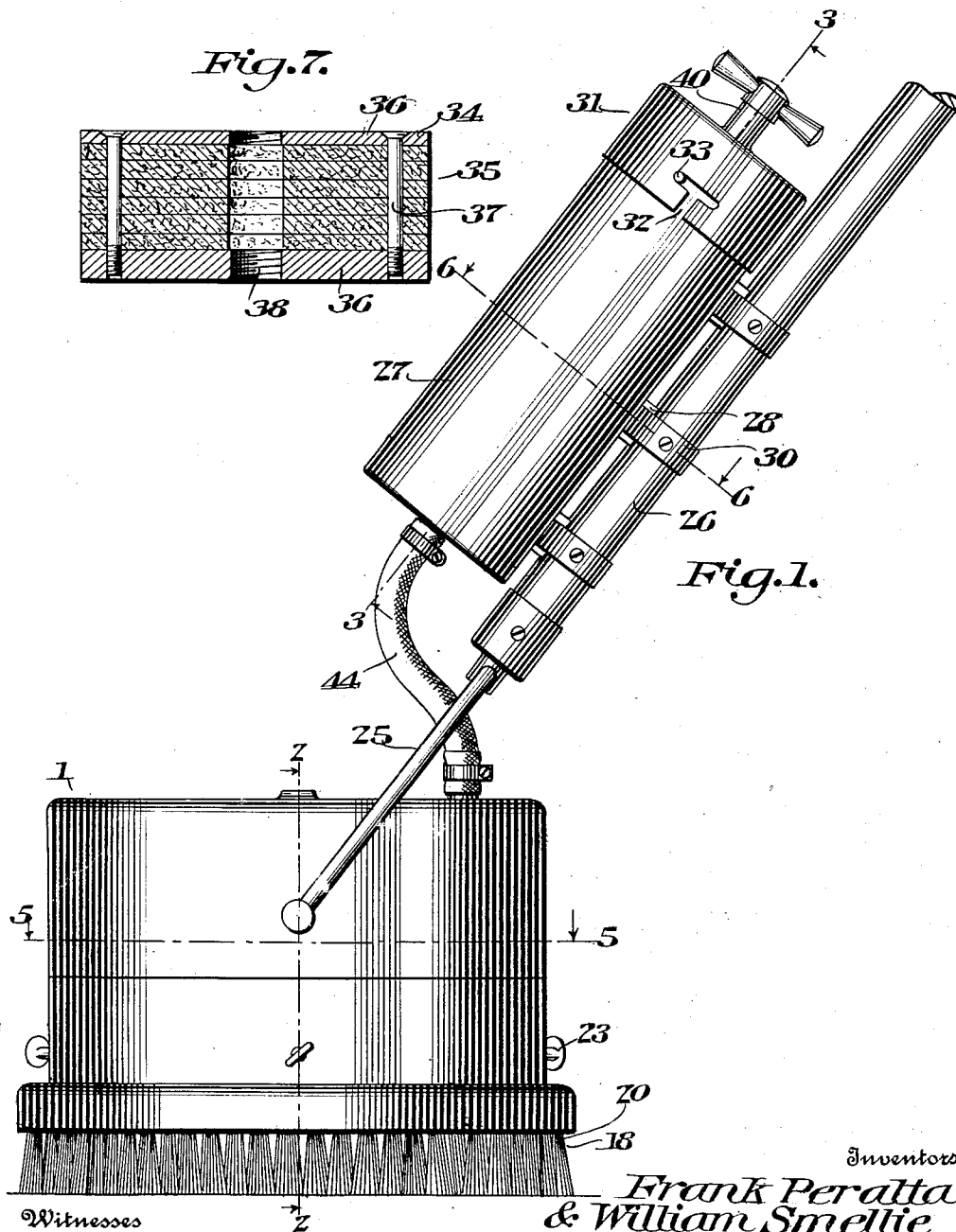


F. PERALTA & W. SMELLIE.
FLOOR POLISHING MACHINE.
APPLICATION FILED DEC. 22, 1914.

1,186,433.

