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PATENTED AUG. 27, 1907.

J. LEITSCHUH.

PROPELLING ROLLER FOR COLLAR SHAPING MACHINES.

APPLICATION FILED FEB. 6, 1905.

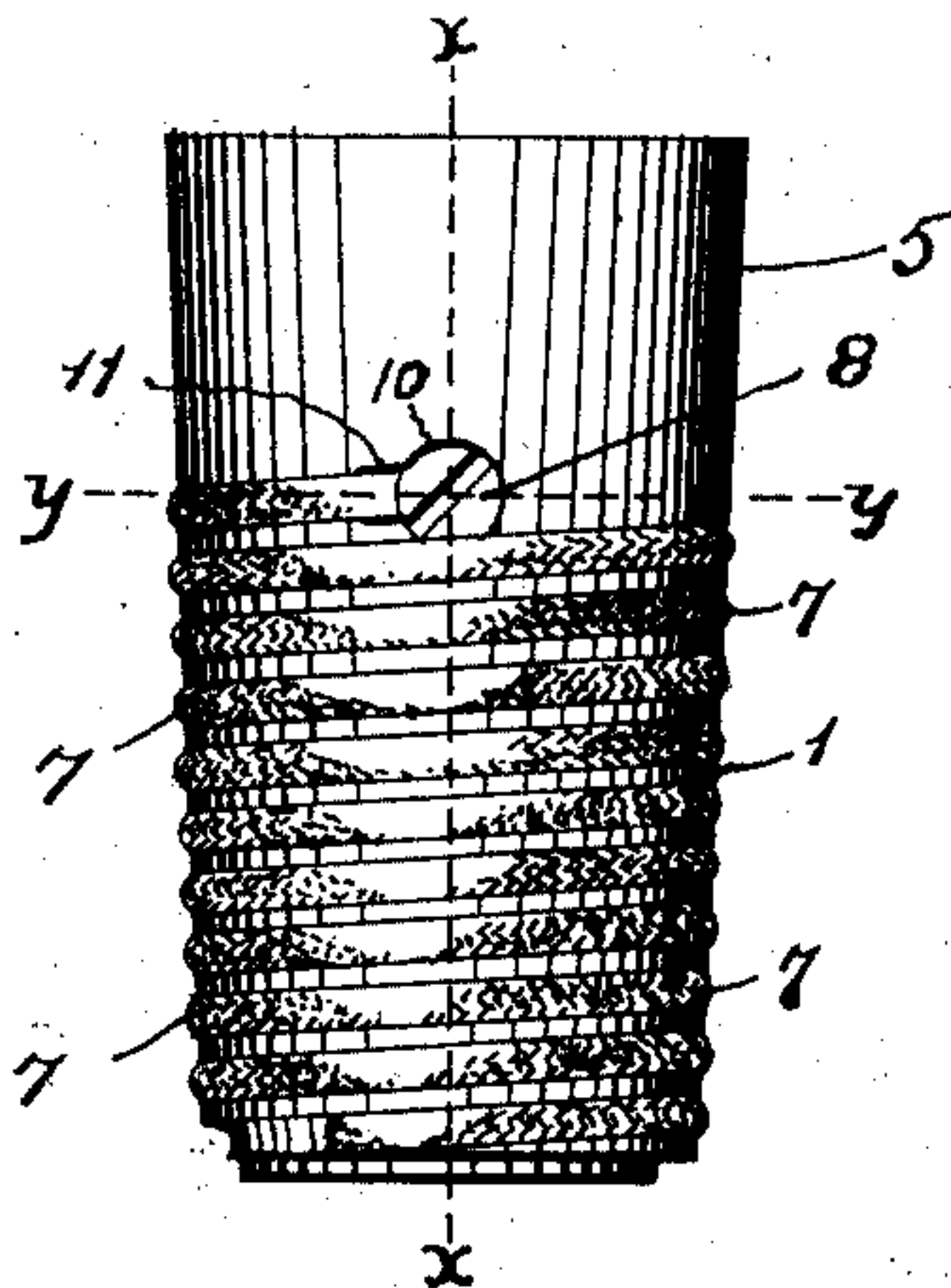


Fig. 1.

