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3,269,610

WALL HOLDER FOR SPRAY DISPENSER

Filed Jan. 28, 1965

2 Sheets-Sheet 1

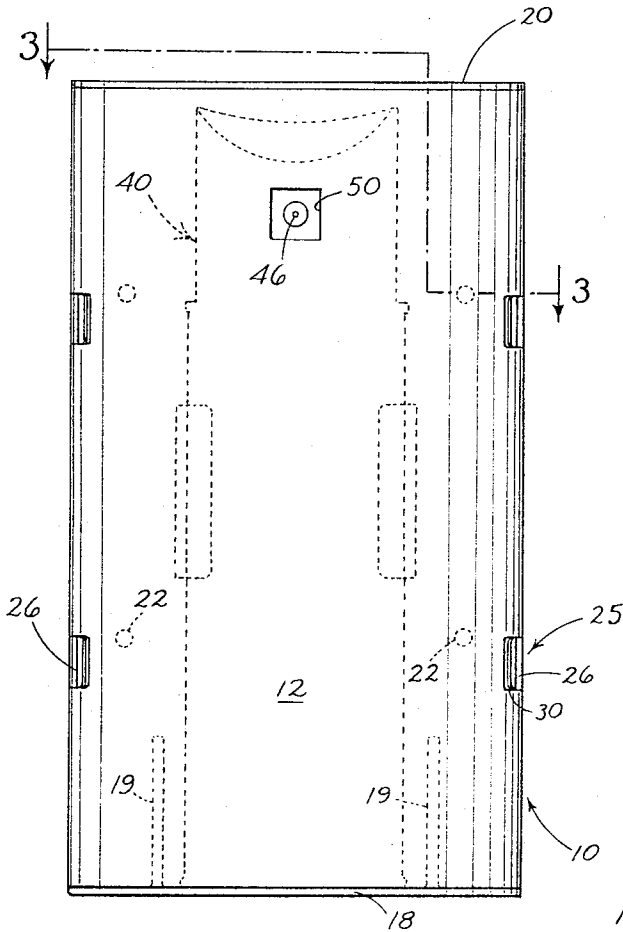


Fig. 2.

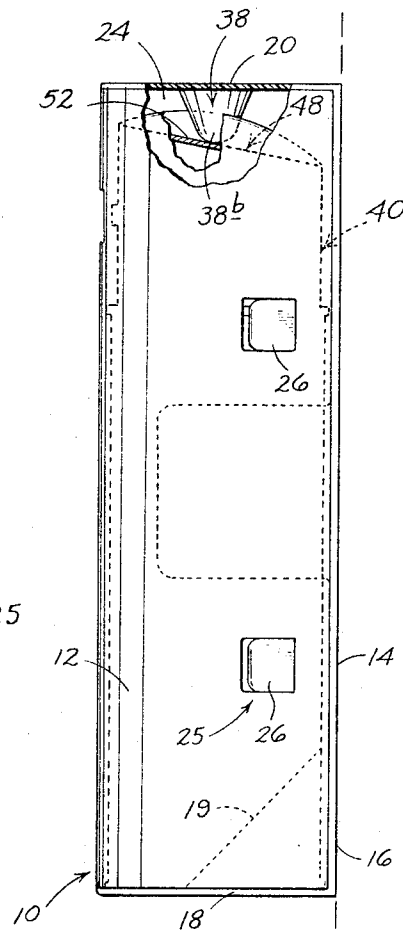


Fig. 1.

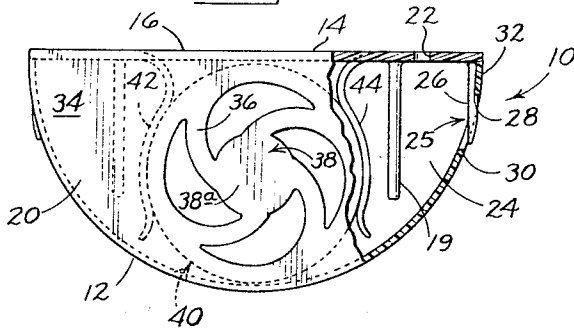


Fig. 3.

