

C. E. GRAHAM.

BUFFING DEVICE.

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1,048,957.

Patented Dec. 31, 1912.

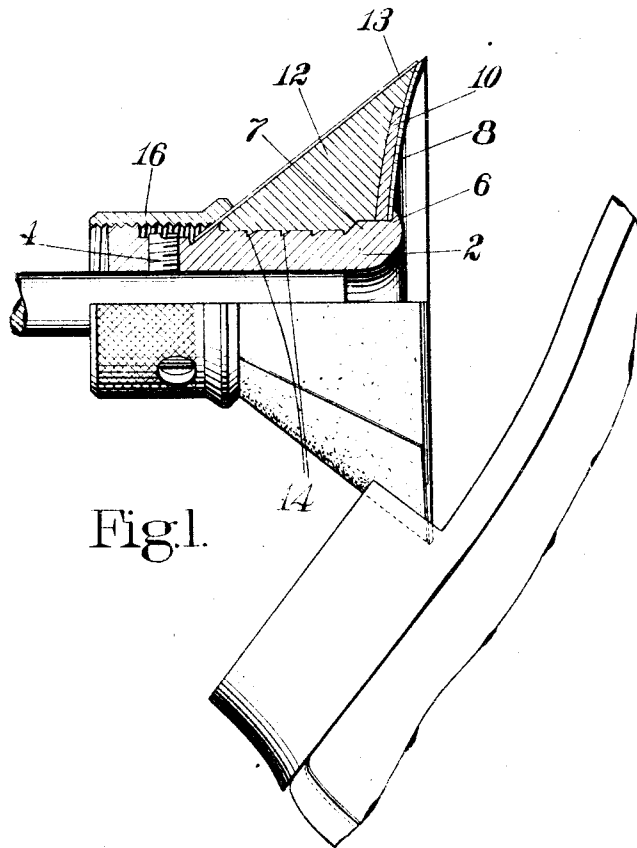


Fig. 1.

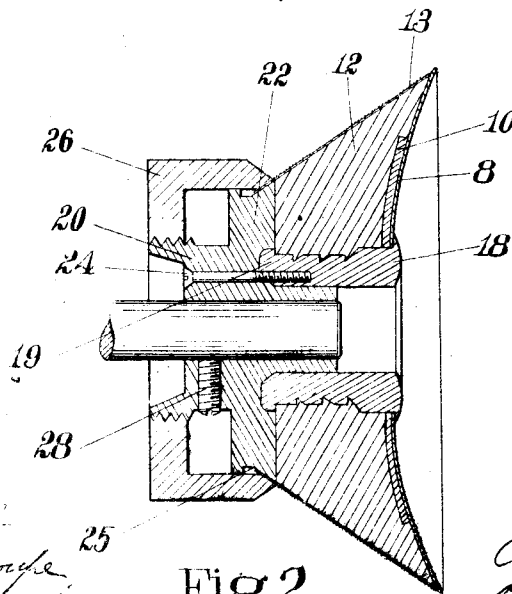


Fig. 2.

WITNESSES.

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BUFFING DEVICE.

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To all whom it may concern:

Be it known that I, CHARLES E. GRAHAM, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Buffing Devices, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to buffing devices and more particularly to devices adapted to polish the breast portion of the heel of a boot or shoe.

The object of the invention is to improve the construction of buffing devices of the above character.

To this end the present invention consists in the improved buffing devices hereinafter described and claimed.

Referring to the drawings.—Figure 1 is a side elevation partly in section of a buffing device embodying the present invention; Fig. 2 is a sectional view of an alternative construction embodying the present invention.

