

Jan. 29, 1952

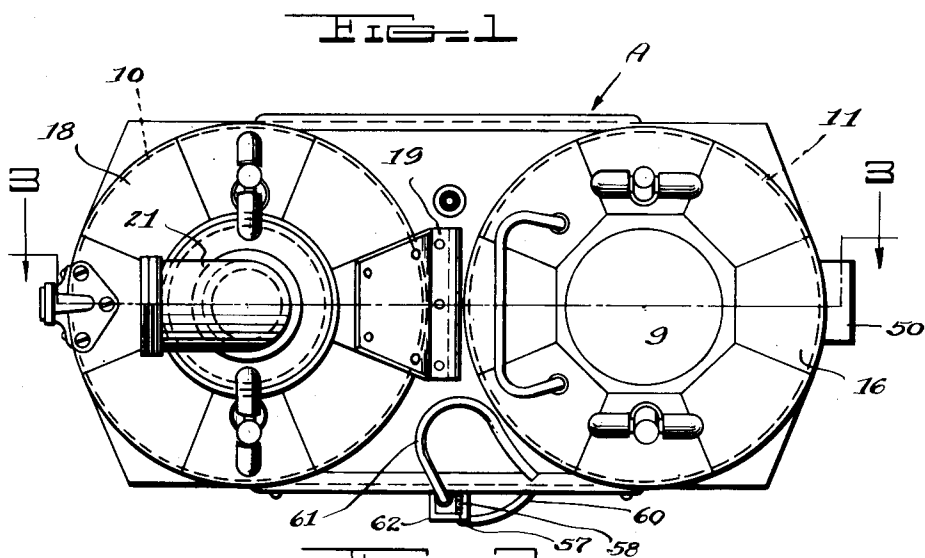
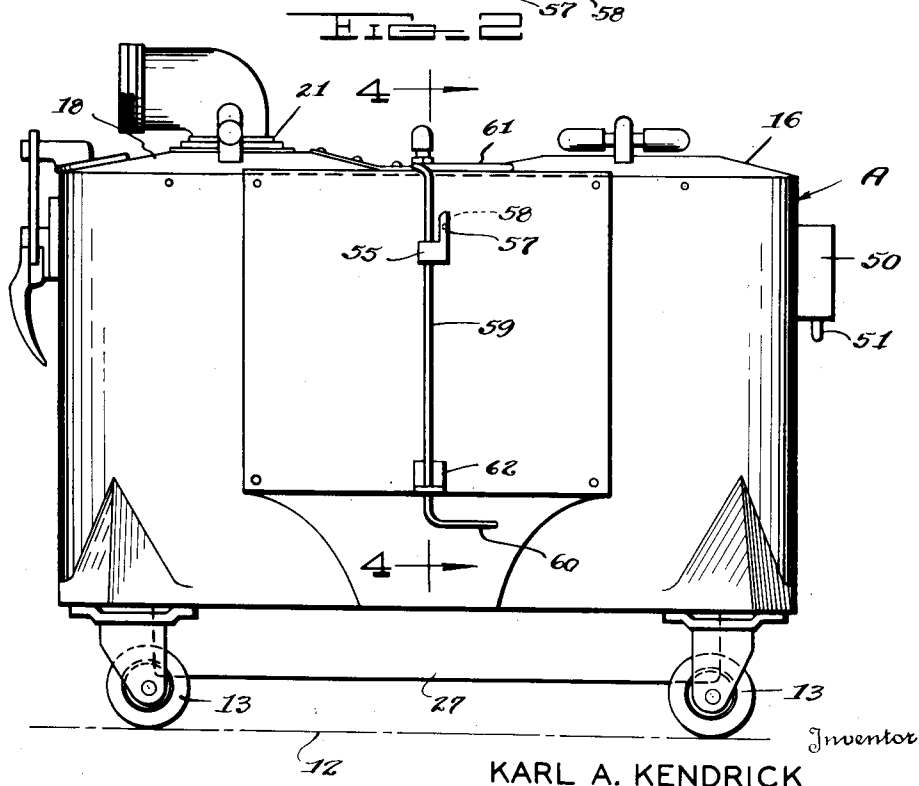
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2,583,949

