

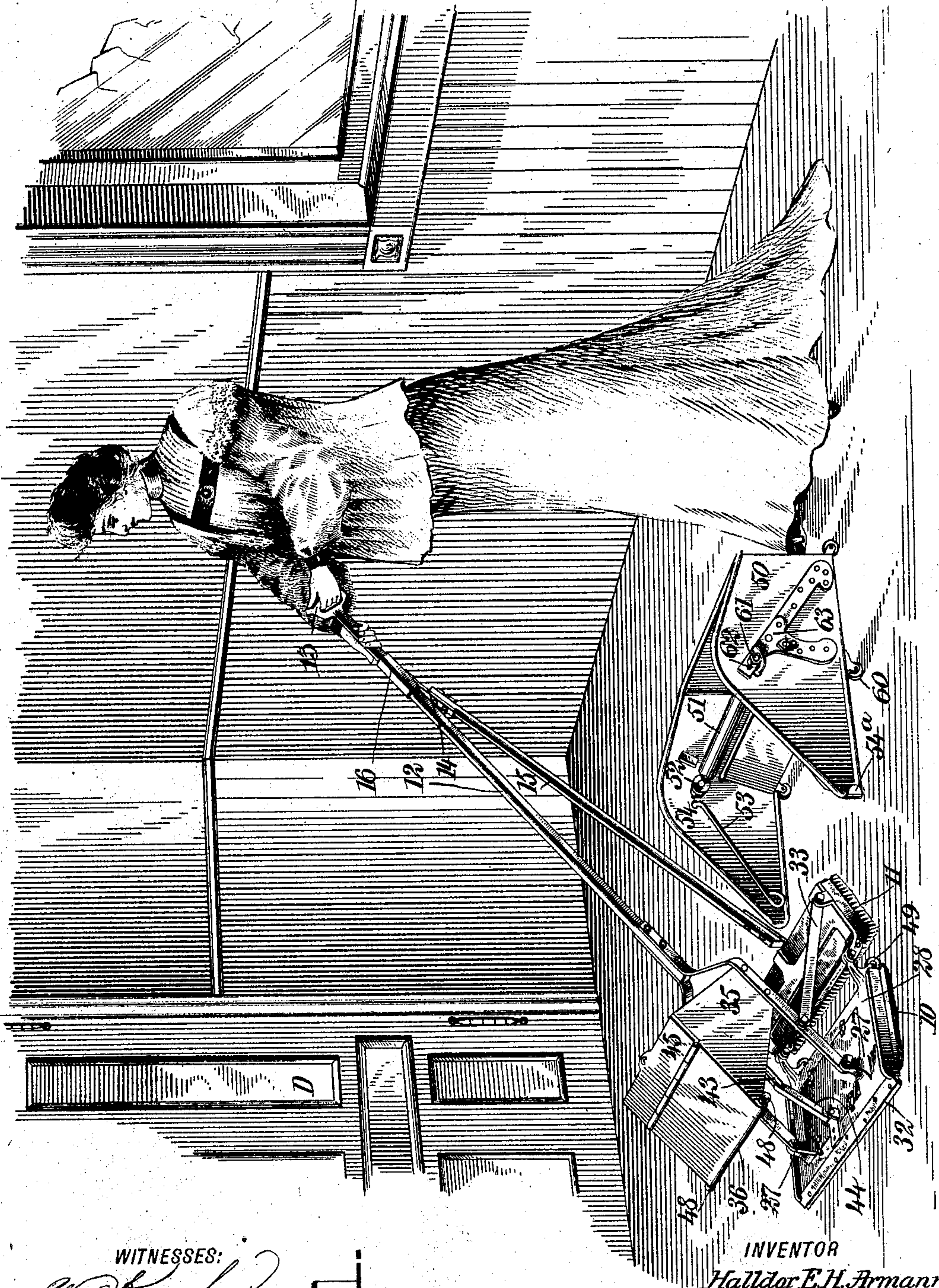
No. 815,324.