In the drawings, the present invention is shown embodied in two different forms of conical buffing wheels, such as are adapted to polish the breast portion of the heel of a shoe as indicated in Fig. 1 of the drawings. In the construction shown in Fig. 1 there is provided a supporting sleeve 2 which is adapted to be secured upon a shaft by means of a set screw 4. One end of the sleeve 2 is provided with an annular flange 6 and a portion of the sleeve adjacent the flange is of a diameter slightly greater than the remainder of the sleeve so as to provide a raised seat 7 upon which a circular disk 8 of flexible non-heat conducting material such as leatherboard is symmetrically arranged with its outer face in engagement with the flange 6. A metallic disk 10 of a diameter smaller than that of the disk 8 is driven upon the seat 7 so that it engages the inner face of the disk 8. By the provision of a raised seat such as 7 for the two disks the latter may be more readily moved along the sleeve into their proper positions and more readily removed from the sleeve than would otherwise be the case. The contacting faces of the two disks are preferably attached to each other as by being glued together. A conical cushion 12 of elastic material, such

as compressed felt, is secured upon the sleeve 2 and has its circular face secured to the metallic disk 10 and to a portion of the disk 8. According to a convenient way of assembling the parts the felt cushion may be forced upon the sleeve 2 and may be secured to the two disks and said sleeve by means of glue. To enable the glue to be properly applied to the contacting surfaces of the cushion and sleeve 2 the sleeve is provided with a plurality of annular grooves 14 which are adapted to receive glue applied to the circumference of said sleeve so that when the felt cushion is forced into place the glue will not be entirely scraped off from the circumference of the sleeve but will be sufficiently retained by the grooves to insure its even application to said circumference. The left-hand side of each of the grooves 14, viewing the device as in Fig. 1, is perpendicular to the sleeve and the right-hand side of each groove slants toward the flanged end of the sleeve. With this construction, as the felt cushion is forced into place those portions of it which come in contact with the grooves may slide along the inclined sides of the grooves so that liability of tearing the cushion is obviated. The perpendicular sides of the grooves assist in preventing displacement of the felt cushion in a direction away from the flanged end of the sleeve as will be readily understood from an inspection of Fig. 1. The conical cushion 12 is provided with a removable covering 13 of abrasive material such as sandpaper which is formed to fit around the conical periphery of the cushion.

The abrasive covering is secured upon the cushion by means of a cap 16 which is threaded upon one end of the sleeve 2 and is provided with a beveled inner edge adapted to clamp the abrasive covering in engagement with the cushion 12 when the cap is screwed sufficiently toward the cushion.

In Fig. 2 is shown an alternative construction embodying the present invention. The buffing device shown in this figure is provided with a supporting sleeve 18 upon which is secured a disk 8 of non-conducting material, a metallic disk 10 and a frusto-conical cushion 12 in a manner similar to that described in connection with the device shown in Fig. 1. In the construction shown in Fig. 2 the sleeve 18 is of a length slightly greater than the length of the cushion 12

and is provided with an annular flange 19 arranged to engage the smaller circular face of the cushion to assist in retaining the latter in place upon the sleeve. A hub 20 provided with an annular flange 22 arranged intermediate its ends is formed to fit within the sleeve 18 and is secured thereto by machine screws 24 (one only being shown upon the drawing) which extend through the hub into said sleeve. The flange 22 engages the end of smaller diameter of the conical cushion and an annular portion 25 of its circumference forms a continuation of the conical periphery of said cushion, as clearly shown in Fig. 2. In this construction, the covering 13 of abrasive material is secured in place by a cap 26 which is threaded upon the outer end of the hub 20 and provided with a beveled inner edge formed to clamp the abrasive covering in engagement with the annular portion 25 of the flange. The hub is adapted to be secured upon a suitable shaft by means of a set screw 28. As in this construction the hub 20 is removably secured to the conical cushion it will be seen that when the cushion wears out a new one may be readily substituted in place of the old.

By the provision of a metallic reinforcement for the end of larger diameter of the cushion sufficient strength is secured to enable the buffing device to withstand the rough usage to which devices of this character are commonly subjected and by terminating this reinforcement short of the periphery of the cushion sufficient elasticity is permitted the acting portion of the cushion to prevent excessive friction between the buffing device and the shoe such as would produce sufficient heat to injure the shoe. The flexible disk of non-heat conducting material serves to prevent the metallic reinforcement from engaging the shoe and also is of assistance in holding the acting portion of the cushion in place. Owing to the fact that this disk is formed of non-heat conducting material there is less liability of its edge burning the shank of the shoe than would be the case if the disk were formed of metal.

