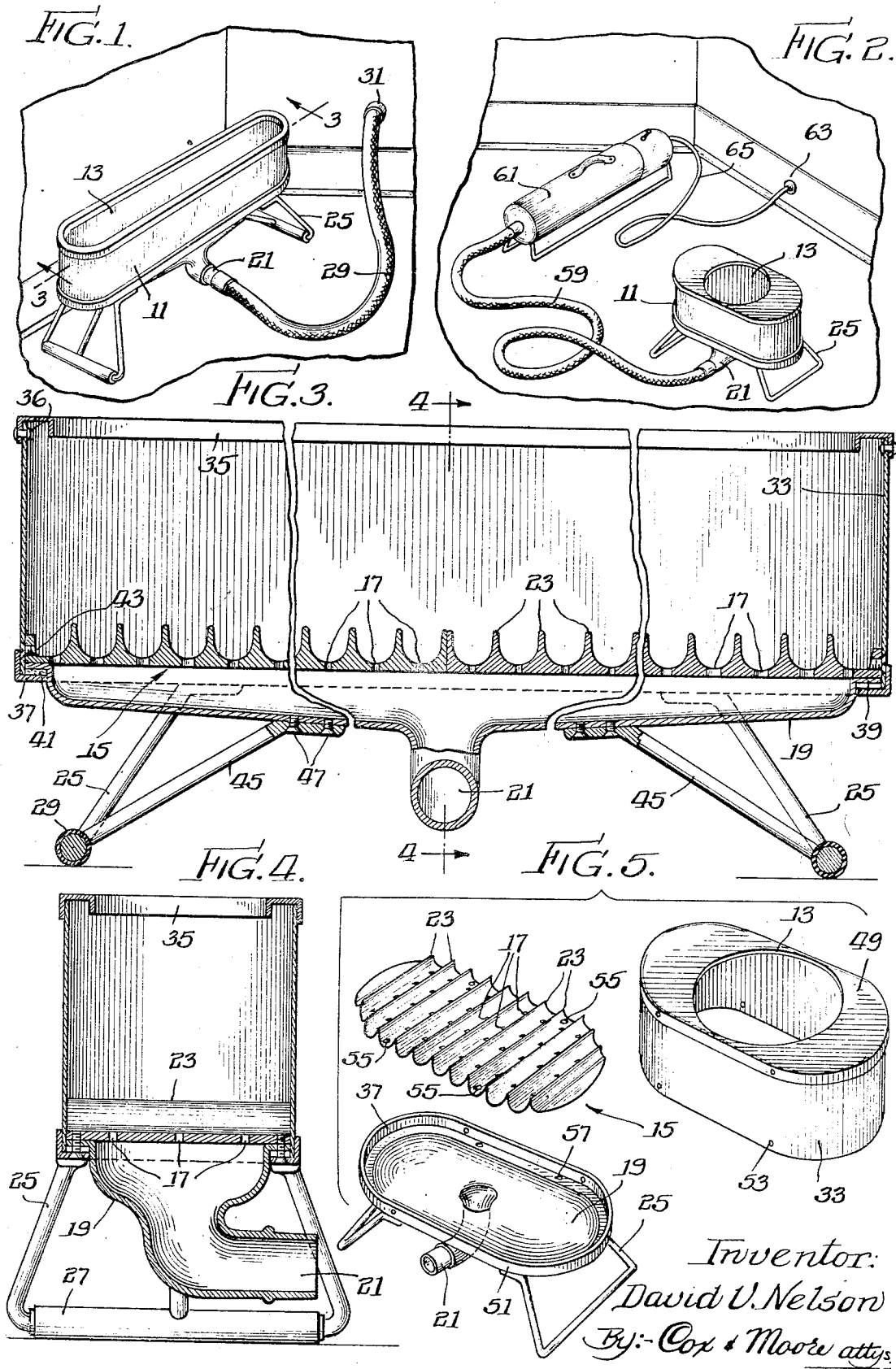


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CLEANING APPARATUS

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3 Claims. (Cl. 15—15)

My invention relates in general to cleaning and has more particular reference to an appliance for facilitating the cleaning of mops and the like.

5 An important object of the invention is to simplify the cleaning of mops and similar dirt collecting devices; a further object being to provide an improved vacuum cleaner for devices of the character mentioned.

