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MACHINE FOR SCRUBBING RUGS, FLOORS AND THE LIKE

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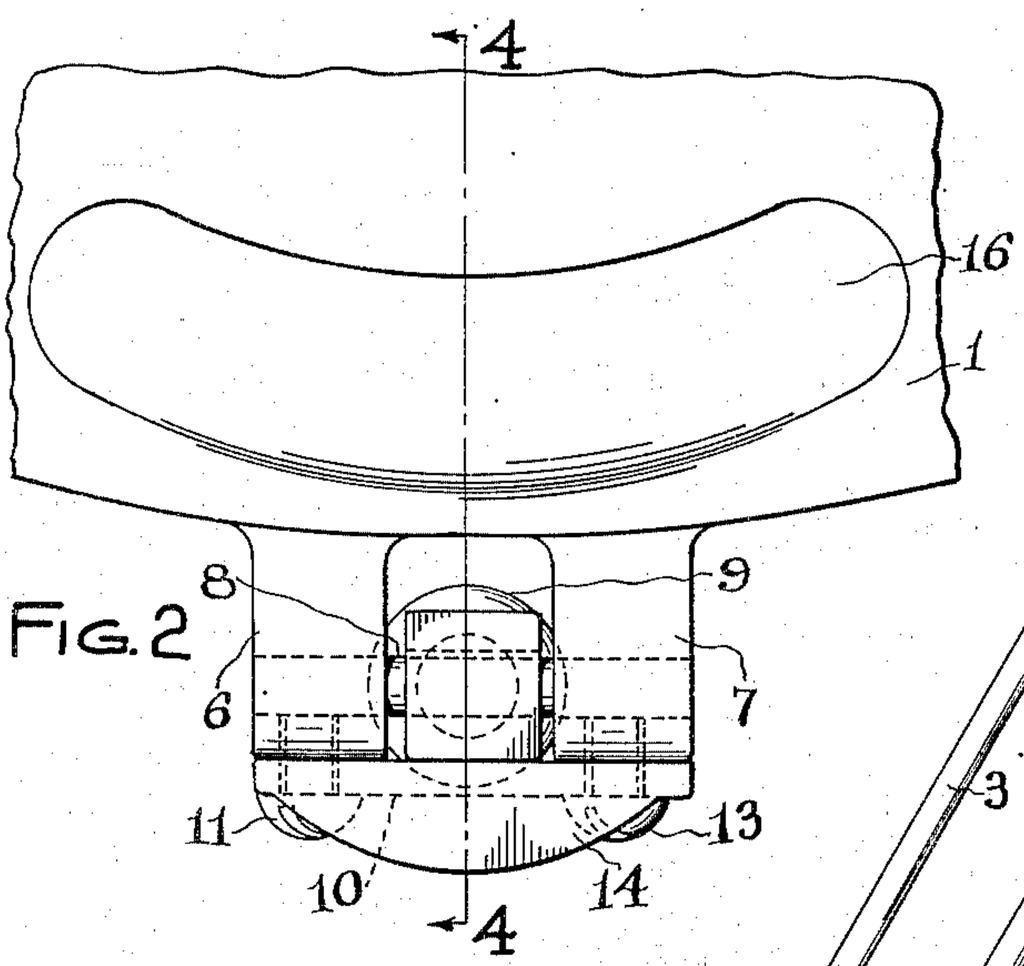

