Nov. 1, 1932. D. DURHAM 1,885,997

FLOOR WAXER AND POLISHER

Filed Dec. 18, 1928

Fig. 1.

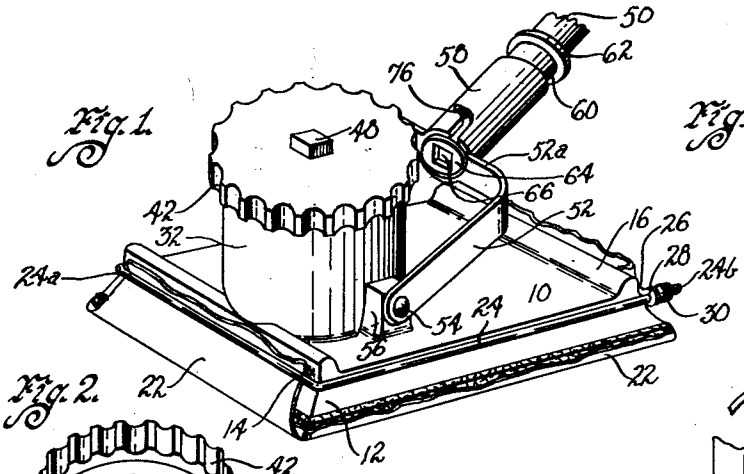


Fig. 2.

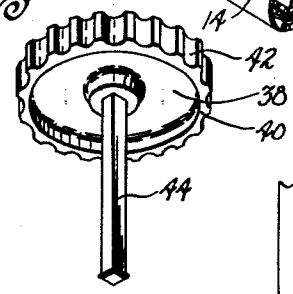


Fig. 3.

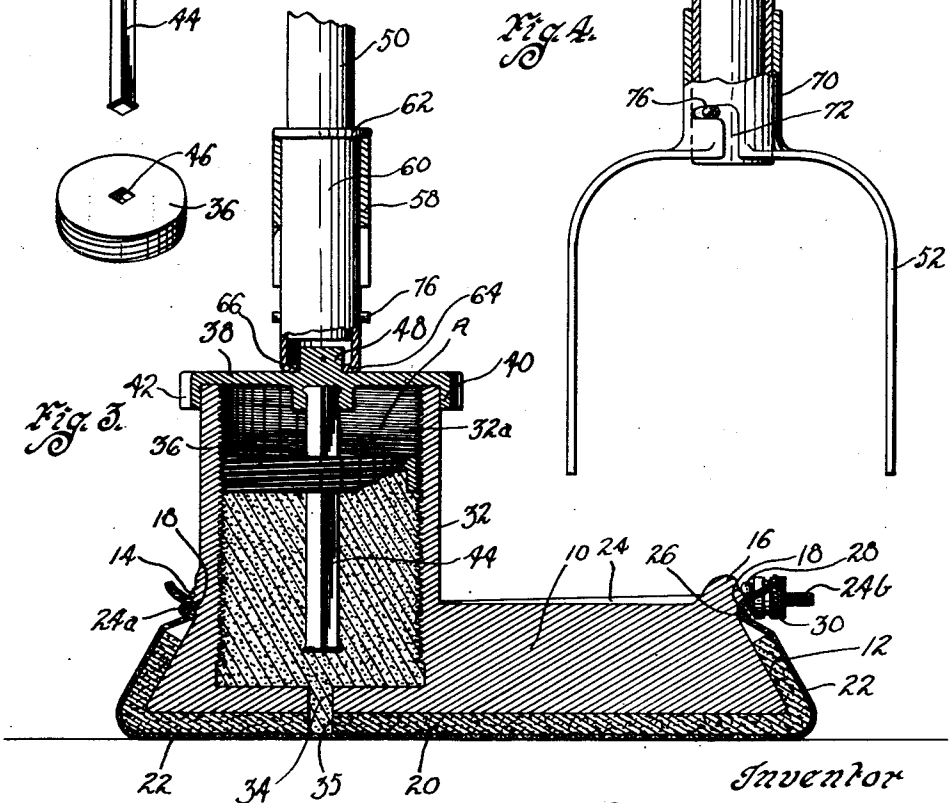


Fig. 5.

