Nov. 25, 1952 H. B. OHRT 2,618,798

WAXER AND POLISHER

Filed May 15, 1950 2 SHEETS—SHEET 1

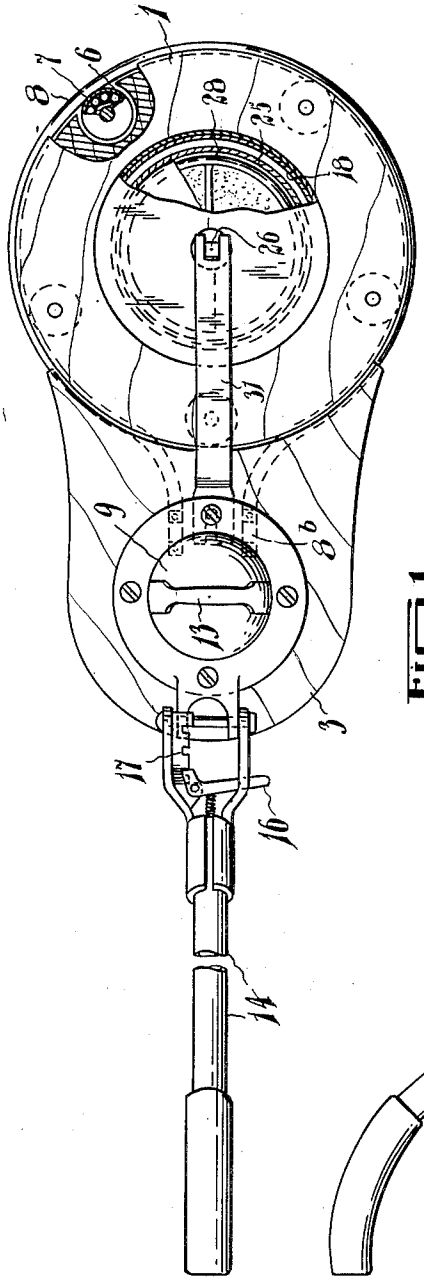


FIG. 1.

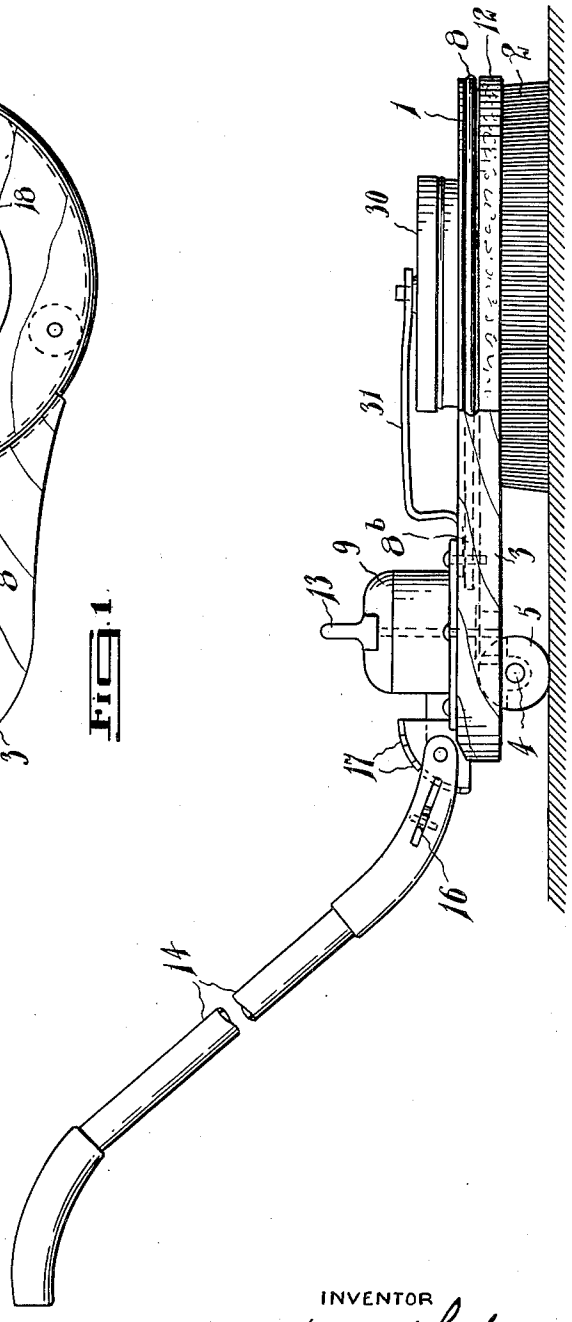


FIG. 2.