PATENTED MAR. 20, 1906.

H. E. H. ARMANN.  
SCRUBBING DEVICE.

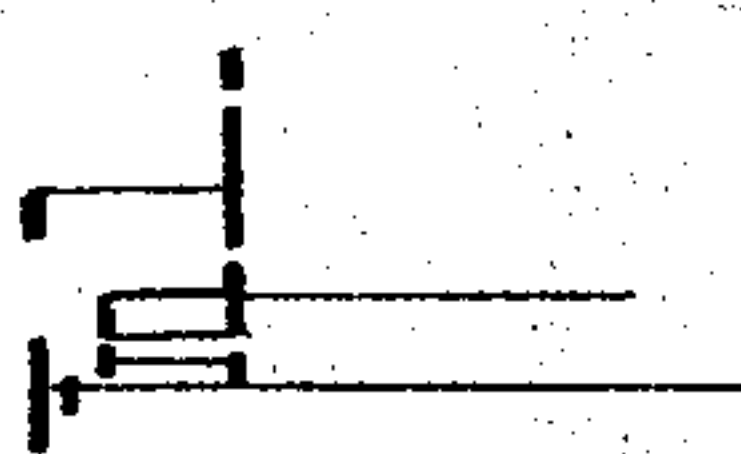
APPLICATION FILED OCT. 8, 1904.

