Aug. 21, 1956 R. GORDON 2,759,228

VACUUM CLEANER SCENTING ATTACHMENT

Filed May 14, 1952 3 Sheets-Sheet 1

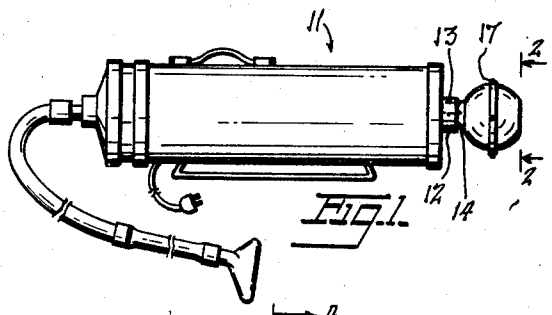


FIG. 1.

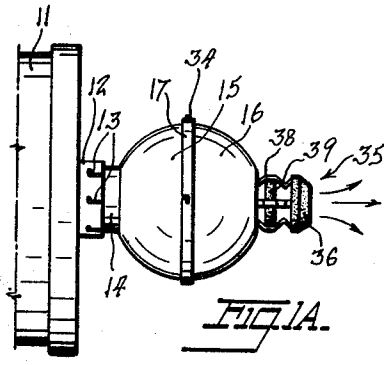


FIG. 1A.

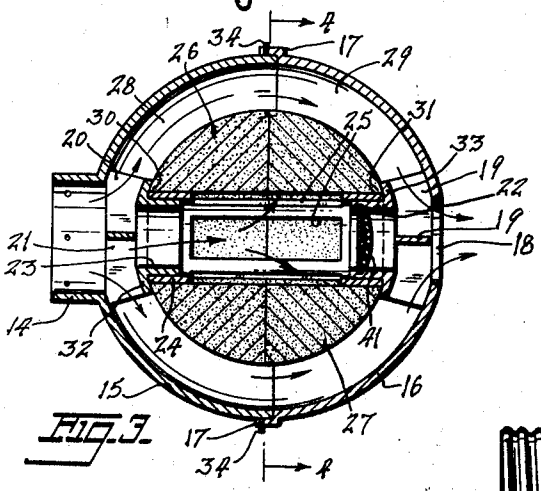


FIG. 3.

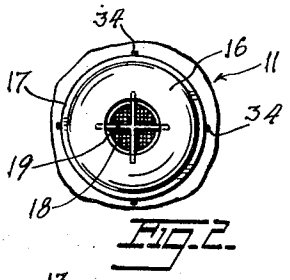


FIG. 2.

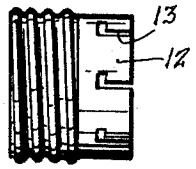


FIG. 5.

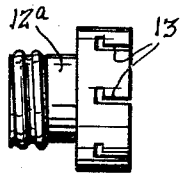


FIG. 6.

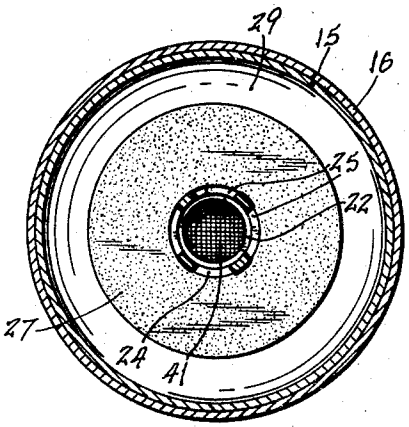


FIG. 4.

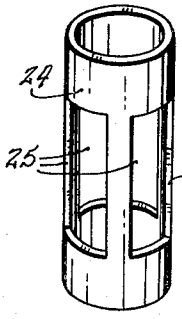


FIG. 7.

INVENTOR.
REUBEN GORDON
BY
ATTORNEY

Aug. 21, 1956 R. GORDON 2,759,228

VACUUM CLEANER SCENTING ATTACHMENT

Filed May 14, 1952 3 Sheets-Sheet 2

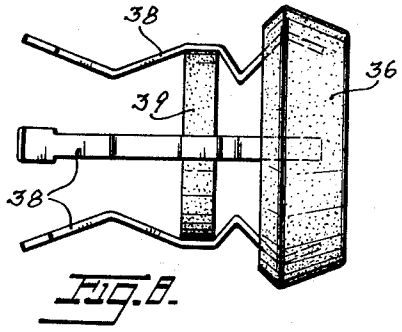


Fig. 8.