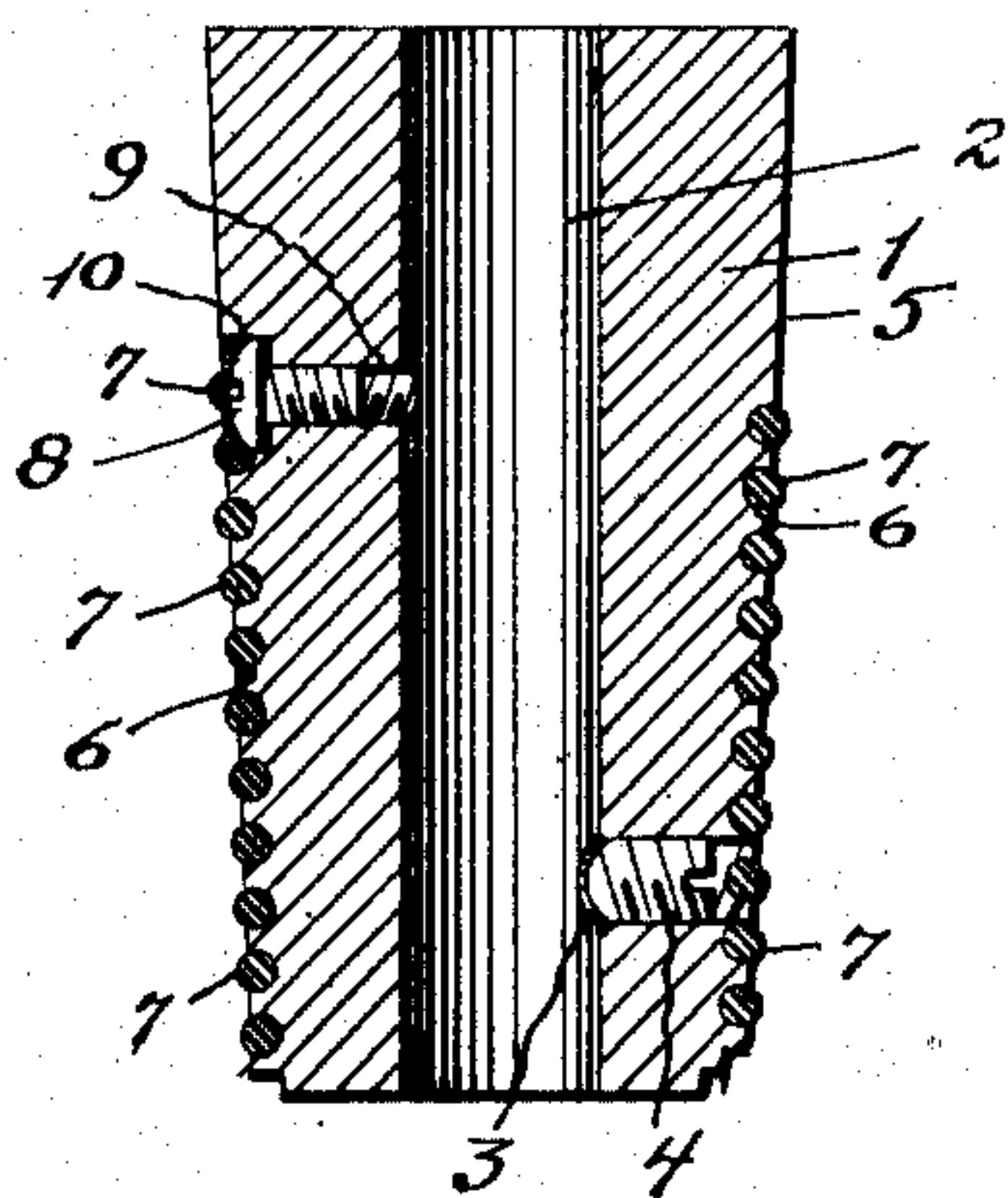


Fig. 2.