By the expression "conical cushion" as hereinafter employed in the claims it is intended to cover any cushion having a substantially conical shape, such as one having a frusto-conical shape.

Having described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:—

1. A heel breast scouring wheel, having in combination, a sleeve provided with a flange at one end, a disk of non-conducting material mounted on the sleeve in proximity to said flange, a metallic disk arranged on the sleeve in position to clamp the first-named disk in engagement with said flange, a conical cushion secured on the sleeve and having its larger end attached to said disks, a re-

movable cover of abrasive material for the cushion and means for clamping said cover in place.

2. A heel breast scouring wheel, having in combination, a supporting sleeve, a conical cushion secured thereon, a metallic disk of a diameter less than that of the circular end of the cushion arranged upon the sleeve having a face engaging the circular face of the cushion and a disk of non-conducting material secured to the outer face of said metallic disk and to said cushion.

3. A heel breast scouring wheel, having in combination, a central supporting member, a conical cushion of yielding elastic material mounted on said member, a disk of non-conducting material secured to the circular surface of the cushion, a metallic reinforcement secured on the supporting member and to a face of said disk, having its free edge terminating short of the periphery of the cushion, an abrasive cover for the cushion and means for holding said cover in position.

4. A heel breast scouring wheel, having in combination, a supporting sleeve, a conical cushion of yielding elastic material symmetrically mounted on said sleeve, a circular disk of non-conducting material attached to the cushion, a metallic reinforcement carried by said sleeve and arranged to reinforce the larger end of the cushion, an abrasive cover for the cushion, and means for holding said cover in position.

5. A heel breast scouring wheel having, in combination, a sleeve provided with a flange at one end, a disk of non-conducting material mounted on the sleeve in proximity to said flange, a disk of stiffer material than that of said first-named disk also mounted on the sleeve in proximity to said flange in position to support said first named disk, a conical cushion secured on the sleeve, a removable cover of abrasive material for the cushion, and means for clamping said cover in place.

6. A heel breast scouring device comprising a yielding cushion in the form of a frustum of a cone, an abrasive cover for the sides thereof, and a disk of non-conducting material secured to the larger end of the cushion and terminating at the junction of said end with the sides thereof.

7. A heel breast scouring device, in the form of a frustum of a cone having a concave base, comprising a disk of rigid material held against said base, the diameter of said disk being less than that of said base, a second disk of non-conducting material held against the outer face of said first disk and the exposed portion of said base, and an abrasive cover held against the lateral surface of said frustum.

8. A heel breast scouring wheel comprising a sleeve having a plurality of grooves in its periphery and a raised seat at its outer

end terminating in an annular flange, a disk of non-conducting material arranged at the outer end of said sleeve and having an aperture to fit said seat, a metallic disk also arranged at the outer end of said sleeve and having an aperture to fit said seat, a conical cushion of material more yielding than that of either of said disks, said cushion being adapted to be forced over said sleeve and to be held from longitudinal movement thereon by said grooves, an abrasive cover for the sides of said cushion, said cover terminating at the junction of the sides of said cushion with the larger end thereof, and means for holding said cover in place.

9. A heel breast scouring wheel comprising a sleeve having a seat at its outer end terminating in a flange, a disk of non-con-

ducting material mounted at the outer end of said sleeve, a metallic disk also mounted upon said sleeve at its outer end, said disks being in mutual contact and being pressed together against said flange, a conical cushion concave at its larger end secured to said sleeve, an abrasive cover for the sides of said cushion, said cover terminating at the junction of said sides with said concave end, and means for holding said cover in place.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES E. GRAHAM.

Witnesses:

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BERNARD BARROWS.