(No Model.)

H. F. ACKERMAN.

SCRUBBING MACHINE.

No. 594,509. Patented Nov. 30, 1897.

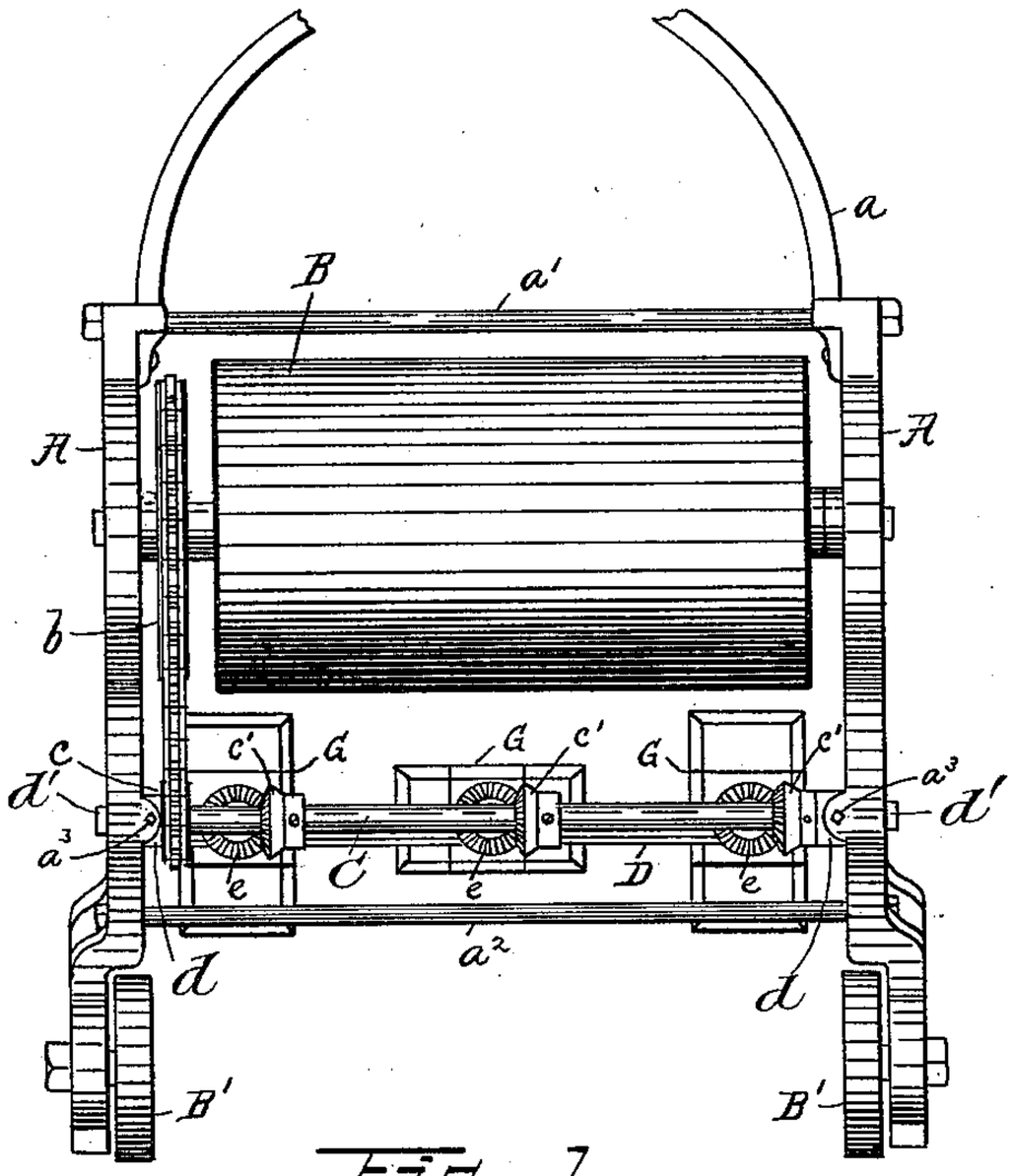

FIG. 1

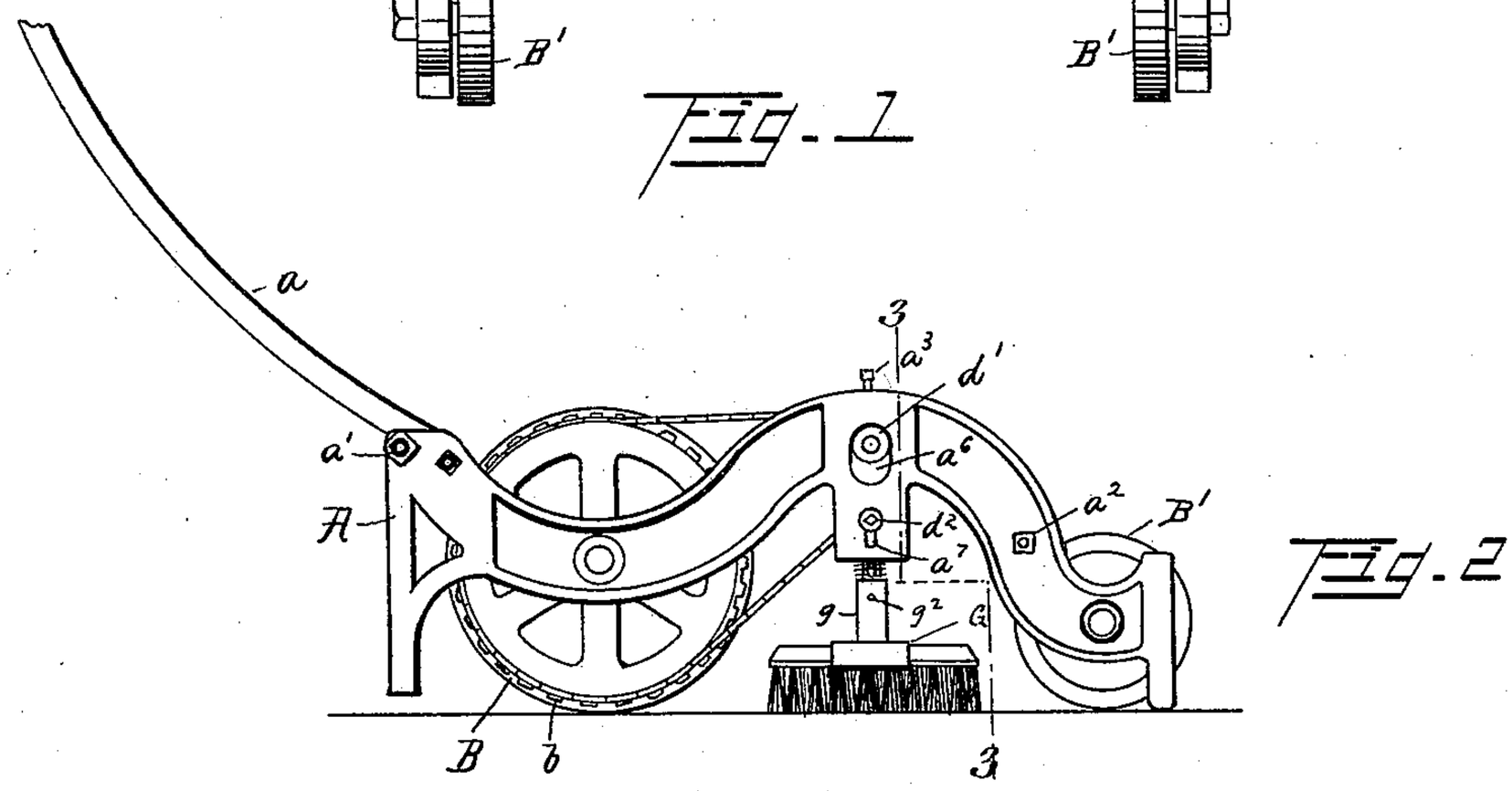

FIG. 2

