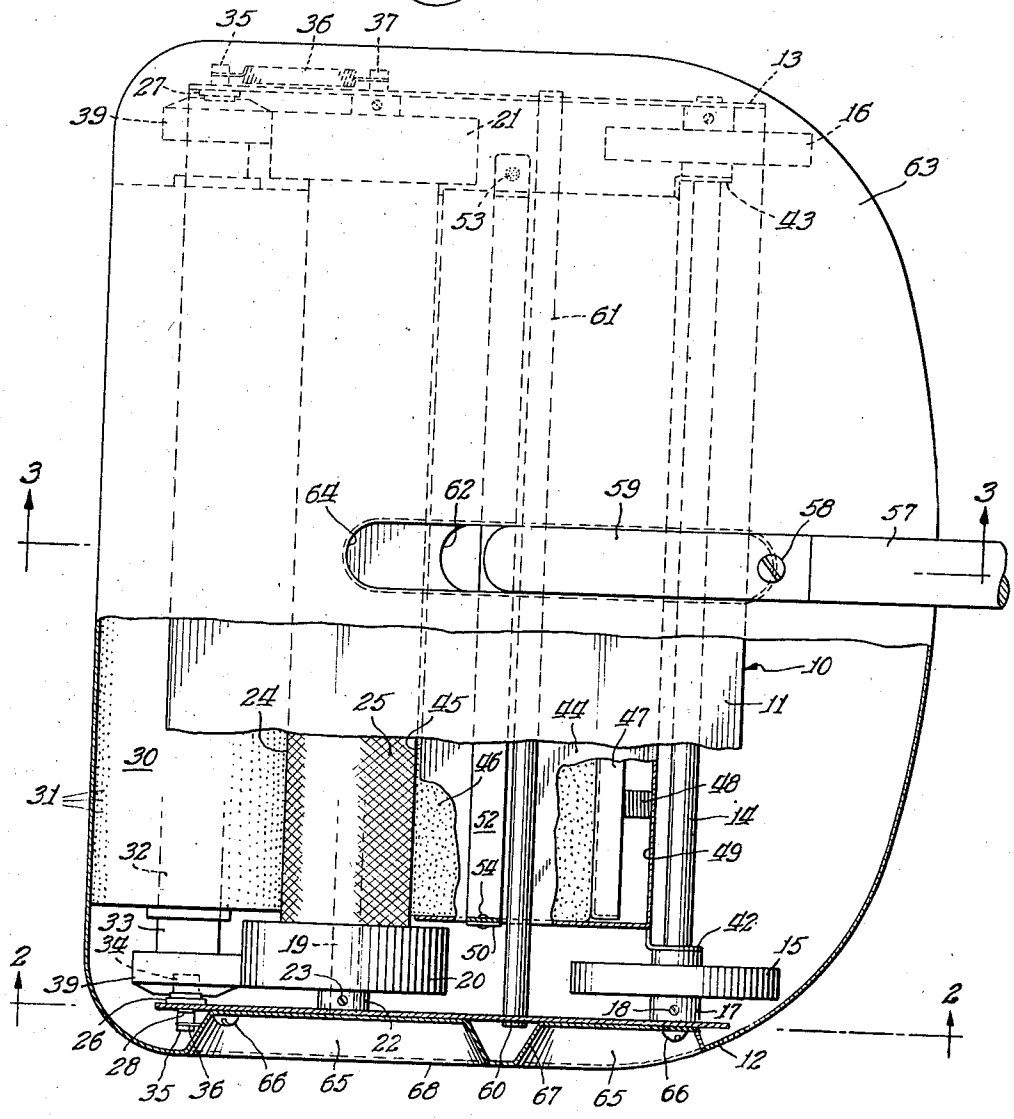
June 14, 1949. J. GORDON 2,472,895

FLOOR WAXING AND POLISHING DEVICE

Filed April 4, 1946

2 Sheets-Sheet 1

Fig. 1



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Fig. 2

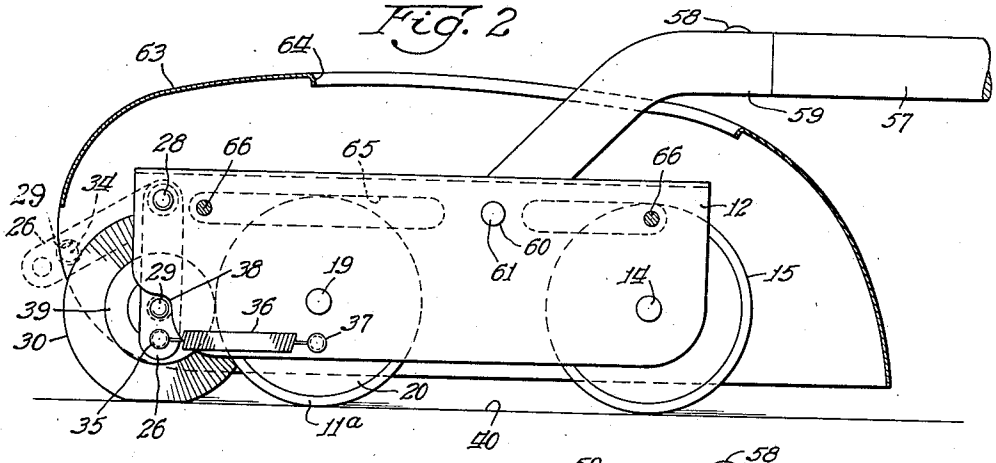