3 SHEETS—SHEET 1.



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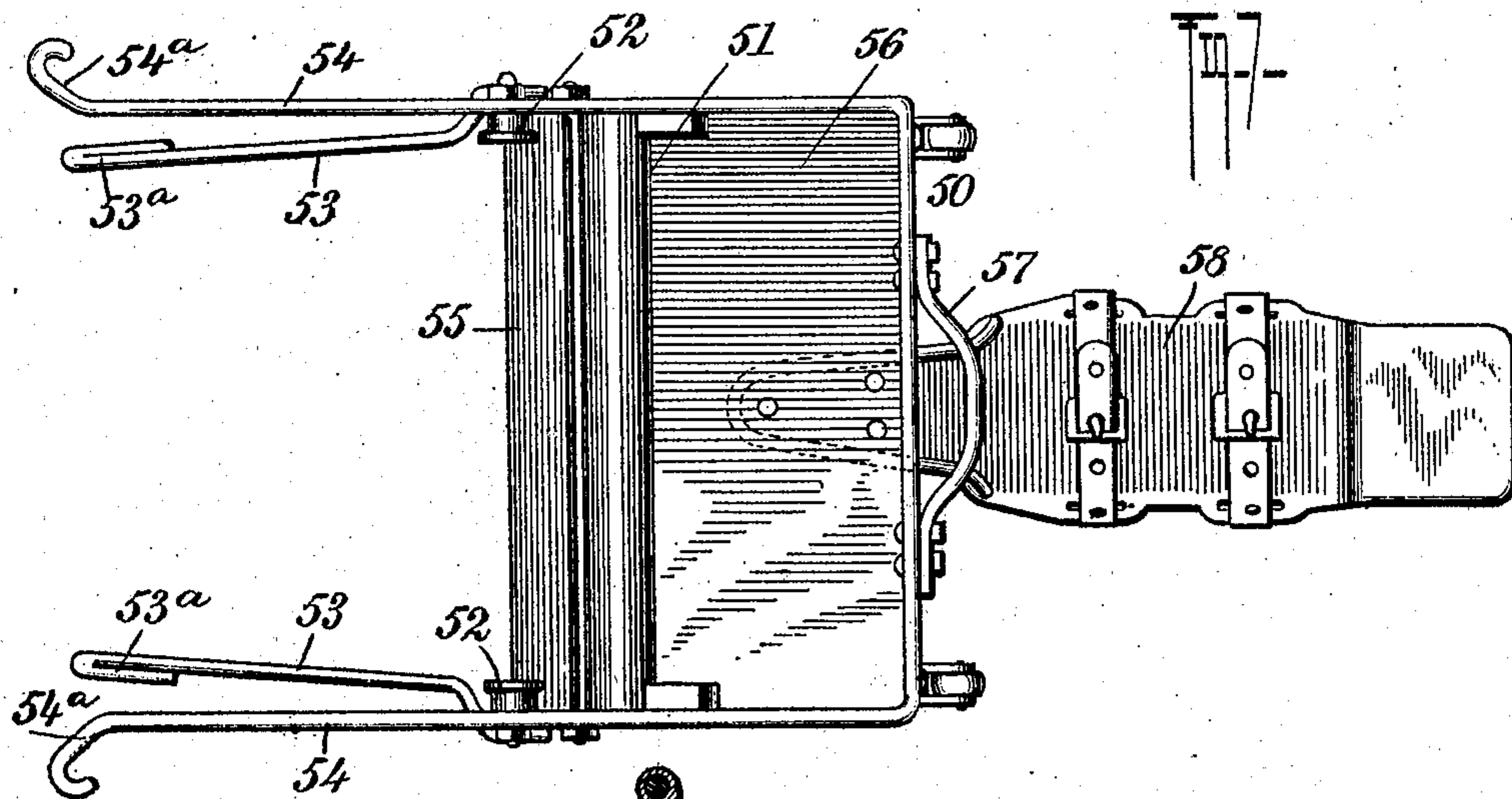
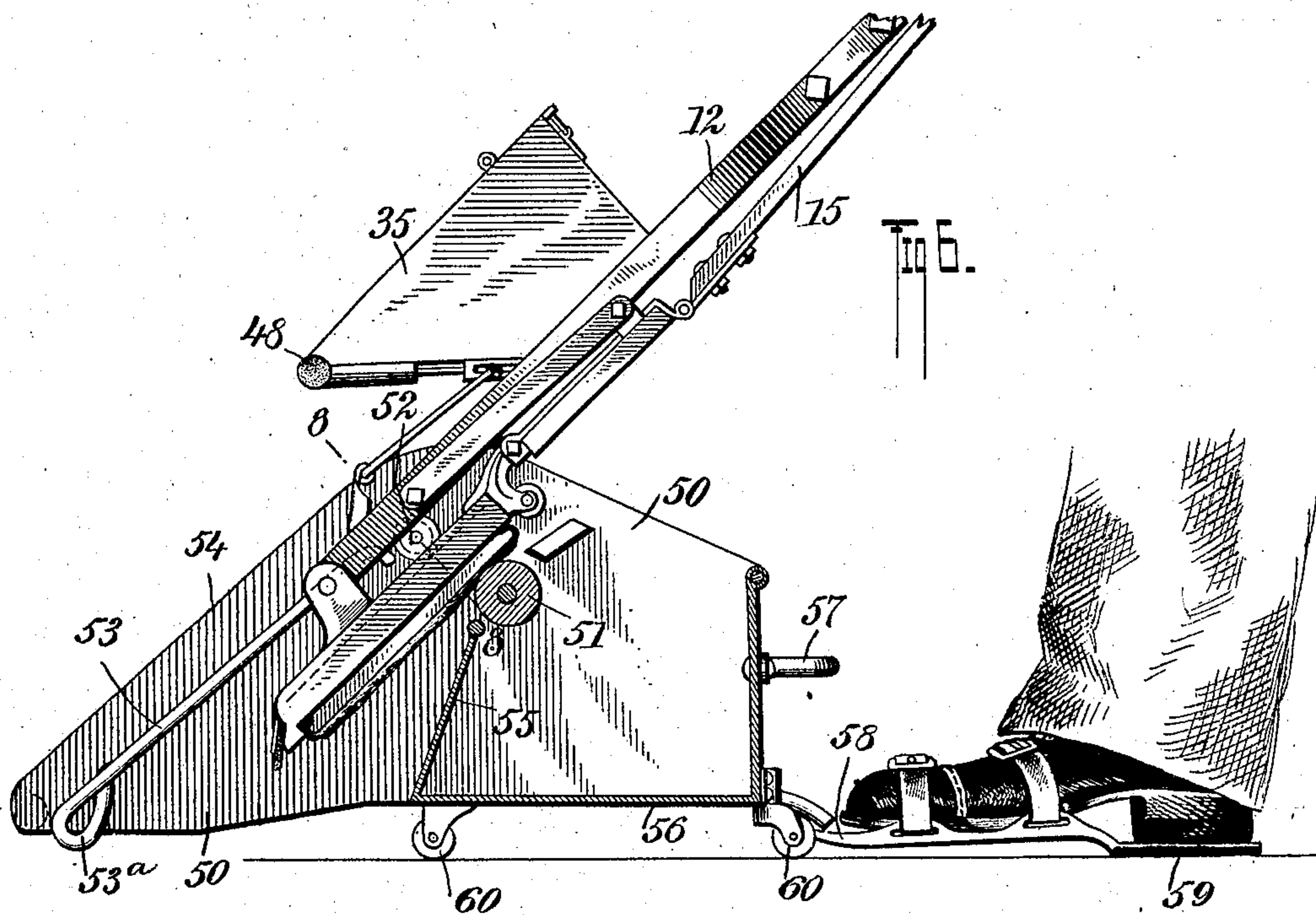
