

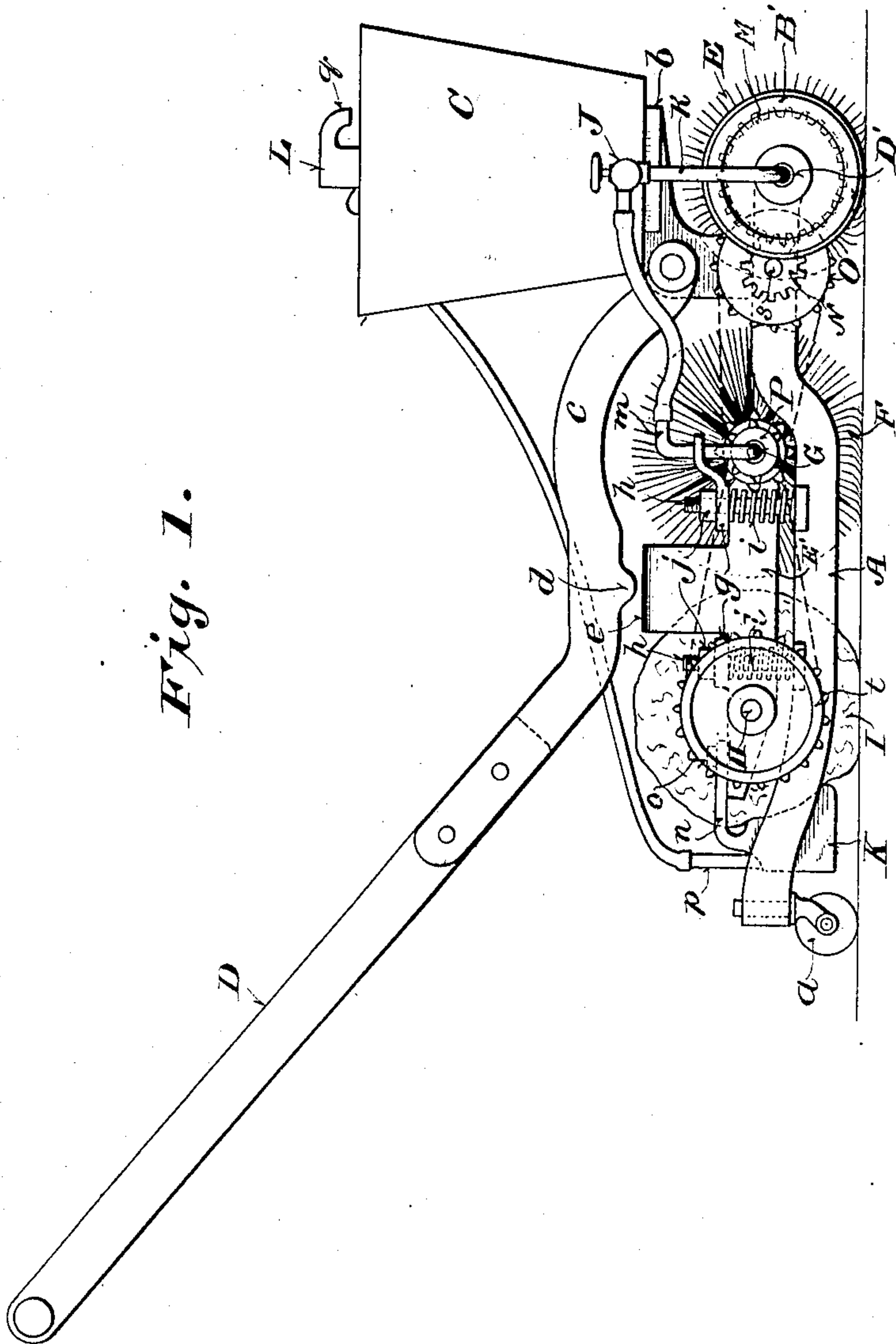
C. H. HENNING.
SCRUBBING MACHINE.
APPLICATION FILED JUNE 24, 1907.

920,136

Patented May 4, 1909.

2 SHEETS—SHEET 1.

Fig. 1.



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UNITED STATES PATENT OFFICE.

CHARLES H. HENNING, OF IRON RIDGE, WISCONSIN.

SCRUBBING-MACHINE.

No. 920,136.

Specification of Letters Patent.

Patented May 4, 1909.

Application filed June 24, 1907. Serial No. 380,402.

To all whom it may concern:

Be it known that I, CHARLES H. HENNING, a citizen of the United States, and resident of Iron Ridge, in the county of Dodge and State of Wisconsin, have invented certain new and useful Improvements in Scrubbing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof.

10 The object of my invention is to provide a simple, economical and effective scrubbing-machine, its construction and arrangement being such that by means of a series of rotary fountain brushes and mop, all of which
15 are hung in a suitable truck, an operator may with slight exertion, readily sweep, scour, and wipe, a large area of floor space in a comparatively short space of time, and at a single operation.

20 Said invention therefore comprises various details of construction and combination of parts as set forth hereinafter with reference to the accompanying drawings and subsequently claimed.

25 In the drawings: Figure 1 represents a side elevation of a machine embodying the features of my invention; Fig. 2, a sectional elevation of the same looking from the opposite side, with parts broken away, the section
30 being indicated by line 2—2 of Fig. 3, and Fig. 3, a plan view of the machine with parts removed, other portions in section to better illustrate details of construction.