10 Another important object is to provide a device for receiving a mop or similar article to be cleaned, including means for applying reduced pressure or suction in the device in order to clean the article; a further object being to incorporate in the cleaner a serrated cleaning surface against
15 which the article to be cleaned may be scraped during the suction cleaning process, in order to assist the same.

20 Another important object is to provide a device adapted for attachment to a suction outlet such as is usually provided in buildings having a central vacuum system, the cleaner—when so attached—being adapted to apply suction on any device inserted therein for the purpose of cleaning such inserted device.

25 Another important object is to provide an attachment for a vacuum cleaner of the character—usually provided for household use, said attachment comprising a receptacle for devices to be cleaned, and serving to apply suction, for cleaning purposes, on such articles.

30 Another important object is to provide a cleaner of the character mentioned, including a perforate serrated element or cleaning board and manifold means for applying reduced pressure or suction on one side of said cleaning board, whereby to clean articles drawn across the serrations on the other side of the board; a further object being to so place the perforations and arrange the same as to size that substantially the same suction cleaning effect is applied through the board
40 upon the object to be cleaned at all points within the area of said board.

45 These and numerous other important objects, advantages and inherent functions of the invention will become apparent as the same is more fully understood from the following description which, taken in connection with the accompanying drawing, discloses preferred embodiments of the invention.

50 Referring to the drawing:

Figure 1 is a perspective view showing a suction cleaner device embodying my present invention, arranged in form suitable for cleaning relatively large brooms and mops;

55 Figure 2 is a perspective view illustrating a suc-

tion cleaner device for accommodating relatively small mops and brooms and adapted for connection as an attachment on domestic vacuum sweepers;

Figure 3 is a sectional view taken substantially
5 along the line 3—3 in Figure 1;

Figure 4 is a sectional view taken substantially
along the line 4—4 in Figure 3; and

Figure 5 is an assembly view of parts forming
the cleaner shown in Figure 2.

10 To illustrate my invention, I have shown on the drawing suction cleaners particularly adapted for cleaning brooms, mops and similar devices. In Figure 1 I have shown a cleaner adapted for the reception of substantially large, elongated
15 brooms and mops, the form shown being particularly well adapted for use in conjunction with centralized vacuum systems of the character incorporated in office, factory and relatively large apartment buildings; while in Figure 2 I have
20 shown a vacuum cleaner well adapted for use in conjunction with domestic vacuum sweepers for the purpose of cleaning mops, brooms and the like of a size usually employed in private homes. In both embodiments the cleaner comprises
25 means forming a box-like receptacle 11, having an opening 13 in the top and adapted to receive the head of a mop or broom to be cleaned. The floor or bottom 15 of the receptacle is provided with perforations 17, and this perforated element
30 forms with a member 19 a suction manifold having a nozzle 21 by means of which the manifold may be connected with a source of reduced pressure or suction whereby when the device is in operation air currents may be drawn vigorously
35 through the openings 17 into the manifold and thence through the nozzle 21 to the source of reduced pressure so that any mop, broom or other article placed in the receptacle 11 may be subjected to the cleaning action of such air currents. The perforated floor element 15 of the
40 cleaner is also formed with ribs or serrations 23 extending upwardly into the receptacle 11, preferably intermediate the perforations 17. By drawing the mop, broom or other device to be
45 cleaned laterally across the ribs 23, any dirt or other foreign matter lodged on the broom may be loosened in order to facilitate and render more efficient the cleaning action exerted by the air currents.

50 The receptacle 11 may be, and preferably is, provided with suitable support legs 25, attached thereto in any suitable or convenient fashion, said support legs preferably comprising bent elements having spaced apart leg portions which may be
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secured to the receptacle 11, the lower ends of said leg portions being inter-connected by portions forming feet, which may if desired be enclosed in resilient sheath-like means 27, such as a short length of rubber hose.

