May 1, 1951 J. CIRIGLIANO 2,551,418

DEODORIZER AND DOOR CHECK

Filed Dec. 12, 1946

Fig. 1

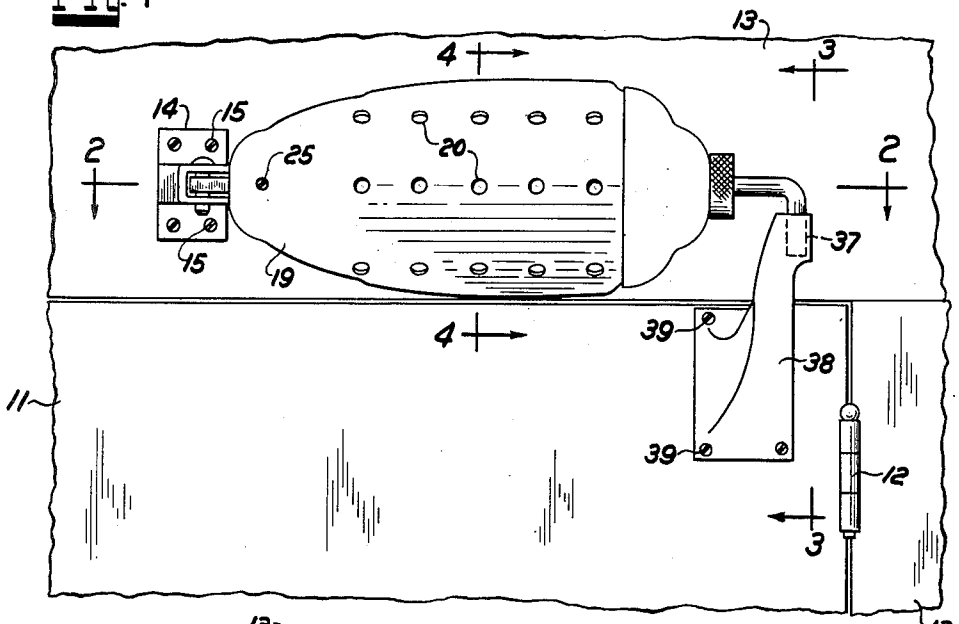


Fig. 2

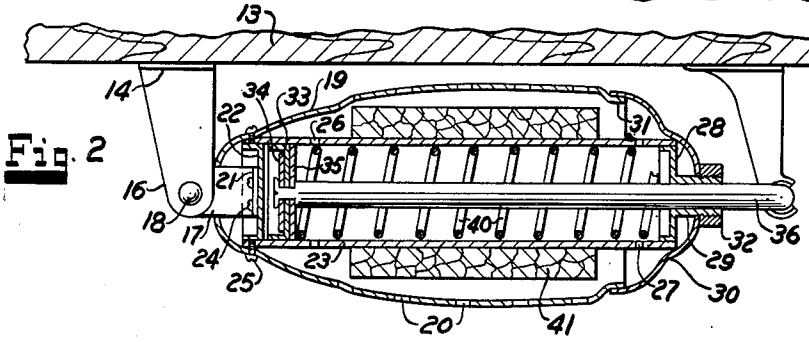


Fig. 3

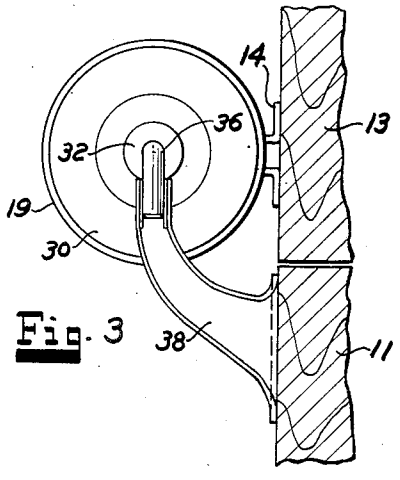
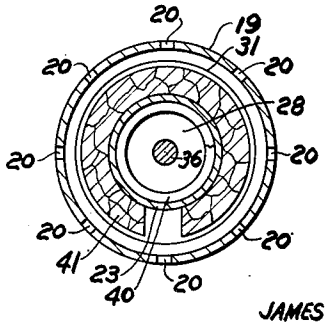


Fig. 4



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DEODORIZER AND DOORCHECK

James Cirigliano, Detroit, Mich.

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1 Claim. (Cl. 21—77)

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This invention relates to room deodorizers and more particularly to a combined deodorizer and door check.

It is the object of this invention to provide a pneumatic spring returned door check together with means for delivering a stream of air over a deodorizing volatile substance.

It is the object of this invention to provide a door check housing adapted to carry a pneumatic spring returned door check together with a deodorizing volatile substance adapted to be positioned within said housing around said door check, and means for delivering a stream of air from the door check and over said volatile substance.

These and other objects will be seen from the following specification and claim in conjunction with the appended drawing in which:

Fig. 1 is a front elevational view of the door check and deodorizer mounted on a door and door header which is fragmentarily shown.

