

Nov. 13, 1956

O. B. SUTTON
WAX APPLICATORS

2,769,994

Filed Jan. 5, 1954

3 Sheets-Sheet 1

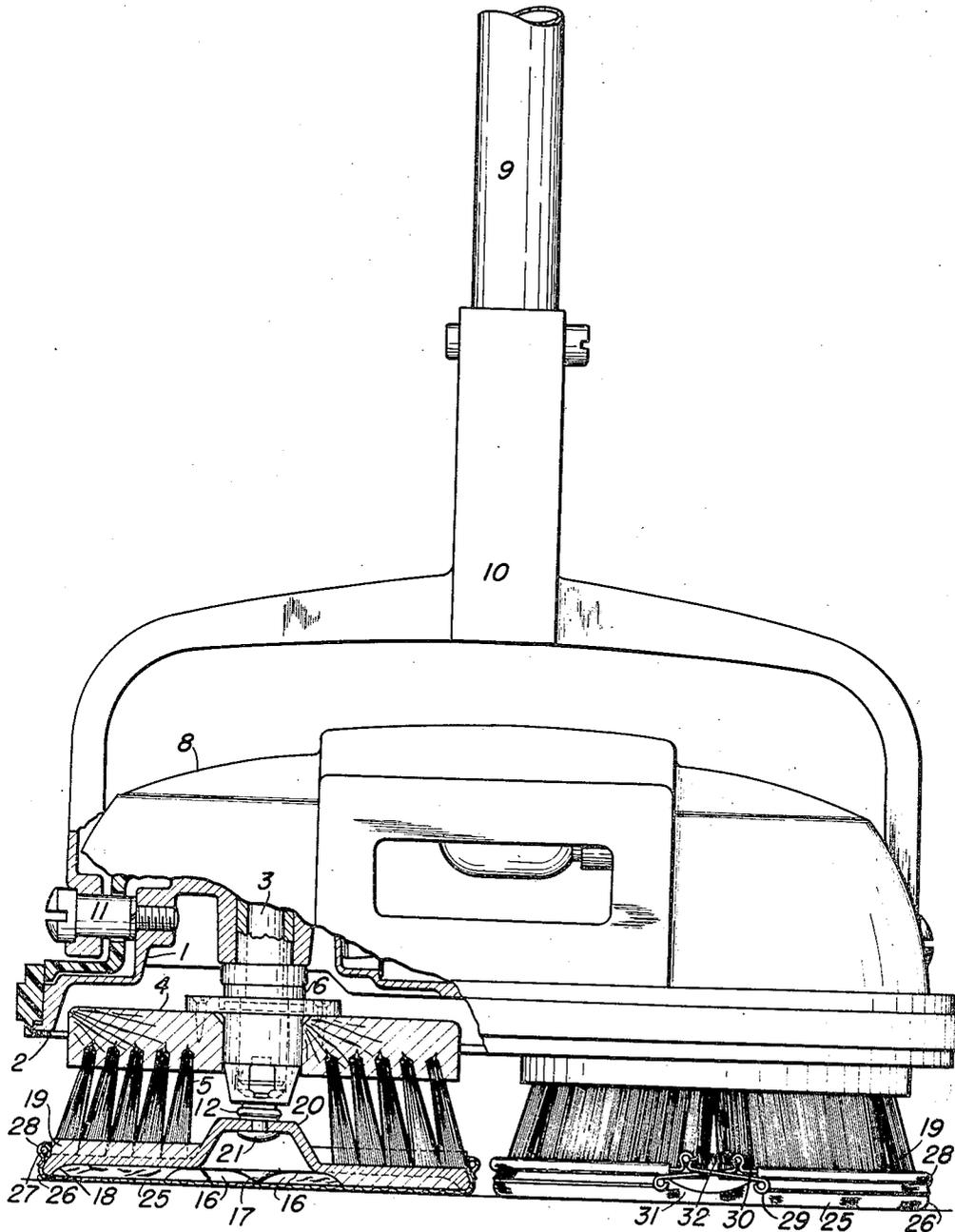


Fig. 1

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