No. 742,283. PATENTED OCT. 27, 1903.

D. BOWEN.

SCRUBBING MACHINE.

APPLICATION FILED FEB. 6, 1903.

NO MODEL 2 SHEETS—SHEET 1.

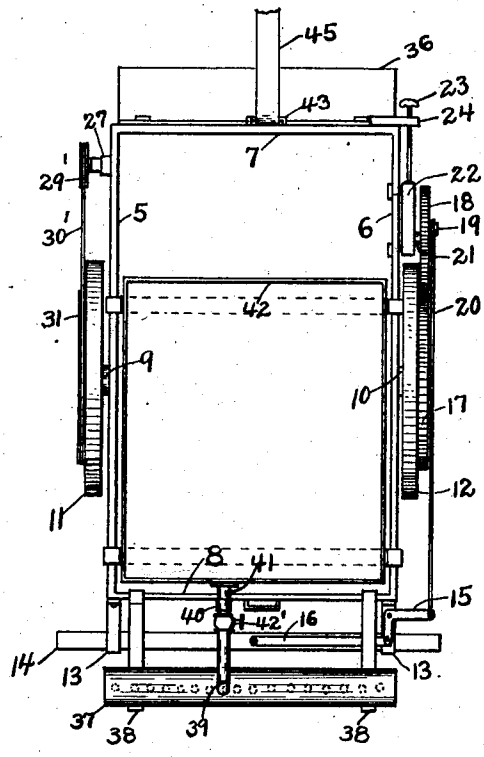


Fig. 1.

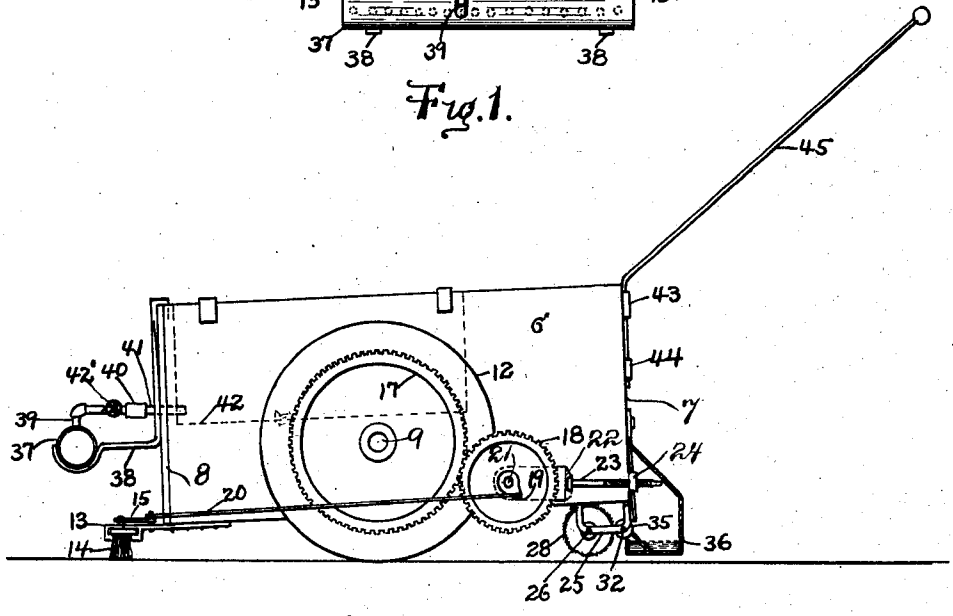


Fig. 2.

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NO MODEL. 2 SHEETS—SHEET 2.

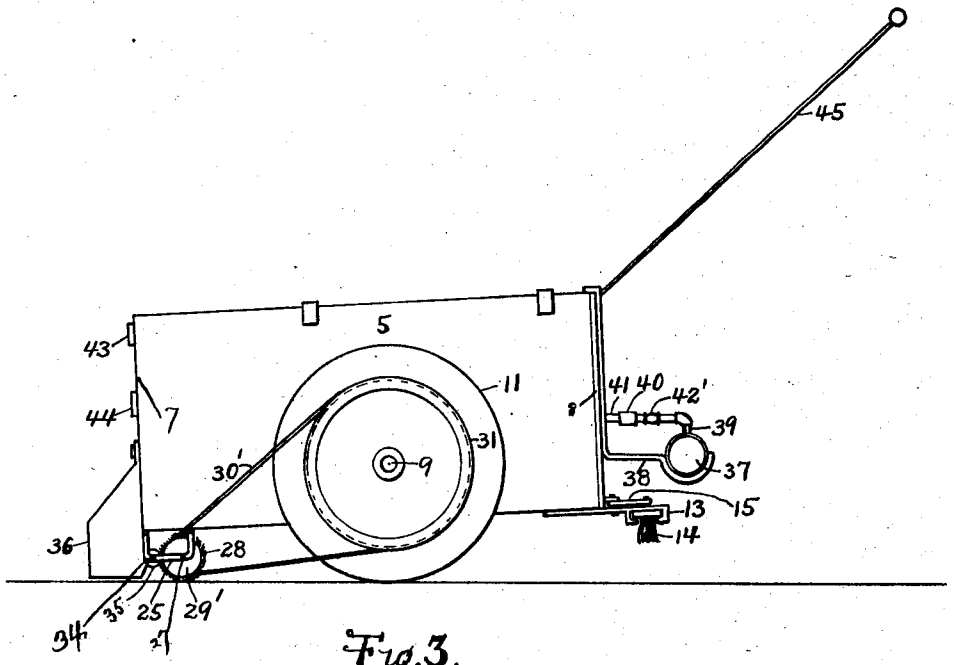


Fig. 3.