INVENTOR

H. B. Ohrt

Nov. 25, 1952 H. B. OHRT 2,618,798

WAXER AND POLISHER

Filed May 15, 1950 2 SHEETS—SHEET 2

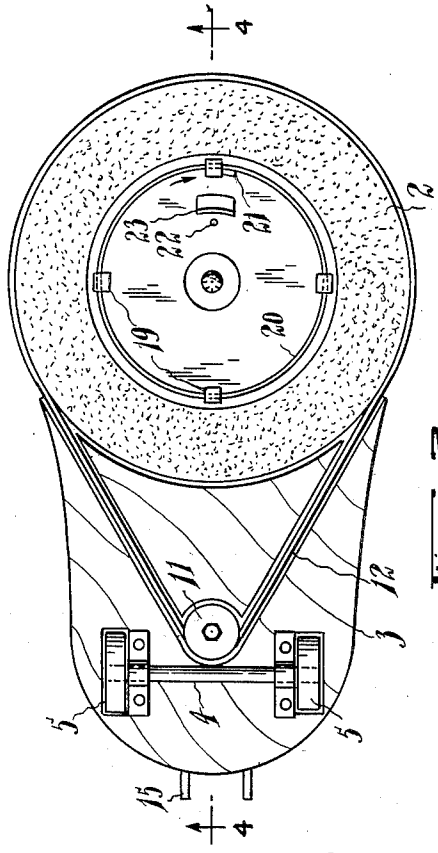


Fig. 3.

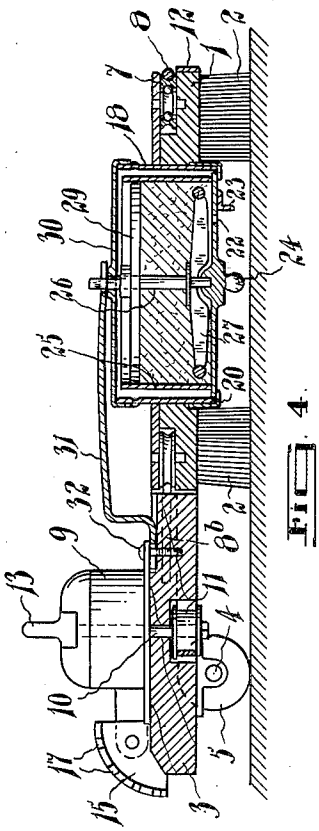


Fig. 4.

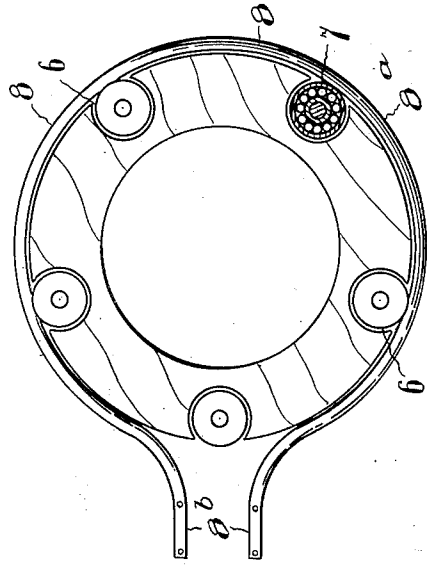


Fig. 5.

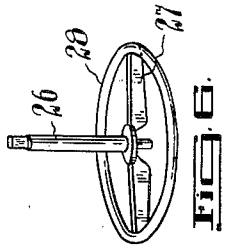


Fig. 6.

INVENTOR

H. B. Ohrt

Patented Nov. 25, 1952 2,618,798

UNITED STATES PATENT OFFICE

2,618,798

WAXER AND POLISHER

Herbert B. Ohrt, Toronto, Ontario, Canada

Application May 15, 1950, Serial No. 161,931

4 Claims. (Cl. 15—50)

1

This invention relates to floor polishing machines of the type employing a motor driven polishing brush rotating on a vertical axis. Heretofore the application of wax to a floor has generally been done by hand or by means of a separate wax spreader.

The object of the present invention is to combine in a single machine both the wax-applying means and the polishing means.

