

Dec. 19, 1961

R. DESCARRIES

3,013,287

FLOOR POLISHER

Filed May 26, 1959

2 Sheets-Sheet 1

FIG. 1

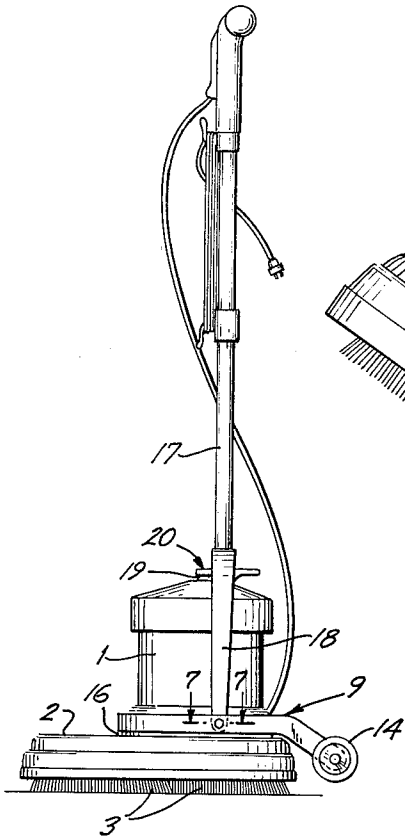


FIG. 2

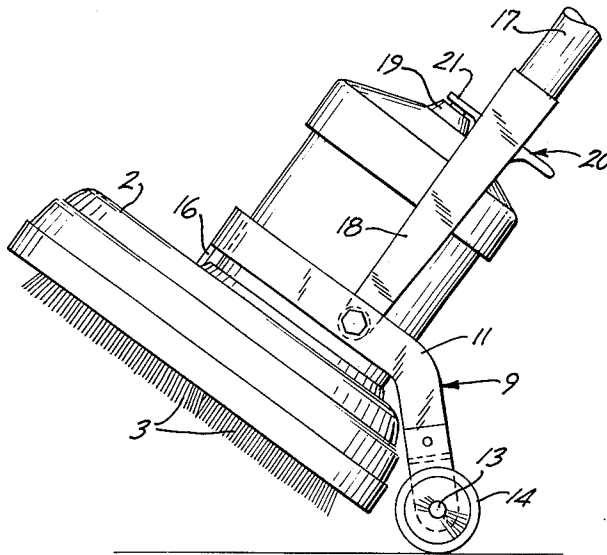


FIG. 3

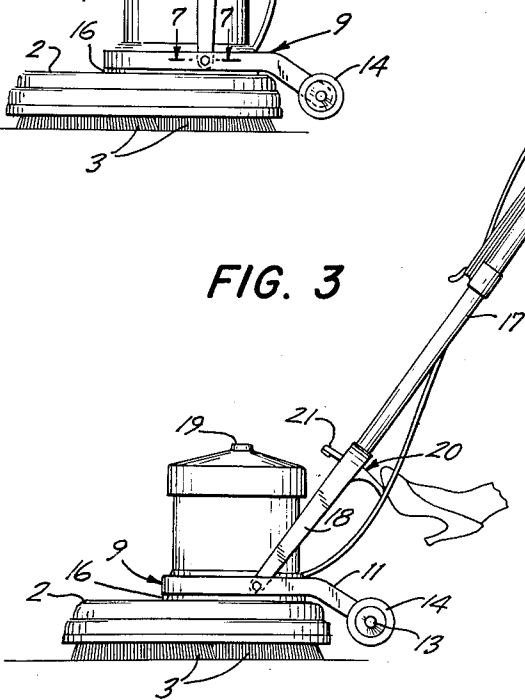
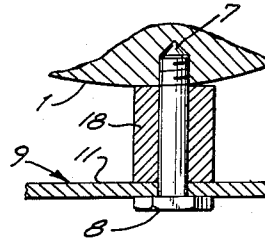