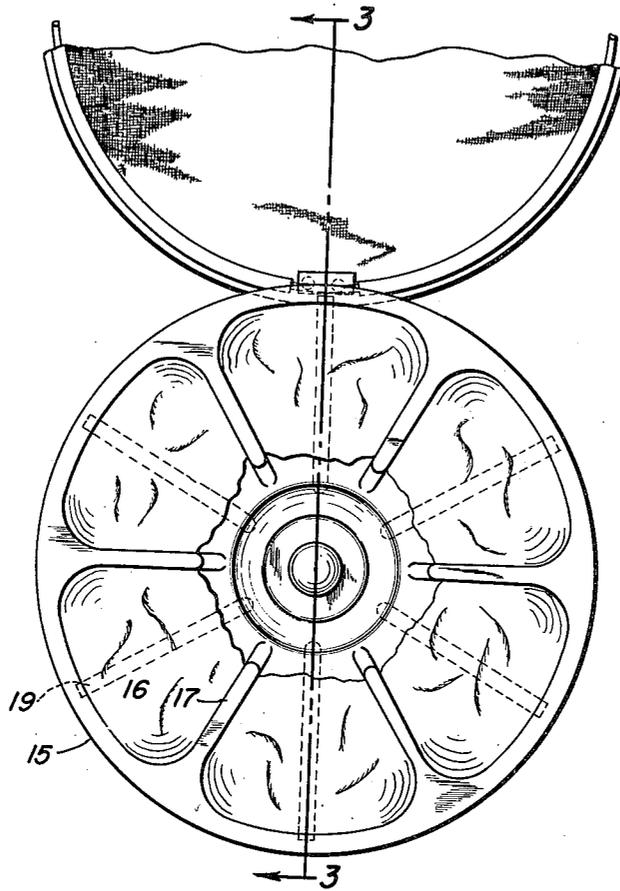


Fig. 2

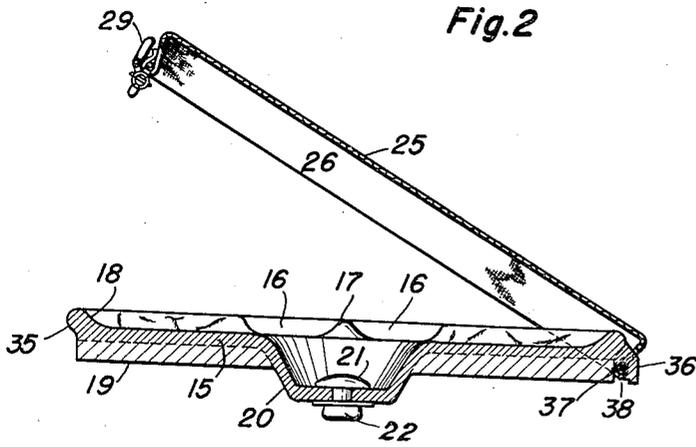


Fig. 3

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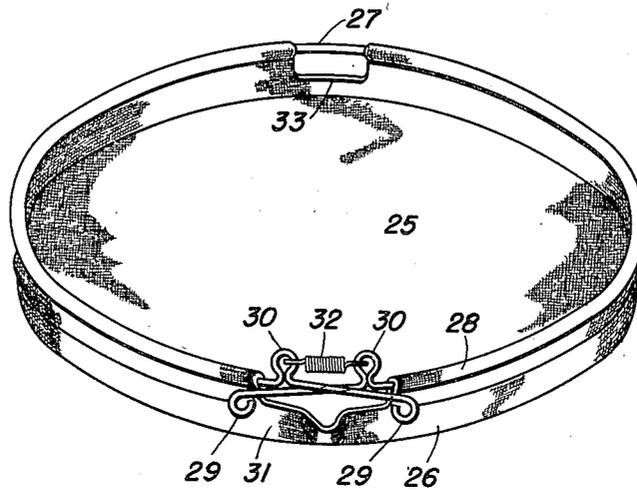


