

Aug. 18, 1936.

R. H. MANNING

2,051,728

VACUUM CLEANER

Filed Jan. 11, 1935

2 Sheets-Sheet 1

Fig. 1.

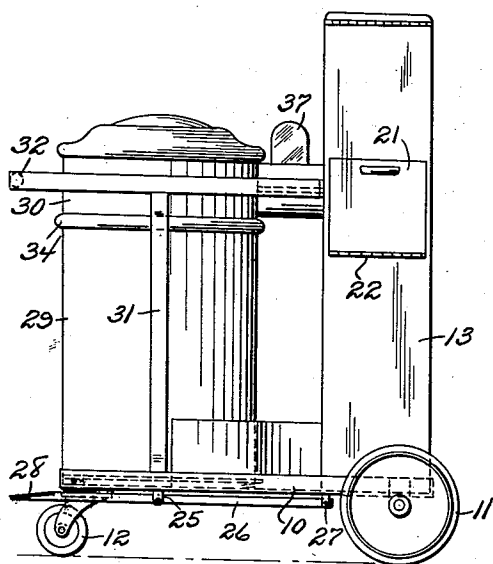


Fig. 2.

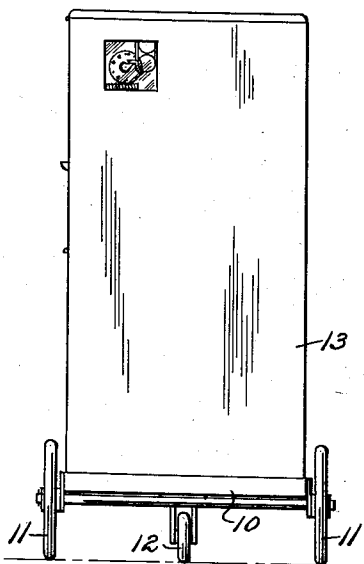


Fig. 3.

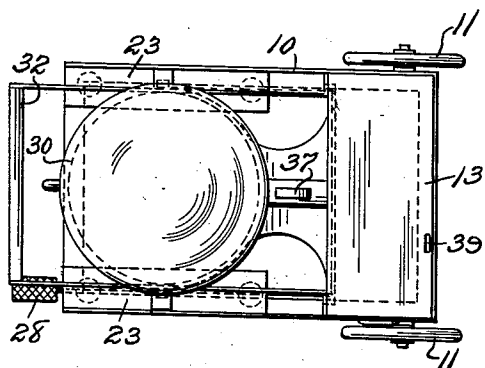


Fig. 4.

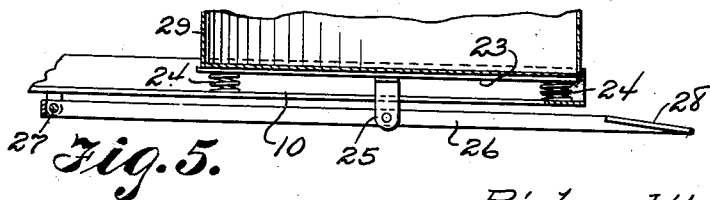
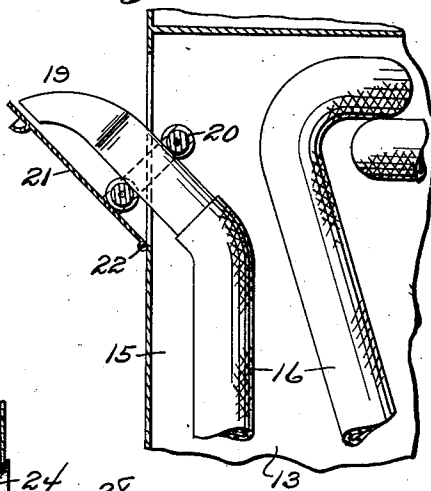


Fig. 5.

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Fig. 6.

