Aug. 15, 1933. J. R. FOLEY 1,922,127

PAIL SILENCER

Filed Sept. 3, 1930

Fig. 1.

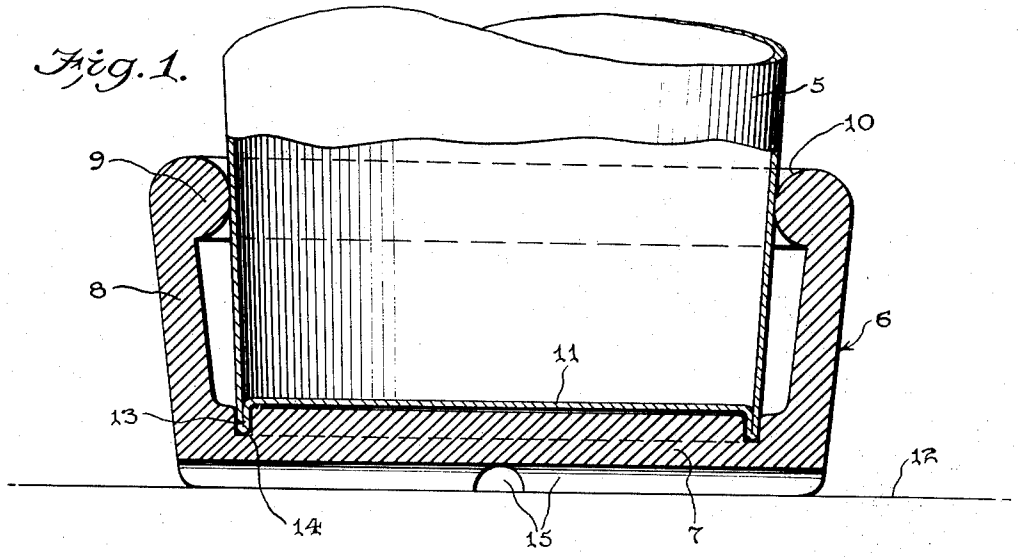


Fig. 2.

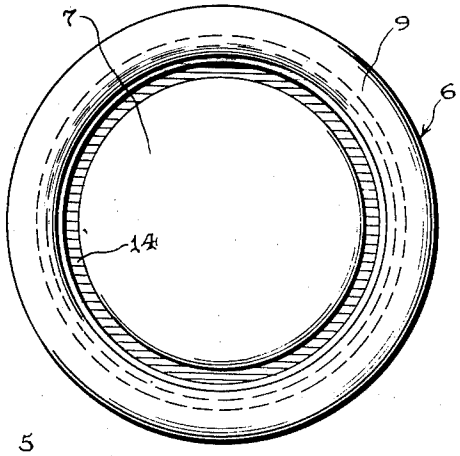
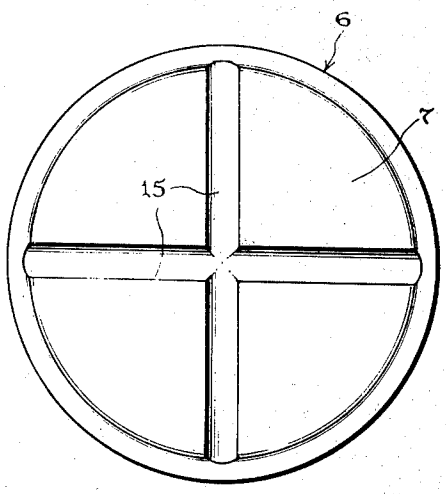


Fig. 3.



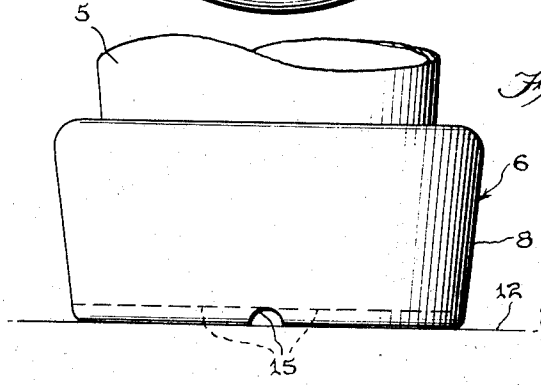


Fig. 4.

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Patented Aug. 15, 1933 1,922,127

UNITED STATES PATENT OFFICE

1,922,127

PAIL SILENCER

John Russell Foley, New York, N. Y.

Application September 3, 1930. Serial No. 479,531

4 Claims. (Cl. 220—69)

This invention relates to improvements in pail silencers, and more especially to a novel device of this character particularly adapted for use in hospitals or the like, where silence is necessary.