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2 Sheets-Sheet 2

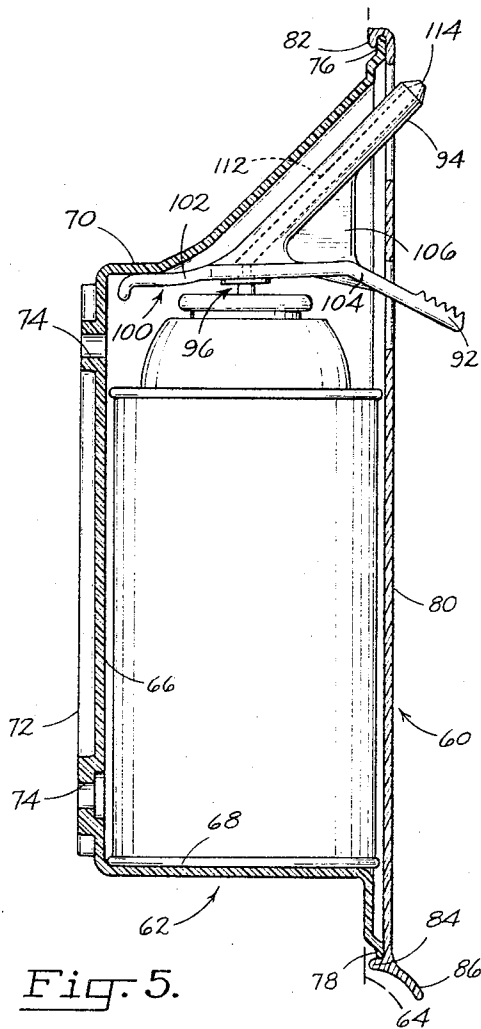


Fig. 5.

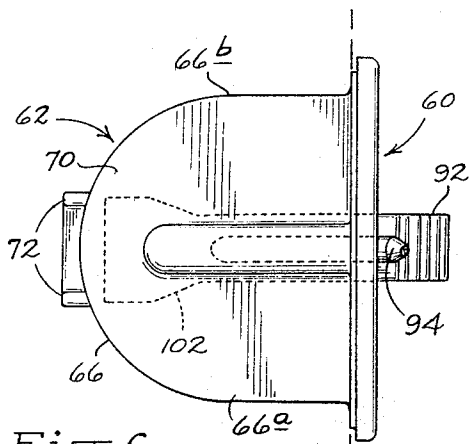


Fig. 6.

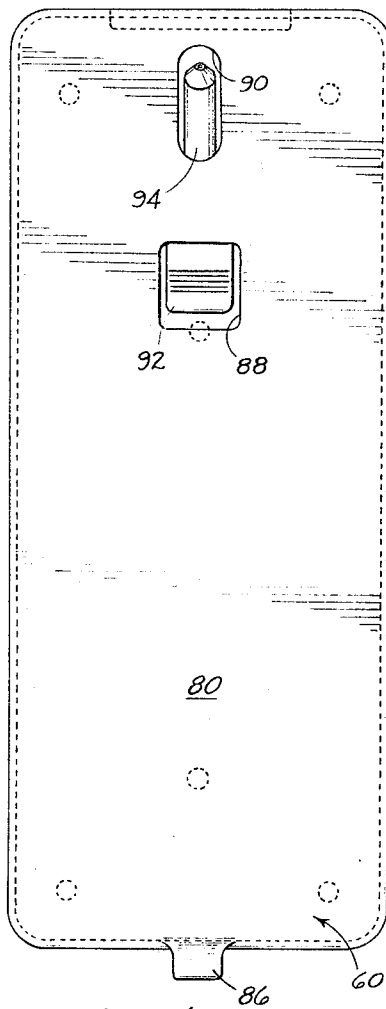


Fig. 4.

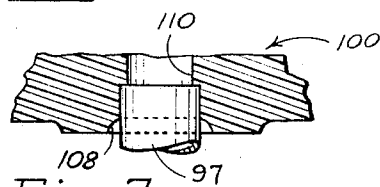


Fig. 7.