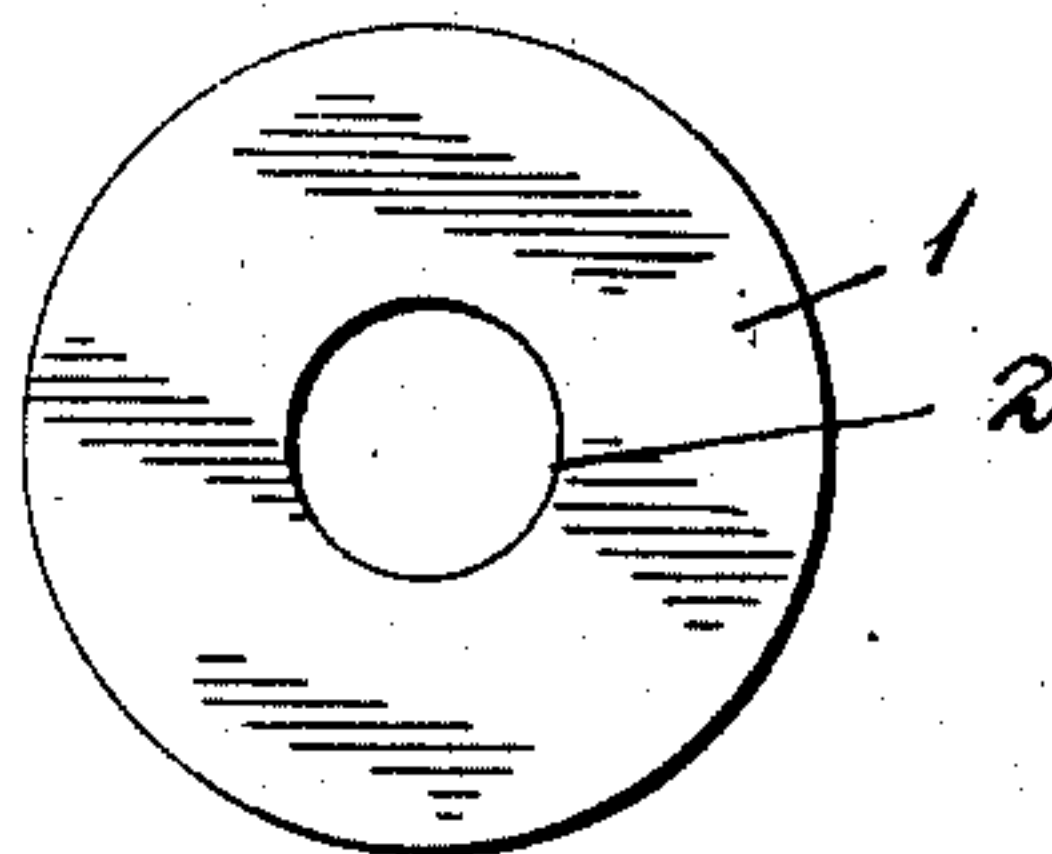


Fig. 3.

