Nov. 1, 1932. J. E. S. TAYLOR 1,886,136

POLISHER

Filed Sept. 22, 1930

Fig. 2.

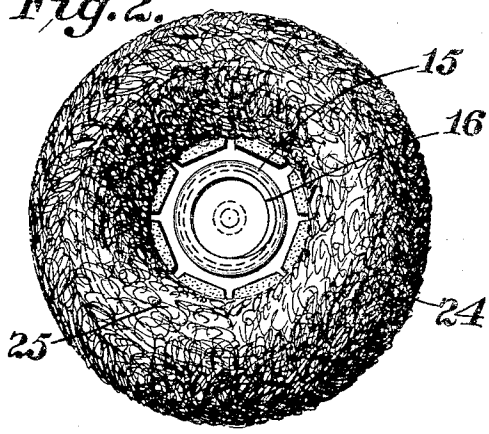


Fig. 5.

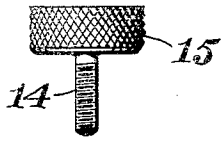


Fig. 6.

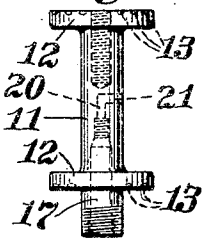


Fig. 1.

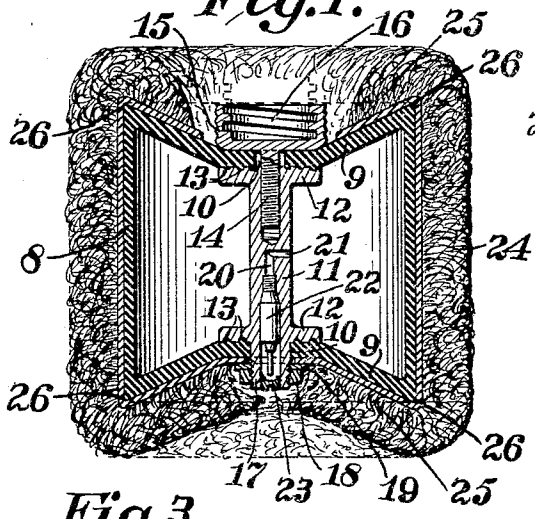


Fig. 4.

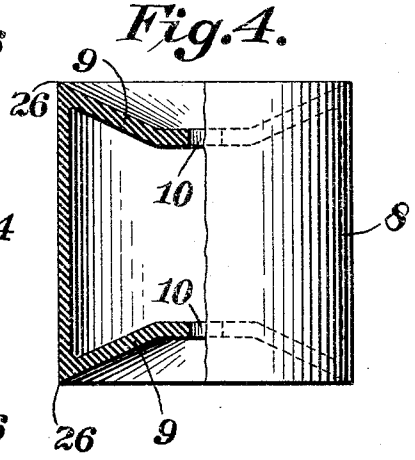


Fig. 3.

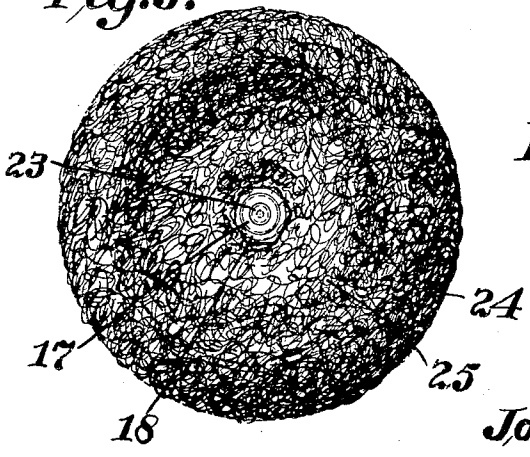
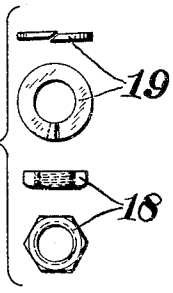


Fig. 7.



Inventor:

John E. S. Taylor,

By [signature] Atty.

Patented Nov. 1, 1932 1,886,136

UNITED STATES PATENT OFFICE

JOHN E. S. TAYLOR, OF ALEXANDRIA, VIRGINIA, ASSIGNOR TO UNIVERSAL POWER TOOL COMPANY, INC., OF BALTIMORE, MARYLAND, A CORPORATION OF VIRGINIA

POLISHER

Application filed September 22, 1930. Serial No. 483,682.

The object of the present invention is to provide a brush or polishing member intended to be rotatably driven and having a form and structure that will permit it to follow practically any contour, enter corners, grooves and the like, and effectively treat the surfaces thereof.