Patented June 6, 1916.

3 SHEETS—SHEET 1.



Witnesses

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3 SHEETS—SHEET 2.

Fig. 2.

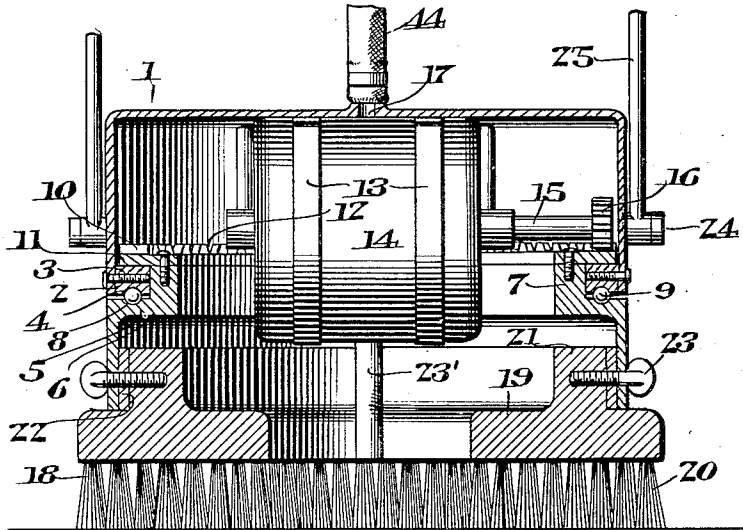
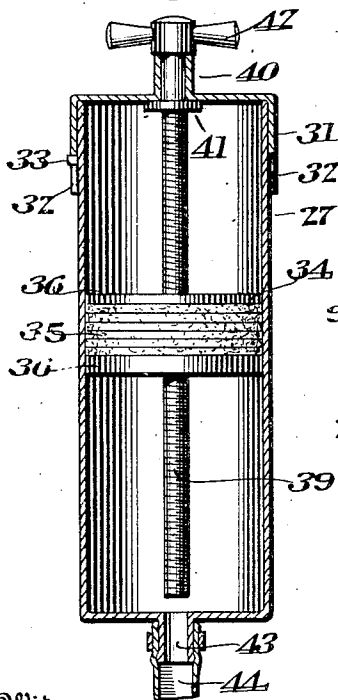


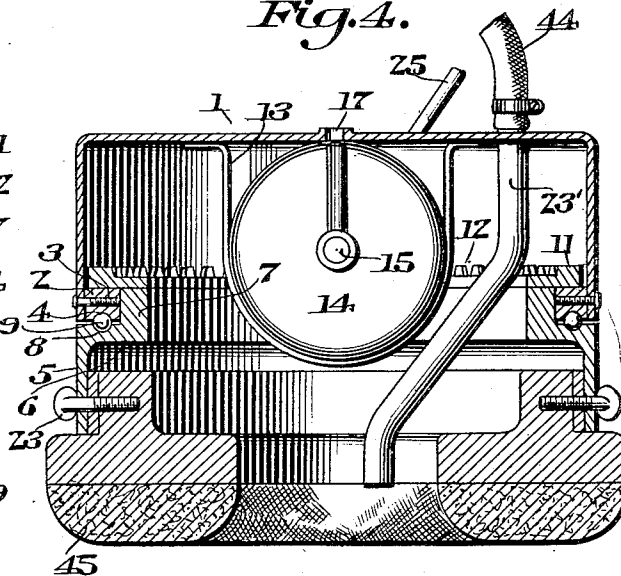
Fig. 3.



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Fig. 4.



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3 SHEETS—SHEET 3.

Fig. 5.