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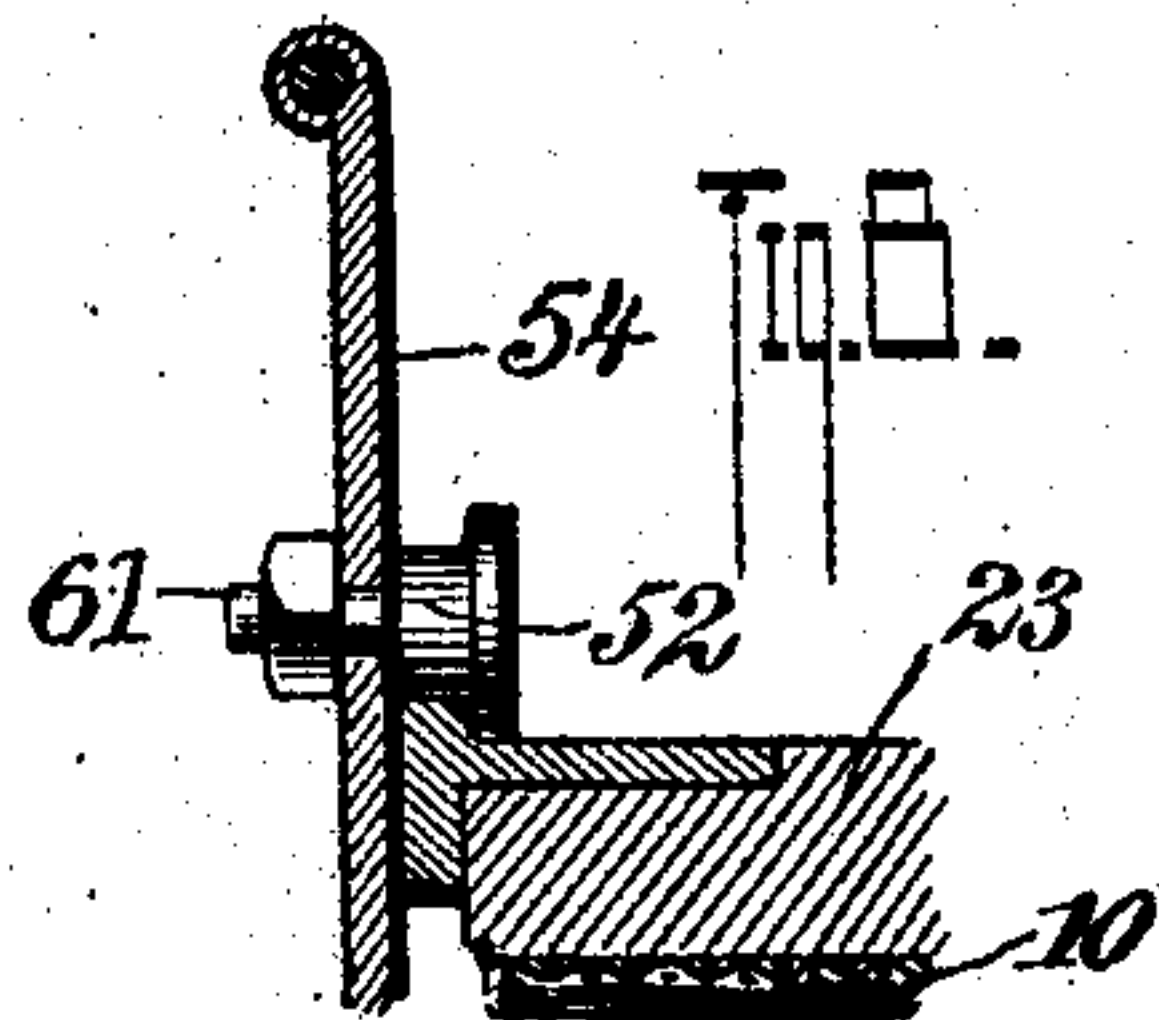
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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

