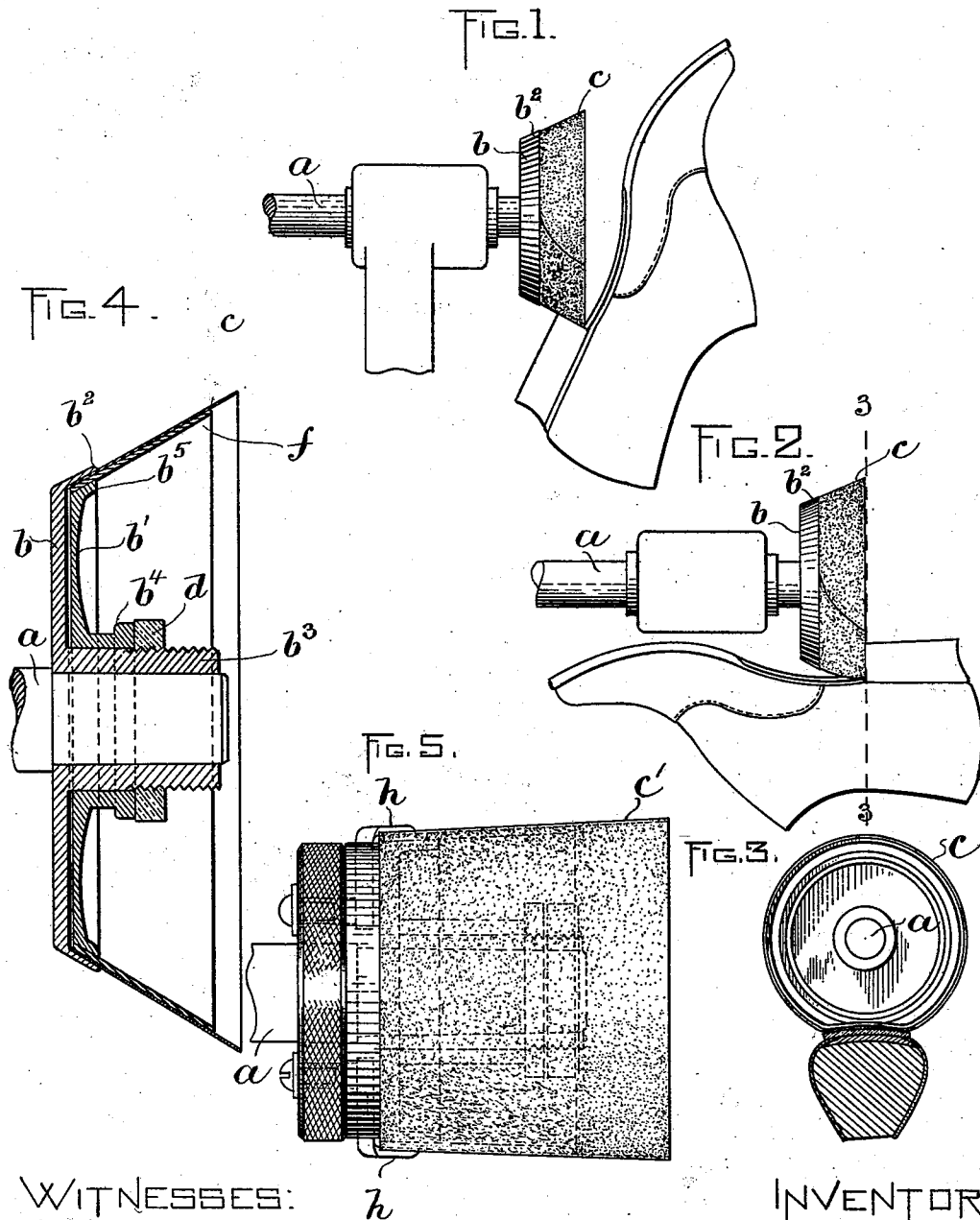


(No Model.)

H. A. WEBSTER.
BUFFING OR POLISHING DEVICE.

No. 550,063.

Patented Nov. 19, 1895.



WITNESSES:

E. Batchelder
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UNITED STATES PATENT OFFICE.

HAROLD A. WEBSTER, OF HAVERHILL, ASSIGNOR TO THE GLOBE BUFFER COMPANY, OF BOSTON, MASSACHUSETTS.

BUFFING OR POLISHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 550,063, dated November 19, 1895.

Application filed August 2, 1895. Serial No. 558,029. (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 Buffing or Polishing Devices, of which the following is a specification.

