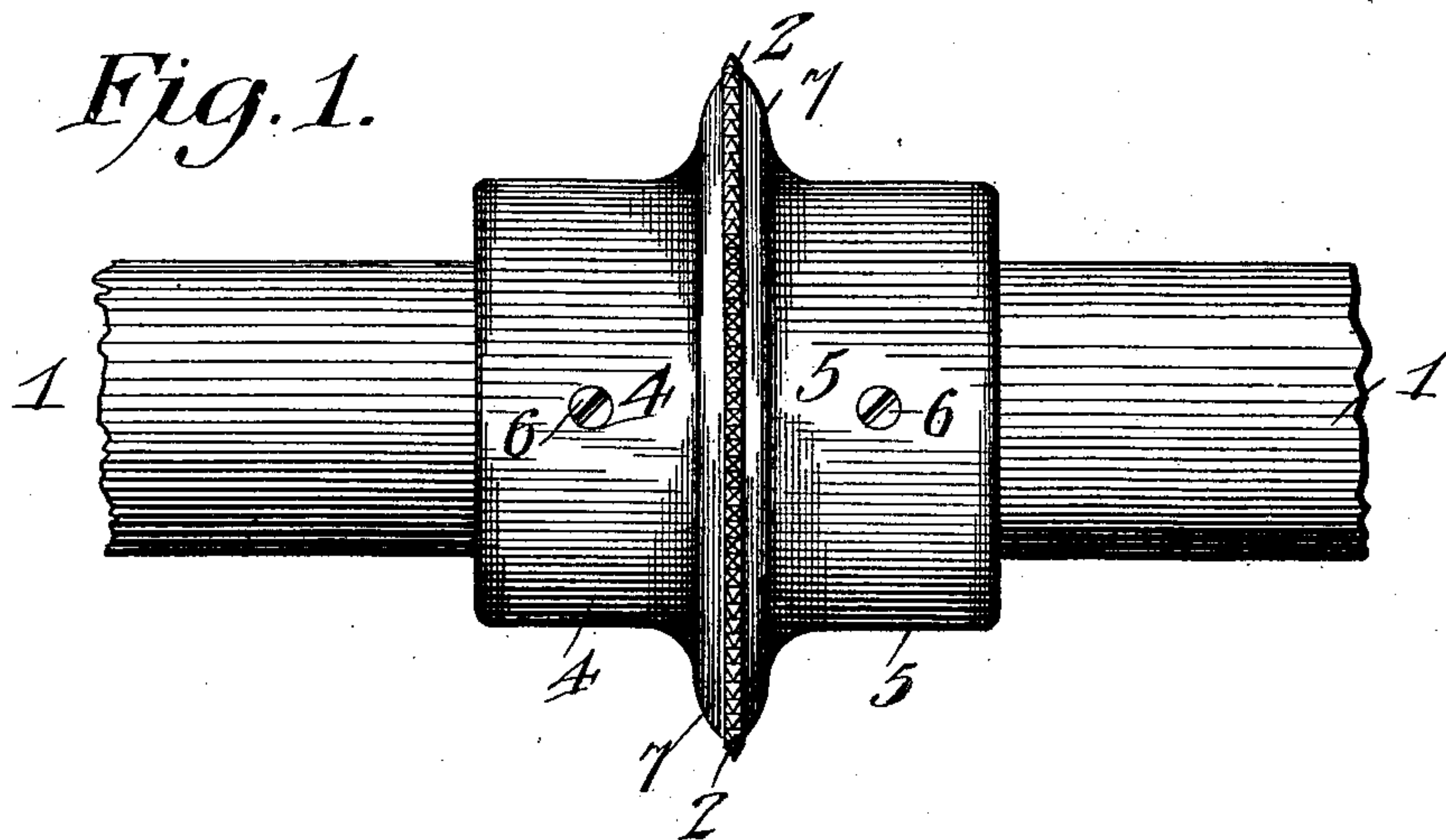


Fig. 2.

