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J. P. JOHNSON

COMBINED FLOOR SCRUBBER AND MOP

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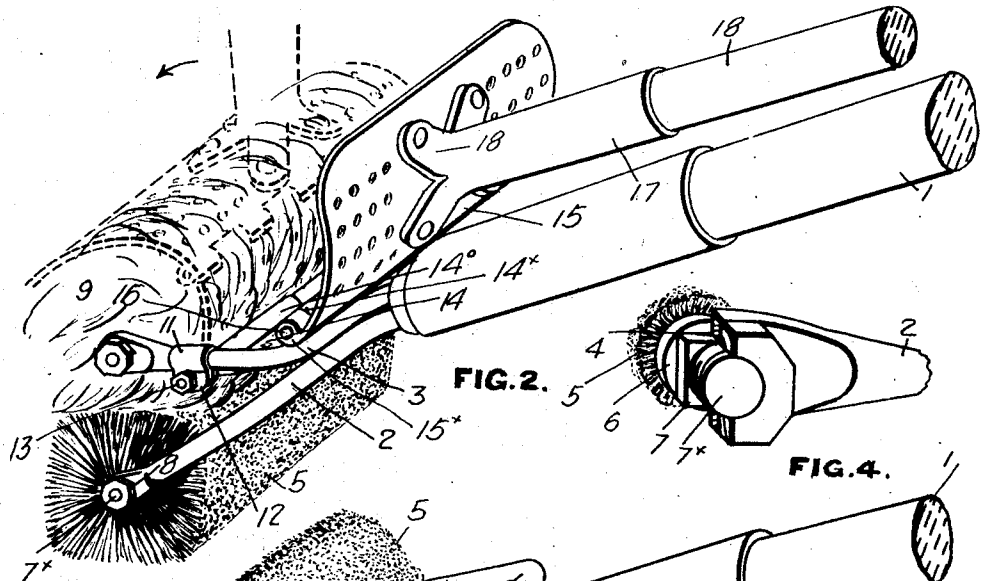

FIG. 2.

FIG. 4.

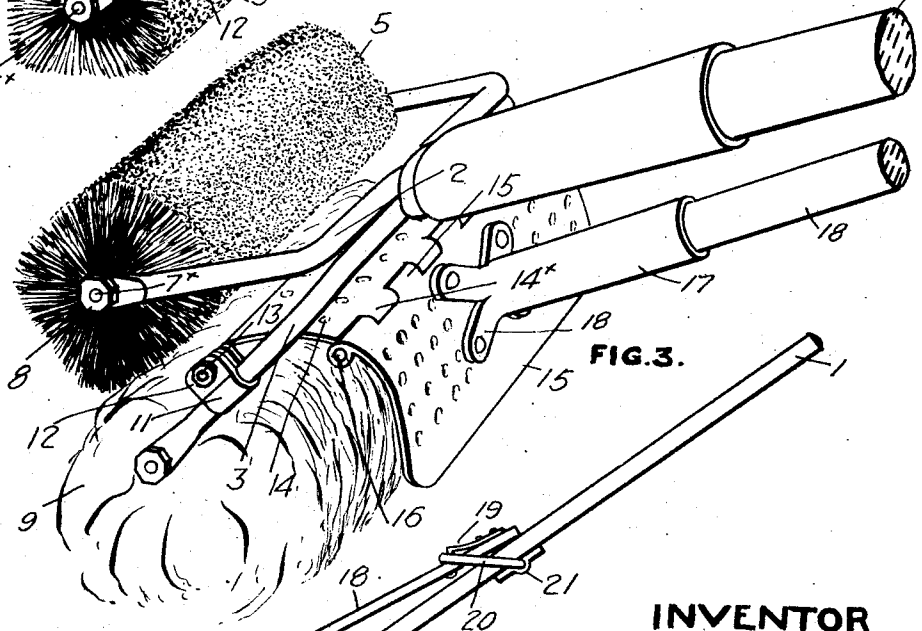

FIG. 3.

FIG. 1.

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UNITED STATES PATENT OFFICE.

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COMBINED FLOOR SCRUBBER AND MOP.

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To all whom it may concern:

Be it known that I, JAMES PIERSON JOHNSON, a subject of the King of Great Britain, and a resident of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Combined Floor Scrubbers and Mops, of which the following is the specification.

My invention relates to improvements in floor scrubbing and mopping devices, and the object of the invention is to devise a device by which the operator may, whilst in an easy and little tiring position, quickly and more effectively scrub and remove the surface water from a floor without the operator kneeling on the hard floor or assuming a tiring bending position, and it consists essentially of the arrangement and construction of parts hereinafter more particularly described.

