No. 695,479. Patented Mar. 18, 1902.

J. A. NELSON.

SCRUBBING MACHINE.

(Application filed July 5, 1901.)

(No Model.) 3 Sheets—Sheet 1.

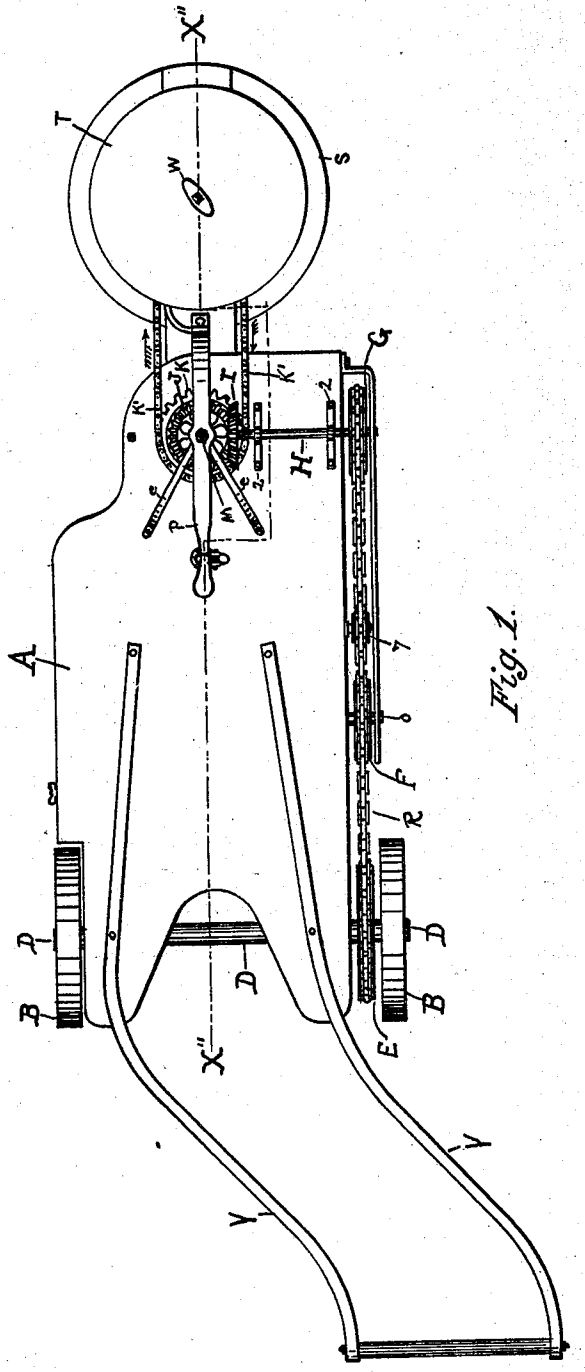


Fig. 1.

