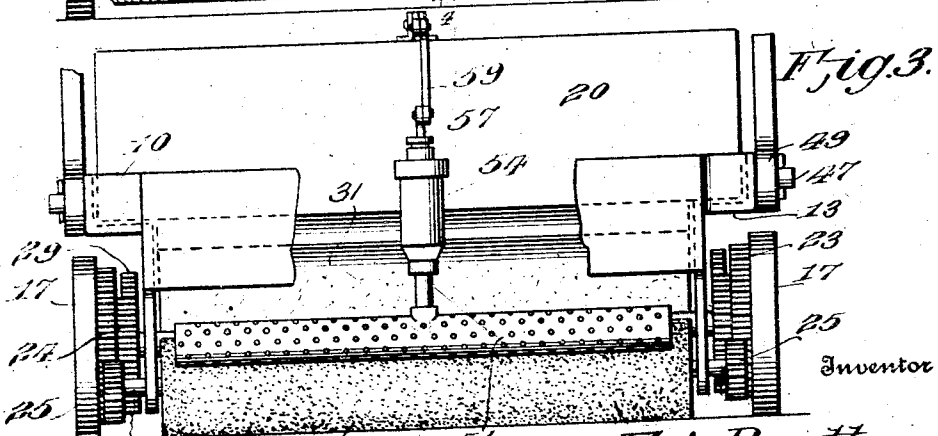
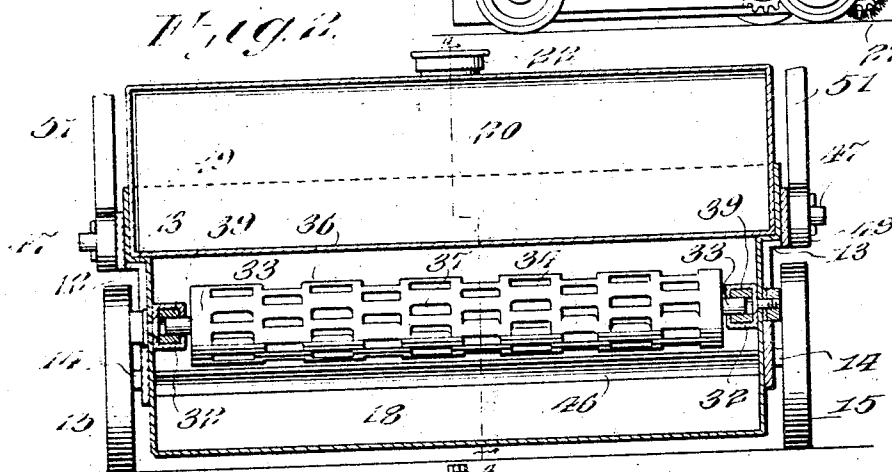
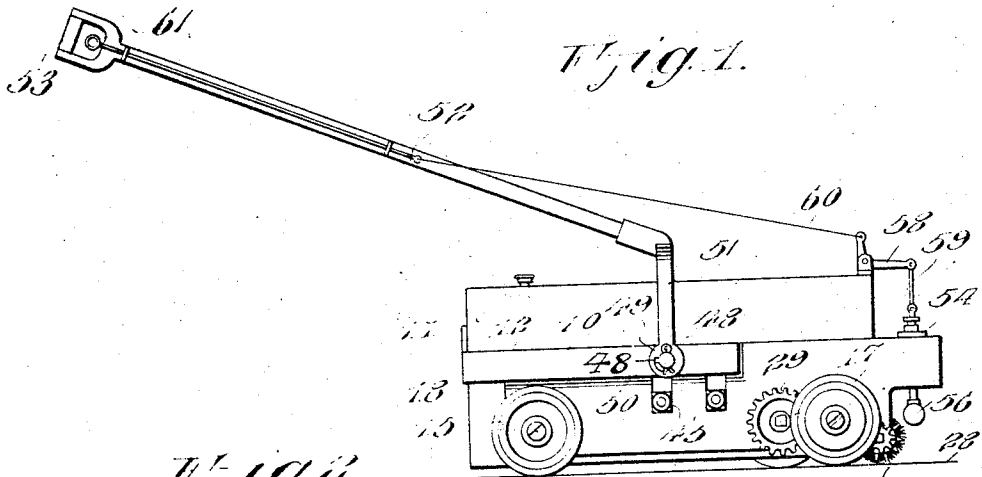


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 SCRUBBING MACHINE.
 APPLICATION FILED DEC. 2, 1911.