HALLDOR E. H. ARMANN, OF GARDAR, NORTH DAKOTA.

## SCRUBBING DEVICE.

No. 815,324.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed October 8, 1904. Serial No. 227,662.

*To all whom it may concern:*

Be it known that I, HALLDOR E. H. ARMANN, a citizen of the United States, and a resident of Gardar, in the county of Pembina and State of North Dakota, have invented a new and Improved Scrubbing Device, of which the following is a full, clear, and exact description.

My invention relates to a device for brushing and scrubbing. It is especially applicable for use upon floors, and although not strictly limited thereto it will be described with especial reference to this use.

The invention comprises a brush, a mop, means for applying water to the mop and to the floor, and means for wringing the mop.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view showing a preferred form of my invention in use. Fig. 2 is a central longitudinal sectional view of the same, on an enlarged scale, showing the parts in position for brushing and also showing in dotted lines the parts in another position. Fig. 3 is a view of a portion of the handle. Fig. 4 is a fragmentary sectional view of the handle. Fig. 5 is a fragmentary sectional view on the line 5 5 of Fig. 2. Fig. 6 is a central sectional view of a portion of the apparatus. Fig. 7 is a plan view of certain parts shown in Fig. 6, and Fig. 8 is an enlarged fragmentary sectional view on the line 8 8 of Fig. 6.

The numeral 10 represents the absorbent part of a mop, and 11 a brush. The mop is pivotally connected with a handle 12, which is provided with a grip 13, and the brush is also connected with the handle by means of a resilient connection 14, which is connected at its opposite ends, respectively, with a rod 15, pivoted to the brush, and with a slide 16, working upon the handle. A spring 17 is mounted upon the slide, which is provided with a passage larger than the handle to permit the slide to be shifted back and forth in a manner which will be obvious from an inspection of Fig. 4. A second spring 18 is mounted upon the opposite side of the slide and is provided with a projection 19, which is designed to enter holes 20 in a plate 21, attached to the handle. It will be obvious that the shifting of the slide with respect to the handle will operate the brush and mop and change their angles with respect to each

other and the handle and that by allowing the projection 19 to enter the holes 20 the parts may be retained in any desired position. The plate 21 is also provided with additional holes 22 near its opposite end for providing for other positions of the mop and brush.