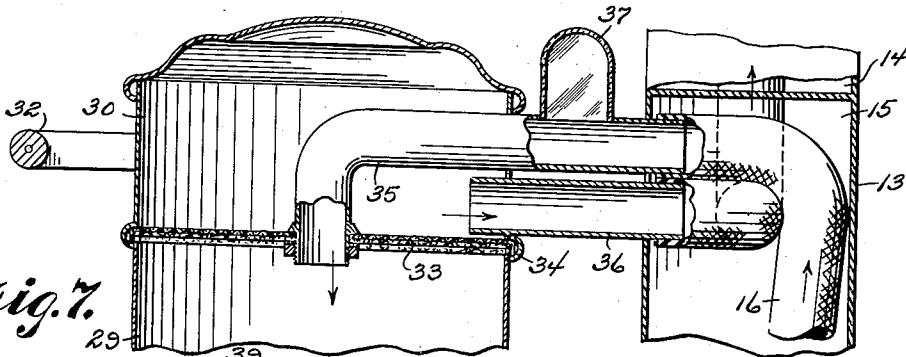


Fig. 7.

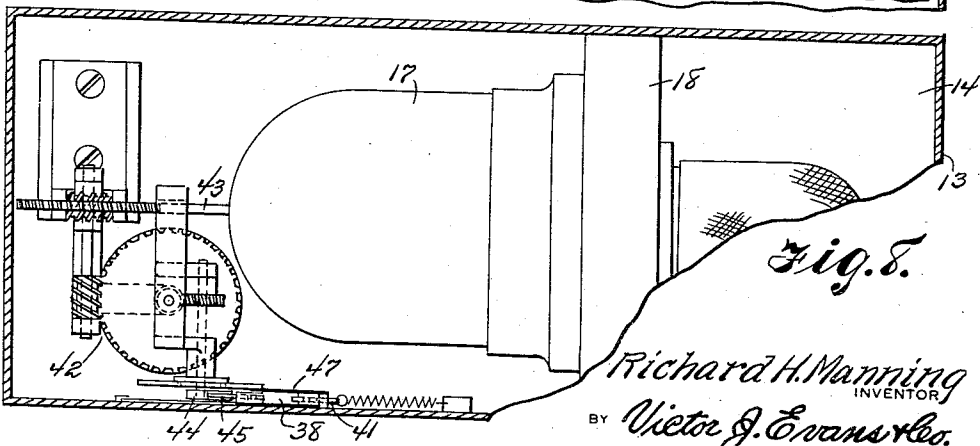
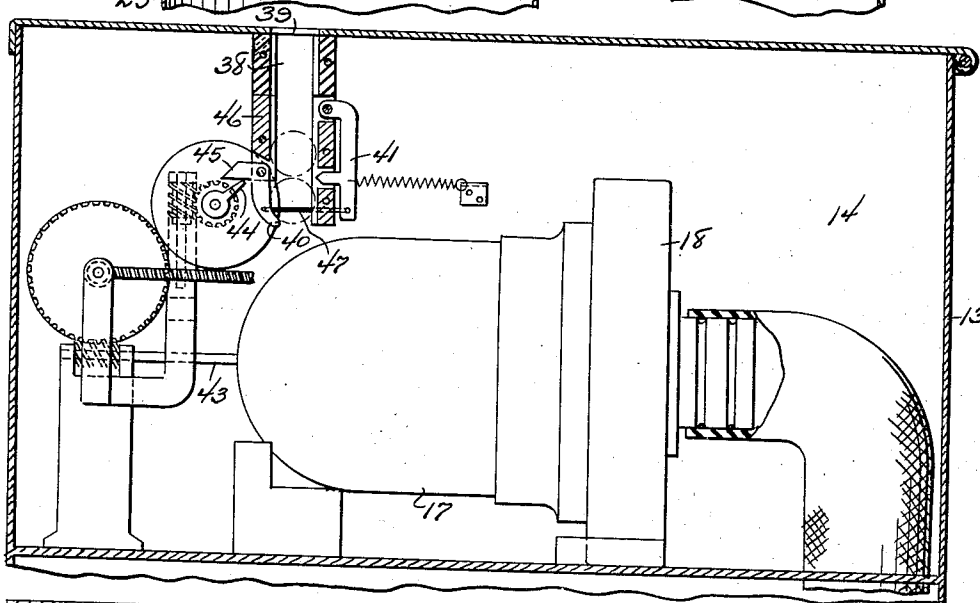


Fig. 8.

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UNITED STATES PATENT OFFICE

2,051,728

VACUUM CLEANER

Richard H. Manning, Butte, Mont.

Application January 11, 1935, Serial No. 1,417

3 Claims. (Cl. 15-2)

The invention relates to a vacuum cleaner and more especially to an automatically operated automobile vacuum cleaner.