Fig. 3

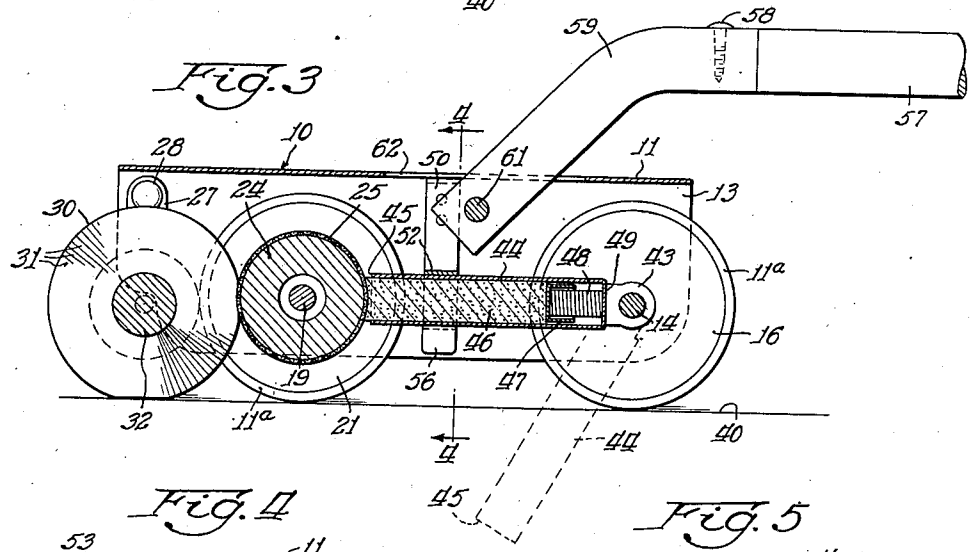


Fig. 4

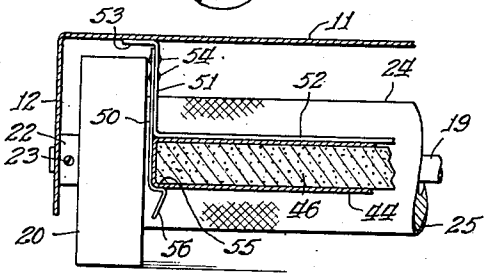
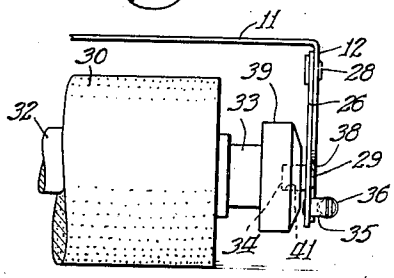


Fig. 5



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FLOOR WAXING AND POLISHING DEVICE

James Gordon, Chicago, Ill.