The mop 10 is mounted on a plate 23, which virtually constitutes a portion of the mop and will be so referred to in this specification. This plate is provided with projections 24 at its opposite ends and with depressions 25 adjacent thereto. The fabric 10, of which the mopping-surface is composed, is long enough to extend around the projections and into the depressions and may be held therein in any desired manner—as, for example, by means of bars 26, secured in these depressions. Brackets 27 are provided for the purpose of securing the plate 23 to the handle 12, and bolts 27<sup>a</sup> are used for pivotally supporting these brackets from the handle. A plate 28, upon which the brackets are mounted, is provided with a depression into which the plate 23 sits, as indicated in Fig. 2, and thumb-nuts 29 are mounted on the plate 23 for the purpose of securing it in the plate 28. The last-named plate is also pivotally connected with a plate 30, upon which the brush 11 is mounted. This connection may be made adjustable, as indicated at 31. A scraping device 32 is mounted at one end of the plate 28, as shown in Figs. 1 and 2. This scraper is preferably made of rubber or similar material and is designed to operate in the manner shown in dotted lines in Fig. 2 for pushing the water along the floor. The plate 30 is swingingly connected with the handle 12 by means of a link 33 and with the rod 15 by means of a pivotal connection 34.

In order to provide for sprinkling water upon the floor and also for applying water to the mop, a tank 35 is mounted upon the handle 12 and is provided with a nozzle 36. An outlet 37 from the tank and into the nozzle is provided, and a series of perforations 38 are located in the lower part of the nozzle. Behind the nozzle and the opening 37 is a chamber 39 for a valve 40. This valve is provided with a valve-stem 41, which is connected with a cross-pin 42, sliding in a groove 42<sup>a</sup> upon the lower part of the tank. A connecting-rod 43 is mounted upon the pin 42 and connected with a bar 44, which is pivotally connected with the plate 28. A spring 41<sup>a</sup> is coiled on the valve-stem 41 behind the valve 40, as shown in Fig. 2. It will be un-



derstood from the description given that in the operation of the mop about its pivots 27<sup>a</sup> the spring 41<sup>a</sup> will normally act to close the valve 40, so as to cause the water to be discharged from the tank at the proper times and also to cut off the flow of water. The tank is provided with a door 45, having a plate 46 secured thereto, and is held in closed position by means of a latch 47. The ends of the nozzle 36 may, if desired, be closed permanently, or they may be temporarily closed by corks 48 or similar packing. The mop is provided with casters 49.

Referring now to Figs. 6 and 7, 50 represents a frame for supporting the means for wringing the mop. A roller 51 is mounted upon this frame so as to be free to turn thereon, and a pair of freely-rotatable wheels 52 are mounted in close proximity to this roller. A pair of guide-bars 53 are also mounted near the wheels and are provided with ends 53<sup>a</sup>, rounded over so as not to tear the mop when it is applied. The frame is also provided with projecting side plates 54, with rounded ends 54<sup>a</sup> to help guide the mop into position for wringing and to prevent accidental tearing of the material thereof. It will be readily understood that the mop having been drawn into the position shown in Fig. 6 upon the handle 12 it can be transferred to the frame 50 and will be guided by the parts 52, 53, and 54 to and against the roller 51, so that the water which has been absorbed by the mop will be squeezed out as the mop is forced along the roller. A partition 55, extending downwardly from the roller 51, together with the rear and side walls and the bottom 56, provide a tank for the reception of the water wrung from the mop. The frame 50 is preferably provided with a handle 57 and with a projection 58, upon which the foot of the operator may be placed in order to prevent any motion of the device on account of the resistance offered to the pulling of the mop through it. The plate 58 is provided with a depression at the rear thereof, having a lower surface 59 of rubber or similar material to come into contact with the floor and prevent motion of the device along the floor. The frame is provided with rollers 60 to aid in its movements, and the wheels 52 are mounted in the frame by means of bolts 61, passing through slots 62 in brackets 63, secured to the outside of the frame, as shown in Fig. 1. This will provide for the adjustment of the wheels 52, so that they can be placed at any desired distance from the roller 51.

