

[54] **COMBINATION CLEANER, POLISHER AND WAXING DEVICE FOR WALLS AND FLOORS**

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[51] Int. Cl. **A47I 13/312**

[58] Field of Search..15/114, 115, 118, 144 R, 144 A, 15/147 D, 172, 210 R, 228, 229 B, 229 BP, 231, 232, 235; 306/19; 401/9, 24, 27, 11

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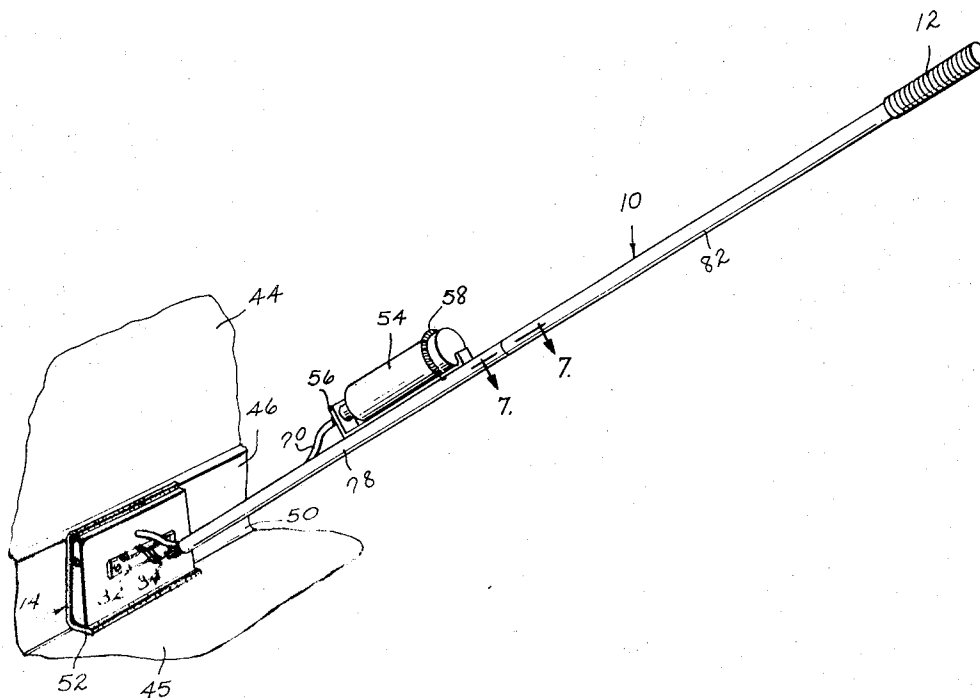
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[57] **ABSTRACT**

A combination cleaner, polisher and waxing device for walls and floors which includes an elongated handle having a pad carrier connected to the handle at one end thereof. One side margin of the pad carrier is weighted so as to permit the carrier to assume a generally vertical position for wall cleaning when held spacedly above the floor by the handle. The handle carries a liquid dispenser means which is connected by a conduit to the carrier and which serves to dispense a liquid into the pad of the carrier for use upon the wall or floor. The handle of the device is preferably of a two-piece construction which enables an auxiliary cleaning tool to be attached to the detachable handle piece when separated from the remainder of the handle.