Patented May 20, 1913.
 2 SHEETS—SHEET 1.

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Witnesses
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 by Victor J. Evans
 Attorney

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Fig. 4

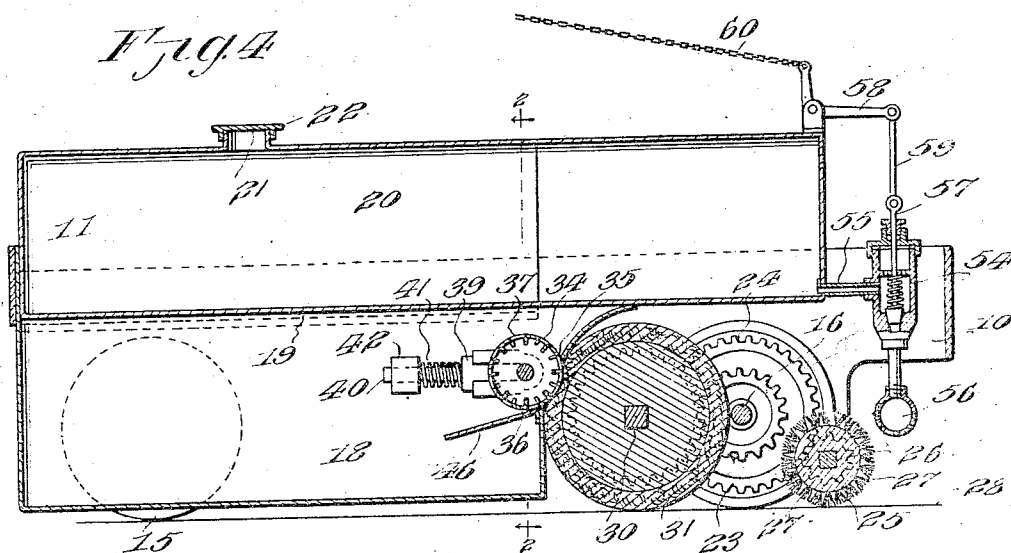
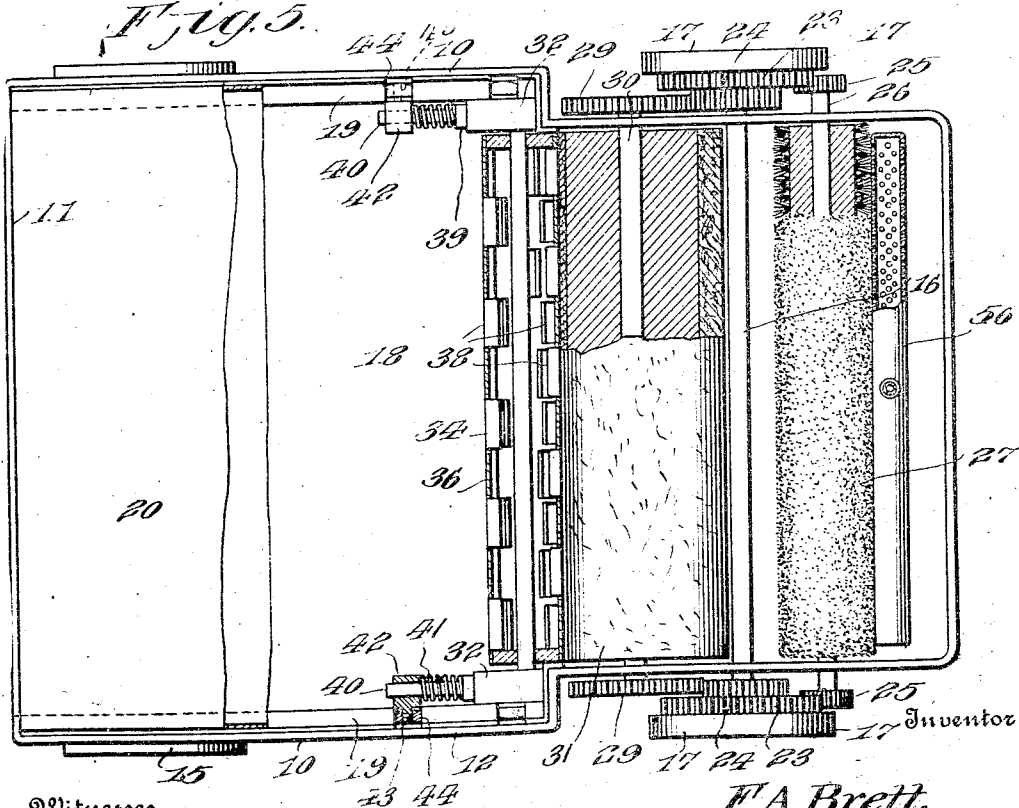


Fig. 5



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UNITED STATES PATENT OFFICE.