Application April 4, 1946, Serial No. 659,556

5 Claims. (Cl. 91—40)

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This invention relates to a floor waxing and polishing device more particularly for home-use for waxing and polishing floors.

The invention aims to provide, among other objects, a markedly light-weight portable device for this purpose of simple and inexpensive construction which may be manually operated without the need for any other power means and with a minimum of effort on the part of the operator by merely propelling the device over the floor much in the manner of an old-fashioned carpet sweeper, while, simultaneously, the device continues to deliver wax to the polishing member and the latter continues to polish the floor employing the wax so delivered to it.

In the present preferred form of the device of the present invention, a rotary brush is caused both to apply the wax and do the polishing at the same time, while the means for mobilizing the device also constitutes the means for rotating the rotary brush both to cause the wax to be delivered to the brush and to cause the brush to deliver the wax to the floor.

These and other objects and advantages will be apparent from the following description, taken together with the accompanying drawings, of an illustrative embodiment of the invention, and in which drawings—

Figure 1 is a plan view of the device here specifically shown, the cover and frame thereof being broken away for clearness of description and to disclose the inner parts, and the handle also being broken away to save space;

Figure 2 is a side elevational view, partly in section, of the device of Figure 1, an alternative position of a part being shown in broken lines;

Figure 3 is a cross-section taken on the line 3—3 of Figure 1, an alternative position of other parts being shown in broken lines;

Figure 4 is a transverse section taken on the line 4—4 of Figure 3, showing one end of the device; and

Figure 5 is a front elevational view of the same end of the device shown in cross-section in Figure 4, but looking in the opposite direction.

Referring in detail to the illustrative construction shown in the drawings, the numeral 10 indicates a frame for the device which is of somewhat inverted U-shape, having a top 11 and depending side walls 12 and 13, the latter serving as bearing members for the axles of the rotary elements of the device.

At the rear end of the frame, is an axle 14 for a pair of wheels 15 and 16, at each end of the axle, each of which may have a hub member 17

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keyed to turn with the axle by a set screw 18, so that rotation of one of the wheels causes rotation of the other. In front of the axle 14 and spaced therefrom toward the other end of the frame 10 is another axle 19 upon which is keyed a pair of wheels 20 and 21 as by a hub 22 for each with a set screw 23. These wheels may have rubber tires 11a. The axle 19 also has fixed thereon to rotate therewith, as by being held thereto by the wheels 20 and 21, a roller 24 having a fabric covering 25 or the like thereon in the form of a canvas hose or sleeve, for a purpose presently pointed out.

Still further forward of the axle 19 and adjacent the front edge of the frame 10, on the inner face of each of the walls 12 and 13 respectively, is a depending swinging link 26 and 27, each of which may be swingingly secured to the frame as by a rivet 28 permitting sufficient play for the links so that they may be swung forwardly and upwardly from the position shown in full lines in Figure 2, for example, to the position shown in broken lines in this figure. Adjacent the free ends of the links 26 and 27 is journaled the axle 29 of a rotary brush member 30 having the usual radially extending bristles 31 similar to the rotary brush of an old-fashioned carpet sweeper, the bristles being secured in the usual cylindrical body 32 of the roller brush. As is usual in this construction, the cylinder 32 may be of wood and may have an end continuation 33 reduced in diameter into each end of which is inserted by a rotary fit on the axis of the cylinder, the metal bearing members 34 (Fig. 5), which together constitute the axle 29 for the rotary brush. Each of these links, such as at 35 at each side of the device, may have connected therewith, one end of an expansion coil spring 36, the other end of which is anchored as at 37 to the frame walls 12 and 13 respectively. The springs 36 resiliently retract the links and with them the rotary brush 30, when the latter is carried by the links, to a position to cause the rotary brush to contact by its bristles the canvas covering 25 of the roller 24. At this time, the axle 29 of the rotary brush is in a notch 38 in the front edge of the walls 12 and 13 respectively, thus limiting retracted movement of the rotary brush to a position such as to just bring it into contact with the roller 24.

