J. B. JOHNSON.

Sand-Paper Rollers for Buffing Shoe-Soles.

No. 197,860. Patented Dec. 4, 1877.

Fig. 1.

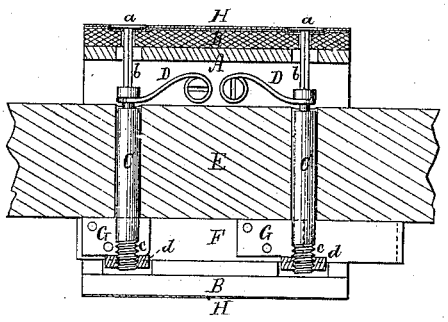

Fig. 2.

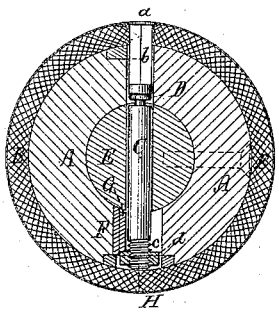

Fig. 3.

Witnesses.
S. N. Piper.
L. M. Miller.

Inventor.
Joseph B Johnson
by his attorney
R K Eddy

UNITED STATES PATENT OFFICE.

JOSEPH B. JOHNSON, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN SAND-PAPER ROLLERS FOR BUFFING SHOE-SOLES.

Specification forming part of Letters Patent No. **197,860,** dated December 4, 1877; application filed July 10, 1877.

To all whom it may concern:

Be it known that I, JOSEPH B. JOHNSON, of Lynn, of the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Cylinders or Rollers for Buffing Soles; and do hereby declare the same to be described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a longitudinal section, and Fig. 2 a transverse section, of one of my improved buffing rollers or cylinders.

My invention is to effect the securing of the sand or emery paper covering upon the cushioned body of the roller.

In the drawings, A denotes the roller-body, covered by a cushion, B, of felt. Within the body and cover there is arranged diametrically a series of slide-rods, C C, to each of which there is a spring, D, for forcing it upward. Each rod has, at its upper end, a thin and flat head, *a*, and the part *b* of the rod which is next below such head is shaped as shown in transverse section in Fig. 3—that is, it is knife-edged both in front and rear. The portion of the rod which goes through the shaft E of the roller and extends below such has a male screw, *c*, cut upon it to receive a nut, *d*.

Behind the nuts there is arranged a slider, F, which should be so applied to the roller-body as to be capable of being moved therein lengthwise thereof. This slider carries or has fixed to it a cam or trapezoidal shaped projection, G, for each of the rods C. On moving the slider these cams may be forced in succession over and against the upper surfaces of the nuts, so as to draw and hold down the rods. The cams I so arrange that the first one may take on the next adjacent nut before the second one may reach its next adjacent nut. This enables the sand-paper covering H to be secured in place by one of the heads *a* before the other may be brought down upon it.

In order to apply and fix the abrasive cover to the felt cushion, the former should be of sufficient size to go entirely around the latter, the cover having one end to overlap the other a short distance. Previous to applying the cover to the body the slider F should be moved back far enough to allow the several springs D D to force up the rods C C until their nuts may abut against the shaft. This having been done, the abrasive cover is to have one end forced against the knife-edges, so as to cause them to cut into it a short distance, after which the cover is to be wound about or made to tightly encompass the felt cover, the other end of the abrasive cover being forced against the opposite knife-edges so as to cause them to cut into it sufficiently for it to extend underneath the heads *a a*, and, if desirable, lap a short distance on the part previously placed thereunder.

Having thus proceeded, the first of the heads should be pressed down closely upon the abrasive cover, and the slider F should be moved so as to cause the said head to be held in place, after which the next head should be pressed down, and the slider should be still farther moved, so as to cause both heads to be drawn down firmly upon the cover, so as to hold it in position. When the abrasive cover may require to be removed from the felt covering, the slider F should be moved backward, so as to enable the springs to force up the rods, so as to carry their heads off the cover.

The nut and screw of each rod C enables the head of such rod to be adjusted to its proper distance from the shaft. By taking hold of the head and turning it, the rod may be screwed more or less into the nut, which, by having one side in contact, or nearly so, with the slider, will be prevented from revolving.

It will be evident that, in the place of the screws and nuts, the rods may be provided with fixed or stationary shoulders for the cams of the slider to work against; but such would not be so advantageous, and would not admit of any adjustment, as described, of the heads of the rods. The nuts, independently of the screws, represent such shoulders.

My present invention differs materially from that described and represented in the United States Patent No. 167,905, granted to me on September 21, 1875, in which grooved heads and a bar, provided with hooks, are represented as applied to a roller and its shaft, to operate with separate eyed clamps.

I claim, in the buffing-cylinder, as my invention, as follows:

1. The slider F and its cams G G and the shouldered and headed rods C, combined and arranged with the body and felt cover of the buffing-roller, as set forth.

2. The combination of the slider F and its cams G G with the shouldered and headed rods C and their springs D D, all being arranged in and applied to the roller-body and its felt covering, substantially as shown and described.

3. The combination of the slider F and its cams G G with the headed rods C C, provided with screws *c* and nuts *d*, all being arranged in the body, and with respect to the felt covering thereof, and to operate substantially as set forth.

4. The headed slide-rods C, provided with knife-edges *b*, or so made as to cut into the abrasive cover, as described, while being applied to them, as specified.

JOSEPH B. JOHNSON.

Witnesses:

R. H. EDDY,

JOHN R. SNOW.