FIG. 2

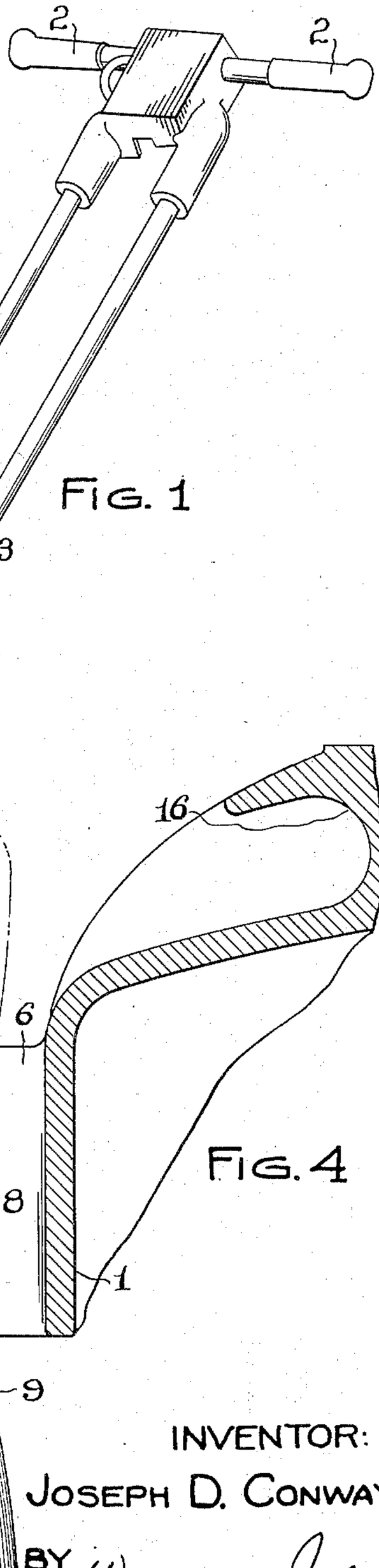

FIG. 1

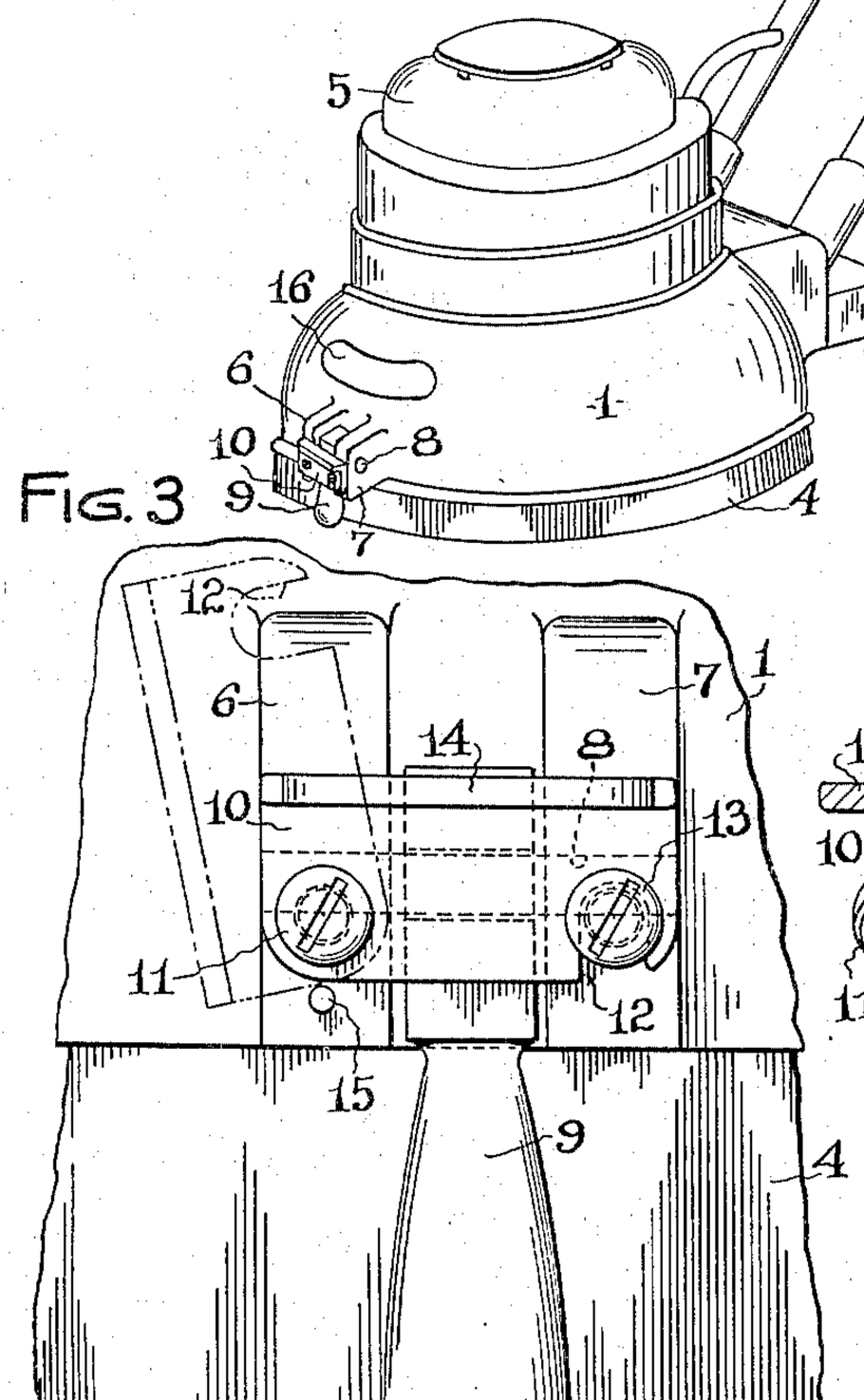

FIG. 3

FIG. 4

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MACHINE FOR SCRUBBING RUGS, FLOORS, AND THE LIKE

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2 Claims. (Cl. 15—49)

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This invention relates, as indicated, to machines for scrubbing rugs, floors and the like, but has reference more particularly to improvements in machines of the rotary brush type, such as that disclosed in my prior U. S. Patent No. 2,717,617.

In machines of the aforesaid type, provided with rotary brushes, the weight of the machine is usually sustained by the bristles of the brush. These bristles, when dry, are sufficiently rigid, so that collectively, they sustain the weight of the machine in a desirable manner without injury to the brush. After the bristles become wet, however, either during or after use of the machine, the ends of the bristles lose their rigidity, and the weight of the machine causes such ends of the bristles to become bent or curled, thereby materially reducing the cleaning or scrubbing efficiency of the brush, and increasing, in many cases, the time required for cleaning or scrubbing.

It is a primary object of the present invention to provide means which is effective to sustain or carry the weight of the machine after the machine has been used, or between periods of the machine's active use, whereby the weight of the machine need not be sustained primarily by the bristles of the brush while the brush is wet.

Another object of the invention is to provide means of the aforesaid character which can be easily and quickly placed in position or use, and which, when not in use, can be locked or held in a position in which it does not, in any way, interfere with the operation or use of the machine.

A further object of the invention is to provide means of the aforesaid character which consists of a minimum number of parts, which are inexpensive to manufacture and which can be readily assembled and disassembled.

A still further object of the invention is to provide a novel finger-hold or hand-hold in a machine of the character described, whereby tilting of the machine to facilitate placement in use of the aforesaid weight-sustaining means is greatly facilitated.

