July 12, 1949. H. E. LONGLEY 2,475,972

PNEUMATIC BUFFING AND ABRADING HEAD

Filed June 27, 1947

Fig. 1.

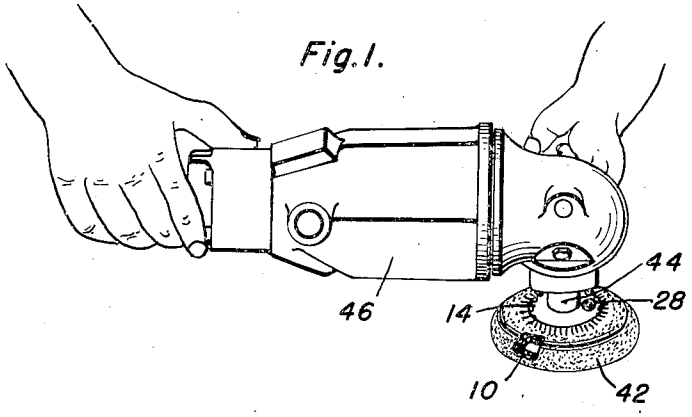
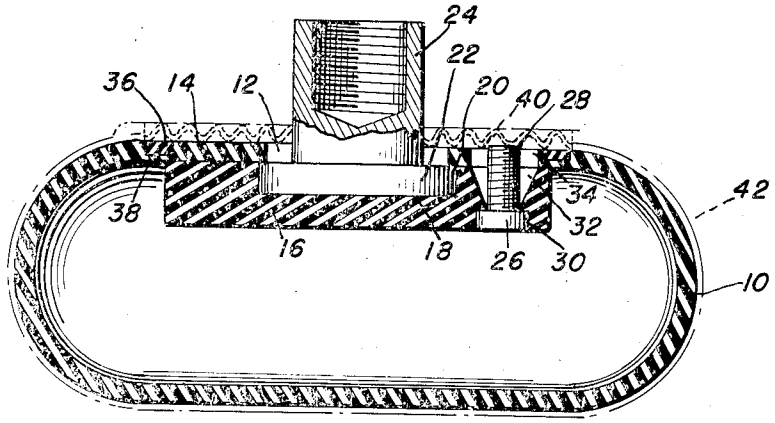


Fig. 3.



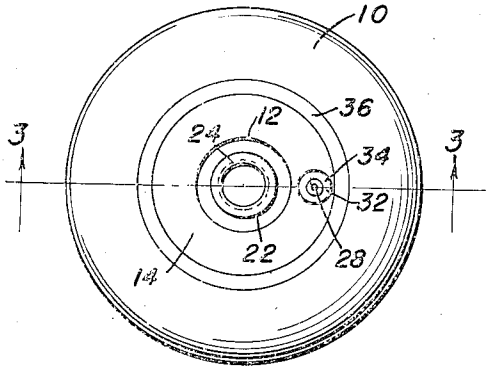


Fig. 2.

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PNEUMATIC BUFFING AND ABRADING HEAD

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Application June 27, 1947, Serial No. 757,465

3 Claims. (Cl. 51—196)

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This invention relates to new and useful improvements in buffing and abrading heads and more particularly to a buffing and abrading head for use with the specific abrading pad set forth in greater detail and claimed in my co-pending application, Serial No. 757,464, filed June 27, 1947.

The primary object of the present invention is to provide a sanding and abrading head particularly adapted for engagement with sanding or other surface treating pads in order to buff or abrade a concave or convex surface.

Another important object of the present invention is to provide a flexible pad receiving body, including a recessed valve for inflating the body against the inner wall of a dish-like sanding member.

A further object of the present invention is to provide a flexible body including a drive shaft receivably mounted on said body to permit an inclined rotary movement of the shaft with respect to the body.

A still further aim of the present invention is to provide a device of the character referred to which is simple and practical in construction, strong and reliable in use, relatively inexpensive to manufacture, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of the device in use, with parts broken away and shown in section;

Figure 2 is a top plan view of the present invention; and,

Figure 3 is an enlarged vertical sectional view taken on line 3—3 of Figure 2, and showing in dotted lines the sanding pad applied thereto.

Referring now to the drawings in detail, wherein for the purpose of illustration, there is disclosed a preferred embodiment of the present invention, the numeral 10 represents an annular body of flexible material, preferably rubber, provided with an annular opening 12 at its upper wall 14.

Vulcanized or suitably secured to the upper wall and supported solely by and underlying the upper wall, is a hub portion 16, preferably of rubber, and provided with an enlarged annular recess 18.

Embedded in recess 18 and bearing against and underneath an annular shoulder 20 at the

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upper wall of the body, is the flanged portion 22 of an internally threaded drive shaft receiving sleeve 24. Opening 12 provides a clearance between the sleeve and the upper wall of the body to permit an inclined movement of the sleeve with respect to the body.

The flanged portion 26 of the valve 28 is embedded in a recess 30, in the hub and communicates with a flared recess 32 in the hub opposing an aperture 34 in the upper wall, to provide means for attachment of a pump hose coupling (not shown) to the valve.

A rim or ring 36 is vulcanized in a recess 38 provided in the upper wall and acts as a reinforcing element for the body, as well as an alignment means for the undulating ring portion 44 of a dish-like sanding pad 42.

In practical use of the device, the body 10 is inserted into a sanding or abrading pad 42 and inflated thereby resiliently and yieldingly retaining the pad. The drive shaft 44 of a sanding machine 46 is receivably engaged in sleeve 24 for rotation of the body and pad by the shaft so that the pad may sand or buff concaved surfaces as well as convex or flat surfaces. The device thus described, is particularly useful in sanding or buffing vehicle bodies and the like which have contours otherwise difficult to reach by ordinary flat sanding pads.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the construction, operation and advantages of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. The combination of a buffing head comprising an annular flexible body, a hub portion supported solely by the upper wall of said body, a drive shaft receiving member recessed in said hub portion, valved means recessed in said hub portion and communicating with said body interior, an annular reinforcing and retaining rim carried by said body upon its upper wall, and including a rim gripping portion, wherein said hub portion and reinforcing and retaining rim are of rubber material and vulcanized together.

2. The combination of a buffing head comprising an annular flexible body, a hub portion supported solely by the upper wall of said body, a drive shaft receiving member recessed in said hub portion, valved means recessed in said hub portion and communicating with said body interior, an annular reinforcing and retaining rim carried by said body upon its upper wall, and including a rim gripping portion, wherein said drive shaft receiving member is embedded in said hub portion.

3. A sanding and buffing head comprising an annular body of rubber material, a hub portion of rubber material vulcanized upon the upper wall of said body, a drive shaft engaging member embedded in said hub portion, valved means recessed in said hub portion communicating with said body interior, and an annular retaining and reinforcing rim carried by said body for engaging a sanding pad.

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