Fig. 4

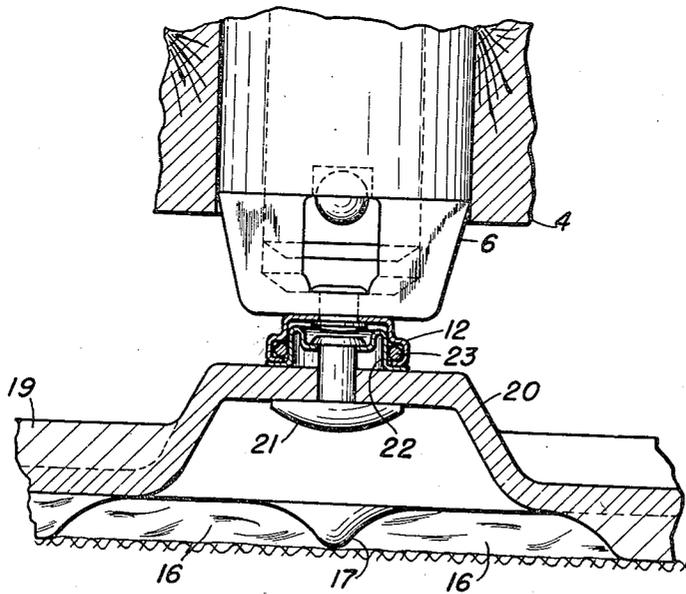


Fig. 5

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WAX APPLICATORS

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Application January 5, 1954, Serial No. 402,251

9 Claims. (Cl. 15—98)

My invention relates to the art of polishing and in particular to a novel wax applicator adapted to be utilized in conjunction with a power polishing machine.

It is a principal object of my invention to provide a wax applying device so constructed that it is readily attachable and detachable from the power driven brushes of a power driven polishing machine without requiring removal of the brushes therefrom.

It is a further object of my invention to provide a power-driven wax applicator consisting of a disc-like plastic molding having radial depressions in its lower face adapted to hold wax and covered by a readily removable polishing cloth through which the wax seeps in use for application to the surface to be waxed.

It is another object of my invention to provide a waxing and polishing machine having readily detachable wax applicator supported and driven by the polishing brushes which centrifugally feed wax to the supporting surface as an incident of their rotation.

Other objects and advantages of the invention will become apparent as the description proceeds when taken in connection with the accompanying drawings wherein:

Fig. 1 is a front elevational view, partly in section, of a floor polishing machine having my novel wax applicator attached thereto;

Fig. 2 is a plan view of the under side of my wax applicator with the cloth cover pivoted to the open position;

Fig. 3 is a transverse sectional view of the wax applicator of Fig. 2 with the cover pivoted to the partly open position;

Fig. 4 is a perspective view of the cloth cover and mounting means therefor; and

Fig. 5 is a partial sectional view drawn to an enlarged scale illustrating the manner of attaching my wax applicator to the polishing machine.

Referring now to the drawing in detail and first to Fig. 1 thereof, I have shown my novel wax applicator applied to a known type of motor driven floor polishing machine consisting substantially of a main frame structure 1 having a peripheral depending skirt 2. The frame 1 supports a motor and drive mechanism, not shown, which drives a pair of vertical shafts such as the shaft 3 lying within the confines of the skirt 2. Each of the shafts 3 detachably supports polishing brushes consisting of a backing plate 4, depending polishing bristles 5 and a central supporting and attaching hub structure 6 which receives the shaft 3 and is detachably secured thereto by any suitable means such as the ball detent securing device disclosed in the application of Dale C. Gerber, Serial No. 137,188, filed January 6, 1950, for Convertible Floor Polisher Arrangement, now Patent 2,673,996, dated April 6, 1954.

The mechanical frame structure 1 is covered by a plastic or other suitable decorative hood 8 as illustrated. The device is propelled by a handle 9 which is attached at its lower end to a bail 10 which is pivotally mounted on supporting studs 11 extending through the sides of the hood 8 and threaded into the main frame 1.

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The foregoing polishing machine as such forms no part of my invention and is substantially the apparatus illustrated and described in the application of Erhard O. Kohl, Serial No. 91,980, filed May 7, 1949, for Floor Polishers now Patent 2,683,884, dated July 20, 1954.

The bottom portion of each attaching hub 6, see Fig. 5, carries a depending button 12 which provides a finger grip for attaching and detaching the polishing brush and also a mounting means for a polishing pad to be described hereinafter.

Referring now to Figs. 2 and 3, the wax applicator per se will be described. The applicator comprises a plastic disc 15 which is preferably molded, having an under surface provided with a plurality of radially extending circumferentially spaced wax receiving depressions 16 which are separated by axially and radially extending ribs 17. These depressions are shallow as shown most clearly in Fig. 3 and are each adapted to receive a small charge of wax. Adjacent the periphery of the disc 15 the outer ends of the walls forming the depressions are curved outwardly and downwardly as indicated at 18 to merge with the outer lip of the disc.