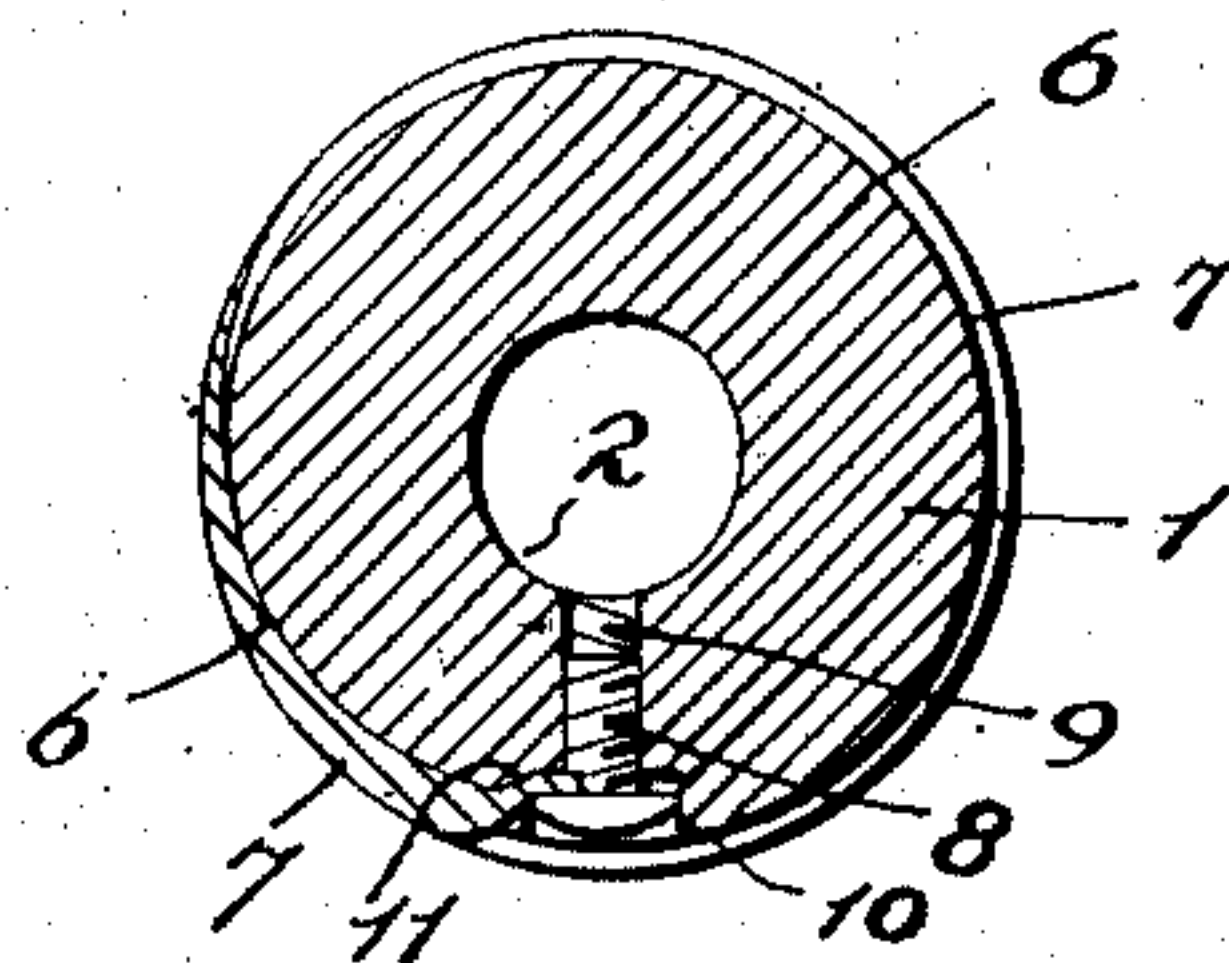


Fig. 4.

WITNESSES:

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JOSEPH LEITSCHUH, OF COLUMBUS, OHIO, ASSIGNOR TO THE FEDERAL MANUFACTURING COMPANY, OF COLUMBUS, OHIO, A CORPORATION OF OHIO.

PROPELLING-ROLLER FOR COLLAR-SHAPING MACHINES.

No. 864,476.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed February 6, 1905. Serial No. 244,347.

To all whom it may concern:

Be it known that I, JOSEPH LEITSCHUH, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Propelling-Rollers for Collar-Shaping Machines, of which the following is a specification.

This invention relates to a new and useful improvement in propelling rollers for collar shaping machines and the like.

The object of the invention is to provide a simple roller of superior construction, that will effectually support a collar while it is acting to propel the same, or in other words, to increase the frictional properties of the periphery of the roller.

Finally the object of the invention is to provide a device of the character described that will be strong, durable and efficient and simple and comparatively inexpensive to make.

With the above and other objects in view, the invention consists of the novel details of construction and operation, a preferable embodiment of which is described in the specification and illustrated in the accompanying drawings, wherein.

Figure 1 is an elevation of the improved roller. Fig. 2 is a vertical sectional view taken on the line $x x$ of Fig. 1. Fig. 3 is a plan view, and Fig. 4 is a horizontal sectional view taken on the line $y y$ of Fig. 1.

