Feb. 17, 1925. 1,526,384

L. SIMPSON

FLOOR SCRUBBER

Filed Dec. 26, 1923

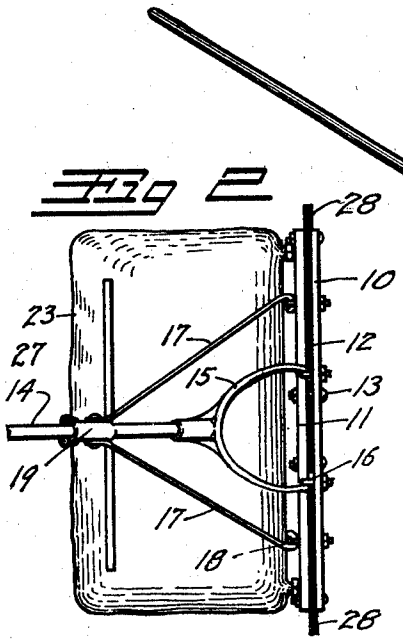


Fig 2

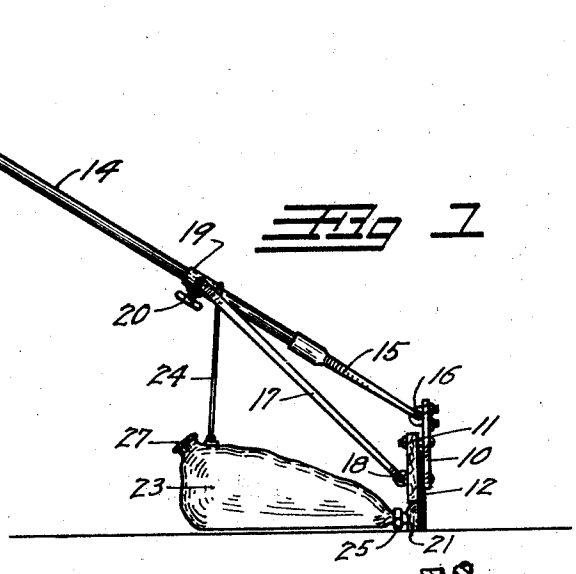


Fig 1

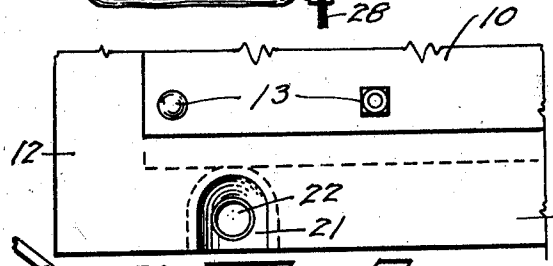


Fig 3

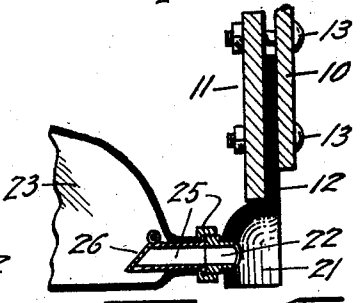


Fig 4

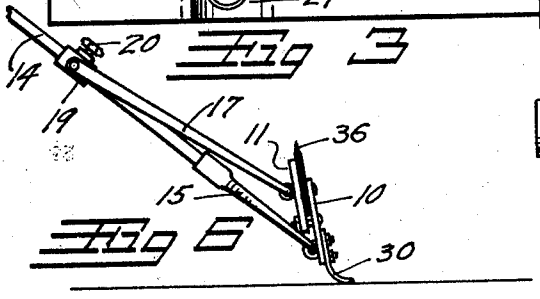


Fig 6

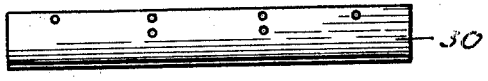


Fig 5

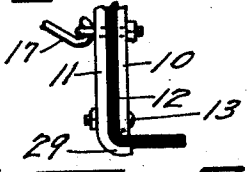


Fig 7

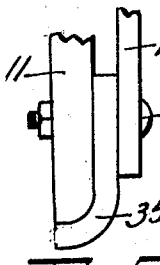


Fig 9

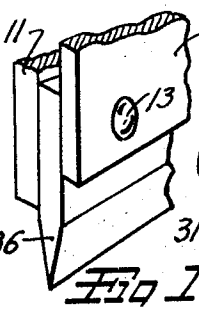


Fig 10

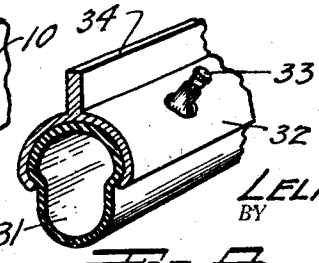


Fig 8

INVENTOR.
LELAND SIMPSON
BY
ATTORNEY.

Patented Feb. 17, 1925. 1,526,384.

UNITED STATES PATENT OFFICE.

LELAND SIMPSON, OF DENVER, COLORADO.

FLOOR SCRUBBER.

Application filed December 26, 1923. Serial No. 682,673.

To all whom it may concern:

Be it known that I, LELAND SIMPSON, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Floor Scrubbers, of which the following is a specification.

This invention relates to devices for the scrubbing of, and the removing of water from, floors and has for its principal object the provision of device of this character which will be efficient in operation and which will pick up and store the surplus surface water.

Another object of the invention is to provide a floor scrubber in which the part in contact with the floor will be interchangeable so that it may be adapted to operate on various kinds of floor surfaces and serve various purposes.