The upper surface of the disc 15 is substantially plane except for the axially and radially extending spaced ribs 19 which form a driving means as will be explained hereinafter, and the conical upstanding central hub portion 20.

It is apparent that the plastic disc 15 is designed to form a simple molding. The central portion of the hub 20 carries a large-headed rivet 21 which in turn secures a snap-type mounting button 22 to the upper surface of the hub 20. As shown most clearly in Fig. 5, the snap button 22 is adapted to be received within the finger clip 12 and secured to the lower end of the brush hub 6. A spring ring 23 mounted within the lower portion of the finger clip 12 resiliently engages the peripheral surface of the snap button 22 for releasably securing the disc 15 to the hub 6 of the polishing brush. Though the applicator as described herein is directly attached to the hub portion of the brush, it may be directly attached to a member such as cup 12 mounted on a portion of the drive shaft projecting through the hub of the brush. In either event, the applicator is supported centrally under the drive shaft which absorbs vertical thrust from the applicator, and rotational motion is imparted to the applicator by the brush.

The lower surface of the applicator is adapted to be covered by a polishing cloth 25 which may for example be of "Nylon" having approximately 90 perforations per square inch and being about 1/32 of an inch thick. The cloth 25 is preferably tailored to have a plane bottom portion surrounded by a peripheral rim 26 which is turned over a securing spring wire 27 to entrap the wire in a hem 28. The ends of the spring wire 27 are free and cross each other as indicated in Fig. 4 to terminate in finger grip portions 29. Adjacent each free end of the wire 27 an upstanding loop 30 is formed within a cutout section 31 of the rim portion of the polishing pad. A small tension spring 32 connects the loop sections 30 of the spring wire tending to draw the same together and thus to contract the wire 27 for gripping purposes as will be described hereinafter. The rim portion of the polishing pad is also cut away as indicated at 33 opposite to the cutout portion 31.

Referring to Fig. 3, the peripheral portion of the disc 15 is flared outwardly slightly as indicated by the reference character 35 to form a securing seat for the contracting wire 27. A small flange 36 is formed on the peripheral portion of disc 15 and is provided with a slot 37 adapted to receive that portion of the wire 27 above the cutout section 33 of the applicator cloth. After the exposed portion of wire 27 is inserted in slot 37, the

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plastic is staked over that portion of the wire as indicated at 38 to secure the same to the disc 15 and also to form a hinge as shown in Figs. 2 and 3. When the cloth is moved to the operating position illustrated in Fig. 1, the finger grip portions 29 of the wire are pressed together which expands the wire, allowing the same to pass over the flared section 35 of the disc 15, after which the finger grips are released and the spring 32 contracts the wire, securely fastening the polishing cloth to the disc 15.

When it is desired to supply wax to the applicator, the finger grip sections 29 of the wire 27 are drawn together, expanding the wire 27 to release the cloth, after which it is pivoted on the flange 36 to the open position illustrated in Fig. 2. Wax is then buttered into the depressions 16 by use of a spatula or the like and is spread flat with the outer edges of the ribs 17. The cloth is now returned to the operation position and the applicator is ready for attachment to the polisher. The charged applicator is attached to the polisher by applying pressure thereto with the snap button 22 engaging the mounting cup 12. As the applicator is secured to the hub 6 the bristles 5 on the polishing brush engage the upper side thereof and engage laterally against the flanges 19. In this manner the bristles provide support for the applicator over its entire upper surface and also provide a driving means therefor by engaging the lateral faces of the ribs 19.

In use of the machine, the wax applicators are charged with the wax and secured to the hubs 6 of the polishing brushes and the polisher is moved back and forth across the surface to be waxed while the motor is running to rotate the applicator at rather high speed. The high rotational speed of the applicators is found to apply a thin even coating of wax to the supporting surface. Due to the high rotational speed of the applicator, wax tends to move outwardly of the disc 15 by centrifugal force and to be projected with appreciable force against the applicator cloth 25 adjacent the periphery of the disc due to the curved surface 18, thus insuring that substantially the entire charge of wax can be effectively and efficiently utilized and applied before a recharging operation is necessary.

The applicators are readily detached from the polisher by applying an axial pull thereto to release the snap button 22 from the securing cup 12, after which the polisher can be used for polishing operations or scrubbing or the like as the operator may desire.

