Aug. 30, 1955 J. A. SCHWARZ 2,716,253

PORTABLE VACUUM CLEARNER STRUCTURE

Filed Feb. 10, 1950 2 Sheets-Sheet 1

Fig. 1.

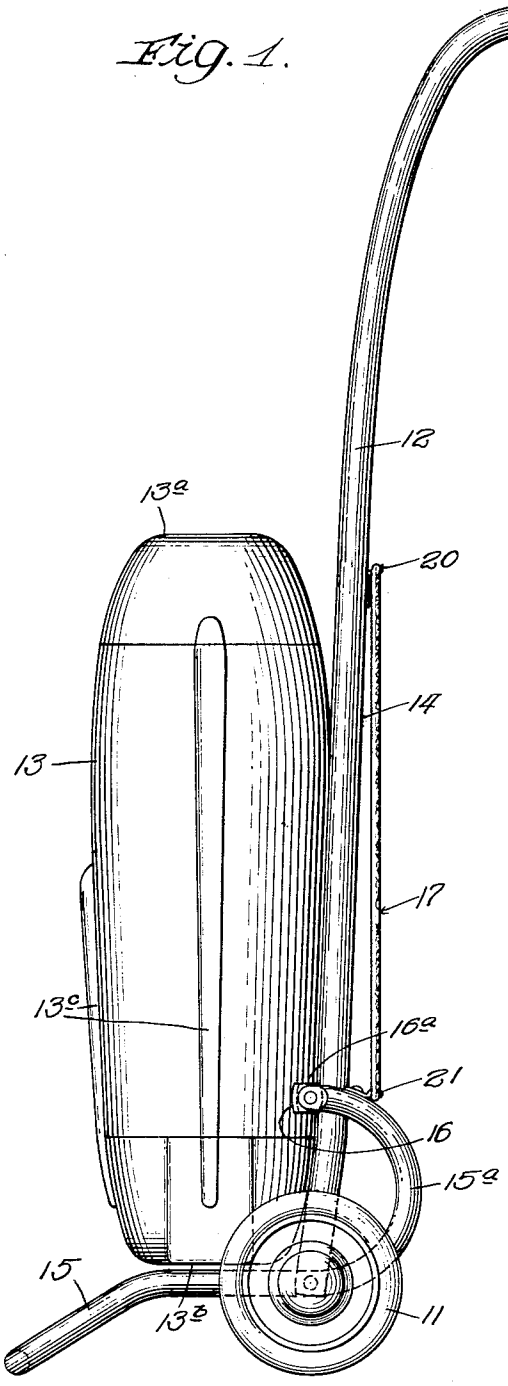
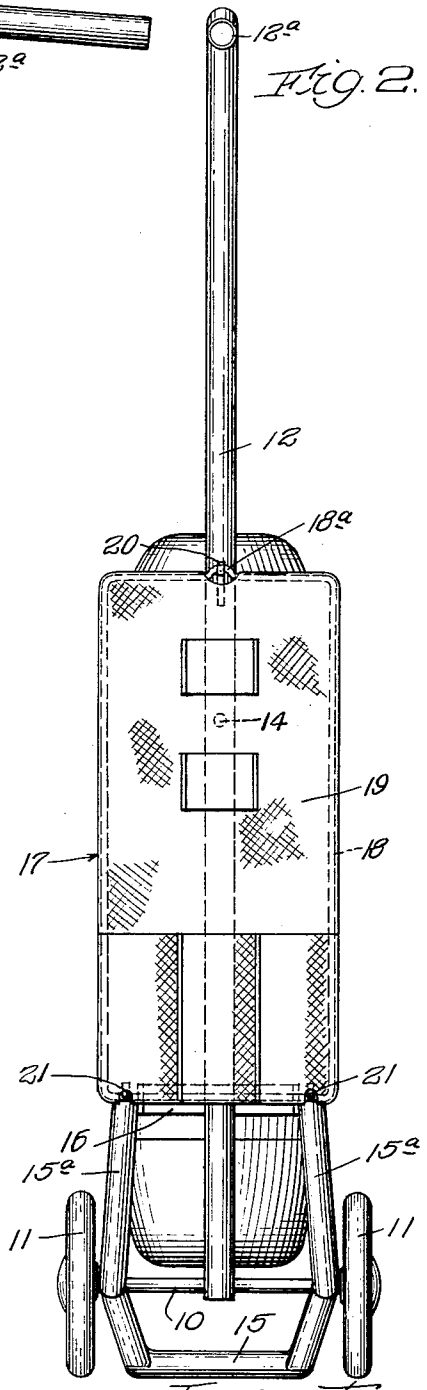


Fig. 2.



Inventor:
Joseph A. Schwarz,
By Schrader, Merriam,
Hofgren & Brady, Attys.