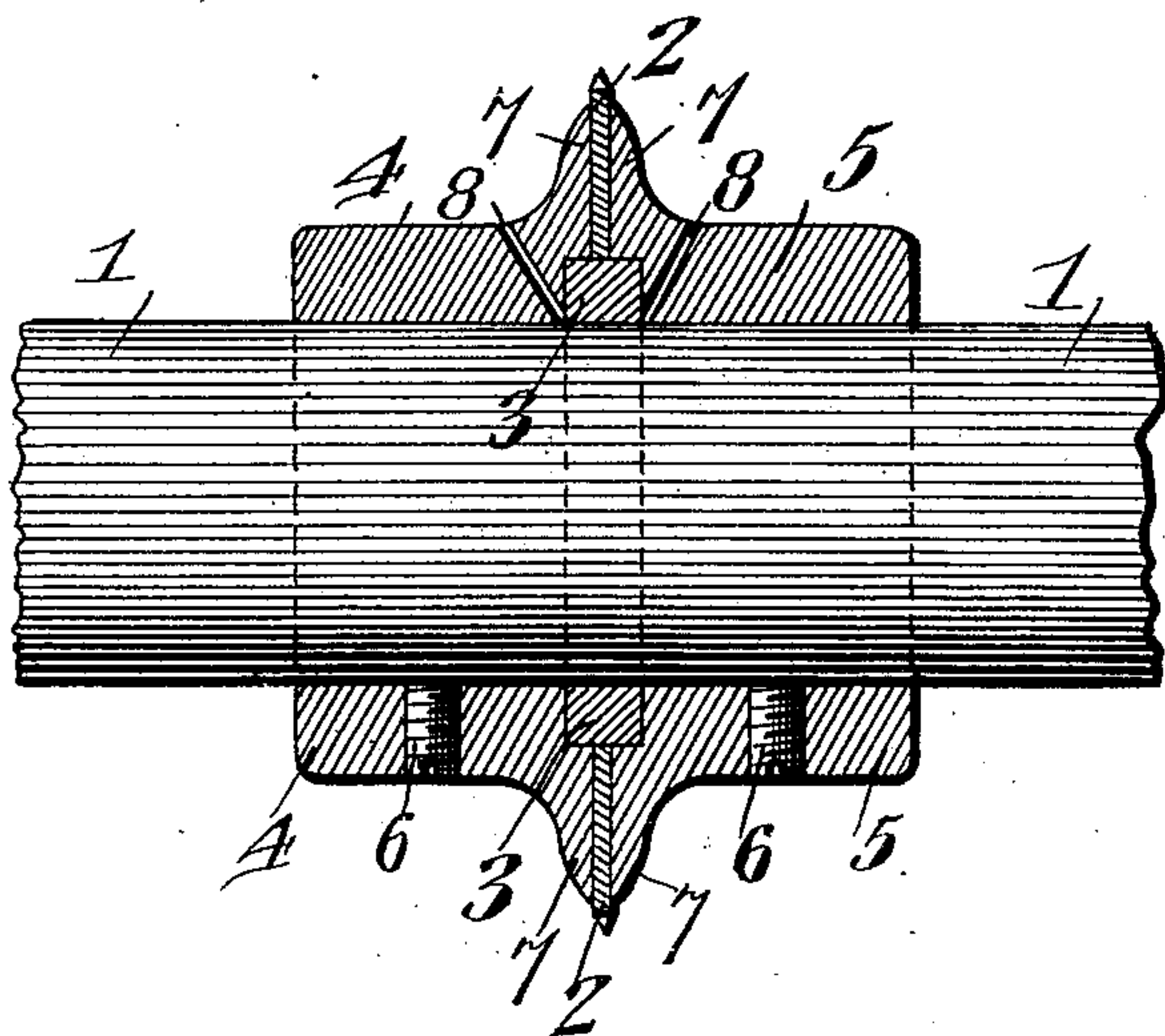


Fig. 3.

