May 17, 1955 D. C. GAYDOS 2,708,281

POLISHING DEVICE

Filed May 7, 1953

FIG. 1.

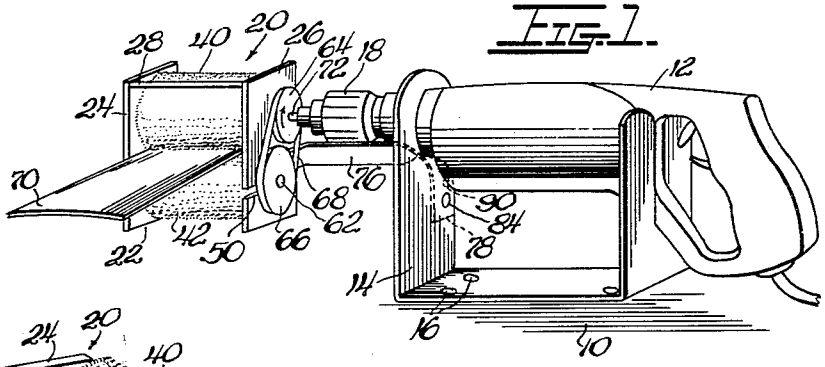


FIG. 2.

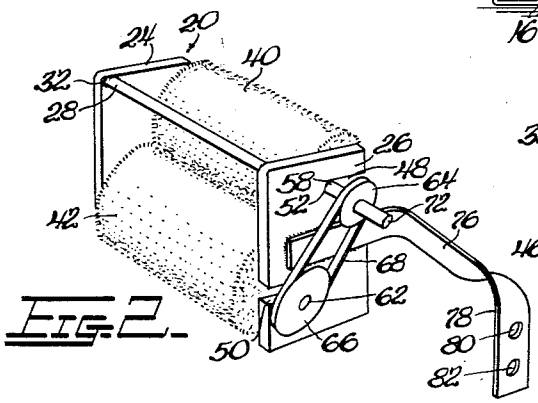


FIG. 3.

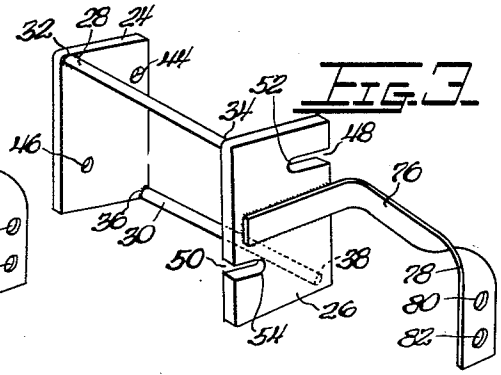


FIG. 4.

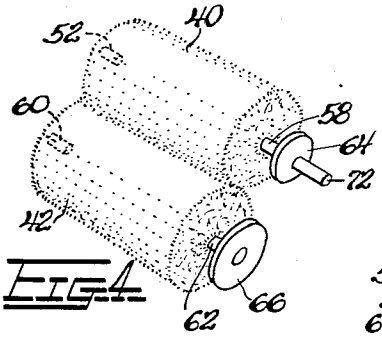


FIG. 5.

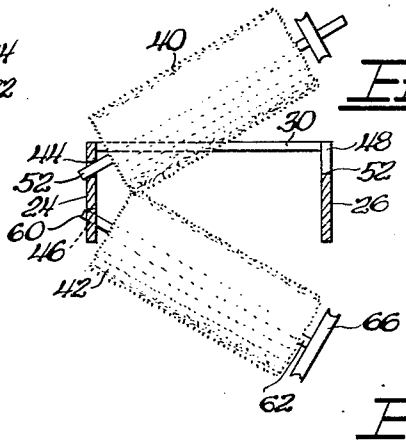


FIG. 7.

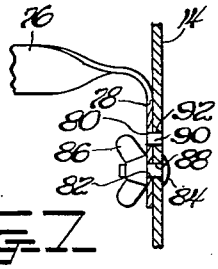
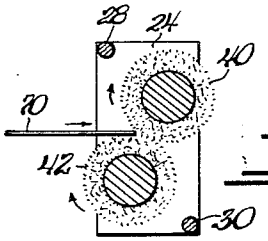


FIG. 6.