FIG. 7



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FIG. 4

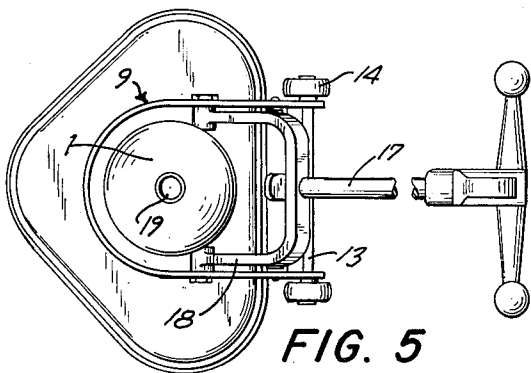
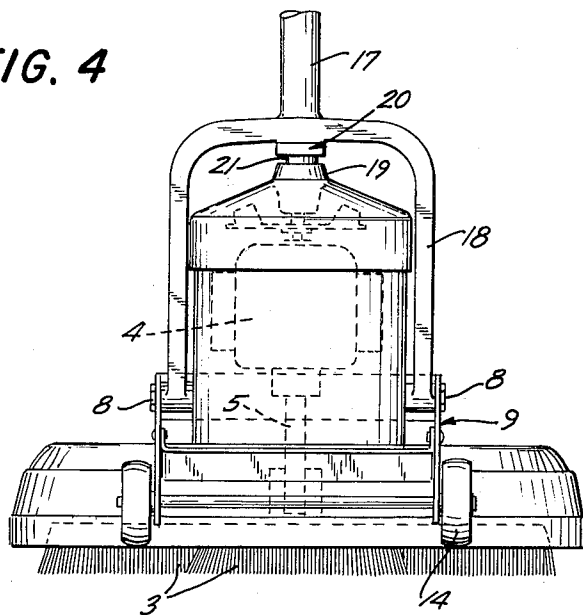


FIG. 5

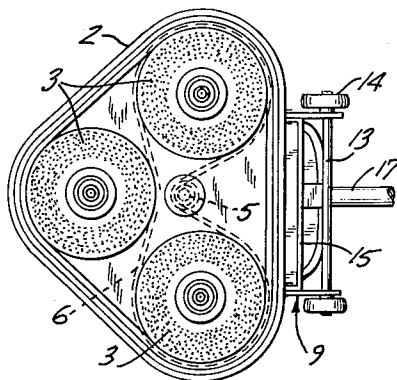


FIG. 6

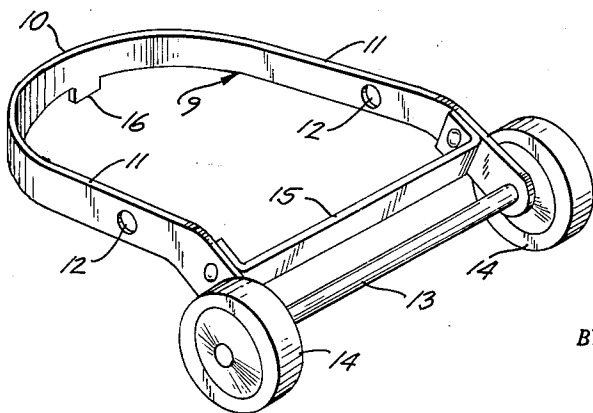


FIG. 8

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3,013,287

FLOOR POLISHER

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2 Claims. (Cl. 15—49)

This invention relates to floor machines and more particularly to floor polishers embodying a novel wheeled carriage.

Floor polishers, scrubbers and similar surface treating machines are of substantial weight, and, during normal use, must be moved from place to place, frequently past rugs and other obstacles which make ease of manipulation imperative.

A general object of the invention is to equip such machines with a novel and particularly effective wheeled carriage which, though out of the way during use of the machine for polishing, scrubbing and similar surface treating operations, can be brought into operative position for rolling of the machine readily by simple and easy manipulation of the handle of the machine.

Another object is to devise a novel and inexpensive wheeled frame for attachment to the upright housing which encloses the driving motor of the machine by the same fasteners employed to mount the handle of the machine.