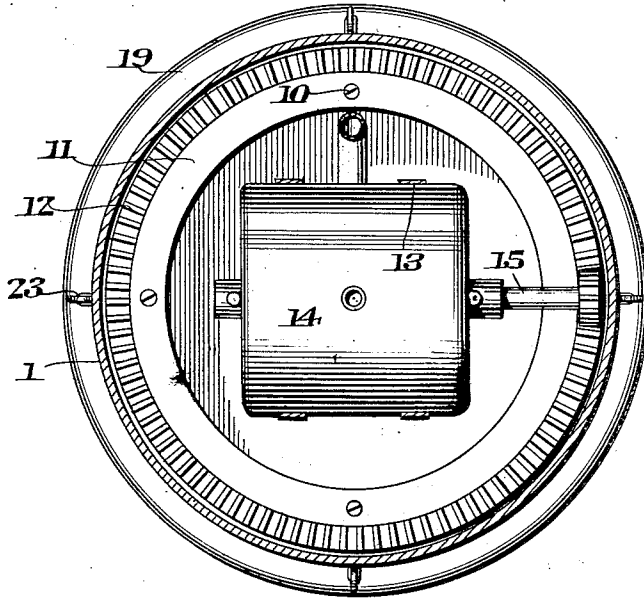


Fig. 6.

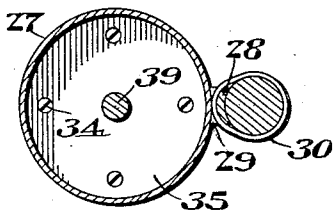
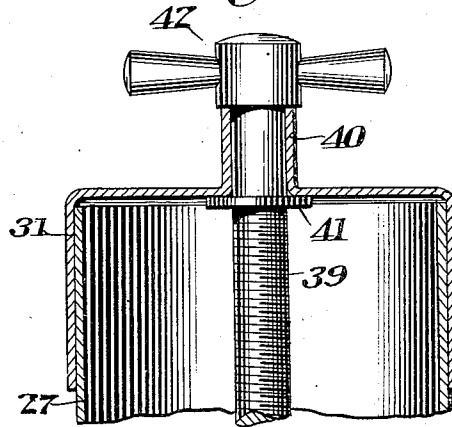


Fig. 8.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANK PERALTA AND WILLIAM SMELLIE, OF SAN FRANCISCO, CALIFORNIA.

FLOOR-POLISHING MACHINE.

1,186,433.

Specification of Letters Patent.

Patented June 6, 1916.

Application filed December 22, 1914. Serial No. 878,536.

To all whom it may concern:

Be it known that we, FRANK PERALTA and WILLIAM SMELLIE, citizens of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Floor-Polishing Machines, of which the following is a specification.

This invention relates to improvements in machines for polishing floors, and has particular application to machines for waxing and polishing floors.

In carrying out the present invention it is my purpose to provide a machine of the class described wherein the polishing brush will be revolved about a vertical axis over the floor and wax fed to the floor through the center of the brush so that such wax may be effectively spread over the floor and rubbed into the floor to polish the latter.

Another object of my invention is to provide a floor polishing machine wherein the wax or analogous material may be fed through the brush manually in accordance with the consumption thereof so that the floor or other surface may be waxed and polished evenly and uniformly.

A still further object of the invention is to improve and simplify the general construction of machine of the type set forth and to provide a machine wherein the component parts may be so correlated and arranged as to reduce the possibility of derangement to a minimum and to permit of easy access thereto so as to facilitate cleaning and repairing.

With the above and other objects in view, the invention consists in the construction, combination and arrangement of parts hereinafter set forth in and falling within the scope of the claims.

In the accompanying drawing:—Figure 1 is a view in side elevation of a floor polishing machine constructed in accordance with my present invention; Fig. 2 is a vertical sectional view on the line 2—2 of Fig. 1; Fig. 3 is a similar view on the line 3—3 of Fig. 1; Fig. 4 is a vertical sectional view, taken at right angles to Fig. 2; Fig. 5 is a horizontal sectional view on the line 5—5 of Fig. 1; Fig. 6 is a similar view on the line 6—6 of Fig. 1; Fig. 7 is a cross sectional view through the feed plunger; and Fig. 8 is an enlarged cross sectional view through the upper end of the wax container, showing the holding means for the feed screw.

Referring now to the drawings in detail, 1 designates an inverted cup-shaped casing constructed of any suitable material, preferably metal. Secured to the inner surface of the flange or side wall of the casing 1, adjacent to the open end of such casing, by means of bolts 2 is a metal ring 3 having the outer edge lying flush with the adjacent edge of the flange of the casing and formed with a circular groove or race-way 4.

