(No Model.)

H. A. WEBSTER.

APPLIANCE FOR BUFFING BOOT OR SHOE SOLES.

No. 547,827. Patented Oct. 15, 1895.

Fig. 1.

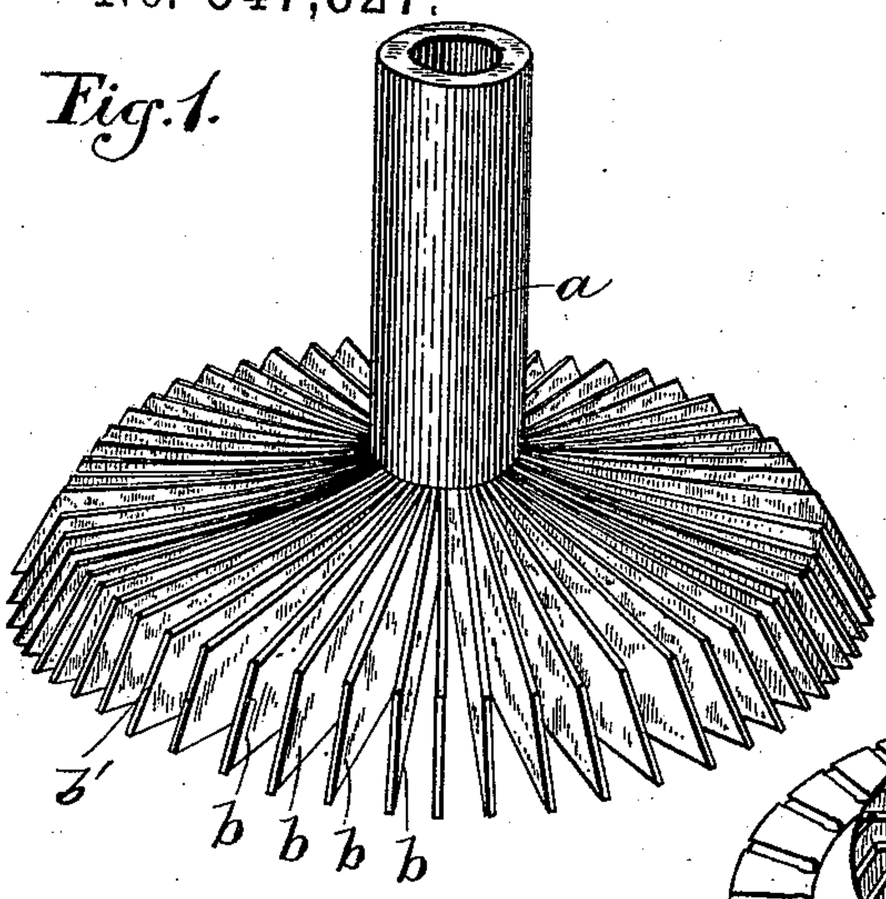


Fig. 2.