SWITCH CONSTRUCTION FOR SUCTION CLEANER APPLIANCES

Filed Feb. 8, 1946

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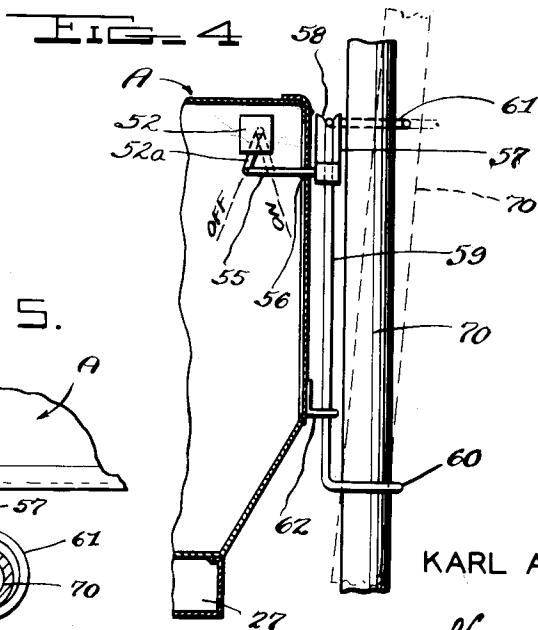
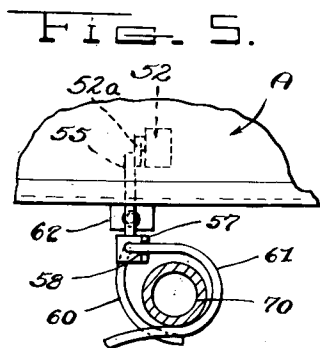


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2 SHEETS--SHEET 2



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UNITED STATES PATENT OFFICE

2,583,949

SWITCH CONSTRUCTION FOR SUCTION
CLEANER APPLIANCES

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Application February 8, 1946, Serial No. 646,239

3 Claims. (Cl. 15—323)

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My invention relates to suction cleaners and more particularly to that type of appliance for cleaning carpets, floors, furniture and other surfaces suitable for cleaning by suction.

Many of the suction cleaners now offered to the public are difficult for the housewife to handle, and are cumbersome and bulky, making it very difficult for the housewife to operate the device with a minimum of time and effort. Also the general arrangement of many devices of this character is such as to make it difficult to design an efficient suction cleaner.

One of the objects of my present invention is to overcome the aforesaid difficulties by providing a compact suction cleaner constructed and arranged to facilitate efficient cleaning by suction with a minimum of time and effort.

Another object of my present invention is to construct an improved suction cleaner appliance by providing a compact structure provided with improved supporting means for supporting the nozzle arm of a hose assembly and including an electrical switch which may be readily turned "off" or "on" by the operator with a minimum of effort.

For more detailed understanding of my invention reference may be had to the accompanying drawings illustrating in detail the many novel features and the improved arrangement and detail construction of my suction cleaner, in which like characters refer to like parts throughout the several views, and in which

Fig. 1 is a plan view of a suction cleaner appliance constructed substantially in accordance with my invention;

Fig. 2 is a side view thereof;

Fig. 3 is a vertical longitudinal sectional view through the appliance and taken substantially on the line 3—3 of Fig. 1;

Fig. 4 is a detail view of the switch mechanism as taken substantially on the line 4—4 of Fig. 2 but showing the nozzle and some of the parts in a different position from that of Fig. 2; and

Fig. 5 is a detail plan view showing the switch arm moved by the nozzle arm support to an "on" position.

The suction cleaner appliance illustrated in detail in the accompanying drawings consists of a casing A constructed to provide the substantially cylindrical compartments 10 and 11 which are substantially arranged to lie in parallel relation side by side having longitudinal axes which extend substantially vertical and normal to the floor line 12. Swivelling supported rollers 13 preferably support the casing so that same may

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be readily moved about the floor in any desired direction.

It will be noted that the casing A is illustrated in plan in Fig. 1, and it will be noted that the compartments 10 and 11 are each provided with an open end 14 in the top wall of the casing A, and associated with each of the openings 14 of compartments 10 and 11, are the adapter plates 16 and 17 respectively. The adapter plate 17 is substantially a ring and provides a seal for engagement by the hinged cover 18, said cover being hinged to the casing as at 19. The adapter plate 16 is provided with an opening 9 while said hinged cover 18 is provided with an opening 20 of substantially the same diameter as opening 9. A hose connection or fitting 21 is adapted to be secured in place with either of the openings 9 or 20.

The separate compartments 10 and 11 are provided with openings 25 and 26 respectively at their lower ends which communicate with a transverse passage or conduit 27, thereby placing said compartments in open communication with each other. A motor and fan assembly is supported in compartment 10 and comprises a motor 28 operatively connected to drive a standard suction fan 29, and is operable to cause a circulation of air through the appliance substantially in the direction as indicated by the arrows 30.

The casing carries an electrical connection 50 having contact points 51 for connection with a source of electric supply, and the switch 52 is wired by means of electric cables 53 to the connection 50, the cables 54 leading from the switch 52 to the motor 28.