Fig. 1 is a side elevation of my device.

Fig. 2 is an enlarged perspective detail of the main portion of the operating mechanism shown in the scrubbing position.

Fig. 3 is a similar view to Fig. 2 showing the parts in the mopping position.

Fig. 4 is a further enlarged perspective detail of the connection between either the scrubbing or mopping member and its carrying fork.

In the drawings like characters of reference indicate corresponding parts in each figure.

1 indicates the main handle provided at its lower end with a double fork comprising the members 2 and 3.

The members of the fork 2 are provided in proximity to their end with rectangular orifices 4.

5 is a scrubbing member formed of bristles carried by a central spindle of any suitable form, each end of the spindle being provided with an enlargement 6, bearing against the inner face of each fork member, a rectangular boss 7 extending from such enlargement fitting within the orifice 4 and a threaded extension 7^x extending centrally from the boss on which is screwed a nut 8 against the outer face of the fork member 2, thus securing the scrubbing member 5 in any position desired from turning around its longitudinal axis. It will be noticed that the scrubbing member is formed rectangular and that the sides of the boss 4 are similarly placed to the sides of the rectangular scrubbing member so that by removing the boss from its orifice and turning the central spindle of the scrubbing member, the flat faces of the scrubbing member may be successively used as they become worn, thus materially increasing the life of such member.

9 is a mop, supported upon the central spindle 10, which is held in the fork 3 in a similar manner to that described in connection with the spindle of the scrubbing member 5. By this means the mop also may be turned to various positions, as the sides of the mop become worn away.

In order to squeeze the moisture from the mop, I have devised split sleeves 11 clamped to the arms of the fork 3, the sleeve being provided with lugs 12 through which a bolt 13 extends. It will be understood that the bolt 13 extends transversely of my device between one arm of the fork 3 and the other arm, connecting the lug portions 12 of the sleeves 11 together and forming a pivotal support for my mop squeezing member which I will now describe.

14 is a plate which is arc shaped in cross section, provided at its lower edge with sleeves 14^o, swung upon the bolt 13. The opposite edge of the plate 14 is provided with hinge sleeves 14^x.

15 is a plate provided with hinge sleeves 15^x fitting between the hinge sleeves 14^x and through which a hinge bolt 16 extends.

17 is a handle socket provided with feet 18^x which are riveted or otherwise suitably secured to the plate 15.

18 is a handle fitting within the socket 17.

19 is a spring catch carried by the handle 18.

20 is a pivotal link carried by the handle 1, as indicated at 21, and adapted to swing over the handle 18 and engage the catch 19 so as to secure the handle 18 and the mop squeezing member in its inoperative position when not in use.

When my device is to be used for scrubbing a floor, it is held in the position shown in Figs. 1 and 2, one face of the scrubbing member 5 bearing upon the floor, the water having first been applied to the floor by the mop 9 held in the position shown in Fig. 3. The operator, in a standing position, reciprocates the scrubbing member in contact with the floor so as to scrub the same. When the floor has been scrubbed,

and it is desired to remove the surface water from the floor, the mop, in a comparatively dry state, is applied to the floor so as to soak up the moisture, and is then held over the pail by the operator and squeezed by releasing the handle 18 and swinging it forward into the dotted position shown in Fig. 2.

By further swinging the handle 18 in the direction of arrow, see Fig. 2, the members 14 and 15 are carried downward towards each other so as to grip the mop 9 therebetween and squeeze out the moisture.

When the operation is complete, the handle may be readily replaced in locked position and the scrubbing operation renewed.

From this description it will be seen that I have devised a very simple form of scrubbing apparatus which will perform both the scrubbing and mopping without the operator assuming a tiring position or having to kneel upon a hard floor, particularly where a tiled floor is being cleaned, and yet at the same time to provide a scrubbing apparatus which may be operated in such a position that the operator is enabled to exert greater pressure upon the scrubbing member and thereby more effectively clean the floor. Also in my construction I have devised a scrubbing member and mop which will have a maximum life, by providing a plurality of scrubbing or mopping faces which may be used successively when one becomes worn out.

What I claim as my invention is:

The combination with an operating handle, a fork member extending from the lower end of the handle, a mop mounted in the fork so that its longitudinal axis extends between the members of the fork, a perforated arc-shaped plate pivotally mounted at its forward edge to the members of the fork and extending rearward over the mop, a perforated arc-shaped plate member hingedly connected to the opposite edge of the aforesaid perforated plate, and an operating handle rigidly connected to the outer face of the last mentioned perforated plate and adapted when forced in a direction away from the operating handle to carry the plates around the mop in squeezing relation thereto to express the moisture therefrom.

JAMES PIERSON JOHNSON.