

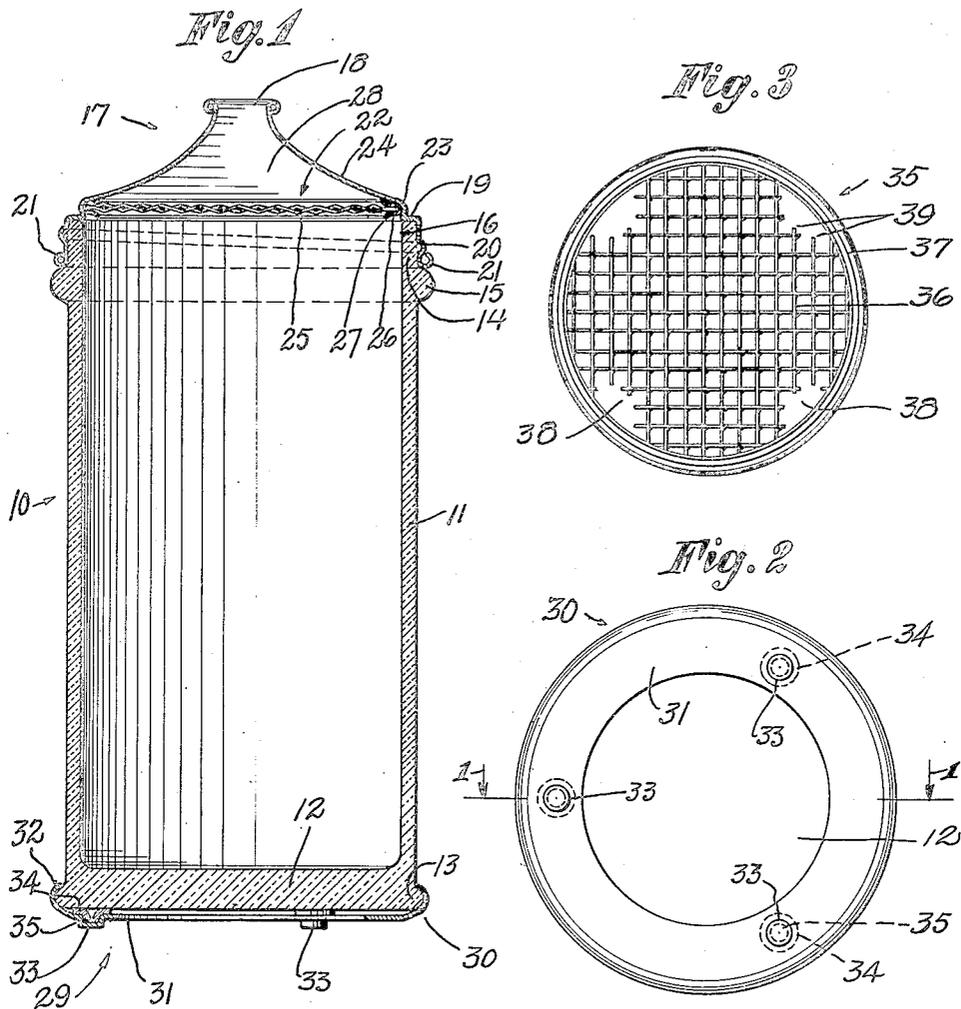
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SUGAR DISPENSER

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SUGAR DISPENSER

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This invention relates to dispensing devices such as sugar spills.

One object of this invention is to provide a device of the character described having a screen in improved association with a container and a closure such as a conical cover, whereby a large screening area is afforded and the screened material guided to a flow controlling orifice of the cover.

Another object of the invention is the provision of improved means for interengaging a container cover and a screen, and also to provide an improved screen for handling caked or even wet granulated or pulverulent materials.

Another object is to furnish a device including a container having an improved base structure to avoid excessive impact to the container, or to protect the surface on which the device is placed, or both; and still another object is to afford a device such as a sugar spill having a container provided with a cover and a screen so detachably mounted therein as to be removable, as for cleaning, by a strong impact on the cover, in improved association with a resilient base for the container to avoid such impact in normal use of the device.