The primary object of the invention is the provision of a vacuum cleaner of this character, wherein the same is mobile for service at gasoline filling stations and is designed so that the same is available to the public at all times and on operation for a determined period of time it will enable the user thereof to thoroughly clean the interior of an automobile, thereby eliminating hand brushing as is customary.

Another object of the invention is the provision of a cleaner of this character, wherein the construction thereof is novel, its suction nozzle or head can be conveniently moved about within an automobile so that the interior can be thoroughly cleaned, removing all dust and dirt both upon the upholstery and floor of the automobile with the result that during the cleaning operation there will be eliminated clouds of dust that usually accompany the cleaning by brush and also assures removal of hair and lint from the cushions within the automobile that would be almost impossible to remove by brush.

A further object of the invention is the provision of a cleaner of this character, which is comparatively simple in its construction, thoroughly reliable and efficient in its operation, automatic of action, conveniently moved from place to place, being self-contained, and inexpensive to manufacture.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings, which disclose the preferred embodiment of the invention and pointed out in the claims hereunto appended.

In the accompanying drawings:

Figure 1 is a side elevation of a vacuum cleaner constructed in accordance with the invention.

Figure 2 is a front elevation thereof.

Figure 3 is a top plan view.

Figure 4 is an enlarged fragmentary vertical sectional view through the nozzle and hose compartment.

Figure 5 is a fragmentary vertical sectional view showing in detail the support of the dust collector of the cleaner.

Figure 6 is a fragmentary vertical sectional view through the upper portion of the cleaner.

Figure 7 is an enlarged fragmentary vertical sectional view showing the motor and the de-

tails of the coin control mechanism of the cleaner.

Figure 8 is a fragmentary horizontal sectional view thereof.

Similar reference characters indicate corresponding parts throughout the several views in the drawings.

Referring to the drawings in detail, the vacuum cleaner comprises a wheeled truck 10 having the pair of front wheels 11 and a single caster wheel 12, respectively, the latter being rotatable and arranged at the rear of the truck so that the said truck can be steered and readily turned in the use of the cleaner.

Rising from this truck 10 at its front end is a vertically disposed casing 13 preferably made from cast metal although it may be otherwise formed and is adapted to be fixedly held upon the said truck. The casing 13 interiorly thereof is partitioned to provide upper and lower compartments 14 and 15, respectively, the latter constituting a space for a suction hose 16 of any desired length and when not in use is confined within this compartment 15. In the compartment 14 is arranged an electric power motor 17 associated with a suction device 18 to create a suction in the hose 16 and a terminal mouth piece or nozzle 19 which normally is held within a roller guide-bracket 20 upon a door 21 hinged at 22 to the casing 13, the door being opened and closed by vertical swinging movement and when opened will permit the nozzle or mouth piece 19 to be pulled outwardly from the roller guide-bracket 20, the latter being also adapted to guide the hose 16 on extension thereof. On the closing of the door 21 the hose 16 and nozzle or mouth piece 19 will be concealed within the compartment 15 in the casing 13.

Arranged on the truck 10 is a platform 23 it being supported upon springs 24 and carries a saddle 25 for a depressible lever 26 pivoted at 27 to a hanger depending from the truck, the lever being provided with a foot pedal end 28 so that it may be operated by the foot for depressing the platform 23 against the tension of the springs 24 supporting said platform.

Releasably carried by the platform 23 is a dirt and dust collector body 29 in the form of a can open at its top where it is engageable with a capping crown or head 30 stationarily held by a framing 31 joined with the truck 10 and the casing 13. This framing carries a handle bar 32 to permit convenient hand pushing of the cleaner.

The crown or head 30 carries a screen or filter-

ing disk 33 which is adapted to match the top open end of the can 29 when fitting the rim 34 of said crown or head and sealed thereby. The suction hose 16 has connection with an elbow lead 35 passing through the screen or filtering disk 33 for connection with the can 29 while the suction device 18 has connection at the suction side thereof by a pipe 36 with the crown or head 39 above the screen or filtering disk 33 so that when the suction device 18 is operating dust or dirt laden air will be sucked through the nozzle 19, hose 16 directly into the can 29 whence the air free of dirt or dust as cleaned or filtered by the disk 33 will be conveyed through the pipe 36 and discharged from the suction device 18. The elbow 35 carries a glass dome 37 which is exposed exteriorly of the cleaner to permit inspection of the flow through said elbow.