In the embodiment illustrated in Figures 1, 3 and 4, the nozzle 21 may be connected, by means of a suitable hose 29, with a source of reduced pressure, such as the outlet 31 of a central vacuum system. In said embodiment shown in Figures 1, 3 and 4, the side walls of the receptacle 11 may comprise sheet metal means 33 formed and arranged to provide an elongated container, the upper edges of said sheet metal means 33 being secured to a preferably channel shaped rim 35 defining the opening 13, the parts being secured together in any suitable or preferred fashion, as by welding or by means of fastening screws or rivets 36. The lower edges of the wall forming means 33 also may be received and secured in a frame element 37, as by means of fastening screws, welding or other suitable or preferred method of connecting the parts together. The manifold preferably has a peripheral rim 39 adapted to be received in the frame 37, a gasket 41 being interposed between the peripheral portions 39 of the manifold and the portions of the frame 37 on which said peripheral manifold portions are mounted. The floor element 15 may be formed in any suitable or convenient fashion and may comprise a sheet metal plate. In the device illustrated in Figure 3, however, I have shown the floor element 15 formed as a casting, preferably of aluminum, having a peripheral configuration adapted to snugly fit within the wall portions 33. The floor element 15 is supported at two edges upon the marginal portions 39 of the member 19 and may be secured in place in any suitable or convenient fashion, as by means of the set screws 43. It will be noted that the suction nozzle 21 of the manifold is disposed centrally thereof, and where the device has substantially elongated shape I prefer to form the openings 17 somewhat larger in the remote opposed end portions of the floor element than at the central portions, in order that the reduced pressure applied behind the floor element by the manifold may be substantially equal in all portions of the floor element 15.

In the embodiment shown in Figure 3, the legs 25 include bracing means 45 extending between the foot portions of said legs and the manifold, said bracing means being connected on the manifold as by the fastening screws 47.

In the embodiment shown in Figures 2 and 5, the frame portion 37 is formed integral with the manifold and it is obvious that this integral construction may also be employed in the embodiment shown in Figures 1, 3 and 4.

In the embodiment shown in Figures 2 and 5, the floor element 15 comprises merely a corrugated strip of sheet metal forming the ridges 23, the perforations 17 being formed in the sheet intermediate the ridges 23. The upper edges of the preferably sheet metal wall forming means 33 are secured, as by welding, riveting or other suitable fastening, to a cover element 49 in which is formed the opening 13 for the insertion of the mop, broom or other device to be cleaned. The lower edges of said wall forming means 33 are secured in the frame 37 by means of fastening elements penetrating openings 51 in said

frame and 53 in the wall forming means 33. The floor element 15 also may be secured directly to the marginal edges of the member 19 by fastening devices penetrating openings 55 in the edges of the floor element and openings 57 in the edges of the manifold.

The nozzle 21 of the cleaner shown in Figure 2 may be connected, by means of a flexible hose 59, with the suction inlet of a domestic vacuum sweeper 61 which is or may be powered from an electrical outlet 63 by means of suitable electrical conducting means 65 under the control of a switch as is usual in vacuum sweepers of the character mentioned.

It will be seen from the foregoing that the broom and mop cleaner of my present invention provides inexpensive and simplified means for the vacuum cleaning of mops, brooms and the like. The invention is thus adapted to facilitate cleaning operations by making available a handy and readily usable device for cleaning mops and brooms.

It is thought that the invention and its numerous attendant advantages will be fully understood from the foregoing description and it is obvious that numerous changes may be made in the form, construction and arrangement of the several parts without departing from the spirit and scope of the invention or sacrificing its attendant advantages, the forms herein described being preferred embodiments for the purpose of demonstrating the invention.

Having thus described my invention, what I claim is new, and desire to secure by Letters Patent of the United States is:

1. A cleaning device comprising means forming a receptacle having an opening for the insertion into the receptacle of an article to be cleaned, said receptacle having a perforated wall portion and means forming with said wall portion a manifold on one side of said receptacle, said manifold having means adapted to be connected to a source of reduced pressure to create air currents through the perforated wall portion for the purpose of cleaning an article inserted in the receptacle, said wall portion having a serrated surface against which the article to be cleaned may be rubbed for the purpose of dislodging dirt therefrom for removal by said air currents, the perforations in said wall portions remote from said connecting means being of larger size than the perforations adjacent said means whereby to substantially equalize the air currents throughout the area of said perforated and serrated wall portion.

2. A cleaning device as set forth in claim 1, wherein said serrated and perforated wall portion comprises a plate formed as a casting having upwardly opening grooves in a surface thereof separated by relatively sharp ridges, with the perforations located through the plate at the bottom of said grooves.

3. A cleaning device as set forth in claim 1, wherein said perforated and serrated wall portion comprises a corrugated sheet-metal plate, the upwardly extending corrugations of which form relatively sharp apices, while the downwardly facing corrugations between said apices have relatively uniformly curved sectional configuration with the perforations located in said downwardly extending corrugations.

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