5 designates an annulus having the recess thereof disposed in a vertical plane and the upper edge formed with an inwardly-extending horizontal flange 6 which, in turn, is formed with an upwardly-extending circular flange 7. The flange 7 is disposed within the metal ring 3 concentrically of the latter, while the lower edge of the ring 3 rests upon the upper surface of the flange 6 and formed in such surface of the flange 6 is a circular groove or way 8 registering with the groove or way 4 to receive anti-friction bodies 9 whereby friction between the parts, in the rotation of one relatively to the other is minimized. Fastened to the upper edge of the flange 7 through the agency of securing screws 10 is in the inner portion of a circular plate 11 such plate having the outer portion thereof overlying the metal ring 3 and coöperating with the inwardly projecting flange 6 on the annulus 5 to hold the annulus 5 connected to the ring 3. The upper surface of the circular plate 11 at the marginal edge or periphery of the plate is formed with a circular row of teeth 12 constituting a gear.

Fastened to the inner surface of the upper wall of the casing 1 and suspended therefrom by means of hanger straps 13 is an appropriate form of electric motor 14 having the armature shaft 15 thereof disposed in a horizontal plane and extending outwardly over the toothed portion of the circular plate 11. Keyed upon the outer end of the armature shaft 15 of the motor is a driving pinion 16 meshing with the teeth 12 on the plate 11. In the present instance, the top wall of the casing 1 is formed centrally with an opening 17 through which the electric current carrying wires for the motor 14 are carried in order that the same may be connected with the motor terminals.

When the motor 14 is energized, the armature shaft 15 revolves and so imparts movement to the pinion 16 and as the latter is in mesh with the teeth 12 on the plate 11

and the plate 11 fastened to the flange 7 connected with the annulus 5, the annulus will be revolved about a vertical axis relatively to the casing 1 and ring 3, the anti-friction body 9 between the ring 3 and the flange 6 on the annulus 5 receiving the weight of the casing and motor and reducing friction between the movable and stationary parts.

18 designates a brush which, in the present instance, comprises a circular back 19 formed of wood or other material and having one face thereof provided with bristles 20 and the opposite surface formed with an upwardly-extending annular flange 21 adapted to fit within the annulus 5 and having the outer surface thereof provided with a metal lining 22 engaging the inner surface of the annulus 5. Formed in the annulus 5 and the flange 21 are alining openings, through which are passed securing screws 23 having the inner ends thereof threaded into the openings in the flange 21 and the outer end provided with thumb pieces whereby the screws may be inserted in the openings to secure the brush 18 to the annulus and removed from the openings when it is desired to detach the brush.

In practice, the brush 18 rests upon the floor or other surface to be polished and the motor is energized so that the annulus 5 and the brush 18 carried thereby are revolved as previously described, the brush 18 rotating about a vertical axis over the surface being polished.

23 designates a feed tube having one end projecting through the top wall of the casing 1 and the remaining end disposed adjacent to the center of the brush 18 in proximity to the floor or other surface being polished.

Formed on the side wall or flange of the casing 1 at diametrically opposite points and projecting outwardly therefrom are trunnions 24 and pivoted to the trunnions 24 are the extremities of a bail or yoke 25 and connected with the central member of the bail or yoke 25 and projecting upwardly therefrom is a handle 26 of any convenient or approved length whereby the casing 1 and the brush carried thereby may be moved about from place to place over the floor.