Witnesses:
Samuel C. Duvall.
R. E. Randle

Inventor:
JOHN A. NELSON,
by his attorney,
Robert M. Randle

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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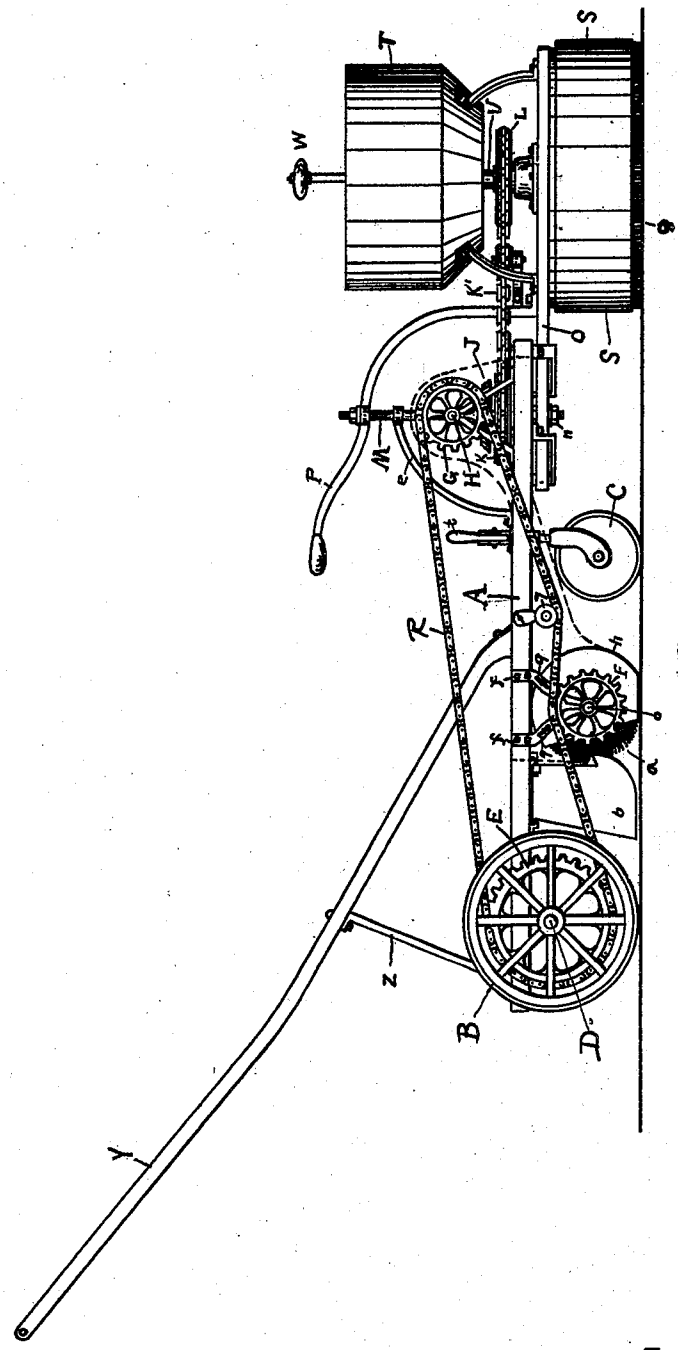


Fig. 2.

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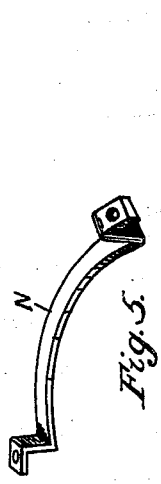


Fig. 5.

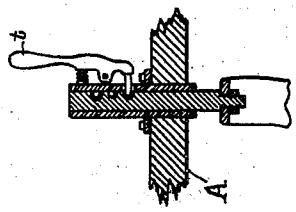


Fig. 4.