This object is attained by means of the construction hereinafter described and illustrated in the accompanying drawings in which

Fig. 1 is a plan view of the apparatus, partly broken away;

Fig. 2 a side elevation of the same;

Fig. 3 a plan view of the under side;

Fig. 4 a vertical section on the line 4—4 in Fig. 3;

Fig. 5 a plan view, partly broken away, of the polishing brush and its mounting means; and

Fig. 6 a perspective view of the wax impeller.

In the drawings like numerals of reference indicate corresponding parts in the different figures.

The polishing is effected by means of an annular brush comprising a head 1 and bristles 2. This brush is mounted in front of a supporting frame 3, which is formed with a concaved end to receive the brush head. This supporting frame has an axle 4 supported on its under side on which are provided ground wheels 5.

The brush head 1 has a series of recesses or pockets 6 formed in its head, in each of which is mounted a bearing comprising an inner and an outer member with anti-friction balls between them. Each outer ring member 7 (see Fig. 4) is provided with a peripheral groove, which receives a track 8, shown best in Fig. 5, and which is formed of a metal bar bent to form a loop 8^a which engages in the peripheral grooves of the ring members 7 and terminates in supporting arms 8^b which are secured to the frame 3 as indicated in Figs. 1 and 4.

Mounted on the frame 3 is a motor 9, the shaft 10 of which has a pulley 11 on its lower end, on which is mounted a driving belt 12, which passes around the periphery of the brush head 1 to rotate the latter.

The motor housing is provided with a handle 13 at its upper end by means of which the device may be tilted to one side to expose the brush, or the apparatus may be lifted if desired for carrying.

The frame 3 is provided with a handle 14 pivoted between lugs 15 on the frame. A spring-

2

pressed lever 16 is adapted to engage any one of a series of notches 17 to hold the handle at the desired angle for moving the apparatus about on the surface being treated.

The waxing portion of the apparatus is carried by the rotary brush and comprises the following. In the center hole of the annular brush is positioned a container 18 providing a reservoir and which is supported on lugs 19 extending inwardly from a ring 20 on the brush head. A lug 21 on the bottom of the container is engaged by one of the lugs 19 to ensure that the container 18 is positively rotated with the brush.

The bottom of the container 18 has an outlet 22 therein and at the outer side of the outlet is a baffle 23 which prevents wax ejected from the outlet being thrown against the bristles 2 by centrifugal action. The bottom of the container 18 is provided with a central dome 24 to receive the socket part of a dome fastener carried by a polishing pad (not shown).

25 indicates a standard type of wax-containing can from which the cover has been removed and also the bottom, leaving it open-ended. The wax is stirred and forced through the outlet by the impeller shown in Fig. 6, which comprises a stem 26, radial blades 27 and a ring 28 connecting the ends of the blades. Mounted on the stem above the wax is a weighted disk 29, which tends to force the wax downwardly to be exuded through the outlet 22. The stem 26 extends through the weight 29 and also through the removable cover 30, which latter is provided with a bearing and holds the stem 26 upright.

As the containers 18 and 25 revolve with the brush, the impeller must be held from rotation and this is effected by providing the stem with a square end, which is engaged by the forked end of a keeper 31. The other end of this keeper is engaged in a recess in the frame 3. This other end is also forked to receive a bolt 32, which is one of the bolts securing the motor housing to the supporting frame.

The operation of the device is as follows. The wax is forced through the outlet 22 by the impeller blades 27 and allowed to drop on to the floor, where it is spread by the bristles 2 of the brush. As the wax is forced through the outlet, the weight 29 forces the wax above downwardly. If it is desired to stop the feed of the wax, the keeper bar 31 is removed, which allows the impeller to rotate with the container and hence there is no relative movement between the container and impeller to feed the wax. If it is desired to use a polishing pad, the latter

is readily mounted below the brush and secured to the dome **24**, and, of course, when such polishing pad is used the keeper bar **31** is left off to avoid feeding wax on to the back of the polishing pad.

It is a simple matter to remove the brush for cleaning or substitution by disconnecting the arms **8b** of the brush carrier member **8** from the supporting frame.

It is also a simple matter to remove the empty container **25** for the substitution of a fresh full one by first removing the keeper bar **31**, the cover **30** and the weight **29**, which parts are replaced after the full container has been inserted.