Still another object of the invention is to provide means for facilitating handling and steering of the machine.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this specification, and in which like numerals are employed to designate like parts throughout the same,

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Fig. 1 is a perspective view of a machine having incorporated therein the novel features of the invention;

Fig. 2 is a fragmentary plan view of the front portion of the machine, showing, in approximately full-size, the novel features of the invention;

Fig. 3 is a fragmentary elevational view of the front portion of the machine, showing the novel features of the invention, and

Fig. 4 is a fragmentary cross-sectional view, taken on the line 4—4 of Fig. 2.

Referring more particularly to the drawing, a machine of the type to which this invention relates, includes a dome-shaped base or cover 1, which is preferably made from an aluminum casting, and which is adapted to be propelled along the floor or rug by means of handles 2, the handles being connected to the base or cover 1 by means of tubular members or conduits 3 which serve to convey the various cleaning fluids from a tank (not shown) to the interior of the base or cover, and thence to the rotating brush 4 of the machine. The movement of the machine along the floor is aided by means of rollers or wheels 4', which are carried by the base or cover of the machine.

The brush, in this instance, is housed within the base or cover 1 in such a manner that the major portion of the bristles thereof projects below the lower edge of the base. The brush 4 is supported by means of the shaft of an electric motor 5, which, in turn, is supported by the base or cover, the motor, when energized, imparting a rapid rotary movement to the brush. During such rotation of the brush, various cleaning fluids are fed to the brush, preferably in the manner described in my aforesaid patent.

Projecting forwardly from the base or cover of the machine, and preferably cast integrally with such base or cover, is a pair of parallel lugs 6 and 7, in which pivot pin 8 has its ends rigidly secured. The pin 8 has pivotally secured to the mid-portion thereof, a handle-shaped member 9, which forms the weight-sustaining or weight-carrying means of the present invention.