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POLISHING DEVICE

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4 Claims. (Cl. 15—102)

This invention relates to a polishing device and more particularly to such device as provided in the form of an attachment connectible to and powered by a small portable electric tool, such as the conventional electric drill. Still more particularly, the invention aims to provide a simple and economical tool especially useful in the care and maintenance of Venetian blinds, primarily by enabling easy and rapid waxing and polishing of the individual slats of such blinds.

The invention has for an important object the provision of a simple mounting frame in which are removably journaled a pair of rolls, which rolls may be replaced by another pair of similar rolls so that one pair may be used for the application of wax, for example, and the other pair for buffing or polishing. It is a further object of the invention to provide the frame with mounting means for effecting the attachment thereof to a suitable support so that the user has both hands free to handle the blind slats. Still further, one of the rolls has an input shaft receivable in the chuck of a portable electrically powered tool. A conventional electric drill makes a suitable source of power, especially when mounted in a typical bench stand, because the frame-mounting means may then be affixed to the bench stand and the entire assembly becomes substantially a convenient and efficient unit.

The foregoing and other imporant objects and desirable features inherent in and encompassed by the invention will become apparent as the disclosure of a preferred embodiment of the invention progresses in the following detailed description and accompanying drawings, wherein:

Figure 1 is a perspective view of the device as used with an electric drill and bench stand.

Figure 2 is a perspective view, on a slightly enlarged scale, of the attachment per se.

Figure 3 is a perspective view, on the scale of Figure 2, of the supporting frame.

Figure 4 is a perspective view, on the scale of Figures 2 and 3, of the removed rolls.

Figure 5 is a fragmentary sectional view illustrating the removal and replacement of the rolls.

Figure 6 is a section on the line 6—6 of Figure 2.

Figure 7 is a fragmentary section showing the attaching means.

In Figure 1, the numeral 10 represents the top of a table, work bench, etc. on which an electrically powered tool, such as a conventional electric drill 12, is mounted by means of a conventional bench stand 14. Screws 16 are shown for affixing the stand 14 to the table 10. The drill 12 has a chuck 18 of usual design.

The polishing device or attachment is designated in its entirety by the numeral 20, and comprises a mounting or supporting frame 22 having first and second upright legs or end members 24 and 26. Each member 24, 26 is of rectangular shape and the members are rigidly interconnected in spaced relation by upper and lower rigid connecting elements or rods 28 and 30. The rod 28 extends between and is preferably welded at its opposite ends at 32 and 34 respectively to alined upper corners of the

end members 24 and 26. The lower rod extends between and is welded at its opposite ends at 36 and 38 respectively to alined lower corners diagonally opposite the alined upper corners. This design produces an open construction enabling easy mounting and removal of upper and lower polishing, buffing or waxing rolls 40 and 42, preferably of lamb's wool.

The end member 24 has a pair of bearing means afforded by upper and lower shaft-receiving openings 44 and 46. A pair of bearing means is established in the other or second end member 26 by upper and lower shaft-receiving slots 48 and 50. The inner portions of these slots, as at 52 and 54, are respectively coaxial with the openings 44 and 46, and the openings and slot portions respectively receive first and second coaxial shaft portions 56 and 58 on the upper roll 40 and first and second shaft portions 60 and 62 on the lower roll 42. A sheave 64 is fixed to the upper second shaft portion 58 and is axially spaced from the proximate end of the roll 40 (Figure 5). A somewhat larger sheave 66 is fixed to the lower roll second shaft portion 62 and is similarly axially spaced so that the sheaves are coplanar to have trained thereabout an endless driving belt 68. The length of each roll 40, 42 is such that it lies between the end members 24 and 26, and the coaxial spacing of each sheave relative to its roll end places it outside the second end member 26. The belt 68 is accordingly outside the second end member, leaving the interior of the structure free to pass Venetian blind slats between the rolls, one such blind slat being shown at 70 in Figures 1 and 6.

