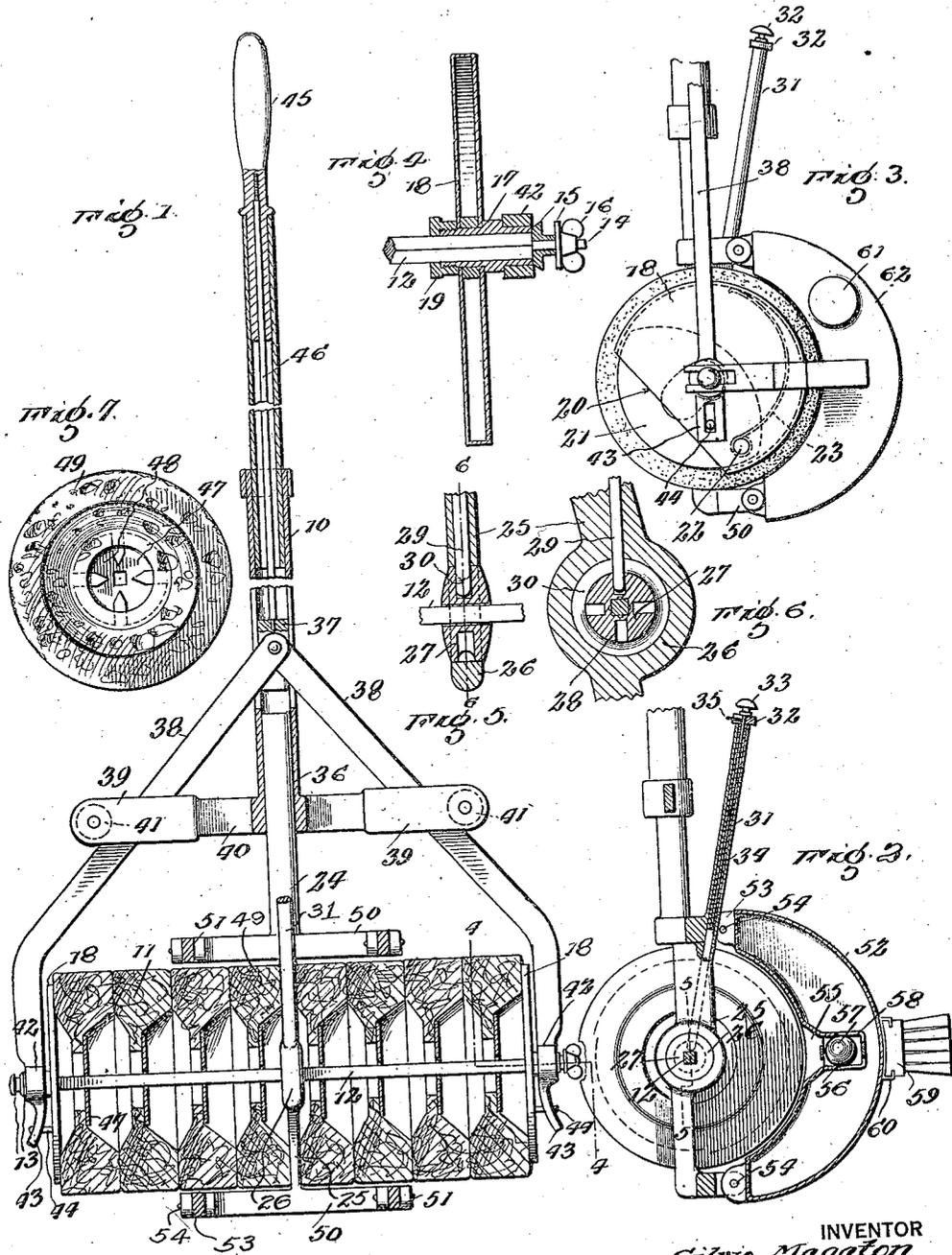


July 22, 1924.

1,502,148

S. MAGATON
FLOOR SCRUBBING MACHINE
Filed Sept. 10, 1921



INVENTOR
Silvio Magaton

BY

ATTORNEY

Richard Brown

UNITED STATES PATENT OFFICE.

SILVIO MAGATON, OF NEW YORK, N. Y.

FLOOR-SCRUBBING MACHINE.

Application filed September 10, 1921. Serial No. 499,732.