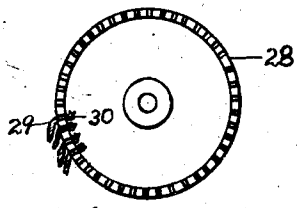


Fig. 4.

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No. 742,283. Patented October 27, 1903.

UNITED STATES PATENT OFFICE.

DANIEL BOWEN, OF DARLINGTON, INDIANA.

SCRUBBING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 742,283, dated October 27, 1903.

Application filed February 6, 1903. Serial No. 142,184. (No model.)

To all whom it may concern:

Be it known that I, DANIEL BOWEN, a citizen of the United States, residing at Darlington, in the county of Montgomery, State of Indiana, have invented certain new and useful Improvements in Scrubbing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to scrubbing-machines; and it has for its object to provide a machine which may be propelled over a floor and during its movement will act automatically to scrub the floor and which machine after the scrubbing operation may be adjusted to mop the floor and wring the mop.

A further object of the invention is to provide a simple machine which will be efficient in its operation and in which the parts will not be liable to disorder.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a plan view of a machine embodying the present invention. Fig. 2 is a side elevation showing the machine adjusted to the position of scrubbing. Fig. 3 is a side elevation showing the opposite side of the machine adjusted to the opposite position from that shown in Fig. 2. Fig. 4 is a section through the mop.

Referring now to the drawings, the present machine comprises a frame including sides 5 and 6 and ends 7 and 8, the sides being provided with trunnions 9 and 10, on which are mounted supporting-wheels 11 and 12, respectively. In the frame adjacent to the end 8 are engaged the stems of brackets 13, with which in turn is slidably engaged the back 14 of a brush which extends transversely of the frame and is slidable longitudinally in the brackets, so that as the frame is advanced or propelled on its supporting-wheels the brush may be given a lateral reciprocation, and will thus travel in a zigzag path over the floor. To reciprocate the brush in its supporting-brackets, an angular rock-lever 15 is pivoted upon the brackets 13 at the front end thereof with one arm extending beyond the end 8 of the frame, and connected to this arm is a pitman 16, connected also to the back 14 of the scrubbing-brush, it being understood that these connections are pivotal. Upon the wheel 12 is a gear-wheel 17, with which meshes a pinion 18, having a crank 19, to which is connected one end of a pitman 20, having its opposite end pivotally connected with the laterally-directed end of the angular lever 15. The pinion 18 is mounted upon a stub-shaft 21, carried by a block 22, which is slidably mounted upon the side of the frame and with which is engaged an adjusting-screw 23, passed through a bracket 24 on the end 7 of the frame, and by adjustment of which screw the sliding block may be moved to throw the pinion into or out of engagement with the gear 17. From the end 7 of the frame project brackets 25, having bearings 26 at their inner ends, in which are journaled the trunnions 27 of a mop-roller. This mop-roller consists of a hollow drum 28, which is perforated to receive sections 29 of cotton rope having knots 30 at their inner ends to prevent withdrawal from the perforations. On the trunnion 27 is a pulley-wheel 29′, with which is engaged a cross-belt 30′, engaged also with the pulley 31, which is mounted upon the wheel 11, concentric therewith, so that as the machine is propelled the mop will be rotated. The brackets 25 have also bearings 32 in the rear of the bearings 26 and in which are journaled the trunnions 34 of a wringer-roll 35, which lies parallel with the mop-roller, so that as the latter rotates the cords or ropes 29 thereof will be carried and squeezed between the two rollers to press water from the ropes or cords. The frame may be reversed from the position shown in Fig. 1 to raise the scrubbing-brush and lower the mop, as shown in Fig. 2, and a trough 36 is disposed in the frame in position to receive the water that is wrung from the mop when the latter is in operative position, as shown in Fig. 2.

In order to wet the floor in advance of the scrubbing-brush, a sprinkler is provided and consists of a transverse pipe 37, supported by brackets 38 from the frame in position above and in advance of the scrubbing-brush, and from this perforated pipe leads a pipe 39, to which is connected a flexible pipe 40, attached

at its opposite end to the pipe 41 of a water-tank 42, which is held within the frame of the machine. The pipe 39 has a controlling-valve 42', by means of which the flow of water to the sprinkler-head 37 may be controlled and by means of which the flow of water from the tank may be cut off. Upon the ends 7 and 8 of the frame are clamps 43 and 44, which are intended to interchangeably receive a handle 45, by means of which the machine is propelled in either position of the frame.

In the operation of the machine the tank is filled with water, which may be either clear water or soapy water, as preferred, and the frame is swung to position shown in Fig. 1, so that the scrubbing-brush rests with its bristles against the floor, and the machine is then pushed, during which time the supporting-wheels 11 and 12 rotate, and from the wheel 12 the brush is reciprocated, as above described. When the scrubbing operation is completed, the handle is engaged with the clamp at the opposite end of the frame and the frame is reversed to bring the mop into operative position, and the machine being then propelled the mop and wringer rollers are rotated to take up the water and wring it into the trough.

In practice modifications of the specific construction shown may be made and any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

What is claimed is—

A scrubbing-machine comprising a frame, a scrubbing-brush mounted in the frame for reciprocation transversely thereof, a rocker mounted upon the frame and connected with the brush to reciprocate it, a crank-pinion mounted upon the frame, a pitman connecting the crank of the pinion with the rocker, a gear carried by one of the wheels and meshing with the pinion and means for moving the said pinion into and out of engagement with the gear.

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

DANIEL BOWEN.

Witnesses:
ABERT MEEK,
CHARLEY COOK.