Referring by letter to the drawings, A indicates a truck-frame provided with rubber-
35 faced forward traction-wheels B, B', and rear casters a, the side-bars of the frame being extended above traction-wheels and connected by a cross-bar b, to which bar is
40 secured a water-supply tank C of any suitable construction. Pivoted to the side-bar extensions of the truck-frame is a bail c to which is secured a handle D, a projection d of the bail being directly over a cross-bar e of a
45 supplementary frame E' to be hereinafter more fully described. The traction-wheels B, B' are fast to a hollow shaft D', which shaft has its bearing in bosses of the truck-frame and intermediate of the side-bars of
50 said frame. The shaft is fitted with and has secured thereto a cylindrical brush E, to the tufts of which brush a series of apertures f in the hollow shaft communicate. The supplementary frame E' is located to the rear of
55 the traction-wheels and within the side-bars of the truck-frame, to which it is connected

by apertured ears g projecting from said frame E' and engaging posts h that extend upward from ears of the truck-frame side-bars, there being coil-springs i surrounding
60 the posts intermediate of the ears. The ends of the posts h are threaded for the reception of adjusting nuts j, by means of which the supplementary frame may be vertically adjusted in opposition to the springs, which
65 springs tend to lift said supplementary frame. The supplementary frame E' is also provided with front bearings for a cylindrical brush F, having an apertured hollow shaft G communicating with its tufts similar to the
70 brush previously described, and to the rear of the brush F a spindle H is revolvably mounted in the frame E', this spindle being provided with a jacket of absorbent material I, preferably a sponge, for the purpose of
75 wiping up and absorbing the water discharged from the fountain brushes, which brushes receive their supply from the water-tank.

A discharge-cock J is connected to the bottom of the water-tank, one opening of which
80 cock has a pipe k leading therefrom, its bent lower end being fitted into an aperture of the hollow shaft D'. A second nozzle opening in the cock is connected by a flexible tube to
85 a pipe m, which pipe is secured to the supplementary frame, its open end being fitted into an open end of the hollow shaft G of the second brush.

A receiving tank K is adjustably secured
90 to the rear end of the supplementary frame by arms n extending from the tank, the ends of which arms are slotted for the reception of screws o, that are in threaded-connection with said frame. This tank has a perforated
95 curved inner side wall which is adapted to be adjusted snugly against the cylindrical sponge and held in position by means of the screws o as stated above, the top of the curved wall being rolled over so as to present
100 a smooth surface to the rotary sponge, whereby the water absorbed by said sponge is squeezed out as it passes said wall, from which it drains into the tank.

The water that is caught in the receiving
105 tank is pumped back into the supply tank C, by means of a pump L secured thereto, a valve-controlled nozzle of which pump is connected by a hose to a pipe-section p that rises from the bottom of said receiving-tank,
110 there being a suitable valve-controlled discharge-nozzle q at the top of the pump com-

municating with said supply-tank, whereby the water is forced therein at each stroke of the pump-piston, which piston is actuated by a pitman *r* in wrist-pin connection with the traction-wheel B, as shown in Fig. 2 of the drawings. Traction-wheel B' has an integral gear-wheel M arranged to mesh with a pinion-hub N of a sprocket-wheel O, which sprocket-wheel is mounted upon a stud *s* of the truck-frame. The said sprocket-wheel is in link-belt connection with a double-faced sprocket-wheel P secured to the shaft of brush F, and the other face of this sprocket-wheel in turn is in link-belt connection with a larger sprocket-wheel *t* carried by the sponge spindle.

The arrangement and dimensions of the gears are such that the rear brush F and sponge-cylinder revolve in the opposite direction from the travel of the machine, said rear brush traveling at a much greater velocity than the front brush E, which brush revolves in the direction of travel of the machine and at approximately the same speed as the traction-wheels and sponge-cylinder, from which wheels the brushes and sponge receive their drive.

Assuming that the supply-tank contains the required water, the machine being pushed over a surface to be cleaned, will cause the traction-wheels to revolve, motion therefrom is transmitted to the second brush, and the feed-cock of the water-supply tank being open, each brush will distribute water upon the floor. The action of the front brush tending to sweep and throw the water backward or in front of the second brush, which brush will catch the same, owing to its reverse motion, and push the water forward or delay its course for a time. The water is then caught up by the sponge cylinder, which revolves slowly in the same direction as the first brush, and is delivered to the drain-trough by the squeezing-contact of said sponge-cylinder against the same. The water is thereafter pumped back into the supply-tank, thus completing a circulating system. Pressure of the second brush and

sponge upon the floor may be varied by the operator forcing the projection *d* of the bail against the cross-bar *e* of the supplementary frame as required, provision being had, by means of the adjusting nuts *j* and springs to permanently regulate said pressure.

While I have shown and described one method of gearing the several brushes and a detailed construction of pumping apparatus, it is evident that said gears and details may be varied within the skill of mechanics, without departing from the spirit of my invention.

I claim:

1. In a scrubbing-machine, the combination of a truck-frame, a water-supply tank carried thereby, rear supporting casters for the truck-frame, a forward shaft mounted in the frame and having traction-wheels secured thereto, a brush carried by the shaft, a supplementary frame in yielding-connection with the truck-frame, an operating handle in pivotal-connection with the truck-frame and adapted to engage the supplementary frame to control the yield of the supplementary frame, a brush carried by the supplementary frame, a cylinder of absorbing material rearward of the last named brush, driving-means in connection with the truck-shaft, said last-named brush and the cylinder of absorbing material, and means for distributing water from the supply-tank to both brushes.

2. A scrubbing-machine comprising a truck-frame, a supplementary brush-carrying frame in yielding connection with the truck-frame, an operating handle in pivotal-connection with the truck-frame and adapted to engage the supplementary frame to control the yield of the supplementary frame.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee in the county of Milwaukee and State of Wisconsin in the presence of two witnesses.

CHARLES H. HENNING

Witnesses:

GEO. W. YOUNG,
FRED PALM.