Said switch 52 is provided with a switch arm 52a which is actuated by means of an actuating arm or link 55 pivotally connected to the arm 52a, this arm or link extending through the casing as at 56 to the outside thereof. (See Fig. 4.) Said arm or link is provided with an ear or extension 57, which is notched at 58 to receive the nozzle arm support 59. The nozzle arm support is preferably constructed of rod material and carries a hook portion 60 at its lower end and an open loop 61 at its upper end. This nozzle arm support is pivotally supported to swing in a horizontal arc by bracket 62 secured to the lower part of the casing and by the arm or link 55. The nozzle arm support is also slidable vertically with respect to bracket 62 and arm 55.

Fig. 5 illustrates the position assumed by the nozzle arm support when same is operable to actuate the switch. The loop 61 is swung around

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clockwise from the inoperative position shown in Fig. 1 and is engaged in notch 58 of the arm extension 57 to lock the nozzle arm support to said arm or link 55. Thus, the nozzle arm 70, which comprises the usual rigid hollow wand or handle carrying a nozzle at one end thereof, may be fitted into the support 59 by assembling same in the loops 61 and 60. To operate the switch, the nozzle arm is grasped at its upper end and is laterally moved outwardly away from the casing, the lower end of the arm fulcrumed on the loop 60 and the upper arm portion moves the loop 61 to the dotted position indicated in Fig. 4 to move the switch to "on" position.

The full line showing in Fig. 4 illustrates the parts with the switch in an "off" position. The extension 57 and recess 58 are thus used to lock the rod structure or nozzle arm support 59 in such a manner as to position the loops 60 and 61 so that the handle 70 is quickly and readily inserted in place for actuating the switch. Preferably, when the appliance is not in use, the rod structure 59 is lifted up so that the loop 61 may be swung around and supported on top of the casing as shown in Fig. 1. The lower end of the rod 59 is supported by bracket 62, and the hole carried by said bracket is preferably of a larger diameter than the rod so as to permit the nozzle arm support to hinge about the bracket 62 on actuating the switch.

Although I have illustrated but one form of my invention and have described in detail but a single application thereof, it will be apparent to those skilled in the art to which my invention pertains, that various modifications and changes may be made therein without departing from the spirit and scope of my invention or the appended claims.

I claim:

1. In a suction cleaner, a casing, operating mechanism for said suction cleaner including an electric motor and an electric circuit including a switch, a switch arm connected with said switch, a nozzle arm support rotatably and slidably carried by said casing and rotatably connected to said switch arm, said nozzle arm support loosely mounted on said casing and also having a sliding connection with said switch arm, a notch carried by said switch arm, said nozzle arm support being selectively movable to engage said support in said notch to lock said nozzle arm support from rotation relative to the switch arm, whereby to positively actuate the switch arm by laterally rocking said nozzle arm support by laterally rocking the nozzle arm when engaged with the said nozzle arm support.

2. In a suction cleaner, a casing, operating mechanism for said suction cleaner including an electric motor and an electric circuit including a switch, a switch arm connected with said

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switch, a nozzle arm support rotatably and slidably carried by said casing and rotatably connected to said switch arm, said nozzle arm support loosely mounted on said casing and also having a sliding connection with said switch arm, a notch carried by said switch arm, said nozzle arm support being selectively movable to engage said support in said notch to lock said nozzle arm support from rotation relative to the switch arm, whereby to positively actuate the switch arm by laterally rocking said nozzle arm support by laterally rocking the nozzle arm when engaged with the said nozzle arm support, said nozzle arm support provided with looped extensions adapted to encircle the nozzle arm, said looped extensions reversely positioned to complement each other in forming a complete encircling enclosure for said nozzle arm.

3. In a suction cleaner, a casing, operating mechanism for said suction cleaner including an electric motor and an electric circuit including a switch, a switch arm connected with said switch, a nozzle arm support rotatably and slidably carried by said casing and rotatably connected to said switch arm, said nozzle arm loosely mounted on said casing and also having a sliding connection with said switch arm, a notch carried by said switch arm, said nozzle arm support being selectively movable to engage said support in said notch to lock said nozzle arm support from rotation relative to the switch arm, whereby to positively actuate the switch arm by laterally rocking said nozzle arm support by laterally rocking the nozzle arm when engaged with the said nozzle arm support, said nozzle arm support provided with looped extensions adapted to encircle the nozzle arm, said looped extensions reversely positioned to complement each other in forming a complete encircling enclosure for said nozzle arm, one of said looped extensions arranged for angular adjustment relative to the switch arm for selective engagement in the notch to lock same against relative rotative movement with respect to said switch arm.

KARL A. KENDRICK.

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