3 Claims, 10 Drawing Figures



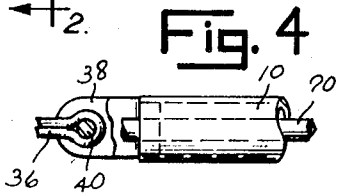
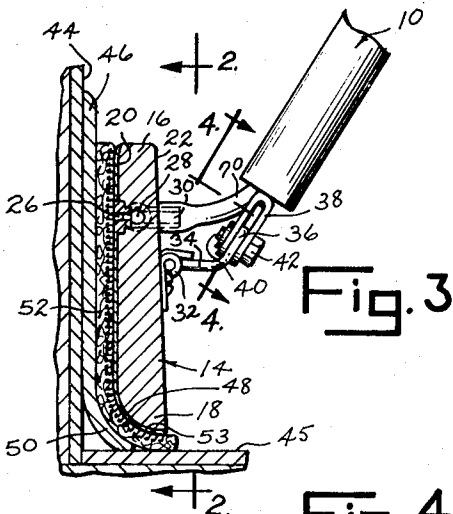
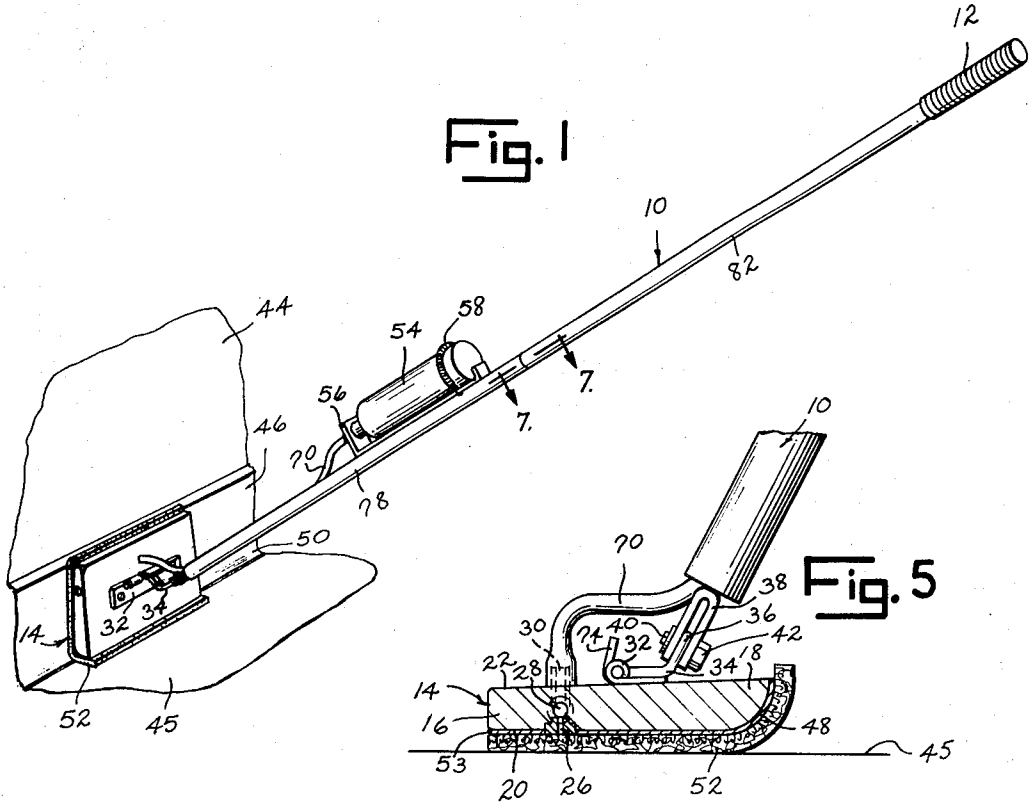


