R. LICHTER.

FLOOR POLISHING DEVICE.

APPLICATION FILED MAR. 16, 1914.

1,111,697. Patented Sept. 22, 1914.

Fig. 2.

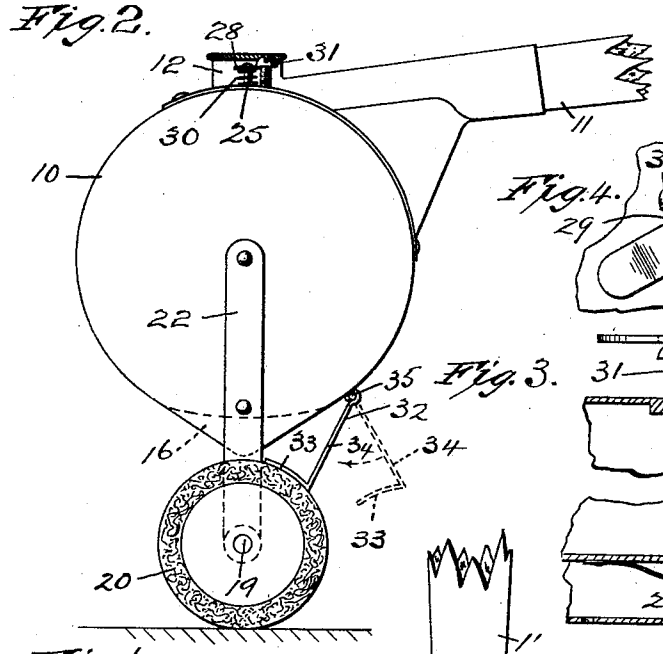


Fig. 4.

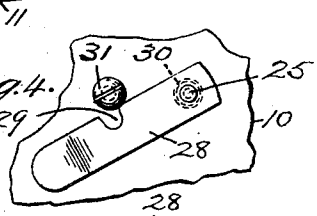


Fig. 3.

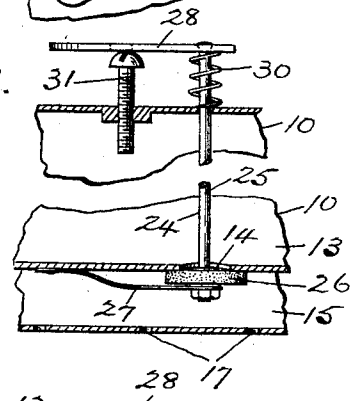
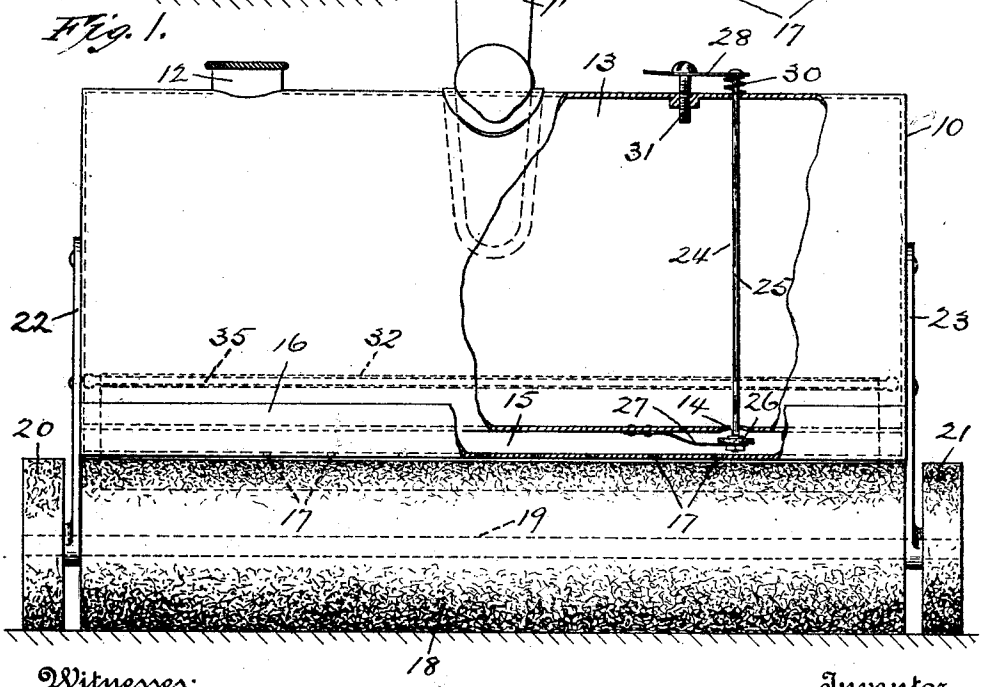


Fig. 1.



