

C. C. GREENE.
MACHINERY FOR BUFFING THE BOTTOMS OF BOOT AND SHOE
SOLES.

No. 176,298.

Patented April 18, 1876.

Fig. 1.

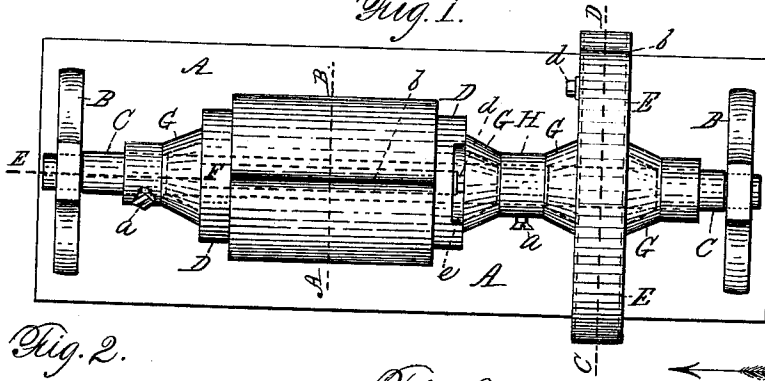


Fig. 2.

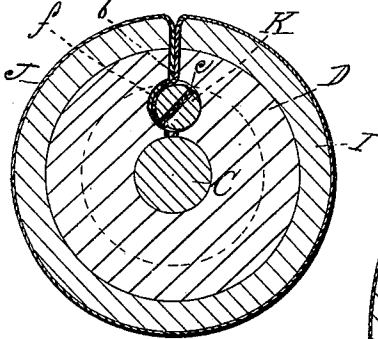


Fig. 3.

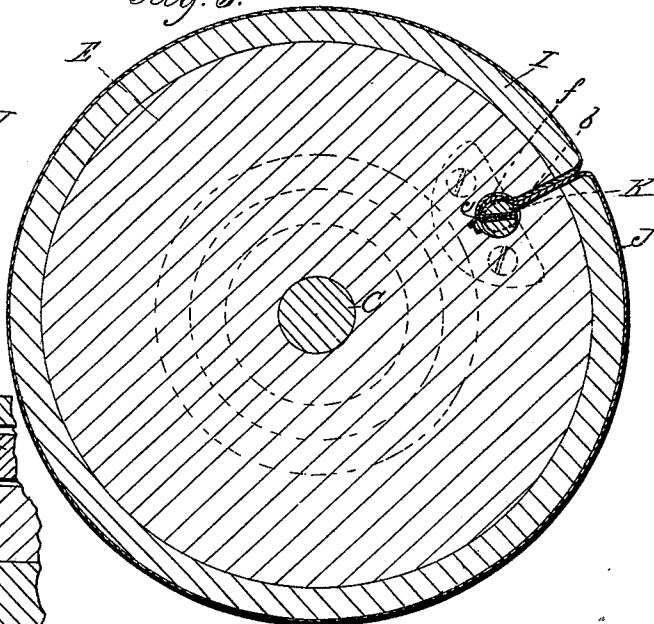
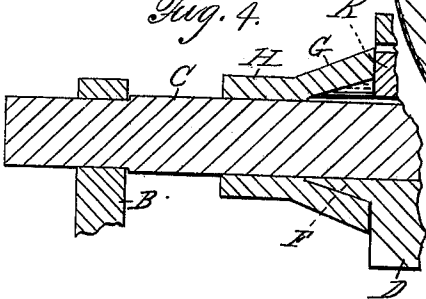


Fig. 4.



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IMPROVEMENT IN MACHINERY FOR BUFFING THE BOTTOMS OF BOOT AND SHOE SOLES.

Specification forming part of Letters Patent No. **176,298**, dated April 18, 1876; application filed March 28, 1876.

To all whom it may concern:

Be it known that I, CHARLES C. GREENE, of the city and county of Worcester and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Machines for Buffing Shoe and Boot Bottoms, and for other purposes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a top or plan view of my said improved buffing-machine. Fig. 2 represents, upon an enlarged scale, a vertical section on line A B, Fig. 1. Fig. 3 represents, upon an enlarged scale, a vertical section on line C D, Fig. 1; and Fig. 4 also represents, upon an enlarged scale, a section on line E F, Fig. 1.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it more in detail.