Fig. 2

Fig. 3

Fig. 4

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Fig. 6

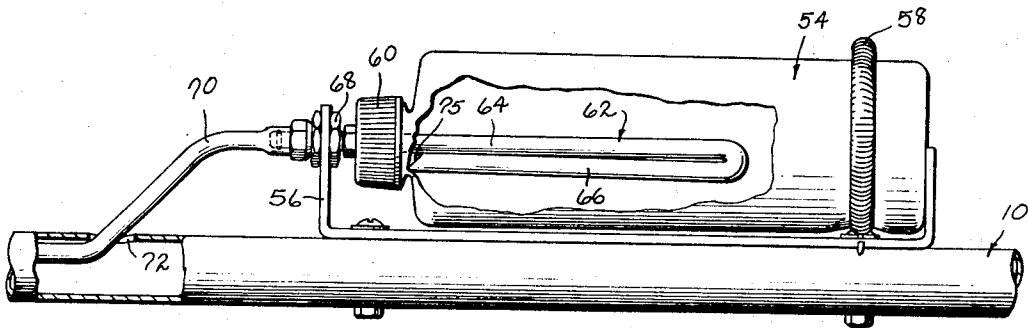


Fig. 7

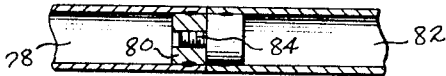


Fig. 9

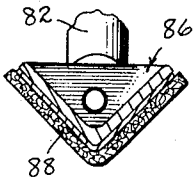


Fig. 8

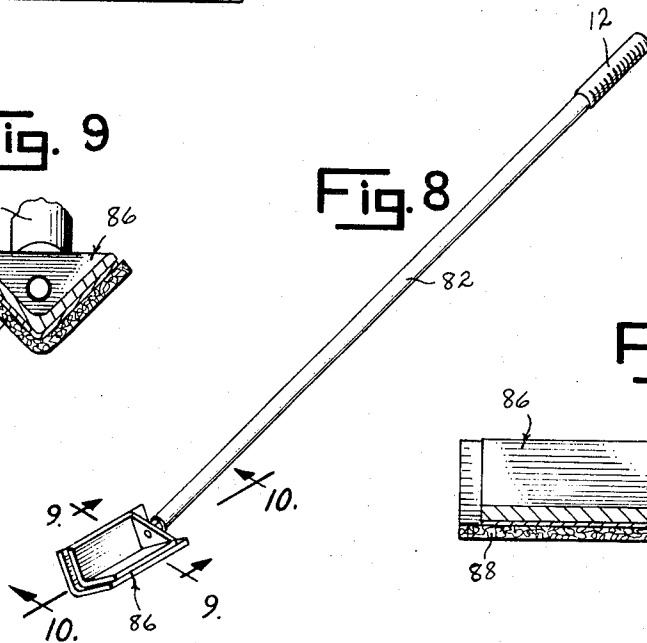
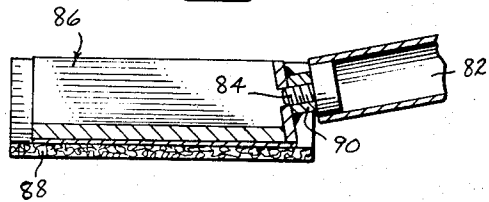


Fig. 10



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COMBINATION CLEANER, POLISHER AND WAXING DEVICE FOR WALLS AND FLOORS

SUMMARY OF THE INVENTION

This invention relates to a device which can be utilized for the cleaning, polishing or waxing of floors and walls and which will find application for home use as well as industrial use.

The combination cleaner, polisher and waxing device of this invention includes an elongated handle having a pad carrier connected thereto. The pad carrier is designed with one side margin weighing more than the opposite side margin so as to enable the carrier to assume a generally vertical position for wall cleaning when the applicator is held spacedly above the floor by the handle. A liquid dispenser is carried by the handle. The pad carrier includes a plurality of orifices which are interconnected to the handle-carried liquid dispenser by a flexible conduit and through which liquid is dispensed onto the pad of the carrier for application to the floor or wall. A portion of the conduit which interconnects the dispenser to the orifices in the pad carrier preferably extends shiftably through the lower end portion of the handle. A swivel attachment is preferably used to connect the handle to the pad carrier. Such a swivel attachment includes stop means which limit the amount of pivotal movement of the pad carrier relative to the handle so as to prevent pinching of the flexible conduit extending from the dispenser. The swivel attachment also includes means for regulating the ease or degree of freedom of pivotal movement of the carrier relative to the handle, permitting the user of the device to have control over the applicator when cleaning a vertical surface, such as a wall or the baseboard thereof.

In the device of this invention, the housewife and industrial cleaning man have a compact, easy to use tool which can be used for the cleaning, polishing and waxing of floors and walls without the necessity of changing the pad carrier of the tool. Such a tool is designed to accommodate a removable, economical cleaning pad which can be disposed of when sufficiently worn so as to be unusable. The pad carrier and its liquid dispenser are designed so as to be easily cleaned and of simple operation.