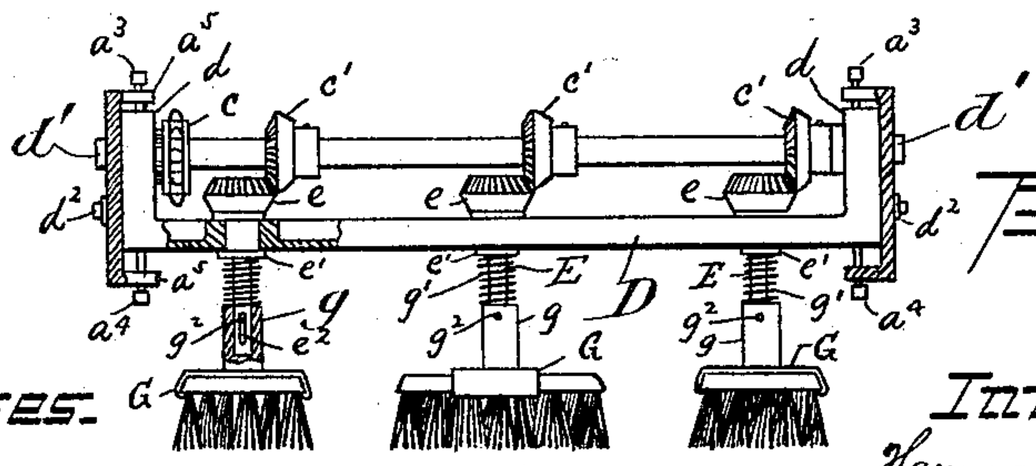

FIG. 3

Witnesses:
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By his attorney
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UNITED STATES PATENT OFFICE.