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UNITED STATES PATENT OFFICE.

RUBEN LICHTER, OF NEW YORK, N. Y., ASSIGNOR TO SUPERIOR FLOOR OILER CO., INC., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

FLOOR-POLISHING DEVICE.

1,111,697. Specification of Letters Patent. Patented Sept. 22, 1914.

Application filed March 16, 1914. Serial No. 824,994.

To all whom it may concern:

Be it known that I, RUBEN LICHTER, a citizen of the United States, and a resident of New York, county and State of New York, have invented a certain new and useful Improvement in Floor-Polishing Devices, of which the following is a full, clear, and exact specification.

This invention relates to a class of devices adapted to be used for polishing the floors of buildings, or other structures, and has for its object primarily to enable this class of work to be accomplished with facility and thoroughness by employing mainly a receptacle, or tank which is formed to provide a supply chamber and a sub-chamber, the supply chamber being adapted to contain oil, or other suitable polishing liquid, and having an outlet leading into the sub-chamber which is provided with means for feeding the liquid to a rotatable buffer, or roller of absorbent yielding material which serves as a medium for evenly distributing the liquid when directed in revoluble and frictional contact with the surface.

Other objects of the invention are to provide a spring actuated feeding means for controlling the feed of the liquid from the supply chamber to the sub-chamber; to provide means whereby the valve may be held in an open adjusted position relatively to the outlet of the supply chamber as well as serving to permit the adjustment of the valve to be regulated; and to provide a hinged brake member adapted to be swung into engagement with the buffer to serve for checking its rotation when it is desired to use the buffer for frictional contact with the surface.

A further object of the invention is to provide a polishing device of a simple and efficient construction, and which is susceptible of being made in various sizes and shapes.

A practical embodiment of the invention is represented in the accompanying drawing forming a part of this specification in which similar characters of reference indicate corresponding parts in all the views, the said invention being more fully described hereinafter, and then pointed out in the claims at the end of the description.

In the drawing, Figure 1 is a front elevation, partly fragmentary and partly broken away, of one form of floor polishing device embodying my invention. Fig. 2 is an end view, partly fragmentary of the device. Fig. 3 is a fragmentary view, partly in section and partly broken away, showing the feeder used in the device, and Fig. 4 is a fragmentary view, showing a top plan of the feeder.

The floor polishing device has a receptacle, or tank 10 which is preferably cylindrical in shape and may be of any desired length. Extending laterally from the central portion of the upper part of the tank 10 is a handle 11 of a suitable length to permit the device to be conveniently moved in forward and backward directions on the surface which is to be polished. In proximity to one end of the tank is a cap which closes an inlet 12 for admitting oil, or other suitable polishing liquid into the supply chamber 13 in the tank, and through the underside of the tank contiguous to the other end thereof is an opening which serves as an outlet 14. The outlet 14 leads into a sub-chamber 15 which is provided by soldering or otherwise securing to the underside of the tank 10 a curved, or substantially V-shaped plate 16 extending longitudinally of the tank, and this plate is disposed so that its apex is in spaced opposed relation to the underside of the tank and to its outlet 14.

At intervals through the apex of the V-shaped plate 16 are a number of openings 17 which serve as means for feeding the liquid from the sub-chamber 15 to a rotatable buffer, or roller 10 of felt, or other absorbent yielding material which is wrapped around a core of wood or the like having a rod 19 disposed lengthwise therethrough. The buffer 18 is preferably similar in length to the tank and to the V-shaped plate 16, and the rod 19 is of a length to extend some distance beyond both ends of the buffer. On the extreme ends of the rod 19 are two narrow rollers, or buffers 20 and 21 which are slightly spaced from the buffer 18, and these rollers are also made of the same material as the larger buffer. The parts of the rod 19 between the buffer 18 and the rollers 20 and 21 are revolubly held in the lower ends of brackets 22 and 24 both of which have their other ends secured to the ends of the tank in a manner whereby the buffer 18 will be dis-

posed in close proximity to the apex of the V-shaped plate 16 so that liquid fed through the openings 17 from the sub-chamber 15 will be received thereon.

Serving to permit the supply of the liquid from the chamber 13 to the sub-chamber 15 to be regulated, a spring actuated feed controller, or valve, as 24, is provided. The feeder, or valve 24 has a rod 25 movably disposed through the outlet 14 of the tank 10 and through an opening in the upper part thereof, and this rod is adapted to be directed in upward and downward directions as well as being rotatable. One end of the rod 25 extends into the sub-chamber 15 while its other end extends above the tank, and on the lower end of the rod 25 is provided a disk 26 adapted to be guided to and from the underside of the tank for closing and opening the outlet 14 of the supply chamber 13.

