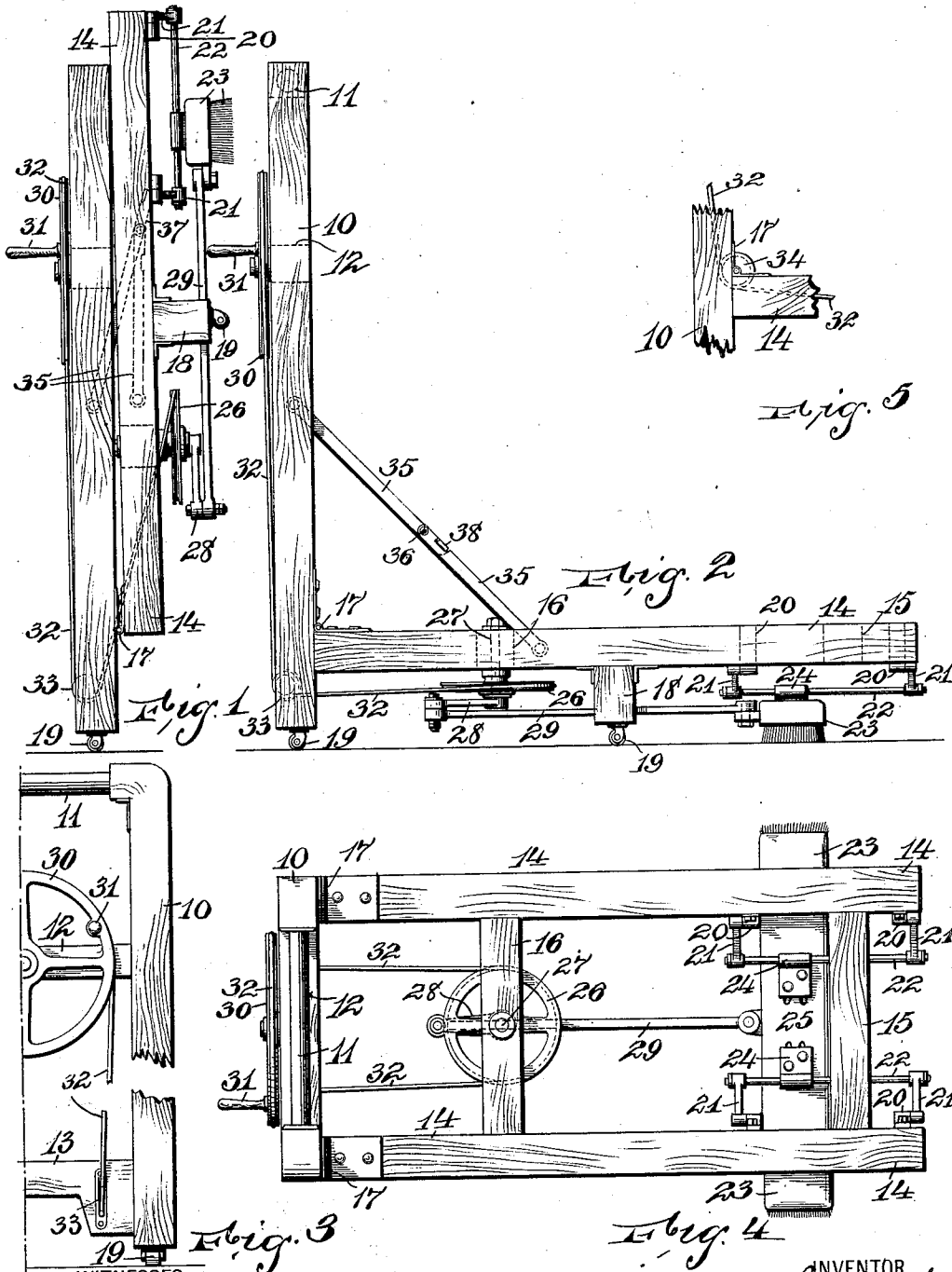


A. STUMPF.
SCRUBBING MACHINE.
APPLICATION FILED JULY 25, 1912.

1,047,458.

Patented Dec. 17, 1912.



WITNESSES:
M. A. Johnson
W. E. Morton

INVENTOR
Anton Stumpf,
BY
J. H. Campfield,
ATTORNEY

UNITED STATES PATENT OFFICE.

ANTON STUMPF, OF ELIZABETH, NEW JERSEY.

SCRUBBING-MACHINE.

1,047,458.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ANTON STUMPF, a subject of the Emperor of Germany, residing at Elizabeth, in the county of Union and State of New Jersey, 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, reference being had to the accompanying drawing, and to figures of reference marked thereon, which forms a part of this specification.

15 This invention relates to an improved scrubbing machine, and refers to a machine for scrubbing floors and the like, being adapted to be pushed along the floor by the operator by means of one hand, and having means thereon for operation by the other hand, the last mentioned means providing for the moving of the brush irrespective of the movement of the carriage.

25 The scrubbing machine is constructed of two main portions, one of which forms a back which projects vertically so that the operator can trundle the machine along without bending over, the other main portion being a frame on which a scrubbing brush is carried, the frame being adapted to be folded up against the back when the scrubbing machine is to be transported or stored, the machine also having fixtures secured to the back and the frame to prevent the accidental folding of the back on the frame and to give a more solid and rigid structure when it is being pushed along the floor for scrubbing purposes.

40 Another feature of the invention is the attachment of the brush to the carriage by means of which the brush rests of its own weight on the floor and is held positively in a sliding position, but is permitted to slowly descend as the bristles wear down so that the brush can be used up without altering the brush carrying means, since they automatically adjust themselves to the height at which the brush is traveling.