While I have illustrated and described the invention in considerable detail, it is to be understood that various changes may be made in the arrangement, proportion and construction of parts without departing from the spirit of the invention or the scope of the appended claims.

I claim:

1. A wax applicator comprising a disc-like body having a lower face provided with circumferentially spaced depressions adapted to be charged with wax, a plurality of circumferentially spaced radial ribs projecting from the upper face of said body, a central hub projecting from the upper face of said body, attaching means on said hub, and a textile cover secured to said body and normally overlying the lower face of said body to feed wax from said depressions onto a surface contacted by said cover.

2. A wax applicator for use with a power operated polisher comprising a disc-like body portion having a plurality of spaced wax pockets on its lower face and a plurality of upstanding driving ribs on its upper surface, means at the center of said disc for attaching the disc to a supporting shaft, a textile cover overlying the lower face of said disc, and means pivotally mounting said cover on said disc.

3. In a waxing and polishing apparatus having a power

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operated spindle, a polishing brush detachably mounted on said spindle and having polishing bristles projecting therefrom axially of said spindle, the combination of a wax applicator detachably mounted on said brush comprising a disc-like body portion having an upper surface engaging the ends of said bristles, ribs projecting upwardly from the upper surface of said disc into said bristles whereby said bristles will impart a driving force to said disc, said disc being formed with a plurality of wax receiving cavities in its lower surface, and a textile cover attached to said disc and underlying the lower face thereof.

4. In a wax applying and polishing apparatus having a vertical spindle, a disc-type polishing brush detachably secured to said spindle and having axially projecting bristles, the combination of a disc-like wax applicator body having a lower face provided with a plurality of spaced wax receiving cavities and a plane upper face having upstanding radial ribs thereon, means for detachably securing said body to said brush with said bristles bearing against the side faces of said ribs to impart driving force thereto, and a textile cover secured against the lower face of said body for transferring wax from said cavities to a supporting surface.

5. A wax applicator comprising a disc-like body portion having a lower face provided at its margin with a downwardly and outwardly curved portion providing a depending peripheral rim, radial ribs on said lower face spaced from each other and having lower ends coplanar with the lower end of said rim to form spaced cavities therebetween adapted to be charged with wax, spaced radial ribs extending upwardly from the upper face of said body portion, means at the center of said body portion for detachably mounting said body portion on a supporting spindle, a textile fabric cover overlying the lower face of said body portion and having a peripheral rim extending around the rim of said body portion, and means in said rim for securing said cover to said body portion.

6. Apparatus according to claim 5 in which said securing means for said cover comprises a wire secured in a hem in said cover rim, means pivotally attaching said wire to said body portion, resilient means for contracting said wire, and manual means for expanding said wire against the force of said resilient means.

7. A wax applicator comprising a disc-like body portion having a lower face formed with a plurality of cavities separated by radially extending ribs adapted to be charged with wax, said cavities having top walls curving downwardly and outwardly to merge with the peripheral portion of the body at the lower edge thereof, and a textile cover overlying the lower face of the body and secured thereto whereby centrifugal force will cause wax to be forced outwardly and downwardly against said textile cover when said applicator is rotated.

8. A wax applicator comprising a disc-like body portion formed with a plurality of depressions in its lower surface adapted to be charged with wax, a textile cover and wax feeding member adapted to overlie said depressions and having a plane surface contacting portion surrounded by an upstanding rim, a securing wire hemmed in said upstanding rim and having free ends projecting from said rim adjacent each other to form gripping sections for expanding the wire, resilient means for contracting said wire, said rim having a section thereof opposite said gripping portions cut away to expose a portion of said wire, and means on said body portion rotatably gripping said exposed portion of the wire.

9. In a waxing and polishing machine having a depending power driven spindle and a disc-type polishing brush mounted on said spindle, the combination of a rigid disc-like body member having a lower face formed with a wax receiving depression provided with a top wall curving downwardly and outwardly to merge into the lowermost portion of said body member adjacent the periphery

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thereof, whereby wax is fed downwardly across said surface by centrifugal force when said disc is rotated, means for securing said body member to said brush with the brush bristles bearing on the top surface of said body member for driving the latter, and a wax feeding and surface contacting pad secured to said body member on the underside thereof.

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