It will be readily understood from the above description that a scrubbing device constructed in accordance with the principle of my invention will be simple, complete, durable, and easy to operate and adjust; that it will readily work in corners and under furniture; that it is a great labor saver, and that

neither hand of the operator need be taken from the handle while operating the machine, all parts being readily operable by merely shifting the slide upon the handle. It will furthermore be seen that it can be so operated as to use little water, thus saving labor, and that when applying water to the floor three things are done at once, thus saving a great deal of time and facilitating the entire operation.

It is to be understood that while I have illustrated and described one practical embodiment of my invention the latter can be manufactured in many forms and is not limited to that embodiment or to mere modifications thereof which may obviously be made.

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

1. In a floor-cleaning device, the combination of a water-tank, a mop pivotally mounted with respect thereto, a valve on the tank, a slidable pin connected with the valve, a rod connected with said pin, and a connection between the rod and mop whereby the valve is operated by the swinging of the mop.

2. In a floor-cleaning device, the combination with a water-tank, of a mop pivotally mounted with respect to the tank, and means connected with the mop for controlling the discharge of water from the tank.

3. In a floor-cleaning device, the combination of a mop, a scraper mounted on the mop, a brush movably mounted with respect to the mop, a water-tank mounted adjacent to the mop, and means for causing the tank to discharge water upon the mop.

4. In a scrubbing device, the combination of a handle, a mop movably connected therewith, and a brush pivotally mounted with respect to the mop and handle.

5. In a scrubbing device, the combination of a handle, a mop movably connected therewith, a brush pivotally mounted with respect to the mop and handle, a scraper on the mop, and a rod pivotally connected with the brush and slidably connected with the handle.

6. In a scrubbing device, the combination of a handle, a mop pivotally connected therewith, a brush pivotally connected with the mop, and a rod pivotally connected with the brush at one end and slidably connected with the handle at the other, whereby the brush and mop may be set at different angles to each other and to the handle.

7. In a scrubbing device, the combination of a mop, a brush, a handle, means for movably connecting the mop with the handle near the end of the latter, means for movably connecting the mop with the brush, and a link movably connecting the brush with the handle.

8. In a scrubbing device, the combination of a mop, a brush, a handle, means for connecting the mop with the handle near the end



of the latter, means for connecting one side of the mop with one side of the brush, a link connecting the other side of the brush with a point on the handle above that at which the mop is connected thereto, a rod connected with the brush at the last-mentioned side thereof, a slide mounted upon the handle and connected with said rod, and means for securing the slide at different points on the handle.

9. In a scrubbing device, the combination of a handle, a mop movably connected therewith, a brush movably connected with the mop and handle, and a water-tank mounted on the handle, said tank having a discharge-opening and means for closing said opening.

10. In a scrubbing device, the combination of a handle; a mop movably connected therewith, a brush movably connected with the mop and handle, and a water-tank mounted on the handle, said tank having a discharge-opening and means for closing said opening; said means comprising a valve and connections between the valve and mop.

11. In a scrubbing device, the combination of a mop, a brush, a handle, means for connecting the mop to the handle, means for

connecting the mop with the brush, a link connecting the brush and handle, a water-tank mounted on the handle and provided with a discharge-opening, a valve for closing said opening, and means for operating the valve; said means being connected with said mop.

12. In a scrubbing device, the combination of a handle, a mop pivotally connected therewith, a brush pivotally connected with the mop, a rod pivotally connected with the brush at one end and slidably connected with the handle at the other, whereby the brush and mop may be set at different angles to each other and to the handle, a water-tank mounted on the handle and provided with a discharge-opening, and means for closing said discharge-opening when the mop is moved into a certain position with respect to the handle.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HALLDOR E. H. ARMANN.

Witnesses:

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PAUL R. WILSON.