On the reduced extension 33 of the rotary brush cylinder 32, at each end, is integrally formed a driven element such as a disc 39 for driving the rotary brush by friction contact of the disc 39 with a driving element such as the periphery, and in this instance, the rubber tire periphery

11a of the front wheels 20 and 21 of the device. When it is desired to remove or replace the rotary brush, as for cleaning or repair, it may be swung forwardly away from the floor 40 against the pull of the expansion springs 36, and the links 26 and 27 spread apart slightly to release the bearing pins 34 of links 26 and 27 from engagement with the roller. Similarly, to replace the brush, the bearing pins 34 may be so engaged, in the sockets 41 in the roller for this purpose and the springs 36 will retract the brush into position.

Turning now to the wax supply means, there is here shown pivoted on the rear axle 14, as by pivot brackets 42 and 43, a carrier means in the form of a box-like casing 44 which extends the greater part of the distance between the wheels 15 and 16 and has an open distal end 45 into which may be slid an elongated flat cake of solidified wax 46. At its inner end adjacent its pivot points the casing may have running lengthwise thereof, a presser bar 47 which is conveniently of channel formation and receiving a plurality of compression coil springs 48 which abut at one end against the closed proximal wall 49 of the casing and at their other end, against the presser bar 47 to urge the cake of wax 46 outwardly through the open distal end 45 of the casing and to cause the presser bar to follow the cake as it is consumed.

As best seen in Figure 3, the cake of wax may be inserted when the casing 44 is swung downwardly, and with the wax cake pressed inwardly to compress the coil spring 48, the casing is then swung upwardly into operative position in which the outer edge of the wax cake is in frictional contact with the canvas covered roller 24. The spring clips 50 near the walls 12 and 13 respectively, releasably hold the casing 44 in this operative position.

As best seen in Figure 4, these spring clips may be mounted on the upright arms 51 of a U-shape abutment 52, the upper ends of which arms 51, are turned outward horizontally as at 53 and suitably secured to the upper wall 11 of the frame 10. Each clip 50 itself is riveted as at 54 to an arm 51 and depends below the abutment 52, where the clip has an inwardly directed shoulder 55 and below this has an outwardly turned angled extremity 56. When the wax holding casing 44 is sprung into operative position, the surface 56 acts as a cam to force the clips momentarily away from the arms 51 so that the casing 44 can move into abutment with the part 52 which thus acts as a stop therefor against further upward movement of the casing, while at the same time the casing rests on the clip shoulders 55 upon the clips springing back into holding position.

The usual handle 57 is provided for the device, the upper part of which extends say waist-high and may be of wood and secured, as by a set-screw 58, in the handle socket 59. The socket 59 is of elbow formation and is pivoted as at 60 on a pintle 61 which spans the walls 12 and 13 of the frame 10. A slot 62 elongated in a direction front to rear of the device permits the handle to play therein as it is pivoted to bring it to a suitable angle for convenience of the operator in propelling the device across the floor.

The device desirably has an ornamental cover housing 63, through which another elongated slot 64 passes the handle therethrough. At the sides of the device, the housing may be indented as at 65 to locally lappingly abut the frame walls

12 and 13 respectively, and to which the housing may be here secured by screws 66. Adjacent the pintle 61, the housing wall may be projected as at 67 to prevent interference with this pintle. Elsewhere, the periphery of the housing as at 68 is advantageously stream-lined about the frame and its associated axles, wheels, rollers, wax casing, and the like.