27 indicates a cylindrical reservoir adapted to contain a quantity of wax or analogous material and formed on the side wall of the reservoir and projecting outwardly therefrom are lugs 28 spaced apart vertically and formed with slots 29. Encircling the handle 26 adjacent to the lower end thereof and passed through the slot 29 in the lugs 28 are securing bands 30 acting to hold the wax reservoir to the handle. The upper end of the reservoir 27 is provided with a removable cup-shaped cover 31 having the flange or side wall thereof encircling the adjacent end

portion of the side wall of the reservoir when the cover is applied and formed in the side wall of the cover 31 at diametrically opposite points are T-shaped slots 32 designed to receive pins 33 projecting outwardly from the side walls of the reservoir at diametrically opposite points. The slots 32 and pins 33 form a detachable connection between the reservoir and the top and closure therefor. Mounted within the reservoir and capable of sliding movement therein is a plunger 34 composed of a series of felt disks 35 placed in face to face contact, and metal disks 36, 36 disposed in contact with the outer faces of the respective end felt disks, the disks 35 and 36 being secured to one another through the medium of bolts 37. This plunger 34 is formed centrally with a threaded bore 38 lying axially in an opening in the cover 31 and passed through the opening in the cover 31 and threaded through the bore 38 in the plunger is a feed screw 39 adapted when rotated in one direction to move the plunger 34 downwardly within the reservoir 27 and when moved in the opposite direction to elevate the plunger. In order to hold the feed screw 39 against axial movement when rotated any suitable means may be employed. In this instance a sleeve 40 is formed on the end wall of the cover 31 concentrically of the opening therein and surrounds the outer end portion of the shank of the screw 39, while fixed to the shank of the screw and abutting the inner surface of the end wall of the cover 31 is a collar 41. Secured to the outer extremity of the shank 39 is an operating handle 42 whereby the screw may be revolved and which bears against the outer edge of the sleeve 40 and coacts with the collar 41 to hold the screw against axial movement during the rotation thereof. The bottom wall of the reservoir 27 is formed, preferably centrally, with an outlet opening and formed on the bottom wall of the reservoir 27 concentrically of the opening therein is a nipple 43 and connected to the nipple 43 is one end of a flexible tube or hose 44, such tube or hose having the remaining end connected with the upper extremity of the feed tube 23.

45 designates a rubbing pad that is adapted to be secured within the annulus 5 in place of the brush 18. It may be here stated that this pad is substantially identical in construction to the brush 18 except that the bristles 20 are replaced by soft pads that are capable of spreading the wax over the floor evenly and uniformly.

In practice, the cover 31 is removed and the plunger 34 taken out of the reservoir 27. The reservoir is now filled with wax or analogous material, the plunger replaced and the cover secured thereon. The feed screw 39 is now revolved so as to force a quantity of the wax through the nipple 43,

tube 44 and feed tube 23 to the floor, and as the pad is revolved under the action of the motor and the machine moved as an entirety over the floor the wax will be spread evenly and uniformly. After the wax has been properly spread over the surface of the floor the pad 45 is removed and the brush 18 secured within the annulus 5 in place of the pad. The motor is again put into operation and the brush revolved about its vertical axis and the machine moved over the floor to polish the latter.

We claim:—

1. A machine of the class described comprising an inverted cup-shaped casing, a metal ring secured to the inner surface of the side wall of said casing adjacent to the open end thereof, an annulus coaxial with the open end of said casing and having the upper end thereof formed with an inwardly projecting flange, and the inwardly projecting flange formed with an upwardly projecting flange arranged within said ring, a plate fastened to the upper end of said last-mentioned flange and overlying said ring to hold the casing and annulus together, anti-friction bearings between said ring and said first flange, means for rotating said an-

nulus, and a polishing element carried by said annulus.

2. A machine of the class described comprising an inverted cup-shaped casing, a metal ring secured to the inner surface of the side wall of said casing adjacent to the open end thereof, an annulus coaxial with the open end of said casing and having the upper end thereof formed with an inwardly projecting flange, and the inwardly projecting flange formed with an upwardly projecting flange arranged within said ring, a plate fastened to the upper end of said last-mentioned flange and overlying said ring to hold the casing and annulus together, anti-friction bearings between said ring and said first flange, a motor within said casing, driving connections between said motor and plate whereby said annulus may be rotated relatively to said casing, and a polishing element carried by said annulus.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANK PERALTA.
WILLIAM SMELLIE.

Witnesses:

NORMAN CHAMBERS,
MOLLIE T. O'BRYEN.