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WALL HOLDER FOR SPRAY DISPENSER

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12 Claims. (Cl. 222-183)

This invention relates to dispensing apparatus, and more particularly to apparatus adapted to be mounted on a wall, for receiving a container holding a treating substance under pressure, the apparatus further including manually-operated means actuatable to produce discharge of such treating substance from the container. In a specific and preferred embodiment of the invention, the container may comprise an aerosol can containing a material such as a room deodorant under pressure, and the apparatus of the invention is utilized to store the can during periods of nonuse, and to cause the contents of the can to be sprayed into a room when actuated by a user.

In recent years, the packaging of different materials in an aerosol container or can has become an increasingly common practice. One product which is now marketed quite extensively in such a manner comprises room deodorants, which may be sprayed into a room or other space to remove undesirable odors and generally freshen the room. A general object of this invention is to provide novel apparatus for holding such an aerosol can, which is readily actuated by hand to cause the contents of the can to be discharged.

Devices of the character contemplated preferably should be capable of manufacture at relatively low unit cost, if they are to receive widespread acceptance. Thus, a further general object is to provide such apparatus which is relatively simple in construction, and can, if desired, be made from inexpensive materials such as plastic.

The dispensing apparatus according to one modification may be mounted in a recessed position on a wall, with a housing section forming the front of the apparatus substantially flush with the wall. In another modification, the apparatus when mounted in place is positioned entirely in front of a wall. With both modifications, a hollow housing is contemplated which receives the aerosol can and includes means for holding such can in proper operative position within the housing. The housing includes separable sections, which are separated from one another to permit the substitution of a full aerosol can for a spent can.

A further feature and object of the invention is to provide novel means, at least partially mounted on structure forming the top of the housing, which is actuatable to produce dispensing of material from the can. With this top mounting, more compact apparatus is possible, changing of aerosol cans is facilitated, and substantial simplification of the structure regulating dispensing periods is possible.

Another object is to provide apparatus for mounting and dispensing the contents of an aerosol can, characterized by novel housing structure which facilitates changing of aerosol cans.

In one modification of the invention, novel means forming an integral part of the top of the housing is provided which may be depressed to produce actuation of a dispensing valve normally found in an aerosol can. The structure contemplated renders the housing readily manufactured as a molded part.

In another modification, novel actuator structure is included which rests on the top of the aerosol can and directs spray emanating from the nozzle at the top of the can laterally to one side of the can and into a room. The actuator further includes an activator which may be in

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the form of a button which is depressed to initiate spray periods.

These and other objects and advantages are attained by the invention, and the same is described hereinbelow in conjunction with the accompanying drawings, wherein:

FIG. 1 is a side elevation of apparatus for holding an aerosol can as contemplated by one modification of this invention, such apparatus being of the type that may be mounted against the outer surface of a wall in a room;

FIG. 2 is a front elevation of the apparatus shown in FIG. 1;

FIG. 3 is a view of the apparatus, partly in section and taken along the line 3-3 in FIG. 2;

FIG. 4 is a front elevation of another modification of the invention, and showing apparatus of the type that is adapted to be mounted in a recessed position in a wall;

FIG. 5 is a cross-sectional view of the apparatus shown in FIG. 4;

FIG. 6 is a top plan view of the modified form of apparatus; and

FIG. 7 is a cross-sectional view, on a somewhat enlarged scale, showing how the valve-controlled nozzle of a type of aerosol can is mounted inside actuator structure provided in the apparatus.

Referring now to the drawings, and first of all more particularly to FIGS. 1, 2 and 3, the apparatus illustrated comprises a hollow housing 10 including a pair of separable housing sections identified as front housing section 12 and rear housing section 14. The rear housing section includes a back wall 16, a bottom wall 18 which projects forwardly from the back wall and forms a shelf adjacent the base of the rear housing section, and a top wall 20. The apparatus is adapted to be mounted against the surface of a wall, and to mount the apparatus the rear housing section is fastened to the wall employing screws or other fasteners extending through accommodating bores 22 in back wall 16. Bracing bottom wall 18 to rear wall 14 are gussets 19.