The arrangement of the means for feeding the wax is very important. Paste floor wax is an inert body that will not move, run, slip or slide of its own accord. It contains a turpentine base or solvent which is very necessary to get good results, and if the turpentine is separated from the wax content, it loses its efficiency. It is therefore necessary to avoid beating or agitation of the main body of wax in the reservoir, so that when it is forced through the outlet it is in nearly perfect condition. The impeller, it will be noted, is of small height relative to the height of the container and it is positioned at the bottom of the reservoir and therefore agitates only the wax near the bottom and not the main body of the wax. The weight **29**, of course, is important in forcing the main body of wax downwardly so that the lower portion may be subjected to the action of the impeller.

What is claimed is:

1. In apparatus for applying pasty wax to a surface and for polishing the waxed surface, the combination of a supporting frame; a track including a loop portion disposed in a horizontal plane and terminating in supporting arms engaging the frame; an annular polishing brush rotatably carried by the loop portion of the track; a motor secured to the frame and coupled to the brush for rotating it; a reservoir for pasty wax mounted in the centre hole of the brush and rotatable therewith, the said reservoir having a discharge opening in its bottom; an impeller in the reservoir; and means carried by the frame engaging the impeller to hold the latter from rotation, the relative rotation of the impeller and reservoir feeding wax through the discharge opening.

2. In apparatus for applying pasty wax to a surface and for polishing the waxed surface, the combination of a supporting frame; a track including a loop portion disposed in a horizontal plane and terminating in supporting arms engaging the frame; an annular polishing brush rotatably carried by the loop portion of the track; a motor secured to the frame and coupled to the brush for rotating it; a reservoir for pasty wax mounted in the centre hole of the brush and rotatable therewith, the said reservoir having a discharge opening in its bottom; an impeller in the reservoir, the said impeller being of small height relative to the height of the reservoir; and means carried by the frame engaging the impeller to hold the latter from rotation, the impeller being positioned adjacent the bottom of the reservoir so that the relative rotation of the impeller and reservoir agitates only the lower portion of the mass of pasty wax in the reservoir to feed the wax through the discharge opening.

3. In apparatus for applying pasty wax to a surface and for polishing the waxed surface, the combination of a supporting frame; a track including a loop portion disposed in a horizontal plane and terminating in supporting arms engaging the frame; an annular polishing brush; a plurality of pulleys rotatably mounted in the head of the brush adjacent its periphery, the said pulleys engaging with the loop portion of the track and supporting the brush for rotation on the loop portion of the track; a motor secured to the frame and coupled to the brush for rotating it; a reservoir for pasty wax mounted in the centre hole of the brush and rotatable therewith, the said reservoir having a discharge opening in its bottom; an impeller in the reservoir; and means carried by the frame engaging the impeller to hold the impeller from rotation, the relative rotation of the impeller and reservoir feeding the wax through the discharge opening.

4. In apparatus for applying pasty wax to a surface and for polishing the waxed surface, the combination of a supporting frame; a track including a loop portion disposed in a horizontal plane and terminating in supporting arms engaging the frame; an annular polishing brush; a plurality of pulleys rotatably mounted in the head of the brush adjacent its periphery, the said pulleys engaging the loop portion of the track and supporting the brush for rotation on the loop portion of the track; a motor secured to the frame and coupled to the brush for rotating it; a reservoir for pasty wax mounted in the centre hole of the brush and rotatable therewith, the said reservoir having a discharge opening in its bottom; an impeller in the reservoir, the said impeller being of small height relative to the height of the reservoir; and means carried by the frame engaging the impeller to hold the latter from rotation, the impeller being positioned adjacent the bottom of the reservoir so that the relative rotation of the impeller and reservoir agitates only the lower portion of the mass of pasty wax in the reservoir to feed the wax through the discharge opening.

HERBERT B. OHRT.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
478,031	Stone	June 28, 1892
1,034,988	Dykes et al.	Aug. 6, 1912
1,493,309	Wilson	May 6, 1924
1,736,446	Keefer	Nov. 19, 1929
1,952,910	Decker	Mar. 27, 1934
2,142,933	Bickford	Jan. 3, 1939
2,246,683	Holt	June 24, 1941
2,318,960	Okun	May 11, 1943
2,358,119	Wilson	Sept. 19, 1944

FOREIGN PATENTS

Number	Country	Date
201,604	Great Britain	Aug. 9, 1923