In the drawings, A represents the base of the machine, from which rise standards B B, in the upper ends of which a horizontal shaft, C, is supported, and turns in suitable bearings. Upon this shaft are arranged buffing-wheels D and E, which are held in place upon, and secured so as to turn with, shaft C as follows: From each end of the buffing-wheels D and E project square wedge-shaped projections F, as indicated in full and dotted lines in the drawings. Over the projections F, on each end of the buffing-wheels, a holding-cap, G, is fitted, so as to cover the projections F, said caps being recessed or formed with cavities, to fit over the projections F on the wheels, and are held in place by the set-screws *a*, two of which are shown in Fig. 1. For convenience and economy in construction, when two wheels are to be arranged close together, as shown in Fig. 1, the center portion H may unite two caps, G G, in which case a single set-screw will suffice for holding both caps in place. Upon the wheels D E are placed coatings of felt or other suitable material, when desired to have such a coating, I, and upon such coating I sand-paper or other suitable material is arranged, and securely fixed in position as follows: One edge of the sand-paper

J is run down into a slot, *b*, in the wheel, and into a slot, *c*, in holding-spindle K, the slot *c* of which then stands in line with the slot *b* in the wheel. The sand-paper is then passed around the wheel, and the other end passed down through slot *b* into slot *c*, after which spindle K is turned by means of a wrench applied to the square head *d* of the spindle K, so as to draw the sand-paper covering close down upon the flexible packing I, arranged between the sand-paper and the peripheries of the wheels D and E, as fully indicated in Figs. 2 and 3 of the drawings. Spindle K in wheel D is arranged in a hole bored from end to end in one side of said pulley or wheel, and is retained in place and prevented from having any longitudinal movement or motion by the caps G G, which hold or fasten pulley D to shaft C, one edge of pulley D being cut out, as shown at *e*, to allow the attendant to apply the wrench to the head *d* of the spindle when the sand-paper is to be tightened or removed, as occasion may require. By reference to Figs. 2 and 3 it will be perceived that when spindles K are turned into the position indicated in said figures, the ends *f* of the sand-paper covering will be drawn down, and compacted and bound between spindles K and the pulleys or wheels D E from end to end, and this clamping of the sand-paper is so secure that no additional fastening is required to keep the spindles K from turning back while the machine is in operation; but, if desired, a set-screw could be inserted very conveniently and readily for holding the spindles K in position when once adjusted. Spindle K in wheel or pulley E, which is a narrow one, is retained from moving longitudinally by means of a plate screwed to the side of the pulley, the edge of the plate being cut out, so as to fit into a groove in the projecting end of the spindle, as indicated in dotted lines, Fig. 3. Spindles K may be secured in position in a different manner, although I have found the arrangement shown in the drawings to be a good one in practice. The pulleys or wheels may also be secured to shaft C in a different manner from that above described; but I prefer the plan shown in the drawings, since I have found it to work satisfactorily in practical use.

By securing the wheels or pulleys D and E

in position upon the revolving shaft C, by means of the caps G, as above described, the fastenings are not liable to become detached while the machine is in operation; but the pulleys can be quickly removed from the shaft, when desired, by simply loosening set-screws a, when caps and pulleys can all be slipped off of the shaft C as soon as it is removed from its bearings in the standards B.

It will be understood that any number of wheels or pulleys D and E may be arranged upon one shaft, and may be covered with coarse or fine sand-paper, as desired, and in any order preferred.

In applying the wheels upon shaft C, they should be so arranged that the spindles K will tend to balance each other, or else the pulleys weighted, so as to be balanced upon the shaft. These pulleys or wheels are run at a very high speed, power being applied to a pulley upon shaft C for such purpose; and the speed at which said pulleys or wheels are run ordinarily in buffing the bottoms of boots and shoes is about three thousand revolutions per minute, and as such machines were generally constructed previous to my invention, a liability or danger existed of the attendant being injured during the operation of the machine by

some parts becoming loosened, so as to be thrown with great violence and force from the machine.

Having described my improvements in machines for buffing the bottoms of boots and shoes, and for other purposes, what I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

1. The combination, with the slotted buffing wheel or pulley D or E, of a slotted tightening and holding spindle, K, substantially as and for the purposes set forth.

2. The combination, with shaft C and wheel or pulley D, provided with square wedge-shaped projections F, of holding-caps G, substantially as and for the purposes set forth.

3. The combination, with pulley or wheel D and tightening and holding spindle K, of wedge-shaped projections F and holding-caps G H, substantially as and for the purposes set forth.

4. The combination, with buffing wheels or pulleys D E and shaft C, of the double holding cap-piece G H G, substantially as and for the purposes set forth.

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