50 The invention is illustrated in the accompanying drawing, in which--

Figure 1 is a view of the machine folded. Fig. 2 is a side view of the machine unfolded and in position for scrubbing. Fig. 3 is a broken view of one half of the back, and 55 Fig. 4 is a top view of Fig. 2. Fig. 5 is a

modified form of conducting the belt or chain that operates the brush.

The device comprises a back 10 which is preferably made of wood, although other materials can be used, they being substantially flat and rectangular, having the handle 11 at the top thereof. The support 12 extends across the sides of the back for the support of a driving means to be hereinafter described, and a brace 13 extends across at the bottom. A frame consisting of side-pieces 14 and cross-pieces 15 and 16 is hinged as at 17 to the back 10. Stud 18 project down from the side-pieces 14, the studs and the side pieces of the back 10 have rollers 19 at the bottom thereof so that the carriage, formed of the back and the frame, can be rolled along the floor. At the front of the side-pieces 14 are the brackets 20. To these brackets 20 are secured the links 21 which swing in a vertical plane, and each pair of links supports a rod 22. A transverse brush 23 is arranged underneath the frame and has eyes 24 secured to the back of it, the eyes being arranged on the rods 22 so that the brush can be slid back and forth on the rods and at the same time can be moved upward and downward. Slots 25 allow for the movement incidental to the swinging of the links 21. On the cross-piece 16 is mounted a transmission wheel 26 rotating on a shaft 27, the shaft having a crank 28 thereon which is connected by means of a link 29 to the brush so that when the transmission wheel is rotated, the crank and the link give to the brush a reciprocating movement. To provide this movement irrespective of any movement of the carriage itself, I arrange on the back a driving wheel 30 having a handle 31 or other means for its rotation, the driving wheel and the transmission wheel being connected by a flexible belt or strand 32 which passes over the driving wheel and over the transmission wheel and also over the pulleys 33, which pulleys are mounted in the brace 13, as will be evident. The machine can be pushed along with one hand by means of the handle 11, and with the other hand the driving wheel can be rotated to reciprocate the brush.

When the frame and back are folded together the belt can be taken from one of the pulleys, or in case of an elastic band it can be left in place, but in case it is desired to always leave the belt in place, the pulleys

can be mounted as shown in Fig. 5, that is, the center of the pulleys 34 will be in line with the pivots of the hinges 17, and with this installation the belt can be left in place.

5 To prevent the accidental closing up of the frame and the back, and to provide a stiff structure, I pivot the arms 35, one to the back and one to the frame, these arms being hinged together at 36, one of the arms
10 35 having an extension 37 which has a link 38 thereon fitting a groove in the other arm to limit the swing in one direction of the arms. When the arms are placed in line the back and the frame will not fold together, but
15 when they are knocked out of alinement, the back and the frame can be folded together. The arrangement of the arms 35 above the hinge, and the connection of the belt between the pulleys 33 and the transmission wheel
20 26 provide a binding means between the back and the frame both above and below the hinged joint, and they go to make up a stiff and positively held structure.

Having thus described my invention, what
25 I claim is:—

1. A scrubbing machine comprising a substantially flat vertical back, a substantially flat horizontal frame, the back and frame forming a carriage, a hinged connection between the back and frame whereby they can
30 be folded together, scrubbing means on the frame, and means for preventing the accidental folding together of the back and the frame.

35 2. A scrubbing machine comprising a substantially flat vertical back, a substantially flat horizontal frame hinged to the back near the bottom thereof, a scrubbing mechanism on the frame, means on the back for
40 operating the scrubbing mechanism, a bendable operative connection between the operating means and the scrubbing mechanism, the bottom of the back and the frame having
45 rollers thereon, and means for locking the back and frame against folding.

3. A scrubbing machine comprising a flat vertical back, a flat horizontal frame, rollers at the bottom of the back and on the frame,
50 links projecting from each side of the frame, rods supported on the links, a brush, eyes arranged to slide on the rods, the eyes being

secured to the brush, a driving means on the back, and an operative connection between the brush and the driving means for causing the brush to slide. 55

4. A scrubbing machine comprising a vertical back and a horizontal frame, the rear portion of the frame being hinged to the back near the bottom thereof so that the frame can be folded up against the back, 60 means for preventing the accidental folding of the frame against the back, downwardly projecting studs on the sides of the frame, rollers at the bottom of the studs and at the bottom of the back, a transversely arranged 65 sliding brush, on the horizontal frame, a driving wheel on the back, a transmission wheel on the frame, a flexible strand passing over the driving wheel and the transmission wheel, and an operative connection between 70 the transmission wheel and the brush for sliding the brush when the transmission wheel is rotated.

5. A scrubbing machine comprising a substantially flat vertical back, a driving wheel 75 on the back and lying in substantially the same plane as the back, a substantially flat horizontal frame hinged to the back near the bottom thereof, a transmission wheel on the horizontal frame lying substantially in 80 the same plane as the frame, a brush sliding in the frame, a connection between the brush and the transmission wheel to slide the brush when the transmission wheel is rotated, a flexible strand passing over the transmission 85 wheel and the driving wheel, conducting means for guiding the strand adjacent to the line of the pivotal connection between the vertical frame and the horizontal frame whereby when the frames are swung on 90 their hinged connection, the strand will remain on the driving wheel and the transmission wheel, and means for preventing the accidental folding together of the frames.

In testimony, that I claim the foregoing, 95 I have hereunto set my hand this 18th day of June, 1912.

ANTON STUMPF.

Witnesses:

WM. H. CAMFIELD,
M. A. JOHNSON.