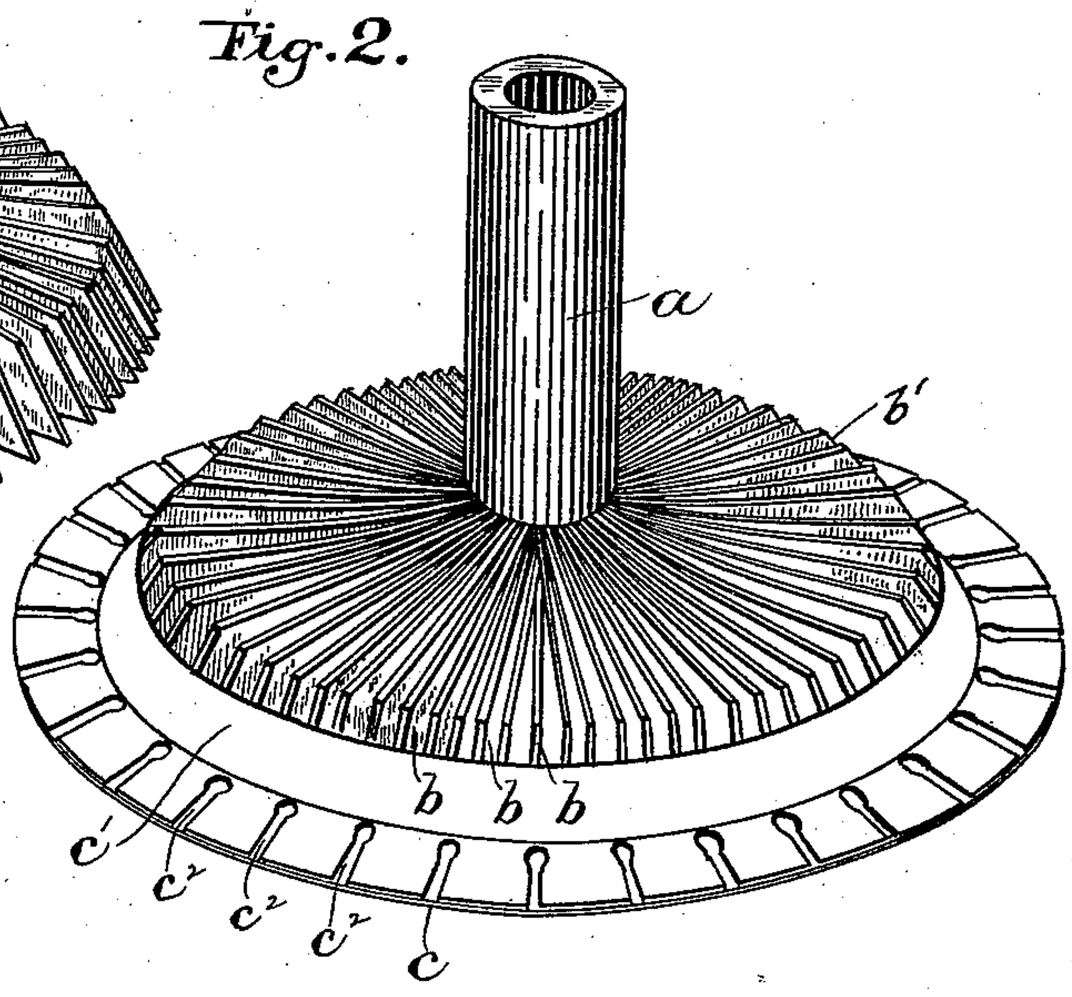


Fig. 3.