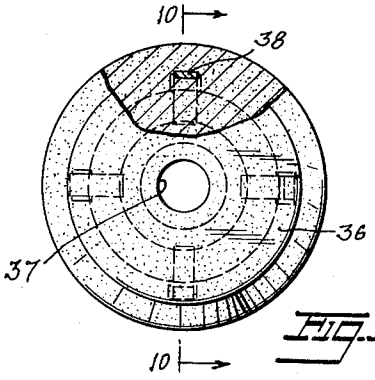


Fig. 9.

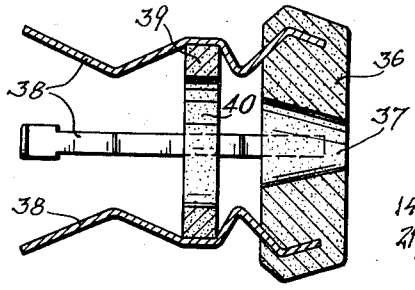


Fig. 10.

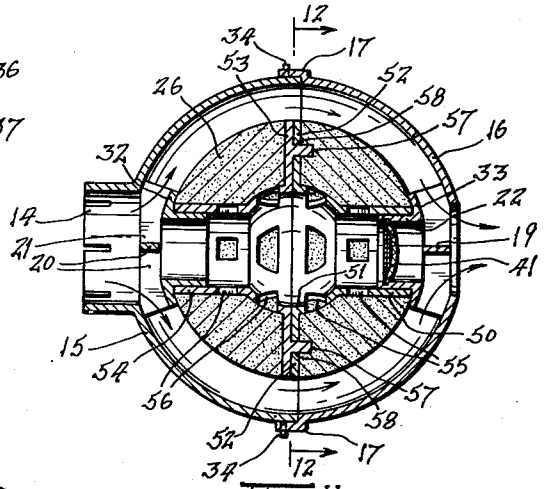


Fig. 11.

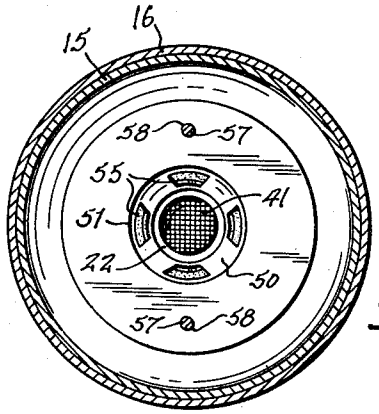


Fig. 12.

INVENTOR.
REUBEN GORDON
BY
ATTORNEY

Aug. 21, 1956 R. GORDON 2,759,228

VACUUM CLEANER SCENTING ATTACHMENT

Filed May 14, 1952 3 Sheets-Sheet 3

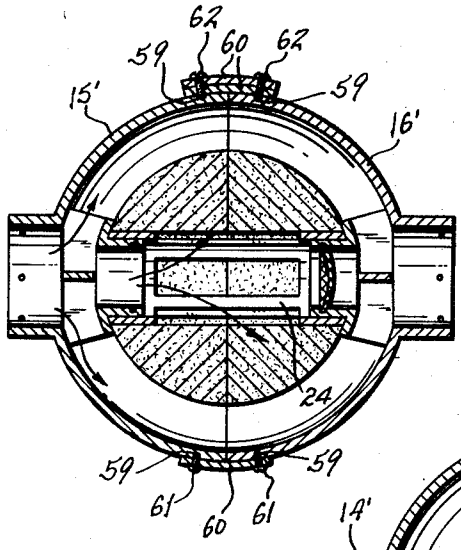


Fig. 13.

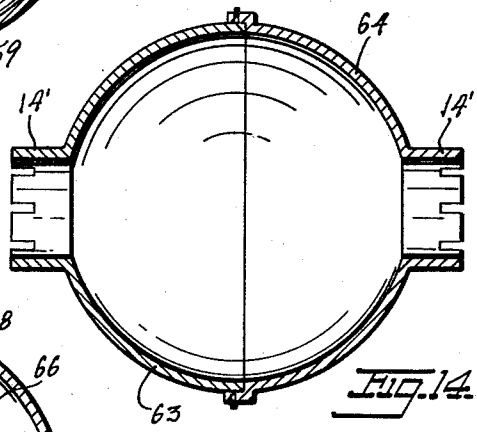


Fig. 14.

