

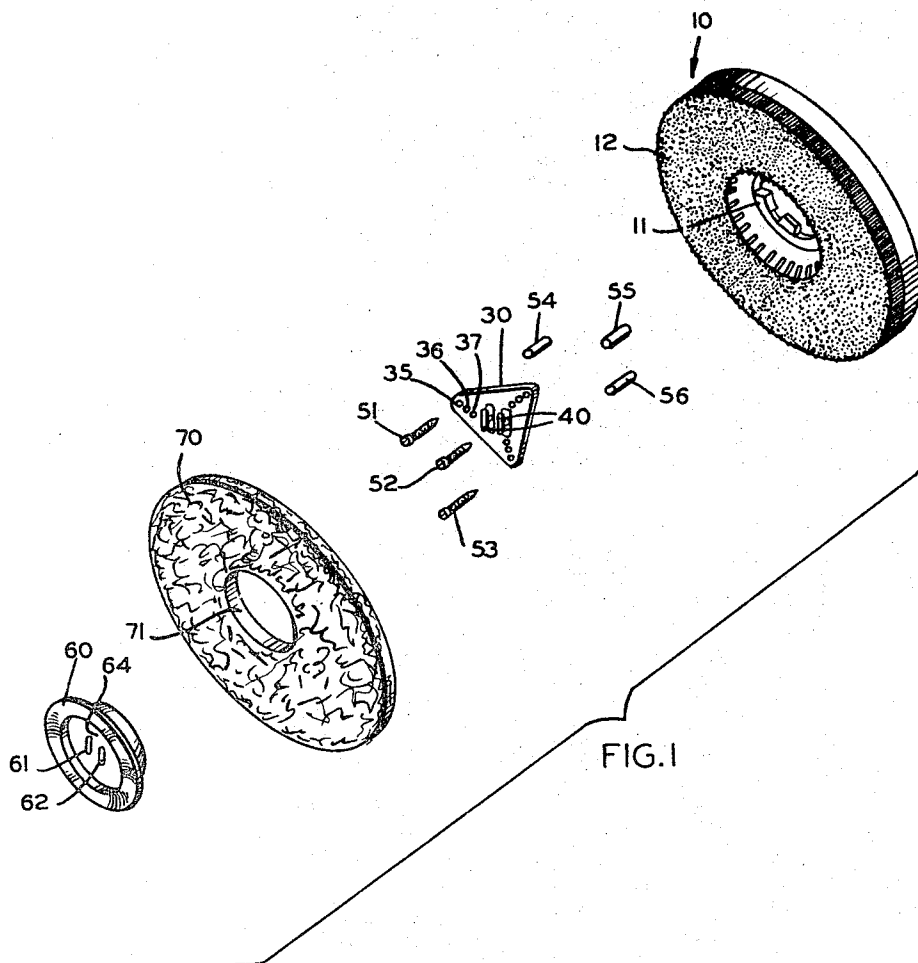
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J. J. BALLATO ET AL
PAD HOLDERS

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2 Sheets-Sheet 1



JOSEPH J. BALLATO
RALPH J. COLANGIONE
WILLIAM STETZ
INVENTORS

BY
Rufus M. Franklin
ATTORNEY

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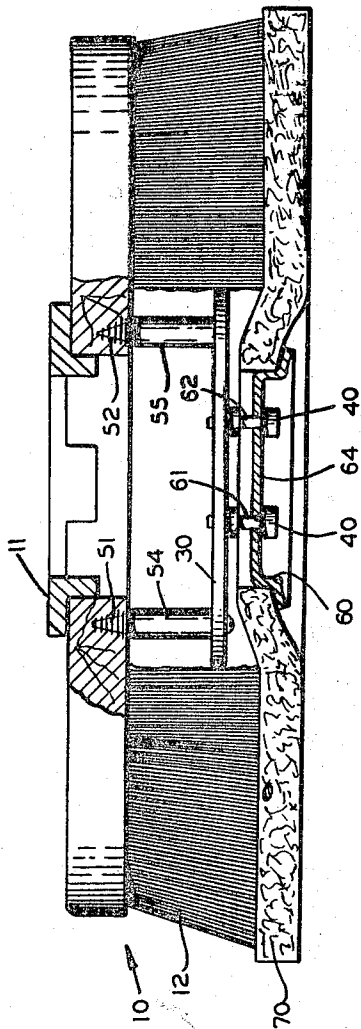


FIG. 2

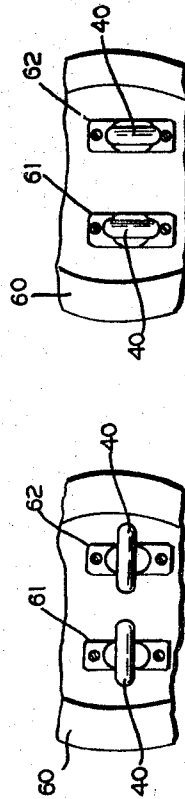


FIG. 3

FIG. 4

JOSEPH J. BALLATO
RALPH J. COLANGIONE
WILLIAM STETZ
INVENTORS

BY

Barbara M. Franklin

ATTORNEY

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PAD HOLDERS

Joseph J. Ballato, Menands, Ralph J. Colangione, Troy, and William Stetz, Watervliet, N.Y., assignors to Norton Company, Troy, N.Y., a corporation of Massachusetts

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This invention relates to a means to adapt fibrous floor polishing, scrubbing, and buffing pads for use with conventional floor maintenance machines.