FRANKLIN A. BRETT, OF OAK PARK, ILLINOIS.

SCRUBBING-MACHINE.

1,062,533.

Specification of Letters Patent.

Patented May 20, 1913.

Application filed December 2, 1911. Serial No. 663,536.

To all whom it may concern:

Be it known that I, FRANKLIN A. BRETT, a citizen of the United States, residing at Oak Park, in the county of Cook and State of Illinois, have invented new and useful Improvements in Scrubbing-Machines, of which the following is a specification.

An object of the invention is to provide a machine for scrubbing floors and other surfaces.

Among other features the invention embraces a device in which a quantity of liquid is sprayed upon the floor, a scrubbing brush being operably mounted to scrub the floor after the liquid has been sprayed thereon, after which a suitable drying mop operates over the floor to dry the surface thereof, the liquid to be sprayed upon the floor being retained in a reservoir, a second reservoir being provided to receive the liquid after the same has been applied to the floor with means for controlling the amount of liquid to be sprayed upon the floor.

In the further disclosure of the invention, reference is to be had to the accompanying drawings constituting a part of this specification and in which similar characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a side elevation. Fig. 2 is a vertical sectional view taken on the line 2—2 in Fig. 4, looking in the direction of the arrow. Fig. 3 is a front elevation, parts being broken away to disclose the underlying structure. Fig. 4 is a vertical longitudinal sectional view taken on the line 4—4 in Fig. 2, looking in the direction of the arrow. Fig. 5 is a plan view, parts being broken away to disclose the underlying structure, the handle being removed from the frame.

Referring more particularly to the views, I provide a carriage comprising a frame 10, preferably consisting of an integral casting, the rear portion of the frame being provided with an upwardly extending plate 11 and having the sides thereof at the upper end of the frame formed into outwardly offset portions 12 to provide a seat 13. Formed on the rear of the frame 10 are outwardly extending studs 14 having wheels 15 journaled thereon and journaled on the front end of the frame 10 is an axle 16 having wheels 17 mounted to turn therewith.

Mounted to repose upon the seat 13 of the frame 10 and depending therefrom is a waste reservoir 18, the upper end of the

said reservoir being offset similarly to the portions 12 to provide a seat 19 on which is mounted to repose a main reservoir 20, the bottom of the main reservoir 20 being adapted to close the waste reservoir 18 as shown in Figs. 2 and 4, the main reservoir 20 being provided with a filling opening 21 normally closed by a cap 22.

Keyed on the ends of the axle 16, exteriorly of the frame 10, are toothed wheels 23, 24, the toothed wheels 23 being larger than the toothed wheels 24 and mounted to mesh with toothed wheels 25 keyed to the ends of an axle 26 journaled in the forward end of the frame 10 and having mounted to rotate therewith a circular scrubbing brush 27, the latter being mounted so that the free ends of the bristles thereof will contact with the surface of a floor 28. The toothed wheels 24 are mounted to mesh with toothed wheels 29 keyed to an axle 30 journaled in the frame 10 and having mounted to turn therewith a drying mop 31, the latter being preferably circular in shape and mounted within the casing 10 as conveniently shown in Fig. 5.

Secured to the inner sides of the waste reservoir 18 are bearing members 32 in which are mounted to slide horizontally, studs 33 rigidly formed on the ends of a squeezing roller 34, mounted to rotate within the waste reservoir 18, an opening 35 being provided at the front end of the reservoir 18 and through which the squeezing roller 34 is adapted to extend to engage the periphery of the drying mop 31. The squeezing roller 34 is preferably formed of a tubular casing 36 having openings 37 therein, the said openings being arranged in staggered fashion and formed by striking portions of the casing 36 inwardly to form inwardly extending flanges 38. These inwardly extending portions surround said openings and form a plurality of raised portions adapted to impinge against the mop, and also are arranged to move over the shelf 46. Mounted to slide in the bearing members 32 are bearing blocks 39, provided with openings in which are received the ends of the studs 33, the rear ends of the bearing blocks 39 being provided with shanks 40 encircled by expansible springs 41, the forward ends of the said springs being adapted to abut against the bearing blocks 39 and the rear ends of the said springs being adapted to abut against blocks 42, having the free ends of the shanks 40 slidably mounted therein, the

mentioned blocks 42 being provided with offset circular shank portions 43, constituting bolts adapted to receive nuts 44. To permit the accommodation of the nuts on the bolts for securing the bearing members 32 to the inner sides of the reservoir 18 and the nuts 44 of the blocks 42, the frame 10 is provided with vertically extending slots 45, the said slots being arranged immediately beneath the offset portions 12, thus permitting the bearing members 32 to be rigidly mounted on the inner sides of the reservoir 18 and also permitting the squeezing roller 34 to be properly mounted within the reservoir 18.