Aug. 30, 1955 J. A. SCHWARZ 2,716,253

PORTABLE VACUUM CLEARNER STRUCTURE

Filed Feb. 10, 1950 2 Sheets-Sheet 2

Fig. 3.

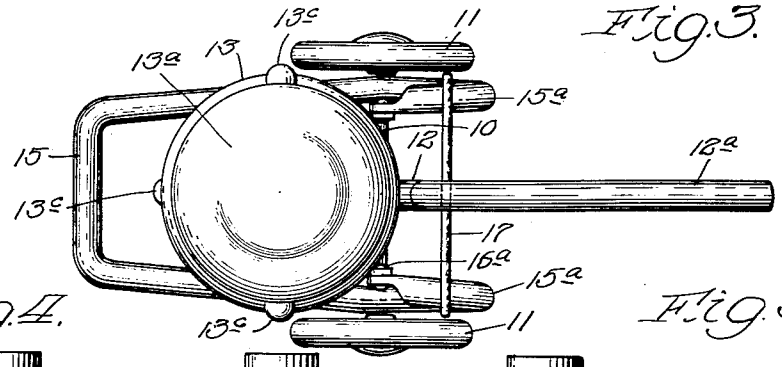


Fig. 4.

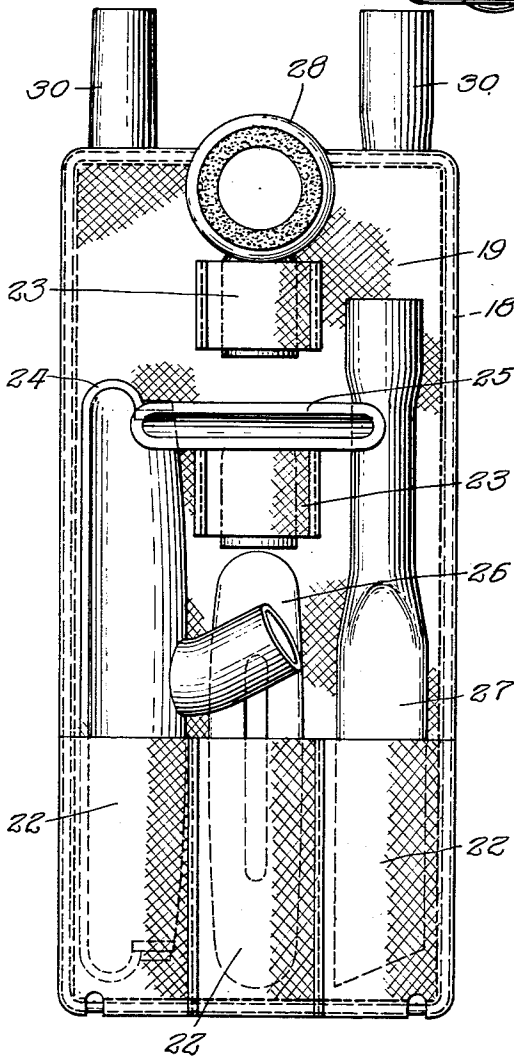
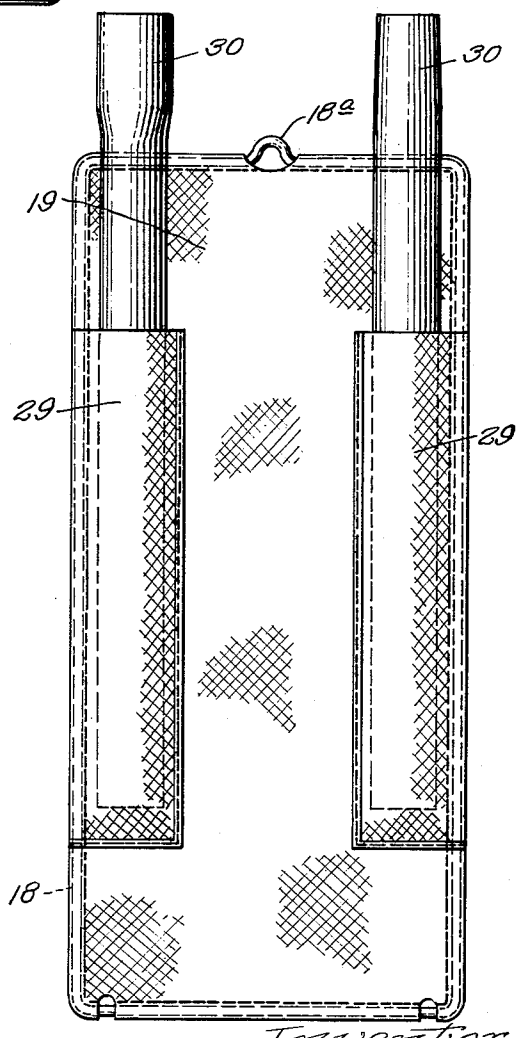


Fig. 5.