In the drawings, the numeral 1 designates the roller which is formed in the shape of an inverted truncated cone and may be made of any suitable metal. A central vertical opening 2 extends from the top to the bottom of the roller to receive the suitable shaft or spindle upon which the roller is mounted. Near the lower end the roller is formed with a radial screw threaded opening 3, in which is arranged a set screw 4 adapted to be engaged with the suitable shaft to lock the roller in position. The set screw 4 is of considerable less length than the opening 3, so that its head will be countersunk some distance beneath the periphery or outer surface of the roller. The roller 1 is formed from its upper end downward about one-third of its length, with a smooth polished surface or portion 5, which portion when the roller revolves, stands above the normal path of travel of the collar, but owing to its smooth and polished surface, it is prevented from interfering with the movement of the collar or soiling the same should the latter travel above its normal path and contact with the said surface or portion. Beginning at the lower end of the portion 5 is a spiral groove 6, which extends around the periphery or surface of the roller to the lower end thereof.

It will be observed that the groove 6 has only a slight

pitch or incline, and that while it is concaved in cross section, it is slightly deeper than a half circle so as to receive and hold against displacement a continuous cord 7. The cord 7 has only a slight portion projecting beyond the surface of the roller and after being once embedded in the groove 6, will remain in place until pulled out by force. At its lower end or the bottom of the roller, the end of the cord 7 is securely held in place by the groove 6 as shown in Fig. 1. However, for removing the cord so that it may be renewed and various other purposes, its upper end is fastened by a set screw 8 engaging in a radial opening 9 and its head standing in a countersunk recess 10 so as to be beneath the periphery of the roller. The end of the cord 7 is let into the recess 10 over a downwardly inclined depression 11 communicating with the recess 10 at one side thereof as shown in Figs. 1 and 2. The end of the cord is passed beneath the head of the screw 8, where it is firmly held against the bottom of the recess 10 by the set screw as shown in Fig. 4.

It is apparent that by simply loosening the screw 8, the upper end of the cord may be freed and the cord removed from the groove 6. By arranging the cord 7 in the groove 6 only a portion of the said cord is exposed to wear and the cord may be turned from time to time so as to present a fresh surface. Further, by reason of the conical shape of the roller, it is necessary to provide a groove to prevent the cord from riding up or down upon the surface of the roller.

It is to be noted that it is necessary to frequently remove the cord 7 and insert a new one, as the cord becomes worn or flattened to such an extent that it loses its usefulness. By the construction and arrangement herein set forth the cord may not only be readily and expeditiously replaced, but will remain firmly in place when applied.

This roller may be used in various ways in connection with collar shaping or ironing machines, and as an instance of such use, attention is called to the applications of Charles W. Currier and Joseph Leitschuh, filed July 7th, 1904, bearing Serial Numbers 215,675 and 215,677, in which the roller illustrated in the present invention, might be used in place of the rollers 10 or 40 of the first named application, or the roller 12 of the last-named application. These applications are merely cited to illustrate more clearly the function of the roller and it is to be understood that its use is in no way limited to the constructions mentioned.

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

1. A propelling roller for collar laundering machines having a continuous spiral groove formed in the surface thereof, a cord removably embedded in the groove in such

manner as to expose less than half of its surface beyond the surface of the roller, and means for securing one end of the cord to the roller, the outer surface of the cord being adapted to engage and propel a collar.

- 5 2. A propelling roller for collar laundering machines adapted to be disposed vertically and having a continuous spiral groove formed in the surface thereof, a cord removably embedded in said spiral groove in such manner as to expose less than half of its surface beyond the surface of the roller, and a countersunk screw located in a threaded recess of the roller and adapted to secure one end of the cord to said roller, the head of said screw lying entirely below the surface of the roller.
- 10 3. A propelling roller for collar laundering machines having a continuous spiral groove formed in the surface thereof about the major portion of the surface of said

roller, and a cord removably embedded in the groove, the outer surface of the cord being adapted to engage and propel a collar.

4. A propelling roller for collar laundering machines having a continuous spiral groove formed in the surface thereof, and a cord located in said groove the outer surface of the cord projecting beyond the face of the roller, said outer surface of the cord being adapted to engage and propel a collar.

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

JOSEPH LEITSCHUH.

Witnesses:

A. L. PHELPS,
M. B. SCHLEY.