To all whom it may concern:

Be it known that I, SILVIO MAGATON, a subject of the King of Italy, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Floor-Scrubbing Machines, of which the following is a specification.

This invention has relation to floor scrubbing machines and has for an object to provide an implement by which water may be distributed over the floor and the dirt particles dislodged, with means to absorb the soiled or waste water from the floor and for temporarily storing the waste water in a receptacle forming part of the implement.

Another object of the invention is to provide a floor scrubbing implement of the character set forth and embodying a rotatable absorbent scrubbing element, means to hold the element against rotation so that sufficient friction may be engendered with the floor to remove the dirt particles therefrom, said element being rotatable to subsequently absorb the soiled or waste water, a means to squeeze said element to expel the waste water therefrom, and a receptacle to temporarily receive the soiled water.

In addition to the foregoing this invention comprehends improvements in the details of construction and arrangement parts to be hereinafter described and particularly set forth in the appended claims.

In the accompanying drawings in which similar and corresponding parts are designated by the same characters of reference throughout the several views in which they appear:

Figure 1 is a view in longitudinal section of a floor scrubbing implement constructed in accordance with my invention.

Figure 2 is a view thereof in longitudinal section taken along a plane at right angles to the plane of the preceding view.

Figure 3 is a view in side elevation of one end of the implement.

Figure 4 is a detail section taken on the line 4—4 of Figure 1.

Figure 5 is a detail view in section taken on the line 5—5 of Figure 2.

Figure 6 is a detail view in section taken on the line 6—6 of Figure 5; and

Figure 7 is a detail view in side elevation of one unit of the scrubbing element.

With reference to the drawings, 10 indicates the handle of the implement, and 11 a rotatable scrubbing element mounted thereon. In detail, the scrubbing element consists of a shaft 12, square in cross section. A pair of spaced collars 13 are mounted on one end, and the other end is formed with a reduced and threaded extension 14 upon which a pair of spaced collars 15 are placed, the latter being held on by means of a thumb nut 16. A sleeve 17 is mounted on each end of the shaft, said sleeves having square openings to receive the shaft. Each sleeve carries a hollow disc 18, the latter having central openings to receive the sleeves, and the discs are held in place by means of nuts 19 which are applied to the inner threaded ends of the sleeves. A segment is cut away from each disc leaving a straight edge 20 along the chord of the disc, and mounted in each disc is a segmental member 21, pivoted at 22, the outer edge of the member projecting from within the disc and forming a complete circle with the balance of the periphery of the disc. A leaf spring 23 fixed to the member 21 at its pivotal point and bearing against the inner surface of the disc acts to urge said member outward.

The handle construction comprises a rod section 24 cast with an extension 25, the latter being formed with an annular portion 26 in which a relatively thick disc 27, is held for rotation. Said disc is formed with a square central opening through which the shaft 12 extends, and a plurality of radial openings or recesses 28 are formed in the disc to receive one end of a rod 29. A groove 30 is formed in the periphery of the disc for a purpose to be presently noted. A tubular member 31 is formed with the extension 25 for the purpose of guiding the rod 29 the opposite or outer end of which is reduced, and said reduced portion passed through a plug 32 which is threaded into the end of the tubular member, a knob 33 being subsequently secured on the outer end of said reduced portion. A spring 34 is embraced about said reduced portion and bears at one end against the shoulder which is located at the juncture of the rod 29 with its reduced portion, and at its other end against the plug 32 thus urging the rod into the recess of the disc 27. A pin 35 extending from the reduced portion of the rod 29 normally rests in a re-