Means are also provided for the purpose of latching or locking the aforesaid weight-sustaining member 9 in either its operative or inoperative position.

Such means includes a flat plate 10 which is disposed adjacent the front faces of the lugs 6 and 7 and extends parallel with said faces, the plate being pivotally secured to the lug 6 by means of a screw 11, whereby the plate may be swung

between the positions shown in solid lines in Fig. 3 and the position shown in broken lines in said figure.

The plate 10 is provided in its lower edge with a notch or recess 12, which is adapted to receive a locking screw 13, which is secured to the lug 7, and the head of which serves to prevent displacement of the plate 10 from the position shown in solid lines in Fig. 3.

The plate 10 is also provided at its upper edge with a forwardly extending ledge or flange 14, which forms a finger-piece for facilitating movement of the plate 10 between the positions shown in Fig. 3.

When the weight-sustaining member 9 is not in use, it is swung upwardly about the pivot pin 9 to the position shown in broken lines in Fig. 4. In order to permit such movement of the member 9, the plate 10 is first swung about the screw 11 from the position shown in solid lines in Fig. 3 to the position shown in broken lines, and is temporarily supported in the broken-line position by means of a stop pin 15 which projects forwardly from the lug 6, directly below the screw 11. Thereafter the member 9 is swung upwardly to the broken-line position in Fig. 4, after which the latch plate 10 is returned to the position shown in Fig. 4, in which position it is effective to prevent the member 9 from falling back to its initial position.

After the machine has been in use, and the bristles of the brush have become wet, the plate 10 is moved to the broken-line position in Fig. 3, permitting the member 9 to be swung about the pin 8 to a lower position. In order to bring the member 9 to the solid line position of Figs. 3 and 4, however, it is necessary to lift the front portion of the machine base 1, tilting it slightly about the axes of the wheels 4'. In order to facilitate this tilting movement, a finger-hold 16 is formed in the base or cover 1, such finger-hold being contoured to receive the fingers of one hand and to enable the front portion of the machine to be elevated sufficiently to permit the member 9 to be moved to its operative position. The finger-hold 16 also serves to facilitate lifting or carrying of the machine for other purposes. After the member 9 has been moved to its operative position, it is locked in such position by lowering the latch plate 10 to the position shown in Fig. 4.

The member 9 and the wheels 4' thus coact to lift the brush from the floor sufficiently, when it is not in use (see Fig. 3), to relieve the bristles of the brush from supporting the weight of the machine. This prevents the ends of the wet bristles from becoming bent or curled, and preserves the cleaning or scrubbing efficiency of the brush, increasing also the life thereof.

It will be noted that the tubular members 3 are connected to the housing or cover 1 at points spaced along the periphery of the cover. It has been found that by providing two such members spaced in this manner, instead of a single member connected to a single point in the periphery of said cover, it becomes easier to handle and steer the machine, or rather the rotating brush.

It is to be understood that the form of my invention, herein described, is to be taken as a preferred example of the same, and that various changes may be resorted to without departing from the spirit of my invention, or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. In a machine of the character described, a brush casing, a brush revolubly mounted in said casing, said brush having an exposed portion below said casing, means for elevating the casing to support said brush out of contact with the floor, said means comprising a pair of spaced lugs extending laterally from the casing, a pivot pin mounted in said lugs and a casing sustaining member pivotally movable about said pin between said lugs, a pivoted latching member comprising a plate pivoted to one of said lugs and a headed projection mounted on the other of said lugs, said headed projection being adapted to engage said plate and prevent displacement of the latter relative to the lugs and said plate being pivoted for movement across the path of pivotal movement of the casing sustaining member to latch said member in operative or inoperative position.

2. In a machine of the character described, a brush casing, a brush revolubly mounted in said casing and having a portion exposed below the lower edge of the casing, wheels carried by said casing at one side thereof, means carried by said casing at the opposite side thereof and movable to a position parallel with the side of said brush and extending below the lower edge of the brush to support the same out of contact with the floor and also movable to an inoperative position in which it extends in the opposite direction, said means comprising an elongated rigid finger having front and rear sides, means for pivoting said finger to said housing, and a pivoted latch carried by the housing and engaging one or the other of said faces to lock the finger in either of its positions.

JOSEPH D. CONWAY.

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