A further object is to provide a polisher which upon application and proper pressure will adapt itself to contours of various characters and readily alter its configuration to any change of formation to which it is applied.

An embodiment of the invention that is at present considered the preferable one, is shown in the accompanying drawing, wherein:—

Figure 1 is a longitudinal sectional view through the polisher or brush.

Figure 2 is a view in elevation of one end of the same.

Figure 3 is a corresponding view of the opposite end.

Figure 4 is a view partly in elevation and partly in section of the polisher body.

Figure 5 is a side elevation of the holding screw and driving connection nipple.

Figure 6 is a view in elevation of the core.

Figure 7 is a detail view in side and plan views of the holding nut and lock washer for the outer end of the core.

In the embodiment disclosed, the brush or polisher is intended to be rotatably driven and may be mounted on any suitable driving device, such as a flexible shaft or the like (not shown).

A body is employed that is formed of elastic material, preferably rubber. This body consists of a cylindrical elastic side wall 8 and end walls 9, also of elastic material, and preferably integral with the side wall 8. The end walls 9 are in the form of inwardly dished disks having central openings 10. The central portions of the end walls are fixedly connected and therefore held in fixed relation by a core. This core consists of a spool body comprising a central shank 11 and flanges 12, the shank extending between the end walls and the flanges bearing against the central portions thereof. Preferably said flanges have their outer faces roughened as illustrated at 13 to prevent any movement of the end walls with respect thereto. One end of this core is secured by a screw 14 threaded thereinto and having a head 15 that bears against the central portion of the outer face of one of the end walls. This head is socketed and provided with internal threads 16, by means of which it can be coupled to a driving member, such as a flexible or other shaft. The core at the other end has a stem 17 that projects beyond the adjacent flange 12 and passes through the central opening 10 of the adjacent end wall. On its outer end is threaded a holding nut 18 preferably overlying a suitable lock washer 19.

The elastic body can be inflated and to this end the portion of the stem opposite to that having the screw 14 is provided with an inlet passageway 20 terminating in a port 21 that opens into the interior of the body. An ordinary inflation valve 22 is located in the passageway. As these valves are well-known, it is believed unnecessary to detail the same. The outer end of the passageway 20 opens through the end of the stem 17 and may be closed by a suitable plug 23.

The body may be used for polishing purposes without any additional matter, but generally it is covered by a jacket of polishing material, designated 24. This may be sheep-skin, the jacket being made in tubular form so as to completely enclose the side wall 8 and having end portions 25 extending over the end walls 9.

Because of the peculiar formation of the body it will be noted that at the juncture of the end walls 9 and side wall 8, annular outstanding corners or edges 26 are formed which are enclosed by the jacket.

In using this device it is mounted on a suitable member that will rotate it and is pressed against the surface to be cleaned or polished. The body is inflated to any degree desirable but in any event is readily misshaped when pressed against the surface. As a consequence it will be found to conform to any irregular surface or to one that is concave or convex. Moreover by reason of the edges or corners 26, the polisher will en-

ter grooves, corners and the like and these edges may be deformed when pressed against the surface, so that practically any form of face can be treated.

While it is particularly utilizable for cleaning and polishing purposes, it will be evident that by properly surfacing it it may be used for grinding or dressing off rough and uneven objects of various forms.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art without further description and it will be understood that various changes in the size, shape, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

What I claim, is:

1. A polishing device of the character set forth, comprising a cylindrical body having a tubular side wall and end walls of flexible material, at least one of the end walls being inwardly dished and having a juncture with the side wall that provides a yielding substantially sharp outer peripheral meeting edge, the end wall being dished inwardly from said edge so that the said edge constitutes the furthest extended end portion of the body.

2. A polishing device of the character set forth, comprising a cylindrical body having a tubular side wall and end walls of flexible material, at least one of the end walls being inwardly dished, an axial core extending between and through the end walls, outstanding clamping devices on the core that engage the inner and outer faces of the central portions of the end walls and are relatively adjustable longitudinally of the core to bind upon said end walls, and means on one of said clamping devices and independent of the core for engagement with a rotating means.

3. A polishing device comprising a tubular body having inwardly dished end walls providing relatively sharp circular outstanding edges at the juncture of the end walls with the ends of the body, a central core extending across the space between the end walls and having outstanding annular flanges on the inner sides of the end walls, outstanding clamping devices mounted on the end portions of the core and engaged with the outer sides of the end walls, and means on one of the clamping devices outside the end of the body clamped thereby and independent of the core for engagement with means for rotating the polishing device.

In testimony whereof, I affix my signature.

JOHN E. S. TAYLOR.