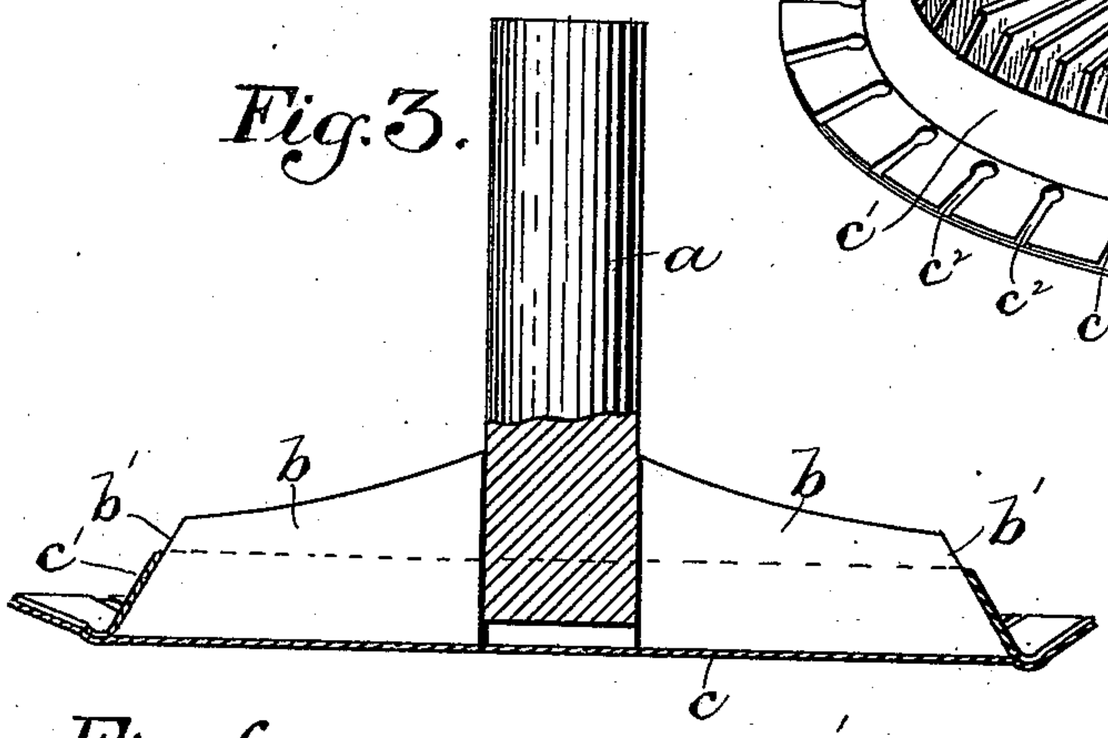


Fig. 4.

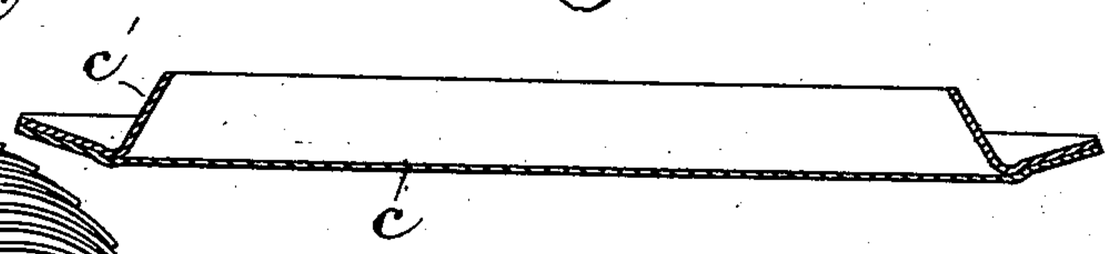


Fig. 6.

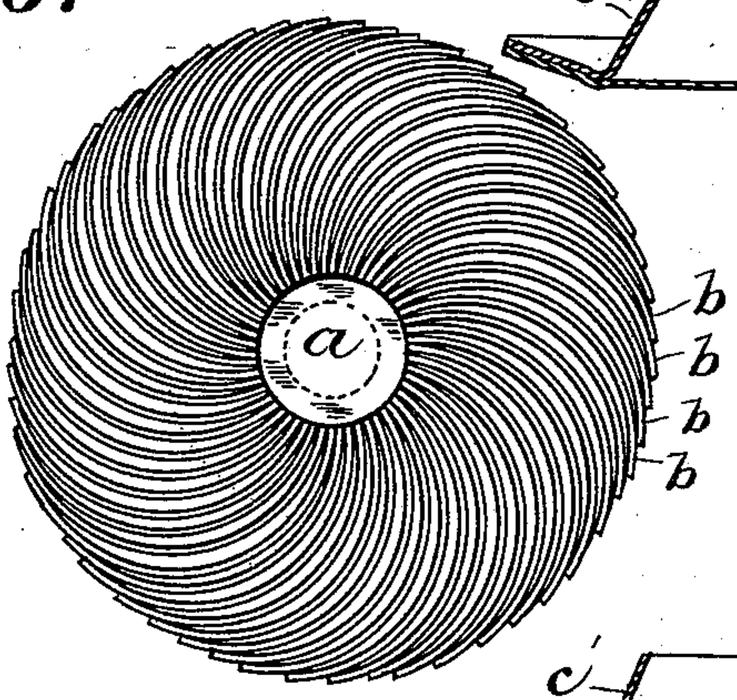
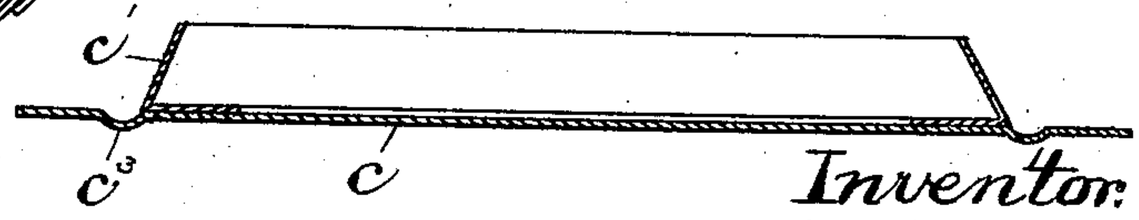