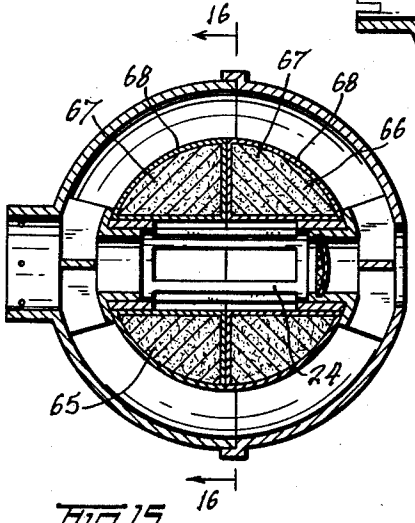


Fig. 15.

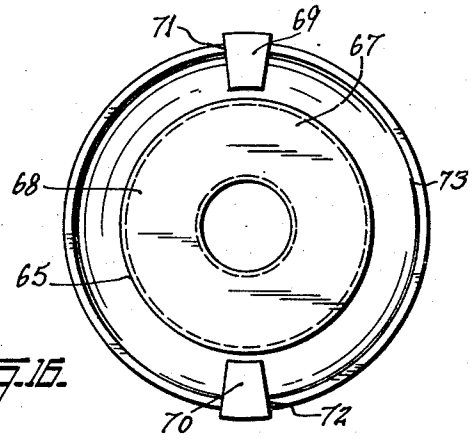


Fig. 16.

INVENTOR.
REUBEN GORDON
BY
ATTORNEY

United States Patent Office

2,759,228

Patented Aug. 21, 1956

2,759,228

VACUUM CLEANER SCENTING ATTACHMENT

Reuben Gordon, Brooklyn, N. Y.

Application May 14, 1952, Serial No. 287,672

9 Claims. (Cl. 21—127)

This invention relates to an improved attachment for tank type vacuum cleaners and has particular reference to such a device which will, by its use in conjunction with a vacuum cleaner, purify the surrounding atmosphere and impart to the air a fragrant and pleasing odor.

An object of this invention is to provide a device of the character set forth which contemplates a split, hollow spherical casing or housing, through which a central open walled, tube engages and holds in position a cartridge compounded of crystal like and compacted mixture which will exude deodorizing and fragrantly scented vapors when air is passed over the compacted mixture.

Another object of this invention is the provision therein of making the compacted mixture into solid cartridges which may be readily replaced when necessary.

A still further object of this invention resides in forming the cartridges in a semi-spherical shape and so arranging same within the housing that portions of same are exposed to the air passing therethrough, from the vacuum cleaner, which passing air will pick up the vapor fumes from the cartridges and dispell them into the surrounding atmosphere.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

On the accompanying drawings forming a material part of this disclosure:

Fig. 1 is a view of a conventional tank-type vacuum cleaner showing this attachment thereon.

Fig. 1A is a similar view to Fig. 1 showing a portion of the vacuum cleaner and a second form of scenting device attached thereto.

Fig. 2 is an end view of the attachment looking in the direction indicated by the arrows of line 2—2 of Fig. 1.

Fig. 3 is a longitudinal section taken along the axis of this attachment.

Fig. 4 is a transverse section taken along the line 4—4 of Fig. 3.

Fig. 5 shows an attachment nipple which is secured in the outlet opening of a vacuum cleaner.

Fig. 6 is an elevational view of an attachment nipple having a smaller attachment shank.

Fig. 7 is a perspective view showing an open walled tube engageable through the central portion of the device.

Fig. 8 is a side view of a modified form of the invention.

Fig. 9 is an end view of Fig. 8, parts being shown broken away.

Fig. 10 is a section taken along line 10—10 of Fig. 9.

Fig. 11 is a central section showing another modified form of the invention.

Fig. 12 is a transverse section taken on line 12—12 of Fig. 11.

Fig. 13 is a view similar to Fig. 3 but showing a modified form of casing.

Fig. 14 is a central section of another casing illustrating another modification of the present invention.

Fig. 15 is a view similar to Figs. 3 and 13, but illustrating a still further modification of the invention.

Fig. 16 is a sectional view taken on line 16—16 of Fig. 15 but showing a further modification of separating wedges to separate the casing halves.

Referring to the drawings in which like reference numerals refer to like parts, 11 designates, generally, a tank-type vacuum cleaner and 12 is an annular attachment nipple having receiving slot formations 13 adapted to receive an annular slotted connecting means 14. The nipple 12a of Fig. 6 has a reduced shank for use with a vacuum cleaner having a smaller discharge orifice. The said slotted connecting means 14 is formed upon one section 15 of a holder in the form of a hollow spherical casing or housing. A second section 16 of the hollow spherical housing is joined to the first mentioned section 15 by means of bayonet fastening means 17 and is formed with an outlet opening 18. Brackets 19, in cross-wire arrangement are secured to the semi-spherical section 16 and extend to the outlet opening 18 (Figs. 2 and 3). Similar brackets 20 are formed upon the slotted connecting means 14 and extend to an inlet opening 21 which is formed upon the semi-spherical section 15. The said brackets 19 and 20 function as spacers or separators between the semi-spherical sections 16 and 15 respectively and flanged thimbles 22 and 23 respectively. The said flanged thimbles 22 and 23 engage within the open ends of a tube 24 having openings 25 along the wall of same and hold the tube in alignment with the outlet opening 18 and inlet opening 21.