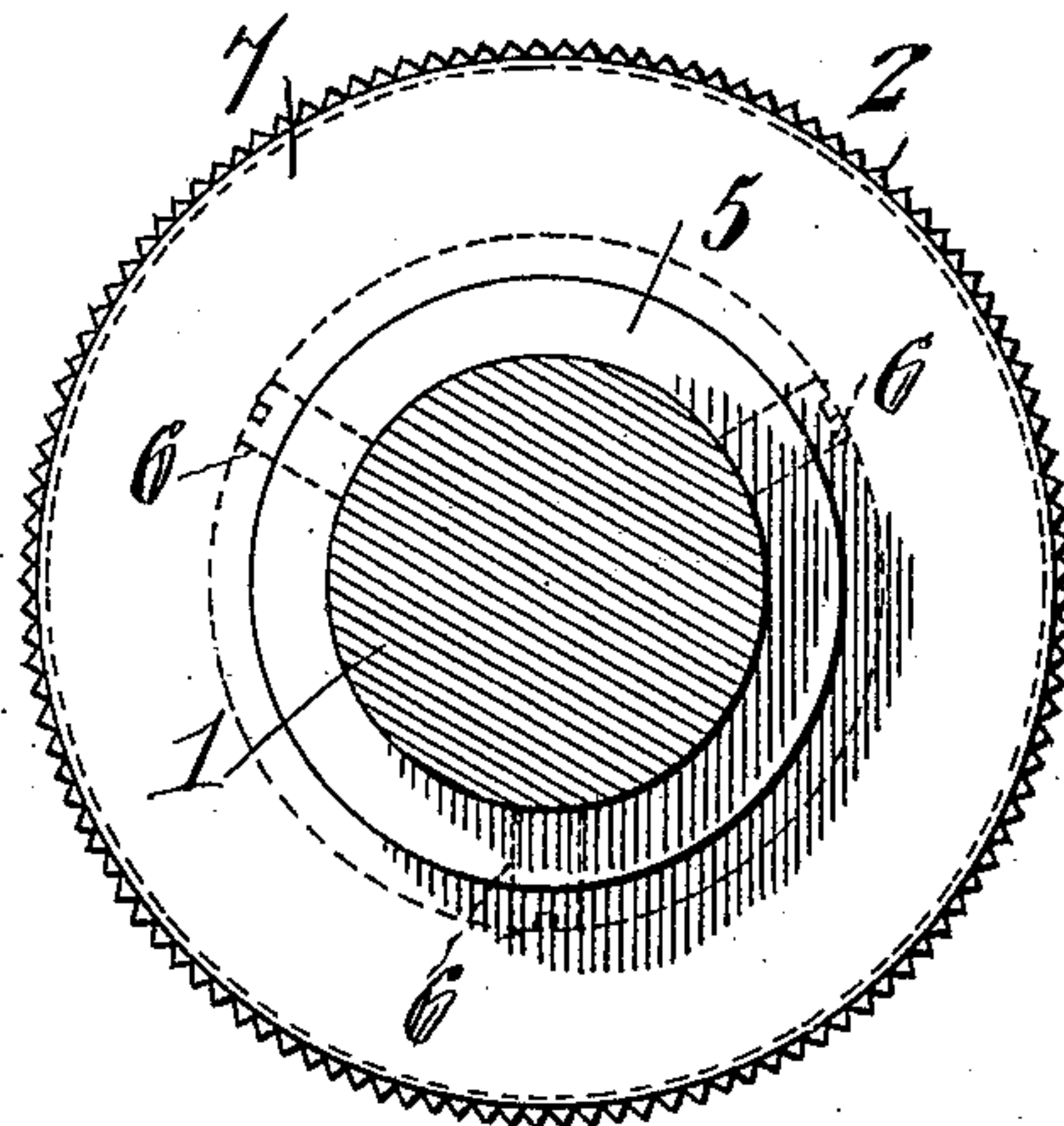
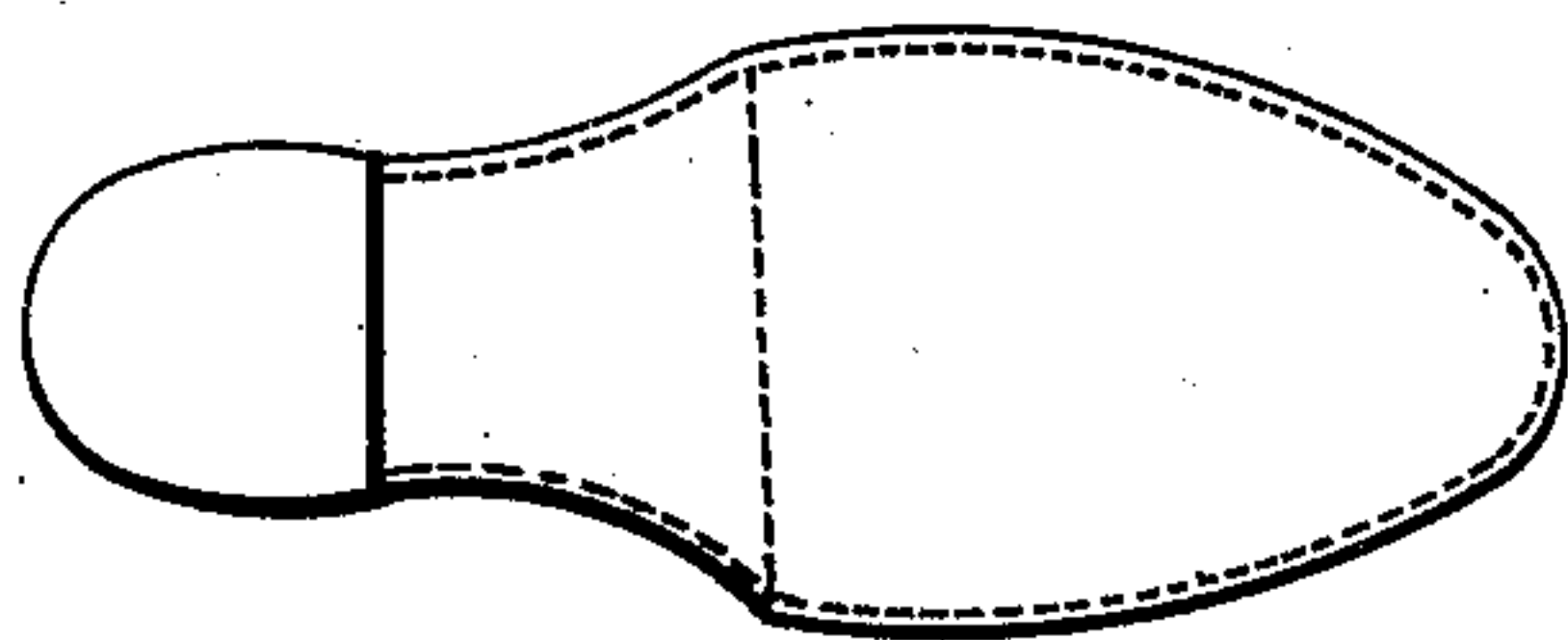