Front housing section 12 is approximately semicylindrical in shape, and when assembled with the rear housing section fits against back wall 16 and between bottom and top walls 18, 20, thus to close off a space 24 within the housing. Means 25 is provided for detachably clamping the two housing sections together, and this means is to the front of the wall upon which the housing is mounted (thus to facilitate removal of the front housing section). As shown, means 25 comprises flexible clip fingers 26 notched at 28, integral with the back wall and extending forwardly therefrom. The fingers extend into apertures 30 in the front housing section, and webs of material 32 of the front housing section seat within notches 28 to hold the two housing sections together.

Top wall 20 includes a web portion 34 and flexible portions 36 extending in approximately a horizontal plane and having a curved shape viewing them in plan. Inner extremities of these flexible portions are integrally joined to an actuator structure or button 38 with a top or activating surface 38a exposed on the top of the housing. The button is depressed for the purpose of initiating a spray period. A rounded bottom portion 38b of the button extends downwardly into the housing in a position to engage the valve-controlled nozzle means 48 of a conventional aerosol can.

Such an aerosol can is shown at 40. The can is mounted within the housing by resting its base on the shelf formed by bottom wall 18. Spring clips 42, 44 joined to back wall 16 and projecting forwardly thereof snugly embrace the sides of the can to hold it from shifting laterally within the housing. The can is mounted in

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position by first separating the two housing sections, and then by shifting it into place over bottom wall 18 between spring clasp 42, 44. The can is positioned with discharge aperture 46 of valve-controlled nozzle means 48 facing forwardly.

Front housing section 12 includes an aperture 50 which, with the two housing sections together, registers with discharge aperture 46 with the can properly positioned in the housing.

The aerosol can shown includes a button 52 forming part of the valve-controlled nozzle means, which when depressed opens up the can so that material carried under pressure within the can is discharged as a spray through aperture 46. In some forms of aerosol cans this button has an inclined top surface which slopes to the side of the can opposite the side having discharge aperture 46. With top and bottom walls 20 and 18 a part of the rear housing section, the can is easily mounted by shifting it inwardly with the side of smallest elevation (the right side of the can in FIG. 1) facing inwardly. Such movement eventually brings the rounded bottom portion 38b of button 38 into engagement with the top of button 52.

The complete device, having a can mounted therein, is actuated to cause the emission of spray by depressing button 38, such being accommodated with some straightening of portions 36. On the button being shifted downwardly, it engages button 52 thus to depress this button and actuate the valve-controlled nozzle means of the aerosol can. Spray then is discharged through discharge aperture 46 and aperture 50 of the front housing section into the room.

Referring now to FIGS. 3 through 6, in the modification of the invention the device is mounted in a recessed position on a wall. The device includes a housing comprising front and rear housing sections 60, 62, the front housing section being substantially flush with the surface of the wall, shown in dashed outline at 64.

Rear housing section 62 includes a back wall 66, a bottom wall 68 forming a shelf, and a top wall 70. The back wall curves around thus to present sides for the housing section shown at 66a and 66b. Strengthening the back wall are vertically extending ribs 72, and the housing section is secured in place using screws or other fasteners with such extending through accommodating bores 74.

Adjacent the front of the rear housing section, and located at the top and bottom thereof, are shoulders shown at 76, 78, respectively, used in detachably fastening the front housing section to the rear housing section. Thus, the front housing section which for the most part comprises a flat web 80, includes as an integral part thereof adjacent the top of the section a reversely turned flange portion 82 adapted to be seated on shoulder 76 as shown in FIG. 5. Adjacent the base front housing section is a flange 84 which with the reversely turned flange 82 in place is adapted to snap over shoulder 78 thereby to hold the two sections together. A tab 86 also forming part of the front housing section facilitates removal of the housing section by enabling slight downward turning of flange 84 on twisting the tab upwardly in FIG. 5. The web forming the front housing section includes a pair of apertures 88, 90.

An aerosol can is seated within the housing with its base resting on the shelf formed by wall 68 and with its sides snugly encompassed by sides 66a, 66b of the housing. In this modification of the invention the can includes a valve-controlled nozzle means 96 which, when depressed, is operable to eject spray upwardly from the center of a nozzle 97 through a suitable passage.

