

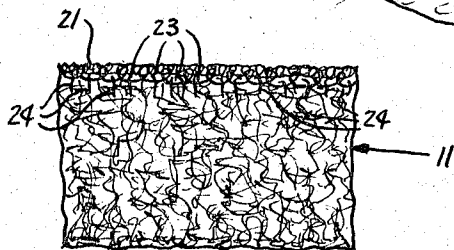
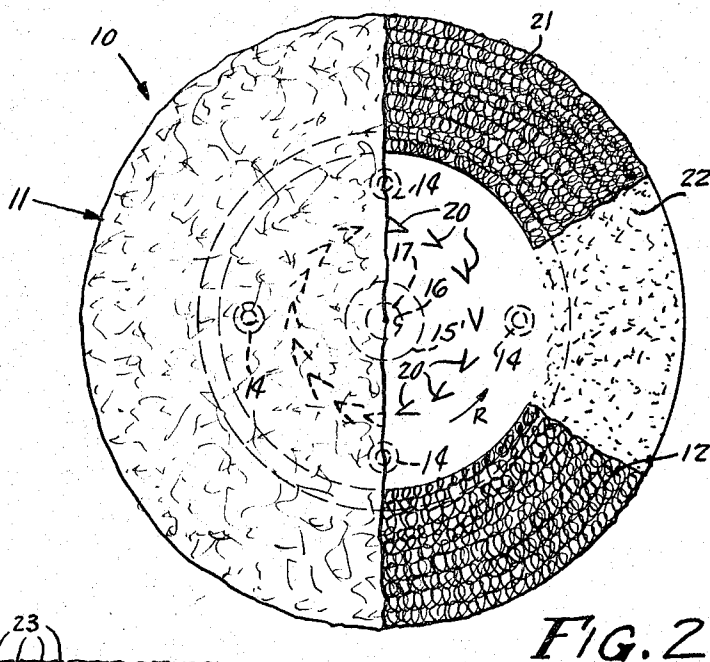
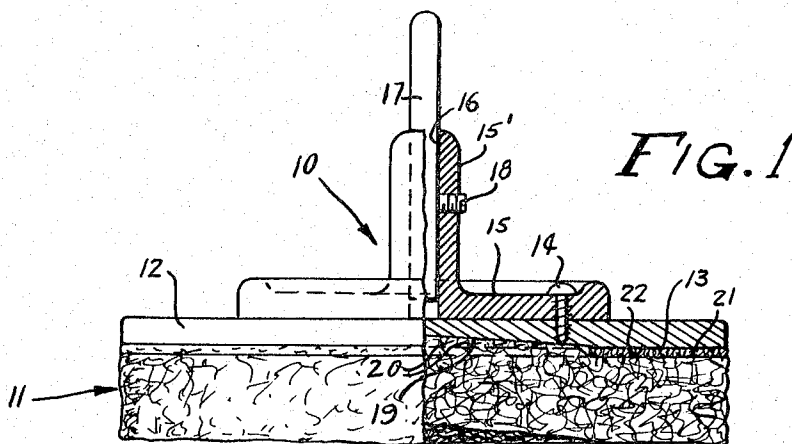
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3,302,232

DRIVING ARBOR FOR FLOOR PADS OR THE LIKE

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3,302,232
**DRIVING ARBOR FOR FLOOR PADS
OR THE LIKE**

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2 Claims. (Cl. 15—230.17)

This invention relates to a driving arbor for floor pads or the like, and has as its primary object the provision of an improved quick detachable means for firmly securing a floor pad to a driving arbor for such operations as polishing, scrubbing, stripping, burnishing, buffing or the like.

An additional object of the invention is the provision of an arbor provided with means on its face whereby a floor pad of the type consisting preferably of non-woven randomly positioned fibrous material may be pressed on the face of the arbor and secured thereto merely by the engagement of the fibers of the pad with the material of the arbor face.

An additional object of the invention is the provision of a means for attachment including auxiliary prongs engaging the material of the pad, wherein the prongs are positioned in a concavity so that in the event of dislodgment or wearthrough of the pad, the pointed prongs will not damage the surface being worked upon.

A further and more specific object of the invention is the provision of means for attaching a specific type of pad, to be hereinafter described to a tool arbor by means of a specific type of material which covers all or a part of the face of the arbor.

Still other objects reside in the combinations of elements, arrangements of parts, and features of construction, all as will be more fully pointed out hereinafter, and disclosed in the accompanying drawing wherein there is shown a preferred embodiment of this inventive concept.