It will be apparent that when the platform 23 carrying the can 29 is lowered it may be readily separated from the crown or head 30 and removed from the platform for emptying the contents or deposit within the can.

Arranged within the compartment 14 at one side of the motor 17 therein is a coin chute 38, the latter opening through the top of the casing 13 which is provided with suitable coin entrance slot 39 registering with the chute for the admission of a coin therein. The coin chute 38 has arranged therein a coin trap including a pair of pivotally mounted retention jaws 40 and 41, respectively, these being located opposite each other and constitute arresters for a coin in the chute 38 which latter when in the lower end portion 46 of said chute effects a closing of an electric circuit (not shown) having arranged therein the motor 17, the circuit receiving its current supply from any suitable source.

Arranged within the compartment 14 is a train of slow speed gearing 42 operatively connected with the power shaft 43 of the motor 17 and this gearing actuates a trip 44 movable in the path of a lift arm 45 fixed to the jaw 40 so that at a determined period the latter will be moved to permit the freeing of a coin within the chute 38 arrested thereby for the deposit of said coin within the compartment 14. This jaw 40 has linkage 47 with the jaw 41 which latter has arresting function elevated or in advance of the arresting function of the jaw 40. When this jaw 40 trips for the release of the coin arrested thereby the jaw 41 by linkage 47 is pulled upon to protrude into an arresting position within the chute 38 for arresting a second coin deposited within the chute 38 and thus assuring a continued operation of the cleaner. When the chute 38 is devoid of a coin therein the motor 17 is passive and the circuit is open so that the machine is inoperative.

The lower end 46 of the chute 38 is insulated from the upper portion of said chute and suitable insulation is had between the linkage 47 and the jaws 40 and 41.

It will be understood that the cleaner is movable so that it may be moved from one locality to another for convenience in the use thereof and in such use it is necessary to make a deposit of a coin and the extending of the nozzle or mouth piece 19 to the point where vacuum cleaning is required. Normally the mouth piece or

nozzle 19 is concealed within the compartment 15. The dust and dirt laden air will be filtered in the operation of the cleaner and the deposit of the dust and dirt will be assured within the dust collector or can 29.

The trip 44 in its travel meters the time of action of the cleaner for vacuum cleaning purposes.

What is claimed is:

1. A machine of the character described comprising a truck, a depressible platform on said truck, a dirt and dust collector body on the platform, a casing rising from the truck at one side of the platform and having separated compartments, a capping crown stationarily held and closing the collector body when upon the platform, an electrically operated suction mechanism within one of the compartments and communicating with the collector body through said crown, a suction hose connected with said suction mechanism and within the other compartment for access to permit the drawing of said hose outside of said casing, a nozzle at the free end of said hose, and foot operated means for depressing the platform to disengage the collector body from the capping crown.

2. A machine of the character described comprising a truck, a depressible platform on said truck, a dirt and dust collector body on the platform, a casing rising from the truck at one side of the platform and having separated compartments, a capping crown stationarily held and closing the collector body when upon the platform, an electrically operated suction mechanism within one of the compartments and communicating with the collector body through said crown, a suction hose connected with said suction mechanism and within the other compartment for access to permit the drawing of said hose outside of said casing, a nozzle at the free end of said hose, foot operated means for depressing the platform to disengage the collector body from the capping crown, and a swinging door on said casing for giving access to said suction hose and having a roller guide bracket accommodating the nozzle and said hose.

3. A machine of the character described comprising a truck, a depressible platform on said truck, a dirt and dust collector body on the platform, a casing rising from the truck at one side of the platform and having separated compartments, a capping crown stationarily held and closing the collector body when upon the platform, an electrically operated suction mechanism within one of the compartments and communicating with the collector body through said crown, a suction hose connected with said suction mechanism and within the other compartment for access to permit the drawing of said hose outside of said casing, a nozzle at the free end of said hose, foot operated means for depressing the platform to disengage the collector body from the capping crown, a swinging door on said casing for giving access to said suction hose and having a roller guide bracket accommodating the nozzle and said hose, and a circuit closing means for the suction mechanism.

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