Fig. 4.



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CHARLES W. ROBERTS, OF HANNIBAL, MISSOURI.

BEADING-TOOL FOR BOOTS AND SHOES.

No. 925,387.

Specification of Letters Patent.

Patented June 15, 1909.

Application filed December 7, 1908. Serial No. 466,330.

To all whom it may concern:

Be it known that I, CHARLES W. ROBERTS, a citizen of the United States, residing at Hannibal, in the county of Marion and State of Missouri, have invented a new and useful Beading-Tool for Boots and Shoes, of which the following is a specification.

My invention relates to the art of indenting or impressing patterns, especially patterns to be impressed into the leather of boots and shoes, and the invention particularly relates to a rotating tool for impressing a bead pattern upon the soles of shoes, though the principle of my invention can be equally well applied to tools operating on other material and for other purposes.

Heretofore beading patterns have been "hot tooled" around the margins of shoe soles by an instrument including a pattern wheel and a flame for heating the same. This instrument has been operated by the hand and has been pressed downward against the shoe sole. One of the difficulties incident to devices of this character heretofore produced has been that the tool was not steady and, hence, great care had to be taken to make it track properly, and another difficulty was due to the heating of the tool, there being great liability of the tool becoming overheated and burning the sole.

The object of my invention is to provide a tool for this purpose which is mounted on a shaft whereby the shoe is adapted to be held against the tool in place of the tool being held against the shoe, and, further, to provide frictional means for heating the tool, this frictional means permitting of the tool becoming sufficiently heated to impress the pattern, but preventing all chance of the tool becoming overheated.

In the drawings, Figure 1 is a side elevation of a shaft with the tool thereon; Fig. 2 is a like view, but with the tool and the holding chucks in section; Fig. 3 is a side elevation of the holding chucks and tool, the shaft being in section; Fig. 4 is an under side view of a shoe showing the manner in which the beading pattern is applied.

In the drawings, 1 designates a shaft rotatable by any suitable means and mounted in any desirable manner, preferably in fixed bearings. Surrounding the shaft is a disk 2, having on its edge any suitable pattern or design such as is impressed upon the soles of boots and shoes. Interposed between the annular disk 2—whose central opening is

larger than the shaft 1—is the brass sleeve, 3. This sleeve, as will be seen in Fig. 2, is wider than the disk 2, and supports the same. The action of the brass sleeve is to reduce friction between the interior of the tool disk 2 and the shaft.