This invention relates to appliances for buffing, abrading, or for polishing the exposed surfaces of articles, such as the soles and heels of boots and shoes, and it has for its object to provide a simple and effective device whereby surfaces of various shapes, such as the shanks and other portions of boot and shoe soles and the breasts of boot and shoe heels may be quickly and thoroughly buffed or polished.

The invention consists in the several improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side elevation of my improved buffing appliance and a shoe presented thereto in position for buffing the breast of the heel. Fig. 2 represents a similar view showing the shoe in position for buffing the shank portion of the sole. Fig. 3 represents a section on line 3-3, Fig. 2. Fig. 4 represents a sectional view of the improved appliance. Fig. 5 represents a side elevation of a somewhat different form of appliance embodying my invention.

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

In the drawings, *a* represents a shaft which is journaled in suitable bearings and adapted to be rotated by power. To said shaft is affixed a head or hub of circular form, its perimeter being concentric with the shaft. The said head or hub is preferably constructed as a clamp, it being composed, as here shown, of two members *b* and *b'*. The member *b* is rigidly secured to the shaft and has at its perimeter a laterally-projecting annular flange *b²*, the preferred means of securing the member *b* to the shaft being a collar *b³*, formed on or attached to the member *b*, and inclosing a portion of the shaft. The member *b'* is provided with a central hub *b⁴*, fitted to move upon the collar *b³*, and with a marginal flange *b⁵*, which is formed to co-operate with the flange *b²* in grasping or clamping one end of a flexible tube

c, which is of abrasive material, such as sand-paper or emery-cloth for buffing, and of silica or other similar polishing material for polishing. A nut *d*, engaged with a screw-thread on the collar *b³*, serves to adjust the member *b'* and clamp or release the tube *c*. The said tube *c* is made of such length that when its inner end is clamped, as described, its outer end will project sufficiently from the head or clamp to enable it to furnish a working face or periphery adapted to act on the different parts of the boot or shoe or other article presented to it. The outer end of the tube *c* is open and the greater part of said tube surrounds an air-space or cavity, so that the tube from its outer end to the line along which it is grasped by the clamp is free to yield inwardly, and thus conform to curved surfaces of various forms, such as are presented by different parts of a boot or shoe.

In Fig. 1 I show the manner of buffing the breast of a heel, the shoe being held so that the outer end of the tube enters the angle formed by the intersection of the breast and shank. In case the breast is concave, as is frequently the case, the curvature of the tube conforms to the concavity of the breast. When the breast is flat, the flexibility of the outer portion of the tube enables it to yield and bear upon substantially the entire surface of the breast.

In Fig. 2 I show the position of the shoe during the operation of buffing the shank, the outer end of the tube *c* entering the angle of the breast and shank, while the flexibility of the tube enables it to yield and conform to the transverse curvature of the shank, as shown in Fig. 3. For operation on the shank and breast I prefer to make the tube *c* frusto-conical in form, while its larger end is open and free to yield inwardly. This form strengthens the tube and prevents it from gyrating when rapidly rotated and enables it to more conveniently reach the parts of the shoe on which it is particularly intended to act, as shown in Figs. 1 and 2. I do not limit myself, however, to this form, and for buffing the bottom of soles I make the tube substantially cylindrical, as shown in Fig. 5.

In Fig. 4 I show the working tube *c* reinforced internally by a flexible inner tube *f*, clamped between it and the member *b'*, said

inner tube extending outwardly nearly to the outer end of the tube *c* and being composed of any suitable flexible material having suitable inherent elasticity to enable it to exert an outward yielding pressure on the tube. The said inner tube *f* may be composed of leather, rubber, or any other suitable material.

In Fig. 5 I show the tube *c'* made substantially cylindrical, the mechanical construction being the same as that shown in Fig. 4, excepting that the inner end of the tube *c'* is secured by means of clamping-fingers *h h*, which are radially adjustable and are pressed inwardly against the tube by any suitable means, the tube being clamped between said fingers and an internal collar similar to the collar *b'*. (Shown in Fig. 4.)

I do not limit myself to the details of construction herein described, and may variously modify the same without departing from the spirit of my invention.

I claim—

1. An appliance of the character described comprising a rotary head or hub having clamping members, and a working tube of flexible material engaged at its inner end with said clamping members and surrounding an air space at one side of the head, its outer end being open and unobstructed.

2. An appliance of the character described comprising a rotary head or hub, an inner flexible tube secured to said head and extended therefrom, and an outer flexible working tube secured at one end to the head or hub and extended therefrom over the inner tube.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 30th day of July, A. D. 1895.

HAROLD A. WEBSTER.

Witnesses:

C. F. BROWN,

A. D. HARRISON.