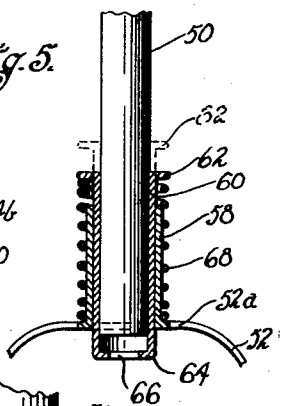


Fig. 4.

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UNITED STATES PATENT OFFICE

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FLOOR WAXER AND POLISHER

Application filed December 18, 1928. Serial No. 326,835.

The object of my invention is to provide a floor waxer and polisher of very simple and inexpensive construction having a base with a sheet of soft material on its under surface, which base is provided with a wax container supported thereon and with a passage through which wax can be forced from the container to the under surface of the base, the device including means of novel structure for feeding the wax from the container.

More particularly, it is my object in this connection to provide a wax feeding means so constructed and arranged as to be simple and effective and free from parts projecting above the wax container.

Another purpose of my invention is to provide in such a floor waxer and polisher having such a wax container and wax feeder a convenient structure whereby the wax feeder can be easily actuated for feeding the wax through the base by a suitable manipulation of the handle by which the base is propelled across the floor.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my floor waxer and polisher, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawing, in which:

Figure 1 is a perspective view of a floor waxer and polisher embodying my invention.

Figure 2 is a perspective view of the wax feeding apparatus.

Figure 3 is a vertical sectional view through the waxer and polisher, the parts being in position for forcing the wax through the base.

Figure 4 is a front elevation of the handle, parts being shown in section to illustrate the arrangement thereof and parts being broken away; and

Figure 5 is a vertical, sectional view through the lower end of a handle embodying a slightly modified form of device.

My floor waxer and polisher is of the type which is provided with a base 10, which may have substantially the form of a rectangular flat block, preferably having its sides and ends beveled as at 12, so that the base is of its greatest width and length at its lower part.

At the ends of the base 10 on the upper surface thereof are transverse ribs or the like 14 and 16, which have in their outer faces the horizontal grooves 18, for convenience in attaching the clamp mentioned below.

Extending across the lower face or bottom of the base 10 and upwardly around the ends and sides thereof is a strip of suitable material 20, such as felt, which is preferably secured to the base by means of cement, glue or any suitable adhesive material.

A strip of cheese cloth or other suitable material 22 is extended across the under surface of the felt 20 upwardly around the ends of the base 10 beyond the upper edges of the felt 20 as shown in Figure 3.

For fastening the cheese cloth in place and thus holding it snugly against the felt and also helping to hold the felt in position, I provide for example a U-shaped clamp 24, the closed end of which fits in the groove 18 and grips the upper end of the cheese cloth therein as indicated at 24*a*. The arms of the yoke clamp 24 extend along the sides of the base 10 at its upper edge and are screw-threaded at their free ends as at 24*b*.

Mounted on the free ends of the arms of the yoke clamp 24 is a cross rod 26 having at its ends the eyes 28 which receive the threaded ends 24*b* of such arms. The rod 26 enters the groove 18 and is locked in place by means of nuts 30.

This clamp structure snugly holds the cheese cloth member 22 in place and permits

the ready removal and replacement thereof.

Formed preferably integral with the base 10 and projecting upwardly therefrom is a wax container 32 having a cylindrical bore.

The chamber A formed by the wax container may project downwardly into the body of the base 10. From this chamber a passage 34 extends downwardly through the body of the base 10 to the under surface thereof as shown in Figure 3.

A felt strip 20 preferably has a passage 35, which registers with the passage 34 for permitting the free movement of wax from the chamber A to the under surface of the base 10.

The interior of the wax container 32 is screw-threaded for the greater portion of its length as at 32*a*.

Received within the container 32 is a disc-like plunger 36 having a threaded periphery to coact with the threads 32*a*.