To the rod 25 under the disk 26 is movably held one end of a spring, as 27, having its other end secured to the wall of the tank, and this spring normally serves to force the rod and the disk in a direction to close the outlet 14. On the upper end of the rod 25 is tightly held one end of a bar 28 which extends in a lateral direction with respect to the rod, and the central part of one edge of the bar is notched, at 29. Encircling the rod 25, and between the wall of the tank and the bar 28, is a spiral spring 30 which also normally serves to force the rod upwardly so that its disk will be seated over the outlet 14. In order to hold the valve 24 for keeping the outlet 14 of the tank open for a suitable length of time the rod 25 is forced in a downwardly direction by pressing the arm 28 also downwardly. The arm 28 is then rotatably moved so that it will be directed under the head of a threaded bolt 31 which is screwed in a threaded opening provided in the wall of the tank. The bolt 31 will thereby enter the notch 29 of the arm 28, and the valve 24 will be held in open position from the outlet 14 to permit liquid in the supply chamber 13 to be fed to the sub-chamber 15. By also adjusting the bolt 31 in the wall of the tank the valve will be suitably adjusted to regulate the feed of the liquid to meet desired requirements.

To operate the device a sufficient quantity of oil, or other polishing liquid is poured through the inlet 12 of the tank 10 after the cap of the inlet is removed therefrom, and the valve 24 operated to close the outlet 14 of the tank. The outlet 14 is then opened by adjusting the valve 24, as above described, for permitting a required quantity of the liquid to be fed from the supply chamber 13 to the sub-chamber 15. By directing the device through the medium of the handle 10 so that the rollers 18, 20, 21 will be revolved in contact with the floor of a building, or other structure, or surface, the liquid in the sub-chamber 15 will be delivered to the roller 18 which in turn will distribute the liquid evenly on the surface, and by the use of the two narrow rollers extending a distance from the ends of the tank the device may be so manipulated that the corners of the floor of a room may be properly oiled. When it is desired to polish the surface after the liquid is applied thereon, the buffer, or roller 18 is held against rotation by providing a brake, as 32. The brake 32 is in the form of a substantially L-shaped plate to provide two angularly disposed arms 33 and 34 which are nearly the same lengths as the tank 10. The upper edge of the arm 34 of the brake is hinged, at 35, longitudinally to the tank 10 in a manner whereby the arm 33 will snugly engage the roller 18 when the brake is swung toward the apex of the V-shaped plate 16 of the tank. The roller 18 will then be held against rotation, and by moving the device to and fro, over the surface and in contact therewith it will be readily polished. By swinging the brake 32 in a reverse direction the roller 18 will be released from its engagement therewith so that the device may be used for applying liquid to a surface in the manner explained.

In the foregoing description, I have embodied the preferred form of my invention, but I do not wish to be understood as limiting myself thereto, as I am aware that modifications may be made therein without departing from the principle, or sacrificing any of the advantages of this invention, therefore I reserve to myself the right to make such changes as fairly fall within the scope of the appended claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. A device of the character described, comprising a tank having a supply chamber and a sub-chamber therein, means within the tank to provide an outlet whereby liquid in the supply chamber may be delivered to the sub-chamber, means in the sub-chamber to permit the liquid to be fed therefrom, a buffer pivoted to the tank, and adapted to receive the liquid when fed from the sub-chamber, said buffer being rotatable when guided over a surface by moving the tank so that the liquid delivered thereto will be applied on the surface, a controller within the tank for permitting the flow of the liquid through the outlet to be regulated, and a brake hinged to the tank, and adapted to be swung to engage the buffer to prevent its rotation for the purpose specified.

2. In a device of the character described, a tank adapted to contain liquid, and having an inlet and an outlet, a substantially V-shaped plate having its edges secured to the

underside of the tank so that the apex of the plate will be spaced from the tank to provide a sub-chamber, and said plate having a number of spaced openings in its apex for the passage of the liquid from a sub-chamber, a spring actuated valve within the tank, and controlling the passage through the outlet thereof whereby the flow of the liquid may be regulated, means on the tank, and adapted to be detachably engaged by the valve to retain the valve in adjusted open position relatively to the outlet, a buffer pivoted to the tank, and adapted to receive the liquid when fed through the openings of the V-shaped plate, said buffer being rotatable when guided over a surface by moving the tank so that the liquid delivered thereto will be applied on the surface, and a brake hinged to the tank, and adapted to be swung to engage the buffer to prevent its rotation for the purpose specified.

This specification signed and witnessed this fourteenth day of March A. D. 1914.

RUBEN LICHTER.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."