Fig. 5.



Witnesses:
H. D. Harrison.
Kolbin Abell.

Inventor:
H. A. Webster
by Wright Brown & Quinby
Attys.

UNITED STATES PATENT OFFICE.

HAROLD A. WEBSTER, OF HAVERHILL, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO GEORGE H. P. FLAGG, OF BOSTON, MASSACHUSETTS.

APPLIANCE FOR BUFFING BOOT OR SHOE SOLES.

SPECIFICATION forming part of Letters Patent No. 547,827, dated October 15, 1895.

Application filed December 13, 1894. Serial No. 531,639. (No model.)

To all whom it may concern:

Be it known that I, HAROLD A. WEBSTER, of Haverhill, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Appliances for Buffing Boot or Shoe Soles, of which the following is a specification.

This invention relates to buffing appliances in which an acting abrasive face is supported by a rotary shank or spindle and is arranged substantially at right angles with the spindle and extends across one end thereof.

The invention has for its object to provide an appliance having an acting face, which is yieldingly held in position by centrifugal force when the appliance is in operation.

The invention also has for its object to provide a buffing appliance comprising a holder or support having a centrifugally-supported face and a pad adapted to be engaged and held by said holder and yieldingly backed by said face.

To these ends the invention consists in the improvements which I will now proceed to describe and claim.

In the accompanying drawings, forming a part of this specification, Figure 1 represents a perspective view of my improved centrifugal appliance. Fig. 2 represents a similar view showing said appliance provided with a pad and used as a pad-holder. Fig. 3 represents a sectional view of the pad and pad-holder. Fig. 4 represents a sectional view of the pad. Fig. 5 represents a view similar to Fig. 3, showing a slightly-modified construction. Fig. 6 represents a top view of the pad-holder, showing its condition when compressed to permit the application of the pad thereto.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents a shank, which is adapted to be attached to a shaft or spindle and rotated thereby.

b b b represent a series of arms or strips of any suitable flexible material, such as leather, attached at their inner ends to the shank *a* and extending radially therefrom. The lower edges of the strips *b* are arranged in a plane which is substantially at right angles with the axis of the shank *a* and is located below the latter, as shown in Fig. 3, said edges collectively constituting a seat or support for a buffing-pad *c*, said support holding the pad at a sufficient distance below the lower end of the shank to prevent contact between the pad and the rigid material of the shank. The outer ends *b'* of the strips *b* are preferably inclined, so that they collectively form an inclined or tapering seat adapted to bear upon the inner side of a correspondingly-inclined flange *c'*, affixed to the back of the pad *c*. The pad, which is or may be made of a disk of emery-cloth, has the flange *c'* attached to its back, said flange being continuous and concentric with the pad, the flange springing from the pad at a short distance from the margin of the pad, as shown in the drawings. In making the flange *c'*, I prefer to take a strip of suitably strong and flexible material, such as cloth or heavy paper, and form numerous slits or apertures c^2 therein extending partly across the width of the strip, and then bend the tongues thus formed from the main body of the strip, said tongues being cemented to the pad either at the outer side of the flange, as shown in Figs. 2, 3, and 4, or turned inwardly and cemented to the pad at the inner side of the flange, as shown in Fig. 5. When the said strip is secured to the pad in the manner represented in the drawings, its main portion constitutes a continuous annular inclined wall extending around the pad at a short distance from the margin thereof, the inclination of said wall or flange corresponding to that of the ends *b'* of the arms *b*. The pad is applied to the holder by bending the arms *b* to reduce the diameter of the holder, as shown in Fig. 6, placing the flange over the ends of the bent arms, and then allowing the arms to resume their normal radial position, the inclined ends *b'* of the arms being thus brought into contact with the inner surface of the inclined flange *c'*, so that the pad is engaged by said arms and prevented from dropping from the holder. When the holder is rotated, the pressure of the ends of the arms against the flange of the pad is increased by centrifugal action, so that there is no liability of the pad becoming disengaged from the holder during the buffing operation. It will be seen that the pad can be very quickly applied to and re-