A rearwardly extending inclined shelf 46 is secured to the inner front side of the reservoir 18, immediately beneath the squeezing roller 34 for a purpose that will be hereinafter more fully disclosed and extending outwardly from the offset portions 12 of the frame 10 are studs 47, having lugs 48 formed thereon, the mentioned studs 47 being adapted to revolvably receive circular eye plates 49, provided with slots 50 and formed on the lower ends of bars 51 formed on the front end of a handle 52, provided with a suitable grip 53, the lugs 48 being received in the slots 50 to limit the downward swinging movement of the handle 52 without preventing the mentioned handle 52 from being swung upwardly, as will be readily understood.

Mounted on the front end of the frame 10 is a valve casing 54, having connection, by means of a pipe 55, with the main reservoir 20, a circular apertured spraying tube 56 being mounted to depend from the lower end of the casing 54 and arranged immediately in front of the scrubbing brush 27, a valve 57 being connected to a bell crank lever 58 by means of a link 59, a suitable operating cord 60 being pivotally connected to an arm of the bell crank lever 58, the said cord 60 being extended rearwardly to the handle 52, a suitable grip 61 being provided at the end of the cord 60, adjacent the grips 53.

In the use of my device, when it is desired to scrub a floor, the main reservoir 20 is first filled with a fluid, such as water or a soapy cleansing solution and the carriage is then wheeled upon the floor, the operator being stationed in the rear of the carriage with his hands on the grip 53 to exert a forward pressure on the grip and operate the carriage over the floor. Now by pulling on the cord 61, the grip 60 will be operated to open the valve 57, thus permitting the fluid in the main reservoir 20 to flow outwardly through the spraying tube 56, thus spraying the fluid onto the floor. Now as the carriage is operated over the floor, the revolvable movement of the wheels 17 and the axle 16, will

impart a rotating movement to the scrubbing brush 27, through the medium of the meshing toothed wheels 23, 25 and the scrubbing brush 27 in its rotation will contact with the floor and become saturated with the fluid from the sprayer tube, thus subjecting the surface of the floor to the scrubbing action of the brush. Now as the carriage proceeds over the floor, the drying mop 31, mounted to rotate through the medium of the toothed wheels 24, 29 will absorb the fluid and dirt that has been scrubbed from the floor and the squeezing roller 34, engaging the drying mop 31 by the action of the expansible springs 41, will squeeze the dirty fluid and foreign matter out of the drying mop, the mentioned fluid and foreign matter being adapted to flow into the squeezing roller 34, through the openings 37 therein, the dirty fluid and foreign matter being then adapted to pass outwardly from the squeezing roller and onto the shelf 46 from which the mentioned fluid will flow into the waste reservoir 18.

From the foregoing description it will be seen that when the carriage is operated over the floor, to be cleaned, the floor is first subjected to a spray of fluid and then scrubbed, after which the surface of the floor is dried by a mop and the foreign matter and dirty liquid, absorbed by the mop in its operation over the floor, is squeezed from the mop and received in the waste reservoir 18, thus leaving the floor in a clean and sanitary condition, it being understood that the operator can at all times control the amount of fluid to be sprayed upon the floor while the rapidity of rotation of the scrubbing brush 27 and the drying mop 31 depends entirely upon the rapidity with which the carriage is operated over the floor.

I claim:—

In a device of the kind described the combination of a fluid receiving reservoir, a mop roller disposed exteriorly thereof, a roller disposed transversely in said reservoir and projecting therefrom partially, said roller being formed with a longitudinally spaced series of circumferentially disposed openings, and with inward flanges forming the bounds of said openings, said series of openings being disposed in a staggered relation whereby raised portions are formed upon said roller adapted to impinge against said mop roller, and a shelf downwardly inclined in said fluid-receiving reservoir and having its base in contact with said second-named roller.

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

FRANKLIN A. BRETT.

Witnesses:

ERNEST J. H. BLANCHARD,
GUSTAV C. BUCHHEITZ.