Inventor:
Joseph A. Schwarz,
By Schroeder, Mueriam,
Hofgren & Brady, Attys.

United States Patent Office 2,716,253 Patented Aug. 30, 1955

2,716,253

PORTABLE VACUUM CLEANER STRUCTURE

Joseph Albert Schwarz, Chicago, Ill., assignor to Birtman Electric Company, a corporation of Illinois

Application February 10, 1950, Serial No. 143,463

2 Claims. (Cl. 15—323)

This invention relates to a portable vacuum cleaner structure, and particularly to a structure including a cart having a pair of wheels thereon and a vacuum cleaner attached to the cart.

The portable vacuum cleaner structure of this invention provides a wheeled cart including an easily accessible handle for propelling the cart from place to place and a vacuum cleaner mounted on the cart. The ordinary vacuum cleaners of the tank type do not have wheels attached thereto but must be lifted and carried from place to place, while the cleaner is being used. Such a cleaner is operated with various attachments usually including a hose attachable to the cleaner, a tubular wand that is attachable to the end of the hose and various attachments adapted to be mounted on the end of the wand. Transporting this type cleaner together with hose, wand and attachments necessary for the cleaning operation presents a considerable problem as the cleaner itself is somewhat heavy and the various pieces of auxiliary equipment, the hose, wand and attachments, are bulky and hard to handle. With the ordinary cleaner the user, in order to simplify the problem, ordinarily carries the cleaner, hose, wand and the attachment or attachments he believes that he will use in the particular cleaning operation. These necessary elements, as can be readily seen, total a considerable load. To further complicate the problem, if he finds in the cleaning operation that another attachment, or attachments, is required, it is necessary to return to the place of storage of the cleaner and its auxiliary equipment and secure the needed added attachments.

The cleaner of this invention avoids these problems by providing the wheeled cart described above with the vacuum cleaner attached thereto. In the preferred construction, space is also provided for positioning a unit assembly of all attachments on the cart so that the entire apparatus may be wheeled from the place of storage to the point where it is to be used and then from this point to other places of use or back to the place of storage. The portable structure of this invention is of light-weight construction so that it may be easily wheeled. The structure is also provided with a stop member so that the structure may be stored in upright position where it will occupy a minimum of space.

The invention will be described as related to the embodiment shown in the accompanying drawings. Of the drawings: Fig. 1 is a side elevation of one embodiment of the portable vacuum cleaner structure; Fig. 2 is a rear elevation thereof; Fig. 3 is a plan view of the structure; Fig. 4 is an enlarged elevation showing one side of the appliance holder; and Fig. 5 is a view similar to Fig. 4, but showing the other side of the holder.

In the embodiment shown in the drawings, the portable vacuum cleaner structure comprises an axle **10** extending between a pair of side wheels **11**, an upwardly extending handle **12** attached to the axle at the lower end of the handle and having its upper end bent rearwardly, as shown in Fig. 1. A vacuum cleaner **13** is

attached to the handle **12** as by a bolt **14** or the like extending through the handle and into the cleaner wall at a point adjacent the top of the cleaner. The cleaner **13** is preferably of the usual tank type having the usual provision at the top end **13***a* for attaching a suction hose and the usual provision at the bottom end **13***b* for exhausting air from the cleaner after the dust has been separated from the air.

In order to retain the cleaner in upright storage position, as shown in Figs. 1 to 3, there is provided a generally U-shaped member **15** at the bottom of the structure with this member extending forwardly of the cleaner **13** and having side portions of a general question mark shape. This forwardly extending member **15** has an axis located generally between the wheels as shown in Fig. 2 and at substantially right angles to the axle **10**. The axle **10** substantially coincides with the axes of the wheels. The side portions **15***a*, which are each of a general question mark shape, are attached to the axle **10** just inside of the wheels **11** and each side portion curves upwardly and forwardly with the upper ends of the side portions attached to the ends of a metal strap **16** which is in turn attached to the cleaner **13**. This metal strap **16** follows the contour of the portion of the cleaner to which it is attached and has the ends **16***a* bent rearwardly to provide ears to which the upper ends of the side portions **15***a* of the member **15** are bolted. Thus, the member **15** has both side portions **15***a* attached to the axle and to the cleaner.

The member **15**, which extends forwardly of the cleaner **13**, serves as a stop to retain the structure in upright storage position with the structure resting on the wheels and on the downwardly bent forward portion of the member **15**, as shown in Figs. 1 and 2. The rearwardly extending portion **12***a* of the handle **12** provides not only a hand engaging portion for propelling the vacuum cleaner structure, but also supports the structure when the handle portion **12***a* is resting on the floor. In this position the end **13***a* of the cleaner is raised from the horizontal for ready attachment of the hose to this end **13***a* of the cleaner. As can be seen in Fig. 1, the cleaner **13** may be provided with the usual end caps, trim strips **13***c* and a switch (not shown).