To permit control of operation of the can from the room which includes wall 64, and the purpose of directing spray emitted from the can into the room, actuator structure 100 is provided, including an activator or button 92 on the end of an arm 104 and a tube 94. The actuator structure may have a molded one-piece construc-

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tion, and also includes a fulcrum arm 102 extending to the back of the can and in a direction opposite to arm 104. Connecting tube 94 and arm 104, and strengthening the structure is a gusset 106.

The base of the actuator structure includes a recessed portion 108 adapted to be fitted snugly over the top of nozzle 97. This recessed portion communicates with a passage 110 in the base of the actuator structure, and this passage in turn communicates with passage 112 extending along the center of tube 94. Passage 112 terminates at an end 114 which communicates with the atmosphere within the room by reason of tube 94 projecting into aperture 90. Arm 104 projects through aperture 88, whereby button 92 is exposed outside the housing.

To cause the emission of spray from the can, button 92 is depressed, with the fulcrum arm through its mounting on top 70 (by its engagement with the underside of the top) providing a pivot point for the actuator structure. The actuator pivots downwardly on depressing of button 92, to depress nozzle means 96 whereby spray is released from the can through nozzle 97. This spray is then directed outwardly into the room through tube 94.

To replace an aerosol can, the front housing section is snapped off, apertures 88, 90 accommodating easy withdrawal of the housing section by pulling it to the right in FIG. 5. The can and actuator structure may then be removed from the wall. To replace a can the actuator structure is pulled off the top of the used can, and remounted on the top of the can that takes its place. The new can may then be repositioned within the rear housing section and the front housing section then returned and snapped into position, to place the apparatus in operating condition.

While there has been described particular embodiments of the invention, modifications are possible without departing from the invention. It is desired to cover all variations and modifications as would be apparent to one skilled in the art, and that come within the scope of the appended claims.

It is claimed and desired to secure by Letters Patent:

1. Apparatus for spraying a treating substance into a room and like spaces where such substance is carried in a container having a supply of treating substance therein with such container equipped with a valve-controlled nozzle means for regulating the discharge of the substance from the container, comprising:

a hollow container housing, said container housing including front and rear housing sections which are separable from each other to expose the interior of the housing;

one of said housing sections including a shelf for supporting the base of the container and means above said shelf for snugly encompassing the sides of a container resting on said shelf;

said front housing section including an aperture registering with the nozzle means of a container which is mounted on said shelf and within said encompassing means;

means for mounting the rear housing section on a wall;

means exposed to the front of such a wall detachably securing the housing sections together; and

a manually-operated activator positioned outside and adjacent the top of the housing, in front of such a wall mounting the housing, for actuating the valve-controlled nozzle means of a container within the housing.

2. The apparatus of claim 1, wherein the housing includes a top wall closing off the housing at the top thereof, and said manually-operated activator is part of actuator structure movably mounted on said top wall, with the top wall thus operating properly to locate the activator.

3. The apparatus of claim 2, wherein the actuator struc-

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ture comprises a button, the top wall is joined to the button, and the top wall includes means accommodating vertical shifting of the button relative to the housing.

4. The apparatus of claim 2, wherein the actuator structure is mounted over the top of and rests on the valve-controlled nozzle means of a container within the housing, the actuator structure is mounted on the top wall of the housing through a portion which engages the underside of the top wall providing a fulcrum point about which the structure may be pivoted, and said actuator structure further includes an arm projecting out of said front housing section having a terminal end forming said manually-operated activator.

5. The apparatus of claim 4, wherein said actuator structure includes means defining a passage through which the treating substance may flow, with such passage in a communication with the nozzle means of a container mounted on said shelf in said housing, and said passage extends laterally of the container to adjacent said aperture in said front housing section.