Fig. 2 is a plan section on line 2—2 of Fig. 1.

Fig. 3 is a right end elevational section thereof on line 3—3 of Fig. 1; and

Fig. 4 is an elevational section on line 4—4 of Fig. 1.

It will be understood that the above drawing illustrates merely one preferable embodiment of the invention, and that other embodiments are contemplated within the scope of the claim hereinafter set out.

Referring to the drawing door 11 is shown as supported by hinges 12 within the opening in door header 13. Door header bracket 14 is secured to header 13 above door 11 by a plurality of screws 15. The outer end of said bracket is bifurcated at 16 to receive the cylinder head bracket 17 which is pivotally retained therein at one end by rivet 18. The other end of U-shaped bracket 17 projects through an opening in the end of hollow formed cylindrical shell 19, which has a plurality of air holes 20 formed therein.

As shown in Fig. 2 the spaced foot portions 21 at the inner end of bracket 17 bear against the end wall or cylinder head 22 of pneumatic cylinder 23 and are secured thereto as by screws 24, or in any other convenient manner as by welding.

Cylinder 23 is centrally positioned within shell 19, and the latter is immovably mounted with respect thereto by the opposed screws 25 which project through the outer walls of said shell and into the walls of said cylinder. It will be understood that the end of said cylinder may be secured within shell 19 in any other convenient manner, such as by welding.

Furthermore bracket 17 projects snugly through a rectangular opening in the end of said shell to provide further support therefor. Thus cylinder 23 and shell 19 are mounted upon

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bracket 17 and adapted for pivotal movement therewith within header bracket 14, 16.

House cylinder 23 with air ports 26 and 27 at its opposite ends, has a cylinder head 28 immovably secured within its outer end. Central hollow bearing 29 forms a part of cylinder head 28 and projects therefrom and snugly through a corresponding central opening formed in hollow concave shell cap 30.

As shown in Figs. 1 and 2 the open periphery of cap 30 slidably fits over a corresponding portion 31 of reduced diameter forming a part of shell 19. Said cap is held in position by knurled nut 32 which is threadably mounted on the outer threaded end of bearing 29.

Leather piston cup 33 with washers 34 and 35 on opposite sides thereof are centrally mounted and secured upon the inner end of piston rod 36. The latter extends through cylinder 23 and slidably projects out through bearing 29 on cylinder head 28.

The outer end 37 of rod 36 is bent downwardly at right angles thereto and is swivelly mounted within the central opening formed in the upper portion of door bracket 38. The latter is mounted and secured upon door 11 adjacent its hinged portion by a plurality of screws 39.

As shown in Fig. 2 a coil spring 40 is positioned within cylinder 23 and is interposed between piston washer 35 and cylinder head 28 normally and resiliently urging door 11 to closed position as shown in Fig. 1.

On opening of the door about its hinge 11 said piston rod moves longitudinally out of cylinder 23 compressing spring 40, and upon manual release of said door said spring will expand to forcibly close said door.

A hollow formed deodorizing volatile substance 41 is longitudinally slotted to fit over piston rod 36, and is positioned around cylinder 23 within shell 19. On opening of the door, compressing spring 40, air is forced out of said cylinder through openings 27 whence it passes partially over the volatile substance 41 and escapes into the room through holes 20 formed in the wall of shell 19. The flow of said air increases the rate of vaporization of deodorizing substance 41 directing some of its vapors into the room to be deodorized, such as a lavatory.

At the same time as the door is opened air is drawn into the shell through openings 20 and into cylinder openings 26 at the opposite end of said cylinder. Thus when the door is resiliently closed by spring 40 acting on piston 33, the air is forced out of said cylinder through the same openings 26 whence it passes over the volatile substance 41 and is directed out through shell openings 20 into the room.

Thus it appears that the deodorizer is double acting inasmuch as air is directed over the vola-

tile substance 41 on opening of the door as well as on closing thereof, with the greater portion of said air escaping into the room through shell openings 20.

From time to time volatile substance 41 must be replaced, and this is accomplished by manually removing threaded washer 32, manually loosening shell cap 30, and sliding both longitudinally upon rod 36 and around to its downwardly projecting portion 37, whereupon with the door open or partially open a new slotted member 41 may be projected over said piston rod, and manually projected into said shell and over cylinder 23 therein.

Having described my invention reference should now be had to the claim which follows for determining the scope thereof.

I claim:

In combination, a pivotally mounted perforated housing adapted to contain a hollow cylindrical volatile deodorizing substance, a

cylinder in said housing positioned within said deodorizing substance with air ports at opposite ends of said cylinder, a swivelly mounted reciprocating rod extending into said cylinder, a piston in said cylinder and joined to said reciprocating member and movable therewith for intermittently delivering a stream of air from said ports over said substance and through the perforations in said housing during movements in both directions of said piston.

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REFERENCES CITED

The following references are of record in the file of this patent:

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