Accordingly, it is an object of this invention to provide a device which is used for the cleaning, polishing or waxing of floors and walls and which is of simple operation.

Another object of this invention is to provide a cleaning device for floors and walls which includes an elongated handle and a swivel connected pad carrier by means of which a cleaning liquid can be applied to the floors or walls in a simple and messless way.

Still another object of this invention is to provide a device for cleaning, polishing or waxing floors and walls which is of economical construction, having few moving parts, and which can be rapidly and simply cleaned after use.

A further object of this invention is to provide a cleaning and waxing device for a wall baseboard which enables the user of the device to clean and wax the baseboard with a minimum of effort.

Other objects of this invention will become apparent upon a reading of the invention's description.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a preferred embodiment of the device of this invention shown with its pad being applied to a wall baseboard.

FIG. 2 is a fragmentary sectional view of the device of FIG. 1 taken along line 2—2 of FIG. 3.

FIG. 3 is a fragmentary sectional view taken along line 3—3 of FIG. 2.

FIG. 4 is a fragmentary view taken along line 4—4 of FIG. 3.

FIG. 5 is a fragmentary sectional view of the device seen in FIG. 3 but with its pad shown as being applied to a floor.

FIG. 6 is an enlarged detail view of the handle of the device of FIG. 1 and the dispenser secured thereto, both with portions removed for purposes of illustration.

FIG. 7 is a sectional view taken along line 7—7 of FIG. 1.

FIG. 8 is a perspective view of the handle of the device of FIG. 1 having the handle portion which carries the pad carrier removed and an auxiliary tool attached thereto.

FIG. 9 is a fragmentary sectional view taken along line 9—9 of FIG. 8.

FIG. 10 is a fragmentary sectional view taken along line 10—10 of FIG. 8.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The preferred embodiments illustrated are not intended to be exhaustive or to limit the invention to the precise forms disclosed. They are chosen and described in order to best explain the principles of the invention and its application and practical use to thereby enable others skilled in the art to best utilize the invention.

For the purpose of describing the construction and method of operation of the embodiments of this invention each such embodiment will be referred to as a cleaning device, although it is to be understood that such embodiments would also have application as wax applying and polishing devices for wall baseboards and floors.

The cleaning device illustrated in FIGS. 1-7 includes a handle 10 having a handgrip 12 applied to one end and a pad carrier or head 14 swivel-connected to its opposite end. Carrier 14 is preferably rectangular in shape and has spaced side margins 16 and 18 extending longitudinally of the carrier. Side margin 18 is constructed so as to weigh more than side margin 16 of the carrier. This weighting of carrier side margin 18 may be accomplished by designing carrier 14 with tapering side faces 20 and 22 which converge toward side margin 16. In other constructions of this invention, carrier 14 may be designed with weights or similar means positioned along its side margin 18. A plurality of orifices 26 are located in side face 20 adjacent carrier side margin 16, as shown in FIGS. 2 and 3. Orifices 26 are interconnected by a passage 28 which extends through carrier 14 adjacent to and paralleling its side margin 16 and which includes a fitting 30 which protrudes outwardly of carrier side face 22, preferably centered between side edges 24 of the carrier.

Carrier 14 is connected to handle 10 by a swivel attachment which includes a hinge bracket 32. Bracket