A further object is to accomplish such attachment in pivotal fashion with the frame so constructed and arranged that it is held in fixed position when the wheels are brought into engagement with the floor.

In order that the manner in which these and other objects are attained in accordance with the invention can be understood in detail, reference is had to the accompanying drawings, which form a part of this specification, and wherein:

FIG. 1 is a side elevational view of a floor polisher constructed in accordance with one embodiment of the invention, showing the polisher disposed with its brushes engaging the floor and with its handle latched in vertical position;

FIG. 2 is a side elevational view of the device of FIG. 1, showing the device after it has been pivoted to bring the wheels into engagement with the floor;

FIG. 3 is a side elevational view of the device of FIG. 1 with its parts in their normal positions of use;

FIG. 4 is a rear elevational view of the device of FIG. 1, with a portion of the handle omitted;

FIGS. 5 and 6 are top and bottom plan views, respectively, on smaller scale, of the device of FIG. 1;

FIG. 7 is a detail sectional view taken on line 7—7, FIG. 1, and

FIG. 8 is a perspective view, on larger scale than FIG. 1, of a wheeled frame forming part of the invention.

Referring to the drawings in detail, it will be seen that the embodiment of the invention illustrated is applied to a floor polisher having a cylindrical, upright motor housing part 1 to the bottom of which is secured a hood or housing part 2 projecting laterally from the housing part 1 and extending over three rotatably mounted brushes 3. As indicated by broken lines in FIG. 4, housing part 1 encloses an electrical driving motor 4 having a drive shaft 5, the latter being engaged with a belt 6, FIG. 6, operatively arranged to drive brushes 3.

At points immediately above hood or housing part 2, housing part 1 is provided with two opposed, coaxial, laterally directed, threaded bores 7, FIG. 7, into each of which is threaded a stud or "shoulder screw" 8.

To equip the floor polisher with wheels in accordance with the invention, there is provided a frame 9 comprising an elongated metal strip in the form of a U with

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the base 10 of the U disposed forward of housing part 1 and the legs 11 extending rearward, one at each side of the housing part 1, and projecting beyond the rear edge of hood or housing part 2. As seen in FIG. 8, each leg 11 is provided with a circular opening 12. To attach the frame to the housing, the studs 8 pass through the openings 12, the heads of the studs engaging the outwardly facing sides of legs 11.

At a point approximately above the rear edge of hood or housing part 2, each leg 11 curves downward, so that the end portions of legs 11 slant downward past the rear edge of hood or housing part 2. At its end, each leg 11 is provided with a circular opening, the two openings being aligned, and an axle 13 extends through these openings, the end portions of the axle projecting outward from the legs. Wheels 14 are mounted on such end portions and, to retain the wheels in place, the ends of the axle are slightly enlarged, as by being spun over. For increased rigidity, a cross brace 15, extending parallel to the axle, is secured between legs 11. The length of the downwardly extending portions of legs 11 is such that, when the floor polisher is in an upright position with brushes 3 engaging the floor, wheels 14 are disposed somewhat above the floor.

At its mid-point, the base of the U frame 9 is provided with a dependent projection or stop lug 16 of such length that, with the frame mounted on housing 1 by studs 8 and with legs 11 of the frame parallel to the top wall of hood 2, the tip of projection 16 engages the top wall of the hood, thus preventing the wheels 14 from being pivoted upward relative to the housing and hood.

Handle 17 of the floor polisher is provided with a lower forked end, each leg 18 of which extends between the housing part 1 and a different leg of frame 9. As shown in FIGS. 5 and 7, the tip of each leg 18 is enlarged and provided with a transverse bore to accommodate the corresponding stud 8. The portions of the studs disposed in the bores are smooth, as seen in FIG. 7, and the handle is accordingly supported for free pivotal movement between the positions illustrated in FIGS. 1 and 3.