cess in the plug 32, and when in this position the rod 29 will be seated in one of the recesses 28. If the rod is slightly withdrawn by grasping the knob 33 and then rotated the inner end of the rod will leave the recess and will enter the groove 30 of the disc, said rod being held in this position by engagement of the pin 35 with the plug 32. This, with the rod 29 in an inward position the disc 27 and consequently the shaft 12 is held against rotation, and by withdrawing the rod the shaft may rotate that the seating of the rod in the groove 30 of the disc will prevent the latter from leaving the annular portion 26 by lateral movement. The rod section 24 enters a tube section 36 forming part of the handle. A block 37 slides within said section 36 and pivoted to said block is a pair of arms 38 which are in diverging relation and pass through the bifurcated ends 39 of a cross bar 40 which is fixed to said section 36. A roller 41 journalled within each bifurcated portion 40 serves to provide an auto-friction means against which the arms 38 may ride and to hold the latter in place. The outer ends of the arms 38 are bent so as to extend around the discs 18, and are formed with enlargements 42 which are apertured to receive the ends of the above mentioned sleeves 17, one of which is provided at each end of the square shaft 12. A finger 43 is formed on each arm 38 beyond the enlargements, and each finger is slotted to receive a pin 44 extending eccentrically from each disc 18. A reciprocable member 45 operates in the outer end of the handle, and a rod 46 connects said member with the block 37. The scrubbing element consists of a number of units, one unit being shown in Figure 7 and consisting of a disc 47 having a square central opening to receive the shaft 12, and a number of radial fingers 48 secured to the inner edge of an annular member 49 composed of sponge, felt, or other absorbent material. A number of these units are mounted on the squared shafts between the discs. Formed with the casting 25 is a pair of supports 50, parallel to each other and to the shaft 12. Each support is formed with a pair of apertured lugs 51. A tank 52, semi-circular in cross section is provided. A lug 53 is formed at each side of the tank to enter the space between the lugs 51, so that a rod 54 may be passed through said lugs 51 and 53 to hold the tank in place. A recess 55 is formed in the concave side of the tank and said recess is formed with an aperture 56 against which a ball valve 57 is held by gravity when the implement is held in an operative position, a cage 58 being provided to retain the valve in place. A brush 59 is held within a guide 60 mounted on the convex side of the tank. A cap 61 covers an opening in the end of the tank through which its contents may be discharged. A slotted finger

62 is mouned at each end of the tank, said fingers receiving the ends of the shaft 12 between the collars 13 and 15, thus affording a steadying means for the tank.

In operation, the shaft 12 is locked against rotation and the floor is moistened and the moisture spread by means of the scrubbing element 11. The implement is supported with the handle at an angle and the tank 52 on the upper side. It will be noted that the segments 21 will slide into the discs when contacting with the floor, thus permitting the scrubbing element to engage the floor. After the dirt particles have been dislodged the shaft 12 is unlocked. The scrubbing element may now rotate and by moving the implement over the floor the soiled water is absorbed by the units of the scrubbing element. When said element is saturated the implement is turned over to bring the tank on the under side. The member 45 is now pulled out and the arms 38 in riding against the rollers 41 will force the discs 18 toward each other, thus squeezing the units of the scrubbing elements between them and expelling the waste water which will flow into the tank through the opening 56, the valve 57 being unseated in this position of the tank.

Having thus described my invention, which I claim as new and desire to secure by United States Letters Patent is:

1. A scrubbing implement including a support, an absorbent scrubbing element carried thereby for rotation, means to lock the element to the support against rotation, a handle, a pair of members mounted thereon to engage said element between them to expel the water from the element by compressing the same when the members are moved together.

2. A scrubbing implement including a support, a shaft, a plurality of absorbent elements mounted on the shaft, means to lock the shaft against rotation, and means to compress said elements and to move them toward each other along the shaft to expel the moisture therefrom.

3. A scrubbing implement including a support, a shaft mounted thereon for rotation, a plurality of discs of absorbent material mounted on said shaft for rotation therewith but adapted for sliding movement axially of the shaft, and means to engage the outermost end discs to compress said discs, the latter moving toward each other along the shaft when compressed.

4. A scrubbing machine including a support, a shaft carried thereby, an absorbent element mounted on the shaft, a pair of discs mounted on the shaft, one at each end of the element, a handle fixed to the support, and means operated from the handle to move the discs toward each other to compress the element therebetween.

5. A scrubbing implement including a

support, a shaft, an absorbent element
mounted on the shaft, a pair of discs mount-
ed on the shaft, one at each end of the ele-
ment, a handle fixed to the support, a mem-
5 ber movable along the handle, a pair of
arms pivoted to the block and engaging the
discs at their other ends, and a guide for
the arms whereby to cause the arms to move

together when the block is shifted, to com-
press said element between the discs. 10

In testimony whereof I affix my signature
in presence of two witnesses.

SILVIO MAGATON. [L. s.]

Witnesses:

HECTOR OTTO ARGENTON,
WM. ZEAMAN,