HARMAN F. ACKERMAN, OF CLEVELAND, OHIO.

SCRUBBING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 594,509, dated November 30, 1897.

Application filed May 22, 1896. Serial No. 592,661. (No model.)

To all whom it may concern:

Be it known that I, HARMAN F. ACKERMAN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Floor-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.

The object of my invention is to provide a mechanical device which is adapted to quickly and effectually scrub, rub, or polish a floor. The device, as shown and described, contains a plurality of brushes or other rubbing or scrubbing devices, means for revolving them rapidly, means for holding the said rubbing devices severally against the floor with a yielding pressure while they are revolving, and means for varying the pressure.

The invention consists in the combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is a plan view of my improved scrubbing device. Fig. 2 is a side elevation, and Fig. 3 is a sectional view on line 3 3 of Fig. 2.

Referring to the parts by letters, A A represent the side bars of the machine, to which is attached the handle *a*, by means of which the machine it moved. The side bars are held in the proper relation to each other by the transverse tie-rods a' a^2.

B represents a heavy roller which is journaled in the side bars A A. It is preferably made of cast-iron, faced with rubber. The roller rests upon the floor, and as the device is moved backward and forward on the floor this roller is revolved. At the front end of the device the two wheels B′ B′ are journaled, respectively, to the side bars A A, and when these wheels rest upon the floor the brushes or other devices bear evenly thereon and do the best work.

D represents a cross-bar having upturned ends *d d*. This bar lies between the side bars and is vertically adjustable by means of the set-screws a^3 a^4, which screw through ears a^5 on the side bars and respectively bear against the lower side of said bar D near its ends and against the tops of the upturned ends *d d* of said bar.

A boss d' on each end of the bar D enters a vertical slot a^6 in the adjacent side bar, and this construction, together with the bolts d^2, which pass through slots a^7 in the side bars and screw into the ends of the bar D, serves to guide the said bar D in its vertical movements.

C represents a shaft which extends parallel with the bar D above the same and has its ends journaled in the ends *d* of that bar. Rigidly secured to this shaft are a plurality of bevel-gears c', which operate to drive the brushes, as hereinafter described.

A sprocket-wheel *b*, which is secured to the roller B, a sprocket-wheel *c*, which is fast upon shaft C, and an endless sprocket-chain passing around said sprocket-wheels transmit motion from the roller to the shaft.

E E E represent vertical shafts, which pass through and are journaled in the cross-bar D. Bevel-gears *e* are secured to their upper ends and they mesh with bevel-gears c' upon the shaft C. Each shaft below the cross-bar is provided with a collar e', which, together with the bevel-gear *e*, prevents endwise movement of said shaft.

G G represent brush-holders, and *g g* tubular stems on their upper sides. The lower ends of the shafts E telescope into said tubular stems, the latter being free to move vertically upon said shafts. A coil-spring g' surrounds each shaft E and thrusts at its ends against the collar e' and the upper end of the stems *g*, thereby forcing the brush-holder downward. A slot e^2 in each shaft and a pin g^2, which passes through it and is secured to the stem, compels the simultaneous revolution of the shaft and stem and prevents the removal of the stem. The brush-holders may be of any suitable construction for holding brushes or polishing stones or any desired form of rubbing device.

The springs g' hold the brushes or other rubbing devices against the floor with yielding pressure, whereby the brushes scrub the floor, however uneven it may be. The adjustment of the bar D permits this pressure to be varied as desired, depending upon circumstances.

Having described my invention, I claim—

In a floor-scrubbing device, the combination of the framework, a transverse bar D

vertically adjustable thereon, a roller mounted in the framework and adapted to contact with the floor, a shaft C mounted upon said transverse bar, and mechanism for transmitting motion from the roller to the shaft, with vertical shafts journaled in said bar, meshing bevel-gears on said shaft C and vertical shafts, brush-holders which are vertically movable upon the lower ends of said vertical shafts, and revolve with them, and springs surrounding said shafts and thrusting said brush-holders downward, substantially as and for the purpose specified.

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

HARMAN F. ACKERMAN.

Witnesses:
L. F. GRISWOLD,
H. M. HUTCHISON.