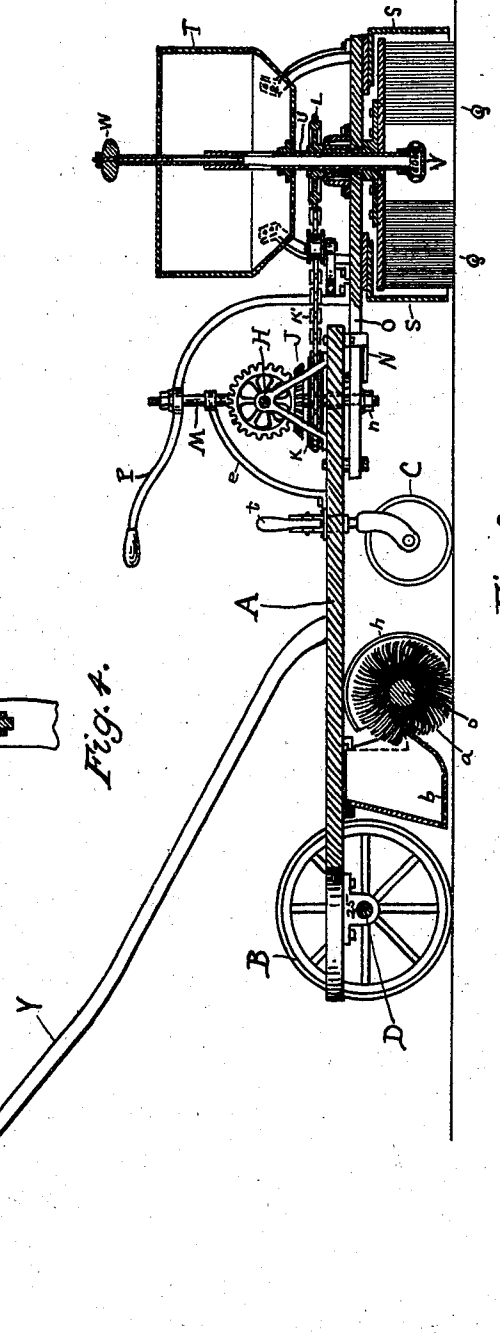


Fig. 3.

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UNITED STATES PATENT OFFICE.

JOHN A. NELSON, OF SALINA, KANSAS.

SCRUBBING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 695,479, dated March 18, 1902.

Application filed July 5, 1901. Serial No. 67,146. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. NELSON, a citizen of the United States, residing at Salina, in the county of Saline and State of Kansas, have invented new and useful Improvements in Scrubbing-Machines, of which the following is a specification.

My invention relates to a new and useful scrubbing-machine provided with revolving scrubbing and mopping brushes adjustably mounted on a suitable framework and adapted to be moved over a floor by means of wheels for carrying the machine and means for adjusting its contact with the floor; and the object of my invention is to provide a new article of manufacture in a scrubbing-machine of novel construction adapted to scrub and mop the floor of a room or the like; and another object is to provide a scrubbing-machine provided with brushes adapted to contact with the floor and means for automatically supplying water thereto as the same may be needed in the work.

Another object is to provide a machine especially adapted for scrubbing floors of large area, such as halls and other public buildings.

Other objects will appear from the following specification and drawings and more particularly pointed out in the appended claim.

I attain the above-named objects and others not specifically mentioned by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a top plan of my entire machine. Fig. 2 is a side view of my entire machine. Fig. 3 is a longitudinal sectional view of same, taken on the line X″ X″ of Fig. 1. Fig. 4 is a detail view of the upper portion of the swivel or adjusting device. Fig. 5 is a detail view of one of the guides.

Similar letters and figures of reference refer to similar parts throughout the several views.

A represents the platform, floor, or base of my machine.

B B represent the two main wheels, which should be provided with rubber tires.

C represents the guiding-swivel and adjusting-wheel.

D represents the main axle, adapted to rotate and carrying the wheels B and B and the sprocket-wheel E.

E represents a sprocket-wheel permanently attached to the axle D.

F represents a sprocket-wheel for revolving the brush *a*.

G represents a sprocket-wheel for revolving the shaft H.

H represents a shaft revolved by G and carrying the bevel-wheel 1, said shaft being mounted on the hangers 2 and 2.

I represents a bevel-pinion mounted on shaft H and meshing with the bevel-pinion J at right angles thereto.

J represents a bevel-pinion meshing with the bevel-pinion I and at right angles thereto.

K represents a sprocket-wheel carrying the sprocket-chain K′, which chain travels in the direction shown by the arrow.

L represents a sprocket-wheel operated by the sprocket-chain K′.

M represents a perpendicular shaft.

N represents the guide secured to the under side of the base A and in which the member O operates.

O represents a hollow beam extending from the under side of A forward to carry the scrubbing mechanism.

P represents the lever for controlling the lateral motion of the scrubbing mechanism.

Q represents the scrubbing-brush.

R represents the main sprocket-chain, extending from the sprocket-wheel E to the sprocket-wheel G.

S represents the cover or casing for the scrubbing-brush Q.

T represents the tank for holding water.

U represents a pipe or tube for conducting the water from the tank T to the brush Q.

V represents a nozzle secured to the lower end of the pipe U.

W represents the water-controlling valve.

Y Y represent the handles for propelling the machine.

Z Z are braces for supporting the handles Y Y.

o represents the shaft on which the brush *a* is mounted.

f f represent hangers for the shaft *o*.

a represents the mopping or drying brush.

b represents the receptacle for holding the water taken up by the wheel *a*.

h represents the cover for the brush *a*.