Recently there have been developed a variety of fibrous pads with or without the inclusion of abrasive particles for scrubbing, polishing or buffing tile, wood, or terrazzo floors. These pads are made in the form of discs of various diameters suitable for use with the various floor maintenance machines now in use. One method of using these pads has been to merely center them under the circular bristle brush of the floor finishing machine and depend on the engagement of the bristles to drive the pads. This method is satisfactory in its result but is subject to the objection that the pad must be initially centered under the brush and will drop off the brush whenever the brush is lifted or tilted away from the floor. It is therefore desirable that a method be found for semi-permanently attaching the pad to the brush and at the same time permitting easy removal and replacement of the pad for cleaning or for changing the type of pad being used.

It is therefore an object of our invention to provide an adaptor for attaching and holding fibrous discs to floor maintenance machines, utilizing conventional bristle brushes as part of the holding means.

Other objects not specifically stated will be apparent from the following description of our invention.

In the drawings:

FIGURE 1 is an exploded view of the holding device with a fibrous pad shown in position.

FIGURE 2 is a cross-sectional view of the holder of FIGURE 1 with a pad attached.

FIGURE 3 is a fragmentary top view of a portion of the device of FIGURES 1 and 2.

FIGURE 4 is a view similar to FIGURE 3, but with the parts in position for disassembly.

Referring now to FIGURE 1, 10 is a conventional brush adapted to be mounted for rotation on a standard floor buffing machine. Numeral 11 refers to a metal adaptor plate mounted in the wooden backing of brush 10 for attachment of the brush to the drive mechanism (not shown) of the floor buffing machine. Fibrous pad 70 is held in place over the bristles 12 of the brush by dish-shaped lock plate 60 having a central depression 64 which is removably held on fastener plate 30 by means of turnbuttons 40. Turnbuttons 40 are rotatable members which in one position can be fitted through elongated slots 61 and 62 in lock plate 60 and when rotated 90° positively hold lock plate 60 from removal.

Fastener plate 30 is permanently attached to the base of brush 10 by screws 51, 52 and 53, each of which is provided with one or more shims 54, 55 and 56 to space the plate 60 the desired distance from the base of the brush.

In operation of the device, with lock plate 60 removed a fibrous pad 70 is placed over the brush 10 and the depressed center of lock plate 60 is inserted in the center hole 71 of the pad, the slots 61 and 62 being positioned in registry with the turnbuttons 40. The turnbuttons 40 are then rotated 90° to lock the plate and pad in position. To remove the fibrous pad all that is necessary is to rotate the turnbuttons 40 to register with the slots 61 and 62 and lift it from the assembly.

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The adaptor of the present invention is of such a nature that it can fit a wide variety of sizes of pre-existing brushes and thus can be used to adapt any older equipment for use of the new fibrous pads. Thus, even a worn brush may be employed to drive the pad, the spacer shims between the fastener plate 30 and the base of brush 10 being so chosen as to give the desired distance between the outer ends of the bristles and the fastener plate. This distance should roughly approximate the thickness of the fibrous pad.

The fastener plate 30, in order to be adaptable to a wide variety of pre-existing equipment is also provided at each corner with a plurality of drilled holes 35, 36, 37 for screws 51, 52, 53. The plate can thus be adapted to brushes having various diameter center holes.

The relation between the depth of the recess 64 in the lock plate 60 and the distance the turnbuttons project outwardly should be such that the turnbuttons do not project past the lip of plate 61. Thus under no circumstances can the turnbuttons contact the floor surface. Although the lock plate itself will not contact the surface being polished in ordinary circumstances, it is formed of a smooth plastic material which will not damage or mar such surfaces in case of accidental contact with the floor.

The triangular shape of fastener plate 60 is desirable in that, as is the practice with some floor maintenance machines now in use, water or water and detergent may be introduced from the machine through the center hole of the brush 10 without being blocked unduly by the plate. Obviously, however, other shapes than triangular may be employed, or plates having apertures may be employed.

Although we illustrate the use of three screws to hold the fastener plate to the brush, obviously more or even fewer screws may be employed if desired. Similarly, although a minimum of two turnbuttons is preferred on the fastener plate, more may be employed if desired where the unit is particularly large.

FIGURE 2 shows the complete unit in assembled condition with a fibrous pad 70 held in driving relation against the bristles 12 by locking plate 60. As is more clearly shown in FIGURE 2, the outer flange of locking plate 60 instead of extending in a plane perpendicular to the axis of the plate 60, slopes downwardly at a slight angle to avoid unnecessary wear on the fibrous pad.

In FIGURE 3 the turnbuttons 40 are shown in the proper position for use, while in FIGURE 4 they are shown in position for removal of locking plate 60.

We claim:

1. An adaptor for operatively attaching a fibrous pad of annular disc form to an annular disc shaped brush having bristles on one face thereof and a base having means to operatively attach said brush to a floor finishing machine, said adaptor comprising a substantially triangular fastener plate adapted to be rigidly mounted centrally of the brush on the same side as said bristles for rotation therewith, and positioned a distance from said base less than the length of said bristles, a dish shaped locking plate adapted to be mounted on said fastener plate and cooperating means on said locking plate and fastener plate to removably attach said locking plate to said fastener plate.

2. An adaptor as in claim 1 wherein said fastener plate is provided with a screw at each corner of the triangle for attaching said plate to said brush base and shims for spacing said plate from said base.

3. An adaptor as in claim 2 wherein said fastener plate is provided with a plurality of apertures at each corner thereof.

4. An adaptor as in claim 1 wherein the locking plate is formed of molded plastic.

5. An adaptor as in claim 1 wherein said locking plate is provided with a plurality of elongated slots and said fastener plate is provided with a plurality of rotatable elongated locking members adapted to fit said elongated slots.

References Cited in the file of this patent**UNITED STATES PATENTS**

1,360,292 Hartman Nov. 30, 1920

FOREIGN PATENTS

494,536 Italy May 26, 1954

531,058 Great Britain Dec. 27, 1940