The upper and lower openings 44 and 46, as well as the inner portions 52 and 54 of the upper and lower slots 48 and 50, are laterally offset, as illustrated, and, since the rolls 40 and 42 are of the same diameter, the surface of the lower roll will be offset relative to the upper roll to provide what may be termed a shoulder (Figure 6) for facilitating the entry of the slat 70 between the rolls.

As best shown in Figure 3, the slots 48 and 50 open in laterally opposite directions. The upper roll is installed from one side, as shown in Figure 5, and installation of the lower roll will be from the opposite side, as also appears in Figure 5. When the rolls are parallel, the sheaves 64 and 66 will be coplanar and the belt 68 is trained thereabout. The belt is of such initial size, material (viz., leather, rubber, etc.) and tension as to fit the sheaves snugly, thus holding the rolls against lateral displacement and accordingly confining the shaft portions 58 and 62 against escape from the slots 48 and 50. When it is desired to remove the rolls, the belt or band 66 may be readily removed and the rolls slipped out as suggested in Figure 5. The necessity or desirability for removal of the rolls may arise because of the use of one pair of rolls for wax or polish application and the substitution of similar rolls for buffing and polishing. Thus an entire set or series of blind slats may be waxed, for example, and then the rolls can be changed and the set or series can be buffed or polished.

The upper second shaft portion has a coaxial terminal end part 72 that projects beyond the sheave 64 to provide an input element receivable and driven by the drill chuck 18.

The device 20 has means for fixing it in position relative to its source of input power—here the drill 12. For this purpose, the end member 26 has rigidly affixed thereto, as by welding at 74, one end of a support arm or mounting element 76, the other end of which is bent down at 78 and apertured at 80 and 82. Securing means, such as a bolt 84 and wing nut 86, may be passed through the aperture 82 and through an alined aperture 88 in the upright front leg of the bench stand 14 (Figure 7). Additional mounting or securing means may be used, employing the aperture 80. For example, as shown, a pin 90

may fit the aperture **80** and an alined second aperture **92** in the bench stand **14**.

The characteristics of use, operation and maintenance of the attachment will appear, without further elaboration, from the foregoing description of its structural and design features. Other features and advantages will readily occur to those skilled in the art, as will various modifications and alterations of the preferred embodiment of the invention disclosed, all of which may be achieved without departing from the spirit and scope of the invention.

What is claimed is:

1. A polishing device of the character described, comprising: a frame having first and second spaced apart upright end members, said first end member having vertically spaced upper and lower shaft-receiving openings and said second end member having upper and lower shaft-receiving slots, said slots opening laterally outwardly respectively in opposite directions and having inner portions respectively coaxial with the aforesaid upper and lower shaft-receiving openings; upper and lower polishing rolls, each of a length receivable between the first and second end members of the frame and each having first and second axially projecting shaft portions respectively receivable by and journaled in the upper and lower shaft-receiving openings and in the inner portions of the upper and lower shaft-receiving slots; upper and lower sheaves respectively coaxial with and fixed to the upper and lower second shaft portions, each sheave being axially spaced from the proximate end of its associated roll so as to lie axially outwardly of the second end member of the frame; and an endless driving belt removably trained about the sheaves, said belt being of such size as to fit the sheaves sufficiently snugly to retain the rolls against lateral displacement so as to retain the second shaft portions against escape from the shaft-receiving slots.

2. The invention defined in claim 1, in which: one of the second shaft portions projects axially beyond its sheave to provide an input element attachable to a source of power.

3. The invention defined in claim 1, in which: a mounting member is rigidly fixed to one of the end members of the frame and has means thereon for attachment to a support.

4. The invention defined in claim 1, in which: the shaft-receiving openings are laterally offset and the inner portions of the shaft-receiving slots are correspondingly laterally offset to offset the axes of rotation of the rolls, said rolls being of the same diameter and said offset enabling the surface of the lower roll to project laterally beyond that of the upper roll for facilitating feeding of articles to the rolls.

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