Referring to FIGS. 2 and 3, it will be seen that the top of housing part 1 includes a central upwardly extending projection 19. Projection 19 is recessed on its upper surface so as to constitute a catch for cooperation with a pivoted latch member 20 appropriately mounted on handle 17. Latch member 20 is resiliently biased in any suitable manner to urge tip 21 thereof downward, and tip 21 is formed to engage in the recess of projection 19 to latch the handle in an upright position, as seen in FIG. 1. The latch can be released to free the handle for pivotal movement about studs 8 by pivoting the latch member 20 in the opposite direction, freeing tip 21 thereof from the recess in projection 19.

When latch member 20 is engaged with catch projection 19, handle 17 is fixed with respect to housing part 1. Hence, the floor polisher can be pivoted, as will be clear from FIGS. 1 and 2, to bring wheels 14 into engagement with the floor, and the polisher can then be rolled easily along the floor. As the handle is pivoted in this manner, stop lug 16 engages the top wall of hood or housing part 2 and frame 9 is accordingly held with the main portion of the U thereof extending parallel to the top wall of the hood. In pivoting the machine from the position of FIG. 1 to that of FIG. 2, the operator can place one foot lightly against cross brace 15 to hold the lower portion of the machine as the handle is pivoted.

I claim:

1. In surface treating apparatus of the class described including structure having motor-driven rotatable means adapted to be positioned on and moved over a surface, means providing a housing for the structure, an elongated rod having a bifurcated end including a pair of

spaced arms, means for mounting the ends of the arms on the housing for pivotal movement about a horizontal axis in a vertical plane intersecting the rotatable means, the rod normally being inclined rearward of the structure and angularly movable about the axis when its outer free end is grasped by an operator for manipulating the structure over the surface, a releasable latch having cooperating elements fixed to the housing and to the bifurcated end of the rod, respectively, for holding the rod in a fixed upright position, a frame having spaced sides, the means for pivotally mounting the ends of the arms on the housing including provisions for mounting the spaced frame sides on the housing for pivotal movement about an axis coinciding with the axis about which the rod is angularly movable, the frame sides extending rearward of the housing and overhanging the rear of the housing, roller means rotatably mounted on the overhanging ends of the frame sides, the roller means being spaced from the surface when the rotatable means is positioned on the surface, means comprising the frame and the rod in its fixed upright position for tilting the apparatus from the vertical to move the rotatable means to a position at an acute angle to the surface and bring the roller means in contact with the surface to facilitate movement of the apparatus on the surface with the aid of the roller means, and means for limiting relative movement of the housing and frame when the apparatus is tilted from the vertical by the frame and rod.

2. In surface treating apparatus of the class described including structure having motor-driven rotatable means adapted to be positioned on and moved over a surface, means providing a housing for the structure, an elongated rod having a bifurcated end including a pair of spaced arms, means for mounting the ends of the arms on the housing for pivotal movement about a horizontal axis in a vertical plane intersecting the rotatable means, the rod

normally being inclined rearward of the structure and angularly movable about the axis when its outer free end is grasped by an operator for manipulating the structure over the surface, a releasable latch having cooperating elements fixed to the housing and to the bifurcated end of the rod, respectively, for holding the rod in a fixed upright position, a frame having spaced sides, the means for pivotally mounting the ends of the arms on the housing including provisions for mounting the spaced frame sides on the housing for pivotal movement about an axis coinciding with the axis about which the rod is angularly movable, the frame sides extending rearward of the housing and overhanging the rear of the housing, roller means rotatably mounted on the overhanging ends of the frame sides, the roller means being spaced from the surface when the rotatable means is positioned on the surface, the frame also including a part projecting forward of the structure from the axis about which the frame sides are pivotally movable, and means comprising the frame and the rod in its fixed upright position for tilting the apparatus from the vertical to move the rotatable means to a position at an acute angle to the surface and bring the roller means in contact with the surface to facilitate movement of the apparatus on the surface with the aid of the roller means, the frame part having a portion engaging a region of the housing to limit relative movement of the housing and frame when the apparatus is tilted from the vertical by the frame and the rod.

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