6. Apparatus for spraying a treating substance into a room and like spaces, where such substance is carried in a container having a supply of treating substance therein with such container equipped with a valve-controlled nozzle means for regulating the discharge of the substance from the container, comprising:

a container housing including a rear housing section adapted to be mounted on a wall, having a back wall, and top and bottom walls projecting forwardly from and joined to the top and bottom of said back wall, and a front housing section separable from the rear housing section, meeting with said top and bottom walls to define an enclosed space within the housing for receiving a container;

means for securing the rear housing section on a wall; means exposed to the front of such a wall detachably securing a front and rear housing section together; means joined to the rear housing section for snugly embracing the sides of a container mounted within said housing;

said rear housing section on separation of said front housing section providing a space for receiving a container with said bottom wall providing support for the base of the container and said means for snugly embracing the sides of the container functioning to hold the container from lateral shifting; and manually-operated actuator structure movably mounted on said top wall for operating the valve-controlled nozzle means of a container within the housing, said top wall functioning properly to locate the actuator structure.

7. Apparatus for spraying treating substance into a room and like spaces where such substance is carried in a container having a supply of treating substance therein with such container equipped with a valve-controlled nozzle means for the discharge of substance from the container, comprising:

a hollow housing including separable sections accommodating by separation of the sections the mounting of such a container within the housing;

said housing including a top wall that overlies a container within the housing, and a button positioned over such a container placed in the housing which is depressible to contact and produce actuation of the nozzle means of the container;

said button being mounted on the top wall through flexible wall elements forming part of the top wall and that are integrally joined to the button accommodating up and down movement of the button.

8. The apparatus of claim 7, wherein said flexible wall elements extend generally in a horizontal plane, have a curved shape viewing them in plan, and elongate on depressing of said button.

9. Apparatus for spraying a treating substance into a room and like spaces where such substance is carried in

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a container having a supply of treating substance therein with such container equipped with a valve-controlled nozzle means for the discharge of the substance from the container, comprising:

a rear housing section adapted to be mounted in a recessed position on a wall;

means at the front of said rear housing section engageable with the front of such wall to position the housing section on the wall in its proper recessed position;

a front housing section for closing off the rear housing section adapted to lie substantially flush with the front surface of the wall, said front and rear housing sections defining a space for receiving a container; and

actuator structure for operating the valve-controlled nozzle means of a container, said actuator structure being mounted for pivotal movement and including a portion that projects out from the housing which may be depressed to pivot the structure thus to produce operation of the valve-controlled nozzle means, said actuator structure further including tube means which connect at one end with the nozzle means of the container and thence extend laterally of the container to adjacent the front housing section.

10. In combination with a wall,

a container holding a spray treating substance and equipped with a valve-controlled nozzle means for the discharge of such substance from the container;

a rear housing section in a recessed position on the wall and defining a space behind the wall receiving the container;

a front housing section closing off the front of said rear housing section; and

means for actuating the valve-controlled means of the container and directing the treating substance therein which is discharged from the container out through the front housing section;

said means comprising an element mounted over the top of and resting on the valve-controlled nozzle means of the container, said element having a tube portion with one end in a position to receive treating substance emanating from the nozzle means of the container and an opposite end spaced laterally of the container and adjacent the front housing section,

said element further including an activator positioned to one side of the container adjacent the front housing section in position to be manually actuated and operable on actuation to cause the element to move down on said nozzle means thus to operate the nozzle means.

11. The structure of claim 10, wherein said element further includes a fulcrum arm which extends to the opposite side of the container from said activator, which engages a portion of the rear housing section and provides a pivot point through such engagement accommodating pivoting of the element.

12. Apparatus for spraying treating substance into a room and like spaces where such substance is carried in a container having a supply of treating substance therein, and such a container has a valve-controlled nozzle means regulating the discharge of treating substance from the container, comprising:

a hollow housing adapted to receive the container including means mounting the container in a stationary position within the housing; and actuator means adapted to be mounted within the housing on the valve-controlled nozzle means of the container for operating the nozzle means; said actuator means including a fulcrum arm, an actuating arm, and a directing tube all joined together; said fulcrum arm when in operative position extending laterally of the container to a point where it engages the housing thus to provide at said point of engagement with the housing a pivot point about which the actuator means

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may be pivoted when operating the valve-controlled nozzle means, said actuating arm when in operative position extending laterally of the container to an end which is exposed outside the housing so as to be actuatable from outside the housing, said directing tube when in operative position having one end communicating with the nozzle means of the container and extending from this one end laterally of the container to an opposite end which is exposed to the outside of the housing whereby treating substance traveling through the tube may be discharged in a region outside the housing.

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