For adjusting the plunger 36 in the container 32 for thus forcing the wax in the container downwardly, I provide the following means:

A container cap 38 has a downwardly extending peripheral flange 40 which is externally corrugated as at 42 (see Figure 1) for convenient manual manipulation.

Extending downwardly from the center of the under part of the cap 38 is an angular post 44, which is slidably but non-rotatably received in an angular opening 46 in the plunger 36. The plunger 36 may thus be adjusted by means of its threaded connection with the wax container 32 and by the rotation of the cap 38.

On top of the cap 38 is preferably provided a central lug 48 angular in outline which may be used in rotating the cap 38 by means of a wrench or by means of the handle as explained hereafter.

In the use of the waxer feeding device, the plunger 36 is removed and was is placed in the container 32 and thereupon the plunger can be adjusted downwardly from time to time by rotating the cap 38 for forcing wax from the container 32 downwardly through the passage 34 in the body of the base 10 and the passage 35 to the cheese cloth 22.

The felt and cheese cloth form a strip of polishing material. The fact that the cheese cloth extends over the passage 36 causes the wax to be properly distributed.

An important feature of the wax feeder lies in the fact that it has no parts which project upwardly to any substantial height or which vary in height depending upon the position of the plunger. This is a valuable advantage of my waxer because it enables me to build the waxer as low as possible and without projecting parts. The waxer can therefore be shoved under furniture without being interfered with.

I preferably use the handle for a manipulating device. There is provided for this purpose an ordinary handle 50. At the lower end of the handle a bail-like member 52 has its arms pivoted as at 54 to the base.

In the particular manner of mounting here shown, the bail is pivoted to lugs 56 on the wax container 32. The bail 52 has a tubular ferrule 58 formed thereon to receive the handle. On the lower end of the handle and slidably received within the ferrule 58 is a tubular sleeve 60 having an annular flange 62 at its upper end and having a closed lower end 64 provided with an angular opening 66 to fit the angular lug 48.

The sleeve 60 is fixed to the handle and to permit limited sliding adjustment of the handle and the sleeve with relation to the ferrule 58, there is mounted on the outside of the ferrule 58 and sleeve 60 a coil spring 68 arranged between the flange 62 of the sleeve 60 and the cross member 52*a* of the bail 52. Thus ordinarily the handle 50 is held at the outer limit of its sliding movement with relation to the bail by means of the spring 68.

The handle is inclined as shown for instance in Figure 1 when the waxer is in use, except that when it is desired to manipulate the wax feed, the handle is swung up to vertical position, whereupon the cross member 52*a* of the bail will stand above the wax container 32 and the handle can be shoved downwardly against the tension of the spring 68 for causing the lug 48 to be received in the angular opening 66 at the lower end 64 of the sleeve 60. Thereupon the handle can be rotated for thus rotating the cap 38 and adjusting the plunger 36.

In Figures 1, 3 and 4 is shown a modified form of handle mounting. The bail 52 is the same as already described. There is provided a sleeve 70 similar to the sleeve 58 already described, except that the sleeve 70 has in it a bayonet joint slot 72, the lower portion of which is vertical when the handle is in vertical position and the upper portion of which is substantially horizontal as shown in Figure 3.

The inner end of the slot 72 is slightly tapered.

In the form of handle mounting now being described, the lower end of the handle is received in a sleeve 74 similar to the sleeve 60, except that there projects laterally from the sleeve 74 near its lower portion a pin 76 which travels in the slot 72.

In the use of the form of the device shown in Figures 1, 3 and 4 when the waxer is being employed in the ordinary way, the pin 76 is wedged in the upper part of the slot 72. When it is desired to manipulate the plunger 36, the handle is swung to vertical position and is rotated to bring the pin 76 to registry with the vertical portion of the slot 72 and the handle is then moved length-

wise until the opening in the lower end of the sleeve 74 receives the lug 48. The handle can then be rotated for adjusting the plunger 36, and after such adjustment the handle is rotated until the pin 76 can be drawn into the slot 72 again.