It will now be understood from the foregoing description that the operator, having seen to it that there is a cake of wax in the casing 44 and the latter in operative position, then needs only to propel the device, by means of the handle 57, along a floor to be waxed and polished, whereupon the rotary brush 30 will be rotated and will pick up wax from the canvas covered roller 24 which in turn receives the wax and is loaded therewith by frictional engagement with the cake of wax 46, the edge of which extends throughout the length of the roller 24, the latter thus acting as a transfer roller. At the same time, the rotary brush 30 is in brushing engagement with the floor 40 to which it applies wax and polishes it.

The wheels 15, 16 and 20, 21 may constitute mobilizing means for the frame 11.

The invention is not intended to be limited to details of construction shown for purposes of exemplification and it is to be understood that such changes may be made as fall within the scope of the appended claims without departing from the invention.

The invention having been described, what is here claimed is:

1. In a floor waxing and polishing device, the combination comprising a frame, a pair of wheels for the frame adapted to contact the floor, a roller carried by the wheels, a rotary brush axled in the frame in brushing contact with said roller and adapted also to contact the floor, a driven element on the brush axle, a driving element on the wheels' axle in engagement with the driven element to drive the brush, carrier means pivoting on and supported by the frame for receiving a bar of wax, the distal end of said carrier means being adapted to swing into proximity with said roller, a spring carried by the carrier means and adapted to urge the bar of wax through the distal end of the carrier means into contact with the roller, a detent carried by the frame for retaining the carrier means in the last mentioned position, and a handle attached to the frame.

2. In a floor waxing and polishing device, the combination comprising a frame, a pair of wheels for the frame adapted to contact the floor, a roller carried by the wheels, a rotary brush axled in the frame in brushing contact with the roller and adapted also to contact the floor, discs on the brush axle in frictional engagement with the wheels to drive the brush, a casing pivoting on and supported by the frame for receiving a bar of wax, the distal end of said casing being adapted to swing from a position below the frame into proximity with said roller, casing supported resilient means for urging the bar of wax into contact with the roller, releasable locking means carried by the frame for retaining the casing in the last mentioned position, and a handle attached to the frame.

3. In a floor waxing and polishing device, the combination of a mobile frame, an axle journaled in the frame, a pair of wheels for the frame keyed to said axle and adapted to support the frame on the floor, a wax transfer roller carried by the wheels' axle, a rotary brush axled in the

frame in brushing contact with said transfer roller and adapted to contact the floor, a pair of discs keyed on the brush axle and engaging the wheels respectively to rotate the brush as the wheels rotate in movement of the frame over the floor, and wax supply means carried by the frame in wax delivery relation to said transfer roller.

4. In a floor waxing and polishing device, the combination comprising a frame, a pair of wheels for the frame adapted to contact the floor, a wax transfer roller keyed to rotate with the wheels, a rotary applicator axled in the frame in brushing contact with said transfer roller and adapted also to contact the floor, a driven disc on the applicator axle in engagement with one of said wheels to drive the applicator, and wax supply means carried by the frame in wax delivery relation to said transfer roller.

5. In a floor waxing and polishing device, the combination of a mobile frame, an axle journaled in the frame, a pair of wheels for the frame keyed to said axle and adapted to support the frame on the floor, a wax transfer roller carried by the wheels' axle, a rotary applicator axled in the frame in brushing contact with said transfer roller and adapted to contact the floor, a driven element on the applicator axle, a driving element on the wheels' axle in engagement with the driven element to rotate the applicator as the wheels rotate in movement of the frame over the floor, and wax supply means carried by the frame in wax delivery relation to said transfer roller.

JAMES GORDON.

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