Scented material in the form of semi-spherical cartridges 26 and 27 having a central opening are adapted to engage over the tube 24. The said cartridges 26 and 27 comprise a compacted porous substance which is moulded to semi-spherical form and scented to exude vapors which expand into chambers 28 and 29 and into the tube 24 where they are carried along with the air which enters at the opening 21 through the chambers and tube to the outlet 18 from whence the air is discharged into the surrounding atmosphere. The cartridges are charged with a deodorizing and perfuming substance and due to their form are quickly replaced with fresh cartridges when required.

The edges 30 and 31 of the central opening of the cartridges engage against lips 32 and 33 respectively, which are formed upon the thimbles 23 and 22 respectively. The cartridges 26 and 27, the tube 24 and the thimbles 22 and 23 are held together by the semi-spherical housing sections 15 and 16 which are in turn held together by means of bayonet locking members 34.

An additional deodorizing perfuming unit 35 is attached to the vacuum cleaner or to the semi-spherical section 16, as shown in Fig. 1A and in detail in Figs. 8 through 10, the said unit 35 consists of scented material in the form of a disc 36 having a central beveled opening 37 and is provided with a holder in the form of a series of bent spring legs 38 which are adapted to be inserted at their free ends into the opening 18 in the semi-spherical section 16, as shown in Fig. 1A. A short distance from the disc 36 there is a ring 39 having a central opening 40. The disc 36 and the ring 39 are made of porous substance which is saturated with any suitable fragrant chemical and imparts an additional pleasant odor to the air as same is emitted from the device.

A dished or bowed out orificed disc 41 may be fixed in the thimble 22 to function as a screen to retain solid objects which might pass through the cleaner.

By a turning movement of one of the hollow semi-spherical sections the two sections may be drawn apart, the thimbles removed from the ends of the central tube

and the cartridges slipped off of the tubes. In reverse manner the parts may be reassembled.

In the modified form shown in Figs. 11 and 12 the central tube **24** of the forms already described is replaced by a shorter tube **50** which widens at its inner end as at **51** and then flanges outwardly in the form of a circular plate **52** and abuts against an opposing similar plate formation **53** which is part of a tube **54**. The tubes **50** and **54** are formed with openings or large orifices **55** and **56** and the plate **53** has formed upon it bosses or pins **57** which engage through orifices **58** in the plate **52**. The cartridges are practically similar in formation as those of the form first mentioned. This form is desirable because the air flow through the central channel is amplified by the expanded central section of the tube **50—54**.

The modified form of the invention shown in Fig. 13 is characterized by the provision of a casing having reversible halves, **15'** and **16'**, each having threaded screw holes **59** to secure a centrally disposed retainer band or strip **60**. The casing halves are held together by the retainer band or strip **60**, the strip encircling the casing at the juncture of the halves **15'** and **16'** and secured by screws **61** and **62** which fit into screw holes **59** in the casing halves. In this manner manufacturing costs are substantially reduced, the casing halves being interchangeable.

In the modified form of the invention shown in Fig. 14, the casing is made of two mating halves **63** and **64** each having annular slotted connected means **14'** for attachment to the slotted formations **13** of nipples **12** and **12a** (see Figs. 1–6). By this means, either end of the casing may be connected to the vacuum cleaner **11**.

The modified form of the invention illustrated in Fig. 15 is characterized by semi-spherical replaceable cakes or cartridges **65** and **66** each having a central opening adapted to engage over tube **24** and each comprised of scented, deodorant or germicidal or other material **67** enclosed in permeable, perforated or highly porous cake retentive paper **68**. The paper covered cartridges **65** and **66** permit convenient handling of refills for the casing.

The modification illustrated in Fig. 16 is characterized by the provision of two opposed separating wedges **69** and **70** fitting in plug openings **71** and **72** provided in the casing half **73** thown and in the casing half not shown. Pressing the wedges **69** and **70** inwardly toward each other results in a prying action assisting greatly in the separation of the sections of the casing. The casing preferably is made as shown in Fig. 15 with press fitting halves and no bayonet locking lugs or members when the wedges are provided.