32 is fixedly attached to carrier side face 22. A wire hinge connector 34 is pivotally secured to bracket 32 with its pivot axis located longitudinally relative to carrier 14 and generally paralleling side margins 16 and 18 thereof. The pivot axis of hinge connector 34 to bracket 32 is preferably located nearer to side margin 16 than to side margin 18 of the carrier, as best shown in FIGS. 2, 3 and 5. Hinge connector 34 has an intermediate loop portion 36 which is bent outwardly from side face 22 of carrier 14. Handle 10 carries a U-shaped bracket 38. Loop portion 36 of hinge connector 34 is located between the open legs of bracket 38 and is secured thereto by means of a bolt 40 which extends through registering apertures in bracket 38 and the opening in loop portion 36 of the hinge connector. A nut 42 is turned onto bolt 40 causing the legs of bracket 38 to be drawn into frictional engagement with loop portion 36 of the hinge connector. The more nut 42 is tightened onto bolt 40, the greater the frictional contact between bracket 38 and connector 34. As such bracket and connector contact increases, the ease or degree of freedom of movement between handle 10 and carrier 14 about bolt 40 of the swivel attachment becomes less. When carrier 14 is lifted by handle 10 from the floor 45 in preparation for application to wall 44 at its baseboard 46 as illustrated in FIG. 1, carrier 14 will assume a generally vertical position due to weighted side margin 18 and the location of the pivot axis between hinge bracket 32 and hinge connector 34 which allows the user of the cleaning device to more readily apply and hold the carrier against the wall or its baseboard during the cleaning or other operation of the device.

Side margin 18 of carrier 14 at portion 48 of side face 20 is formed into an arcuate configuration which is preferably complementary in shape to cove 50 of baseboard 46, as shown in FIG. 3. A pad 52 covers side face 20 of carrier 14. Pad 52 may consist of spun nylon material or steel wool when the device is used for cleaning, or of felt when the device is used for waxing and polishing. Pad 52 preferably extends the full width of carrier 14, around arcuate side face portion 48 and slightly beyond the plane of side face 22 of the carrier. Pad 52 is also preferably removably secured to carrier 14 so as to enable the pad to be cleaned, reversibly repositioned on the carrier, and eventually replaced when worn out. The means for removably securing pad 52 to face 20 of carrier 14 can vary from construction to construction of this invention and may consist of an adhesive applied to face 20 or a thin pad of hook-carrying material 53, such as the type material sold under the name VELCRO, bonded to face 20 of the carrier and to which pad 52 of spun nylon or similar interwoven material will readily adhere. By designing carrier 14 with arcuate side face portion 48, pad 52 which conforms to the curvature of face portion 48 will make extensive contact with cove 50 of the baseboard, as shown in FIG. 3.

A liquid dispenser 54 is carried by handle 10. Dispenser 54 is preferably removably secured to handle 10 by means of a suitable bracket 56 and spring 58. Dispenser 54 is preferably constructed of a flexible, shape-retaining plastic or similar material and includes a filler cap 60 which is preferably removable. A U-shaped liquid regulating tube 62 is located within

dispenser 54. One leg 64 of tube 62 extends through cap 60 and forms the orifice or opening for the dispenser. The remaining leg 66 of tube 62 terminates adjacent cap 60 within the dispenser, as shown in FIG. 6. A fitting 68 carried by bracket 56 is inserted into the leg-defined opening of dispenser 54. A flexible conduit 70 has one end secured to fitting 68 and its opposite end secured to fitting 30 carried by carrier 14. Handle 10 is preferably tubular in construction. Conduit 70 extends from fitting 68 downwardly through an opening 72 in the handle adjacently below bracket 56, as shown in FIG. 6, and internally along the handle where it emerges with sliding clearance through an opening in the end of the handle which carries U-shaped bracket 38. Conduit 70 has sufficient slack so as to enable its carrier-connected end portion to shift within handle 10 as carrier 14 is pivoted relative to handle 10 between the positions shown in FIGS. 3 and 5. By having a substantial portion of conduit 70 carried within handle 10 there is less likelihood that the conduit will become entangled during use of the cleaning device.