A further object of the invention is to provide a device of the nature set forth having relatively few and simple parts, and which is inexpensive to manufacture, easy to take apart and reassemble, durable, reliable, and efficient to a high degree in use.

Other objects and advantages of the invention will become apparent as the specification proceeds.

With the aforesaid objects in view, the invention consists in the novel combinations and arrangements of parts hereinafter described in their preferred embodiments, pointed out in the subjoined claims, and illustrated on the annexed drawing, wherein like parts are designated by the same reference characters throughout the several views.

In the drawing:

Figure 1 is a vertical cross sectional view on the line 1—1 of Fig. 2, showing the device embodying the invention.

Fig. 2 is a bottom view thereof.

Fig. 3 is a plan view showing a modified screening means.

The advantages of the invention as here outlined are best realized when all of its features and instrumentalities are combined in one and the same structure, but, useful devices may be produced embodying less than the whole.

It will be obvious to those skilled in the art to which this invention appertains, that the same may be incorporated in several different constructions. The accompanying drawing, therefore, is submitted merely as showing the preferred exemplification of the invention.

Referring in detail to the drawing, 10 denotes a dispensing device such as a sugar spill having a container 11 that may be of any suitable shape or construction and made of any desired material, for instance, glass. This container may have a relatively heavy bottom portion 12, and a laterally projecting integral bead 13. At its upper end, the container may have a fastening such as a threaded portion, and a bead 15 adjacent thereto.

To afford a convenient and rapid movement of a finely divided material into or out of the container 11, the latter may have a large outlet 16. Normally closing said outlet is a device such as a cover 17, which may be of conical form and provided with a central outlet 18. The lower or base portion of this cover may have an annular shoulder 19 for resting on the rim of the container 11, and a threaded portion 20 depending therefrom for removable engagement with the threaded portion 14. A bead 21 on the end of the cover may abut the bead 15, supplementing the engagement at 19 to afford a rigid, tight connection.

Disposed at some convenient point within the device 10, at or preferably within the base portion of the cover is a screening means 22. The same is removably mounted to facilitate cleaning of the device. For example, the screening means may be detachably connected to a base portion of the cover, this having the advantage that the cover and screening means are removable as a unit for filling the container with material, and also

that the area of the screen may be made substantially equal to the area of the container outlet 16 so as to obtain the full benefit thereof.

5 One manner for detachably mounting the screening means in the cover may include the provision of resilient means adapted to interengage by a spring or snap action, and to be removable either manually or preferably
10 by causing a strong impact on the cover when the same is detached from the container. For instance, the cover may have an annular portion 23 just above the shoulder 19, said annular portion being so formed as to have a
15 continuous internal groove of a slight depth, and the conical wall 24 of the cover may merge into and form a wall of the recess at an acute angle, if desired.

While the screening means can be various-
20 ly constructed as a foraminous body having preferably large perforations, I prefer to employ a wire screen 25 of any conventional construction. I may provide this screen with a marginal rim 26 that may serve as a reen-
25 forcement therefor, or to eliminate projecting ends of the wire of the screen, or to facilitate the detachable mounting of the screen. The rim may, for example, consist of thin
30 sheet material and be folded around the edges of the screen as by pressing, stamping, or the like. If desired, the inner edges 27 of the rim may be slightly raised away from the screen to afford a finger nail hold for removing the
35 screening means from the cover. In any case, the rim may be uniform on both sides so that the screening device may be attached in the cover from either side thereof, and by making the rim narrow, it can possess a degree of resilience to facilitate attachment
40 and detachment thereof in the recess of the cover.