In the drawing:

FIGURE 1 is a side view partially in elevation, and partially in section, disclosing a driving arbor and a pad attached thereto.

FIGURE 2 is a bottom plan view partially in elevation and partially in section of the arbor and pad of FIGURE 1.

FIGURE 3 is an enlarged sectional view showing the material of the pad interengaging with the material of the face of the arbor.

Similar reference characters refer to similar parts throughout the several views of the drawing.

Having reference now to the drawings in detail, the arbor of the instant invention is generally indicated at 10 and is shown as attached to a floor pad generally indicated at 11. The arbor 10 includes a body 12 which in the illustrative embodiment herein shown takes the form of a disc having a flat peripheral rim portion 13. The disc has attached thereto as by screws 14 a hub 15 which includes a central boss 15' having a bore 16 therein in which is positioned a stem 17 secured by a set screw 18. The stem 17 may be of any conventional type and is adapted for attachment to any suitable rotary polishing device. While the body is herein described as circular, it will be obvious that if desired it may take other forms, and the attaching means may be adapted for attachment to a reciprocating or other type mechanism.

The body 12 is provided with a central concaved portion 19, in which are position a series of pointed prongs 20. In the illustrative embodiment herein shown the prongs are in the form of a circle as best shown in FIGURE 2, and are inclined so that their points extend in a direction opposite the normal direction of rotation of

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the arbor, which is indicated by the arrow R in FIGURE 2.

A circular band of securing material 21 is secured to flat face 13 in any desired manner as by adhesive 22, and the character of the band constitutes an important element of the instant invention. The band is preferably comprised of a velvet type fabric which is formed by weaving together a plurality of weft and warp threads together with a plurality of auxiliary warp threads, preferably of synthetic resin material, and so arranged as to form loops which are caused by pretreatment to retain their shape to form raised pile threads, which form material engaging loops. This material is disclosed in Patent No. 2,717,437, wherein corresponding interengaging pieces of material are shown. However, one surface of this material constituting a looped portion thereof and having a series of loops 21, as disclosed in FIGURE 3 has been found particularly suitable for engagement with a polishing pad, particularly of that type which includes a non-woven three-dimensional web of flexible tough synthetic fibers in superposed random relation and secured together by a bonding adhesive. Such a material is disclosed in patent No. 3,016,294. The ends of the short thick random fibers 24 interengage with the loops 21 so that a relatively secure adherence is obtained between the material 21 and the material of the pad 11.

Such engagement is assured further by the engagement of the pointed prongs 20 with the center of the pad, and the arrangement of the points of the prongs in a direction opposite to that of the normal rotation of the disc ensures a firm securement of the pad to the arbor.

It is to be understood that if desired the central concavity and its associated prongs may be omitted, and the entire securing of the pad be obtained by a surface covering sheet 21 formed as above described, which engages the whole surface of the pad. It is similarly to be understood that while a specific shape arbor and pad has been herein described, that the arbor may be of any other convenient shape, such as cylindrical or rectangular, when used with another form of rotary tool or a reciprocating tool or the like, and that when employed with any type of pad having random projecting fibrous material will afford a secure and adequate connection in the absence of any other securing means whatsoever.

From the foregoing it will now be seen that there is herein provided an improved arbor for polishing pads or the like and an improved means of connecting a pad to an arbor, which accomplishes all the objects of this invention, and others, including many advantages of great practical unity and commercial importance.

As many embodiments may be made of this inventive concept, and as many modifications may be made in the embodiment herein before shown and described, it is to be understood that all matter hereinbefore shown and described is to be interpreted merely as illustrative, and not in a limiting sense.

We claim:

1. A driving arbor for abrasive polishing pads of non-woven randomly positioned fibrous material comprising a body having a face surface and a sheet of velvet type fabric including auxiliary warp threads formed in raised loops secured to said face surface, the loops being adapted to be engaged by the ends of the randomly positioned fibrous material to secure the pad to the arbor, said body comprising a disc with said fabric forming a peripheral band about the face of the disc, the center of said disc being concaved and auxiliary securing means for the pad comprising pointed prongs in the concavity having points wholly contained within said concavity to prevent damage to a surface over which the pad is passed.

2. The structure of claim 1 wherein said prongs are

arranged in a circle and inclined relative to the face of the disc in a direction opposite the direction of rotation thereof.

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