In the preferred construction, the cleaner structure is provided with a removable appliance holder **17**. In the embodiment shown, this appliance holder is of generally planar shape and is constructed of a relatively heavy wire **18** bent to a generally rectangular shape, with the wire being held in a marginal hem of a heavy fabric **19**. This appliance holder **17** is removably held on the vacuum cleaner structure by the engagement of the wire **18** with hooks or catch members mounted on the cleaner structure. In the embodiment shown, there is provided a top hook **20** engageable with an upwardly bent portion **18***a* of the wire **18**, with this upwardly bent portion being located at substantially the center of the top portion of the wire. A pair of bottom hooks **21** are provided for engaging opposite sides of the bottom section of the wire **18** with the fabric **19** being cut away to provide access to these portions of the wire. Each bottom hook **21** is mounted on the top part of a side portion **15***a* of the member **15**.

As is shown in Figs. 2 and 4, the rear surface of the appliance holder is provided with various pockets **22** and loops **23** for holding different appliances **24**, **25**, **26**, **27** and **28**. These various loops and pockets may, of course, be provided as desired and shaped to retain those appliances which are used with the particular cleaner. The sides of the holder toward the front of the structure are preferably provided with a pair of relatively long pockets **29** adapted to be located on opposite sides of the handle **12** when the appliance holder is in place,

with these pockets being designed to hold telescoping tubular sections 30 of metal which when attached together form the wand.

As can be seen from the above description, the vacuum cleaner structure will carry not only the vacuum cleaner, but preferably all of the usual appliances so that the cleaner and the appliances may be easily transported from place to place. The structure also permits storage in an upright position with the space requirements being kept at a minimum. In the preferred construction, the member 15 which holds the structure in upright position is forwardly tapered and extends downwardly, as shown in Figs. 1 and 2, so that it will nest beneath a similar portable vacuum cleaner structure when a plurality of structures are stored together, such as in a dealer's storeroom.

Having described my invention as related to the embodiment set out herein, it is my intention that the invention be not limited by any of the details of description unless otherwise specified, but rather be construed broadly within its spirit and scope as set out in the accompanying claims.

I claim:

1. A wheeled vacuum cleaner structure adapted to be propelled over a surface and comprising a pair of spaced wheels and an axle extending therebetween, an elongated handle having one end attached to the axle, a vacuum cleaner including a casing fixed to the handle and positioned adjacent to but spaced from the axle, the handle being located at the rear of the casing at substantially the center thereof, and a forwardly-extending support member positioned adjacent to the wheels and to the cleaner casing for supporting the structure on said surface with the cleaner casing and handle in upright position, the support member including a pair of rigid portions attached to the axle adjacent to the opposite ends thereof and fixed to opposite sides of the casing at places spaced upwardly from the axle to provide a rigid structure, each rigid portion of the support member being curved rearwardly, upwardly and then forwardly from the axle to the cleaner casing.

2. A wheeled vacuum cleaner structure adapted to be propelled over a surface and comprising a pair of spaced wheels and an axle extending therebetween, an elongated handle having one end attached to the axle, a vacuum cleaner including a casing fixed to the handle and positioned adjacent to but spaced from the axle, the handle being located at the rear of the casing at substantially the center thereof, a forwardly-extending support member positioned adjacent to the wheels and to the cleaner casing for supporting the structure on said surface with the cleaner casing and handle in upright position, the support member including a pair of rigid portions attached to the axle adjacent to the opposite ends thereof and fixed to opposite sides of the casing at places spaced upwardly from the axle to provide a rigid structure, and a catch member on the handle and a catch member on each rigid portion of the support member for releasably securing a holder for cleaner appliances.

References Cited in the file of this patent

UNITED STATES PATENTS

D. 151,008	Rycraft	Sept. 14, 1948
D. 156,075	Collier	Nov. 22, 1949
720,422	Green	Feb. 10, 1903
1,790,711	Johnston	Feb. 3, 1931
2,146,932	Boman	Feb. 14, 1939
2,181,892	Head	Dec. 5, 1939
2,291,984	Ponselle	Aug. 4, 1942
2,313,423	Dodd	Mar. 9, 1943
2,340,390	Kitto	Feb. 1, 1944
2,405,862	Toomey	Aug. 13, 1946
2,411,965	Hartung	Dec. 3, 1946
2,415,334	Brown	Feb. 4, 1947
2,479,530	Watson	Aug. 16, 1949
2,482,018	McDonald	Sept. 13, 1949
2,636,207	Reece	Apr. 28, 1953

FOREIGN PATENTS

185,124	Switzerland	Sept. 16, 1936
510,928	Great Britain	Aug. 10, 1939
681,242	France	Jan. 28, 1930