Still another object of the invention is to provide a floor scrubbing device which can be quickly and easily converted into a snow plow for cleaning snow and ice from sidewalks.

Other objects and advantages reside in the details of construction of the invention which result in simplicity, economy and efficiency, and which will become more apparent from the following description.

In the following detailed description of the invention reference is had to the accompanying drawing which forms a part hereof. Like numerals refer to like parts in all views of the drawing and throughout the specification.

In the drawing:—

Fig. 1 is a side elevation of my invention showing it equipped for removing and storing the water from the floor.

Fig. 2 is a plan view of the device as shown in Fig. 1.

Fig. 3 is an enlarged front elevation of the scrubber showing one of the openings for admitting the water.

Fig. 4 is a detail vertical section taken on the line 4—4, Fig. 3.

Fig. 5 is a detail view of the snow plow attachment.

Fig. 6 is a side elevation showing the appearance of the device with the snow plow attachment in use.

Fig. 7 is a plan view of one extremity of the scrubber showing an alternate form in which the extremities of the squee-gee or scrubbing rubber are turned forward.

Fig. 8, Fig. 9 and Fig. 10 show alternate forms of scrubbing rubbers.

Let the numeral 10 designate a plate, which I call the front plate, and the numeral 11 a second or rear plate. A sheet of relatively heavy rubber 12, known as the squee-gee, is clamped between the plates 10 and 11 by means of suitable bolts 13.

A handle 14 is pivoted to the front plate 10 through the medium of a yoke 15, as shown at 16. Diagonal braces 17 are pivoted to the rear plate 11, as shown at 18, and pivotally connect at their other extremities with a collar 19 which is slidably mounted on the handle 14 and which may be secured at any desired position thereon by means of a set screw 20. By varying the position of the collar 19 on the handle 14, the angle of projection of the plates 10 and 11 and the squee-gee may be adjusted as desired.

Near each extremity of the squee-gee 12, and opening to its lower edge, are depressions 21, to the rear of which threaded male nipples 22 are secured.

Suspended from the handle 14, as shown at 24, is a waterproof bag 23 which is provided with suitably spaced female nipples 25. The nipples 25 are threaded on the nipples 22 as shown in Fig. 4.

The nipples 25 project into the bag 23 and carry at their inner extremities check valves 26 which allow the water to pass into the bag 23 but will not allow it to escape.

In use, the scrubber is pushed ahead of the operator held at an angle to the direction of travel. The water accumulates ahead of the squee-gee and travels along it toward the rearmost end where it flows into the depression 21 at that end. The pressure of the movement of the scrubber against the water will force it through the nipples 22 and 25 past the valve 26 and into the bag 23. The bag 23 is provided with an outlet opening 27 which allows the air in the bag to escape as the water enters and by means of which the bag is emptied. It will be noted that the extremities of the squee-gee project beyond the extremities of the plates 10 and 11, as shown at 28, Fig. 1, so that the scrubber can be worked in close proximity to walls, etc., without damaging them.

If desired, the extremities of the squee-gee can be turned forward, as shown in Fig. 7, to prevent the water from escaping around the ends of the scrubber. To accomplish

this, the ends of the plate 11 are turned as shown at 29 so as to force the squee-gee around the ends of the plate 10.

In the smaller forms of the scrubber the valve 26 may be dispensed with since a considerable quantity of water can be held in the bag 23 below the level of the inlet nipples 25.

When it is desired to use the scrubber as a snow plow or scraper, a curved plate 30 is secured along the upper edge of the plate 10, by means of the present bolts 13 and the bolts used to hold the yoke 15. The scrubber is turned over, as shown in Fig. 6, and the angle of the plates adjusted by means of the collar 19, when the device is ready for use as a snow scraper.

The scrubber could, of course, be used as a snow scraper by simply reversing it and adjusting its angle, without using the plate 30, in which case the front plate 10 would act as a scraper.

In Figs. 8, 9 and 10, alternate forms of squee-gees are shown which are interchangeable with the squee-gee 12, previously described, when it is not desired to make use of the water collecting feature.

Fig. 8 shows a pneumatic tube 31, held in a metallic holder 32 and inflated by means of a valve 33. The holder 32 is provided with a lug 34 which is gripped between the plates 10 and 11 of the scrubber.

Fig. 9 shows a solid rubber squee-gee 35 which is formed back under the lower edge of the plate 11 which act as a stiffener for the rubber. This form is used where it is necessary to have great pressure on the floor for removing tightly adhering material.

Fig. 10 shows a solid rubber feather edge squee-gee 36 which is used where only a light pressure on the floor is desired.

While specific forms of the improvement have been illustrated and described herein, it is desired to be understood that they may be varied, within the scope of the appended claims, without departing from the spirit of the invention.

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

1. A floor scrubber comprising a rubber plate one edge of which is adapted to contact with the floor; openings through said plate; a water container in the rear of said plate, said openings opening into said container and a handle by means of which said plate may be moved over said floor.

2. A floor scrubber comprising a handle; a substantially vertical rubber plate; means on said handle for clamping said rubber plate; depressions in said plate below said clamping means; a water container in the rear of said plate suspended from said handle and tubes communicating between said depressions and said container.

3. A floor scrubber comprising a rubber plate one edge of which is adapted to contact with the floor; openings through said plate; a water container positioned to the rear of said plate; tubes communicating between said openings and said container and a check valve admitting water to said container from said tubes and preventing its return therethrough.

In testimony whereof, I affix my signature.

LELAND SIMPSON.