In any of the forms shown and described, the vacuum cleaner **11** may be used to vacuum clean unimpeded while the device is in operating position. Thus upon inserting the scenting attachment to the rear or exhaust end of the vacuum cleaner, air is constrained to pass around the scented material through the central tubes **24** or **54**, as well as the circumferential passageways **28**. Where member **35** is added, air passes through to carry off odors from the scented materials **36** and **39**.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

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

1. An attachment for tank type vacuum cleaners, comprising a pair of semi-spherical hollow sections secured together to form a spherical chamber, inlet means and outlet means on said sections spaced from each other, perforated means providing a passageway in said chamber aligned with said inlet and outlet means, a deodorizing cartridge secured in said chamber on said perforated means, said cartridge being spaced from the inner walls of the chamber to provide an annular peripheral passageway whereby the vapors escape both through the perforated and through the peripheral passageways, said perforated means comprising a hollow tube, and openings in the walls and in the ends of the tube, flanged thimbles engaged in the open ends of said tube, said cartridge being retained on said perforated passageway by said thimbles, and bracket means mounted on said sections between the inner peripheral walls of the chamber and the thimbles to provide spacing means.

2. The combination of claim 1 wherein said inlet means includes a flange and an adapter to be secured to the vacuum cleaner and removably held on said flanged inlet means.

3. The combination of claim 2 wherein a wire screen is secured on said hollow tube to restrain solid particles of dirt.

4. The combination of claim 3 wherein said tube and flange are axially aligned.

5. An attachment for tank type vacuum cleaners, comprising a pair of semi-spherical hollow sections, one of said sections including a bayonet slot and the other section having cooperating bayonet locking means to form a sphere with a hollow chamber therein, inlet and outlet means in diametrically opposed relation, means providing an axial passageway secured in said chamber in spaced relation to said inlet and outlet means, means spacing said passageway means, and a deodorant cartridge retained on said passageway means and spaced from the inner periphery of the chamber to provide an annular peripheral passageway for escape of the vapors, said passageway comprising a hollow tube, perforations in the side and end walls of the tube and flanged thimbles engaging the end wall of the tube, said cartridge being retained between said flanges.

6. An attachment for tank type vacuum cleaners, comprising a pair of semi-spherical hollow sections, one of said sections including a bayonet slot and the other section having cooperating bayonet locking means to form a sphere with a hollow chamber therein, inlet and outlet means in diametrically opposed relation, means providing an axial passageway secured in said chamber in spaced relation to said inlet and outlet means, means spacing said passageway means, and a deodorant cartridge retained on said passageway means and spaced from the inner periphery of the chamber to provide an annular peripheral passageway for escape of the vapors, said passageway comprising a hollow tube, perforations in the side and end walls of the tube and flanged thimbles engaging the end wall of the tube, said cartridge being retained between said flanges, said spacing means comprising cross-wire brackets.

7. An attachment for tank type vacuum cleaners, comprising a pair of semi-spherical hollow sections, one of said sections including a bayonet slot and the other section having cooperating bayonet locking means to form a sphere with a hollow chamber therein, inlet and outlet means in diametrically opposed relation, means providing an axial passageway secured in said chamber in spaced relation to said inlet and outlet means, means spacing said passageway means, and a deodorant cartridge retained on said passageway means and spaced from the inner periphery of the chamber to provide an annular peripheral passageway for escape of the vapors, said hollow tube comprising two members having opposed juxtaposed circular plate portions disposed face to face, said plate portions having central openings aligned with each other and with said passageway, said cartridge being sectional and retained on said tube members.

8. The combination of claim 7, wherein one of said plate portions has an orifice and the other plate portions has a boss received in said orifice to secure the plate portions together.

9. The combination of claim 8, wherein said tube members widen adjacent each other to amplify the vapor flow.

References Cited in the file of this patent

UNITED STATES PATENTS

947,726	Zimmer	Jan. 25, 1910
1,091,929	Hammesfahr	Mar. 31, 1914
1,439,881	Fontaine	Dec. 26, 1922
1,783,859	Smith	Dec. 2, 1930
1,810,613	Keller	June 16, 1931
1,931,553	Martinet	Oct. 24, 1933
1,931,884	Chason	Oct. 24, 1933
2,050,773	Wall	Aug. 11, 1936
2,103,049	Whitaker	Dec. 21, 1937
2,107,019	White	Feb. 1, 1938

FOREIGN PATENTS

415,405	Great Britain	Aug. 22, 1934
428,565	Great Britain	May 15, 1935