moved from the holder, and that when in use it is yieldingly supported at all points. I prefer to form an annular bead c^3 on the pad, said bead being concentric with the margin thereof and arranged so that it coincides with the point where the flange springs from the pad. Said bead is formed so that it forms a convex projection on the under or acting side of the pad, as shown in Fig. 5, the bead being open or trough-shaped on the back of the pad. The object of said bead is to define the margin of the acting portion of the pad and to cause the portion of the pad that projects outside of the flange to bend or yield along a well-defined line without being wrinkled at its marginal portion and without presenting an angle to the boot or shoe sole pressed against it.

I am aware that an annular rib has been formed on a buffing-pad near its edge, as shown in Patent No. 421,763, as a means for securing the pad to a holder, but the sides of such rib are closed together, so that the rib simply stiffens the pad and does not define the margin of its acting face. Moreover, the said rib projects from the back of the pad and not from the front.

The flexible arms or strips, radially mounted on a rotary shank or holder and having their lower edges projecting below the lower end of the spindle, as shown, may be made of emery-cloth or otherwise provided with abrasive facings and used for buffing purposes without the buffing-pad, the said strips collectively presenting a yielding buffing-face made up of the portions of the strips which are exposed behind the edges of the preceding strips, said face being yieldingly held in position by centrifugal force, which tends to hold the lower edges of the strips horizontal or in a plane substantially at right angles with the axis of the shank.

I claim—

1. A buffing appliance comprising a rigid shank or spindle and a series of flexible strips attached at their inner ends to one end of the spindle and radiating therefrom, the lower edges of said strips projecting below the spindle and collectively forming a yielding face arranged substantially at right angles with the axis of the spindle.

2. A buffing appliance comprising a rigid shank or spindle and a series of flexible strips attached at their inner ends to one end of the spindle and radiating therefrom, said strips having lower edges projecting below the lower end of the spindle, and arranged substantially at right angles with the axis thereof and outer ends which are inclined relatively to the said axis whereby said ends are adapted to engage an inclined flange on the back of a buffing-pad, the lower edges of the strips constituting a seat for the said pad.

3. In a buffing appliance, the combination of a rigid shank or holder having a series of radiating flexible strips, a pad composed of an abrasive flexible disk, and a flange attached to the back of the pad and engaged with the outer ends of said strips, said flanges holding the disk against the lower edges of the strips.

4. In a buffing-pad, a disk of flexible material having an abrasive facing, and a molded annular bead near its margin, combined with an inclined annular flange attached to the back of the disk and coinciding with said bead, the margin of the pad projecting outside of the bead and flange.

5. In a buffing-pad, the combination of a disk of flexible material having an abrasive facing, and a continuous inclined annular flange on the back side of said disk, said flange being composed of a strip of flexible material severed partly across its width to form tongues which are cemented to the pad.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 26th day of November, A. D. 1894.

HAROLD A. WEBSTER.

Witnesses:
HERBERT B. NEWTON,
C. F. BROWN.