Hinge bracket 32 which is mounted to carrier 14 includes a stop 74 which, in cooperation with hinge connector 34 whose loop portion 36 is outwardly bent, serves as a means for limiting the extent of pivotal movement of carrier 14 about the pivotal axis of hinge bracket 32 and thus prevents the end portion of flexible conduit 70 which is connected to the carrier from becoming pinched against the handle during use of the cleaning device. When the cleaning device of this invention is utilized as a baseboard cleaner, as illustrated in FIGS. 1 and 3, carrier 14 is pressed against the outer face of the baseboard 46 with handle 10 being positioned in a comfortable inclined angle to wall 44 and floor 45 which enables the user of the device to push the carrier simultaneously forwardly along and against the baseboard. To provide control over the movement of the carrier relative to handle 10 about bolt 40, nut 42 need only be tightened so as to increase the frictional resistance between hinge connector 34 and bracket 38. It is contemplated that nut 42 would normally not be turned tightly enough to cause a lock between connector 34 and bracket 38.

Dispenser 54 may be filled with a cleaning, rinsing, waxing or similar liquid of various degrees of viscosity. To fill pad 52 with such liquid, the dispenser is squeezed and the liquid therein forced into opening 75 of tube 62, out through cap 60 and fitting 68 into conduit 70, through fitting 30 and passage 28 in the carrier and out orifices 26 of the carrier into pad 52. With carrier 14 being held by handle 10 in a generally vertical position, such as when the device is applied to a wall or its baseboard, the liquid after being expelled from orifices 26 will flow downwardly through the pad so as to substantially saturate the pad with the liquid. Once the pad has been saturated, the user of the device releases dispenser 54 which then assumes its normal shape and in doing so causes the liquid within passage 28 and conduit 70 to be drawn into the dispenser, thus clearing the conduit and passage to prevent their clogging. Due to the U-shaped configuration of tube 62, no liquid flows from dispenser 54 during normal use of the cleaning device until the dispenser is squeezed to replenish the liquid supply in pad 52. To assist in cleaning passage 28 in carrier 14, a screw 76 or other removable plug

means may be threaded into passage 28 at each side 24 of the head. When it is desired to clean passage 28, such as when storing the device, screws 76 are removed and the passage flushed with a solvent or cleaned by the insertion of a brush or similar means therein.

Handle 10 is preferably of a two-piece construction. Handle piece 78 to which carrier 14 is attached carries a female threaded coupler 80, and handle piece 82 to which grip 12 is attached carries a male coupler 84. To secure piece 82 to piece 78, coupler 84 is turned into coupler 80. An auxiliary tool 86, which may be of a V-shaped construction and which preferably carries a removable pad 88, is provided with a female coupler 90 into which male coupler 84 of handle piece 82 may be turned to secure the tool to the handle piece as shown in FIG. 8. Tool 86 may be utilized to clean corners or other recesses of the walls and floors.

It is to be understood that the invention hereinabove described is not to be limited to the details herein given but may be modified within the scope of the appended claims.

What I claim is:

1. A device for the cleaning, waxing or polishing of walls comprising an elongated handle, a pad for wall contact, and a carrier for said pad, said carrier having first and second spaced side margins and non-parallel planar side faces which taper toward said second side margin, said carrier including a rounded section having a configuration complementary to a baseboard cove, said rounded section located between said carrier side faces at said first carrier side margin, means removably

securing said pad to one side face and the rounded section of said carrier, swivel means connecting one end of said handle to said carrier at the other carrier side face between the first and second side margins thereof, said swivel means having two pivot axes and being connected by one of its said pivot axes to said other side face at a location nearer to said second carrier side margin than said first carrier side margin so as to enable said carrier to assume a generally vertical position for wall contact with said first side margin lowermost when supported spacedly from said wall by said handle, said one pivot axis paralleling said first carrier side margin.

2. The device of claim 1 and a liquid dispenser carried by said handle, said carrier having a plurality of orifices opening at its one side face and a passage means interconnecting said orifices, a liquid transmitting conduit connected between said dispenser and carrier passage means, said orifices being located nearer to said second carrier side margin than to said first carrier side margin to permit liquid when passing from said dispenser and out said orifices into said pad to flow downwardly through said pad as said carrier is generally vertically positioned.

3. The device of claim 2 wherein said dispenser is formed of a pliable shape-retaining material having a squeezable construction and carries a two-way liquid outlet means, said outlet means constituting the only opening through which the contents of the dispenser are expelled during its use.

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