Other constructions could be used for operating the plunger from the handle.

It will be seen from the foregoing that I have provided a wax feed which projects a minimum distance above the base 10 so as to interfere as little as possible with the use of the waxer under furniture and the like. Thus the plunger can be forced down, or brought to the upper part of the container by the rotation of the post, and yet no part of this feeding mechanism ever projects above the container.

I have also provided a simple and positive wax feeding means, which can be operated manually or can be conveniently operated by means of the handle without the necessity for stooping over.

One advantage of this device arises from the structure wherein the handle is pivoted to the base so that during the waxing operation, the power is applied in such a way as not to upset the waxer, and yet the handle can be conveniently moved to position to coact with the post 44 for actuating the feeding means. If the handle were pivoted to the upper part of the container, there would be a tendency to upset the waxer when pushing it over the floor.

Another advantage of the present structure is due to the fact that the handle can be moved away from the container for allowing unimpeded access to the cap 38 for removing and replacing it for putting in a new supply of wax.

Changes may be made in the details of the construction and arrangement of parts of my improved device without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents, which may be reasonably included within their scope.

I claim as my invention:

1. In a floor waxer, a base, a wax container thereon, said waxer having a passage leading from the container through the base, a plunger in the container having a peripheral threaded connection with the interior wall thereof, a post slidably but non-rotatably associated with the plunger, a handle, a member pivoted to said base, means for mounting said handle on said member for limited sliding and for rotary movement, coacting socket and lug elements, associated with said handle and said first-named member so that in one position of the pivotal movement of the handle the coacting socket and lug element may be brought into engagement and the handle then rotated for operating said plunger, while in another position of such pivotal movement the handle is entirely out of operative association with said post and in position to operate the waxer.

2. In a floor waxer, a base, a wax container thereon, said waxer having a passage leading from the container through the base, a plunger in the container having a peripheral threaded connection with the interior wall thereof, a post slidably but non-rotatably associated with the plunger, a handle, a member pivoted to said base, means for mounting said handle on said member for limited sliding and for rotary movement, coacting elements associated with said handle and said post, respectively, so arranged that in one position of its pivotal movement the handle may be slid to bring said elements into cooperative engagement and the handle may then be rotated for rotating the post and thus operating said plunger, while in another position of such pivotal movement the handle is entirely out of operative association with said post and in position to operate the waxer, said means including elements for locking the handle and the means against longitudinal movement of the handle when the handle is in one of its adjusted positions with relation to said member.

3. A floor waxer having a base, a wax container thereon, said waxer having a passage leading through the base from the container, a plunger in the container having a peripheral threaded connection with the interior wall thereof, a post slidably but non-rotatably associated with the plunger, a handle, means for pivotally and slidably supporting the handle on the waxer adapted to permit the handle to be moved to position with its longitudinal axis in line with the longitudinal axis of said post, said post and handle having associated coacting parts adapted, when the handle is in the last described position, and is slid lengthwise to engage the post, so that when the handle is rotated the post is rotated for actuating the plunger.

4. A floor waxer having a base, a wax container thereon, said waxer having a passage leading through the base from the container, a plunger in the container having a peripheral threaded connection with the interior wall thereof, a post slidably but non-rotatably associated with the plunger, a handle, means for pivotally supporting the handle on the waxer adapted to permit the handle to be moved to position with its longitudinal axis in line with the longitudinal axis of said post, said handle being slidably adjustable on said means, said post and handle having associated coacting parts which when the handle is in the last described position and slid lengthwise, will cooperate to rotate the post for actuating said plunger.

5. In a floor waxer, a base, a wax container thereon, said waxer having a passage leading

from the container through the base, a plunger in the container having a peripheral threaded connection therewith, a member slidably but non-rotatably associated with the plunger, a bail having its ends pivoted to said base, a handle mounted on said bail for limited sliding movement, said handle and member having coacting means whereby when the handle is raised to position in line with said member and moved toward said member the handle may be cooperatively engaged and rotated for operating said plunger.

Des Moines, Iowa, November 27, 1928.

DONALD DURHAM.