The hangers 25 are secured to the under

side of the rear of A, one on each side, and they provide bearing for the axle D.

The machine being arranged as shown, it can now be seen that should the machine be pushed forward to the right by the handles Y Y it is apparent that the brush Q will be given a lateral circular motion upon the floor, the water from the tank T being admitted to the center of the brush as it moves over the floor.

The caster-wheel C, near the center of the machine, supports all of the front portion of the machine. The stem of the wheel C extends up through A and through a casting secured on the top of A, as shown. This is adapted to slide up and down through said casting for the purpose of adjusting the height of the forward part of the machine, and it can be held at any point by means of the member *t*, to be operated by hand. The lower point of *t* extends inward and is adapted to enter notches arranged along said stem of C. It is apparent that the wheel C acts as a fulcrum for the handle Y, by which the pressure of the brush Q on the floor can be regulated by raising or lowering the handles Y. At the same time the brush *a* will be given a motion opposite to that of the drive-wheel B. This wheel *a* will remove from the floor the water left there by the brush Q, and the water will be deposited in the receptacle *b*.

t represents the lever for securing the brush Q at any desired point of pressure with reference to the floor, and the brush Q can be moved to the right or left over the floor by the lever F. The amount of water passing out of the nozzle V can be controlled by raising or lowering the handle W. The shaft extending from V to W is hollow and is adapted to slide up and down in a tube extending upward from the center of the bottom of T, said tube being provided with a hole through its wall near the point where it joins the bottom of T. The hollow shaft extending from W to V is provided with a number of holes of various sizes through its wall between the points where it is covered by said stationary tube. By raising or lowering W any one of said holes in said shaft can be brought into alinement with the hole in said stationary tube, thus allowing the water to pass from T down through said shaft and out at the nozzle V.

The sprocket-wheel G is secured to the outer end of the shaft H, which latter is supported and revolves in the hangers 2 2. The bevel-wheel 1 is attached to the inner end of the shaft H near the upright standard or shaft M, the shaft M being supported by the braces *e e*, the lower ends of which are secured to the base A. The shaft M extends down through the base A and the beam O, with a nut *n* at its lower end. The bevel-wheel J and the sprocket-wheel K should be made in one piece, and they are secured to the shaft M slightly above the base A, as shown. The beam or member O is secured pivotally at its inner end to the lower end of M, the nut *n* holding it in place. The member N (shown in Fig. 5) is secured to the under side of the base A and acts as a guide to the member O, so that it may be moved to the right and left, as stated.

From the foregoing description, taken in connection with the drawings, the operation of my machine will be readily understood and its many advantages will be fully appreciated, and I will simply state that the device by reason of its simplicity and ease and efficiency of operation will prove a useful and practical invention, as I have fully demonstrated to my entire satisfaction.

My improvements herein shown and described are perfectly adapted to accomplish the results for which it is intended; but it is evident that changes in and modifications of the construction herein shown and described may be made and that analogous parts may be used to accomplish the same results without departing from the spirit of my invention or sacrificing any of its many advantages.

Having now shown and described the best construction of my invention to me known at this time, what I claim as new, and desire to secure by Letters Patent of the United States, is—

In a mechanism of the class described, the combination of the base supported at its rear and carried by a pair of wheels, a caster-wheel near the center of the base with means for adjusting same to raise or lower the forward part of the base, so that the contact of the scrubbing-brush with reference to the floor may be adjusted at will, a beam pivotally mounted to the forward end of the base and carrying the scrubbing-brush revolubly mounted near its forward end, a revolving mopping-wheel mounted in the rear of the scrubbing-wheel and a receptacle for holding the water taken up by the mopping-wheel, the water-supply tank mounted above the scrubbing-wheel, and sprocket chains and wheels for operating the rotation of the scrubbing and mopping wheels, all substantially as shown and described and for the purposes set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN A. NELSON.

Witnesses:
A. G. ANDERSON,
J. E. NELSON.