Mounted on either side of the disk 2 and pressing against the same are the collars 4 and 5. These collars are annular and surround the shaft 1, to which they are attached by set screws, 6. The collars have projecting shoulders, 7, which contact with the opposed face of the disk 2, these shoulders extending from the base of the disk to the pattern edge thereof, as shown plainly in Fig. 2. Oil passages, 8, are provided in the collars which lead to the face of the brass sleeve 3. These are particularly arranged so that they will lead to the inner face of the sleeve where it contacts with the shaft, thus reducing as much as possible the friction between the sleeve and the shaft. While I have referred to this sleeve as being of brass, I do not wish to be limited thereto.

It will be noted that the sleeve or ring 3 has a considerable area of contact with the shaft so that there is relatively little wear on the shaft, and this ring serves as a protector for the shaft since the pattern disk does not bear directly on the latter. As the pattern disk is comparatively thin and made of hard metal, it would tend to wear or cut grooves in the shaft if it directly engaged the same.

The operation of the device is as follows: The shaft is revolved at a high rate of speed, and toward the operator, carrying with it, of course, the collars 4 and 5, and the pattern disk 2. The operator places a shoe against the pattern wheel or disk, 2, and presses downward over the wheel. This causes the pattern wheel to stop and creates friction between the pattern disk and the collars 4 and 5. This friction causes the pattern wheel to become heated to a sufficient degree to blind-tool the leather. The operator forces the shoe forward so the pattern wheel will move around the margin of the sole along the line shown in Fig. 4, and as the shoe is moved and pressed downward, the pattern upon the disk 2 will be impressed into the leather of the sole.

My machine is adapted to all kinds of wheel tooling, is capable of all kinds of shank wheeling and has many advantages over a hand-tooling wheel. The hand-tool-

ing wheel cannot be operated as mine, for the reason that there is no means of securing the friction necessary to heat the disk. It must be heated by flame. In addition, 5 the hand tool is never steady, whereas, in my instrument, the tool is always steady, the shoe alone being handled, and being capable, of course, of being directed with great freedom over the face of the disk.

10 My construction is extremely simple, does away with all complicated burners and heating arrangements, absolutely prevents the overheating of the iron—for the reason that the heat of the tool will die away when out 15 of operation—and will not burn the leather.

While I have described my tooling device as applicable to making patterns on boot and shoe soles, I do not wish to be limited thereto, as the tool might also be used for 20 impressing patterns in other situations, as in book-binding and kindred arts, and in various other manufactures.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportions and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the 30 advantages of this invention.

Having thus described my invention, what I claim as new and desire to secure by Letters-Patent, is:

1. In an instrument of the character described, a rotatable shaft, a pattern disk mounted thereon but independently rotatable thereof, a sleeve loosely mounted on the 40 shaft and interposed between the disk and said shaft, and means on the shaft for frictionally engaging the opposite faces of the pattern disk to heat the same and maintain the sleeve and pattern disk in place.

45 2. In an instrument of the character de-

scribed, a rotatable shaft, a sleeve surrounding said shaft and independently rotatable thereon, an annular pattern disk surrounding said sleeve but independent thereof, and opposed collars mounted on the shaft to 50 rotate therewith and arranged to hold the disk and sleeve in place and in cooperative relation with each other, the inner faces of said collars frictionally engaging with the opposed sides of the pattern disk to heat 55 both sides of the same simultaneously.

3. In an instrument of the character described, a rotatable shaft, a sleeve surrounding the shaft and rotatable independently thereon, an annular pattern disk having an 60 opening for loosely receiving the sleeve and having a larger bearing area on the shaft than the bearing area between the disk and sleeve, and opposed collars attached to the shaft and having their inner faces frictionally 65 engaging with the opposed faces of the pattern disk, said collars having lubricating passages leading from the exterior thereof inward to the collar immediately 70 surrounding the shaft.

4. In an instrument of the character described, a rotatable shaft, an annular pattern disk surrounding the shaft but independently rotatable thereon, opposed collars mounted on the shaft on either side of the 75 pattern disk and frictionally engaging both sides of the same, the inner faces of the collars being of such size as to substantially cover the side faces of the disk with only the peripheral edge of the latter projecting 80 beyond the collars and set screws holding said collars to the shaft.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CHARLES W. ROBERTS.

Witnesses:

W. P. SHOSKEY,

MELVIN MARSHALL.