The primary object of the invention is to provide a pail silencer made of a single piece of resilient material such as rubber, and including a cup designed to receive and grip the lower end of a pail so as to firmly adhere to the pail when the latter is carried from place to place, and to form a sound-deadening support for the pail when it is placed upon a floor surface or the like.

Another object is to furnish a resilient pail silencer adapted especially for use with a pail having a bottom flange or skirt; the silencer being provided with an annular groove to receive the skirt and thus prevent accidental tipping over of the pail.

A still further object is to provide a pail silencer having its under side which engages the floor, suitably recessed to prevent the formation of a vacuum, whereby the pail may be readily lifted with the silencer from the floor, or may be shifted along the floor.

With the foregoing objects outlined and with other objects in view which will appear as the description proceeds, the invention consists in the novel features hereinafter described in detail, illustrated in the accompanying drawing, and more particularly pointed out in the appended claims.

In the drawing,

Fig. 1 is a vertical sectional view of my improved silencer shown supporting and grasping the lower portion of a pail as the latter rests on a floor surface.

Fig. 2 is a top plan view of the same.

Fig. 3 is a bottom plan view.

Fig. 4 is an elevation of the parts shown in Fig. 1, on a reduced scale.

Referring to the drawing, 5 designates a water pail or the like which is designed to be supported and held against tipping by my improved silencer 6. The latter preferably consists of a single piece of resilient material such as rubber, and is made up of a flat bottom 7 and an annular wall 8. The wall is preferably of frusto-conical shape, and is provided at its upper edge with an inwardly extending annular bead 9 having a curved inner surface 10 that forms a flaring mouth. This mouth acts to guide the bottom of the pail into the silencer, and then, as the pail is forced downwardly, the bead 9 is caused to expand sufficiently to allow the bottom 11 of the pail to come to rest on the bottom of the silencer. As the pail acts to expand the bead when the silencer is attached, it will be obvious that the bead in tending to move back to its original contracted position, acts to firmly grip the wall of the pail, so that even if the pail is lifted from the floor 12, the silencer will adhere to the lower end of the pail.

To accommodate a pail of the type having a flange or skirt 13 at its bottom, I provide the upper surface of the bottom of the silencer with an annular groove 14, which groove interlocks with the flange and assists in preventing the pail from being tipped over while it is supported by the silencer.

A crucial-form groove 15 is positioned in the under side of the bottom 7, so as to prevent the formation of any vacuum when the device is set upon the floor surface. This groove terminates at the outer surface of the side wall 8, and consequently, air channels extend through the bottom at all times. These channels will allow the shifting of the silencer along the floor, or the raising of the same from the floor without any interference by vacuum.

In some instances, I will reinforce the wall 6 to insure a tight seal between the bead 9 and the wall of the pail. For example, the wall 6 may be provided with internal or external rubber ribs extending from top to bottom, or extending from the ridge down about two-thirds the height of the wall, and others extending up from the inner bottom surface two-thirds of the distance; the upwardly extending ones alternating with the downwardly extending ones. Of course, such ribs will be integral with the wall 6, and may be formed thereon when the silencer is manufactured.

While I have disclosed what I now consider to be a preferred embodiment of the invention in such manner that the same may be readily understood by those skilled in the art, I am aware that changes may be made in the details disclosed, without departing from the spirit of the invention, as expressed in the claims.

What I claim and desire to secure by Letters Patent is:

1. A pail silencer of tub-shape, formed of a single piece of resilient material and comprising an annular wall and a flat bottom, the top of said wall forming an inwardly extending annular bead of substantially cylindrical cross section adapted to grip the wall of the pail.

2. The combination with a pail, of a cup-shaped pail silencer formed of resilient material and comprising a bottom and an annular

wall, said bottom having a substantially flat upper surface on which the bottom of the pail rests, the upper end of the wall having an inwardly extending annular bead gripping the wall of the pail, said bead being held in expanded condition by the pail, and means in the under surface of the bottom for preventing the formation of a vacuum when the silencer rests on a flat supporting surface.

3. A pail silencer comprising a cup-shaped member of resilient material, comprising an annular wall and a flat bottom, the annular wall being provided at its upper end with an inwardly extending annular bead adapted to grip the wall of a pail, said bead having an upwardly flaring surface to facilitate the guiding of a pail bottom into the silencer, and the bottom of the silencer having its under surface grooved to prevent the formation of a vacuum when the silencer rests on a floor surface.

4. The combination with a pail, of a cup-shaped pail silencer formed of resilient material and comprising a bottom and an annular wall, said bottom having a substantially flat upper surface provided with an annular groove to receive the bottom flange of the pail, the upper end of the wall forming an inwardly extending annular bead of substantially cylindrical cross section adapted to grip the wall of the pail, the wall of the silencer being spaced from the wall of the pail from the bottom of the silencer to said bead, the lower surface of the silencer bottom being grooved to prevent the formation of a vacuum.

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