It will be understood that the nature of the attachment of the rim 26 in the recessed
45 portion 23 is such that, when the cover is removed from the container, the screening device can be knocked out by causing an impact on the cover, as by bringing the cover
50 down hard on a table or the like with the bead 21 striking flat on the table. For this purpose, the recess at 23 is comparatively slight and may be of a depth of one or two to five thousandths of an inch, according to materials and constructions used, but sufficient
55 to normally adequately retain the screening device in the cover in normal use thereof.

It will be perceived that by this arrangement, the rim 26 may form a continuous seal
60 with the adjacent wall of the cover and may seat upon a portion of the conical wall thereof.

The cover and related parts thereof may be made of any suitable materials, such as metal or composition materials, the former

being particularly adapted for stamping or spinning operations.

Since the outlet 18 is centrally related with respect to the screen, it is particularly adapted to uniformly receive materials passing
70 therethrough, and because said outlet is spaced from the screen, the space 28 between the screen and outlet constitutes a reservoir for causing a uniform and rapid feed of the material to said outlet. The side wall 24 of
75 the cover forms substantially an acute angle with the screen, thereby slightly retarding the flow of material at the annular region of the screen near the edge thereof, while the material can rapidly flow through the central
80 portion of the screen, thereby facilitating the non-clogging action of screen, especially when it is considered that the device 10 is tilted through an angle of 90 degrees or more for causing a discharge of material. In fact, the
85 action of the screen in breaking the fall of material when the device 10 is tilted is of particular advantage as a flow regulating device.

While the screen can be made of very thin
90 wires or plates, it preferably consists of wire of say one sixty fourth to one thirty second of an inch or more in thickness, and the wires may be suitably soldered together at the
95 points where they cross each other, thus affording the retarding action mentioned. The screen may vary between one eighth to one quarter inch in mesh, but it may also be of less or greater mesh.

Associated with the screening means is a
100 base 29 for the container, so arranged as to avoid excessive impact or jar thereon which might cause release of the screening means from its cover. More specifically, the base is
105 of yielding or resilient nature, so that in the ordinary use of the device, and every time that the same is placed upon a table, sometimes with excessive force, the impacts are absorbed. One form of construction is to provide a sur-
110 facing or housing element such as a ring 30 which may include a bottom flange 31 and a side flange 32 that can be secured or spun over the bead 13. This ring may have a plurality of downward projecting rests or tits 33
115 formed therein. By making the ring of a sheet material such as metal, the ring can be easily worked and formed as a stamping, the construction of the rests 33 resulting in upward opening recesses. If the ring consists of a soft or resilient material, the mem-
120 bers 33 afford an even or three point cushioning support and one which will not mar or scratch a table. The cushioning action may be enhanced by the interposition of a resilient element between the ring and the bottom
125 of the container. Preferably rubber is used, and the action thereof concentrated at the rests 33. Circular rubber elements 34 may be utilized to save material, and these may be disposed at the rests 33. The elements 34
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may have central downward projecting portions 35 adapted to enter the recesses at 33 to afford a resilient reenforcement therefor. The portions 35 may be interengaged in said recesses by being forced or snapped thereinto in a manner that will be readily understood. In this manner the rubber elements are retained in place even if the ring 30 is turned on the container, and the process of attaching the base 29 to the container is facilitated.

It will now be clear that with the aid of the base 29, if the container is, in ordinary use thereof, tilted to discharge a quantity of material and then reset on the table, should an excessive impact occur, the shock would be absorbed by the base. Hence no damage would occur to the glass container nor to the table, and the screening device would not drop downward out of engagement with the cover.

A novel and improved process is also afforded by the mode of constructing the base. The resilient elements result in that the ring 30 need not be tightly spun over the bead 13, since said elements will cause the flange 32 to be pulled snugly down upon the bead 13. Moreover, the elements 34 are secured in place while the ring 30 is being applied and the flange 32 secured.

In Fig. 3 is shown a screening means 35 generally similar to that hereinbefore described, and including a screen 36 and a rim 37, if desired. The screen 36 has one or more openings 38 struck therein in a suitable position, these openings being unfinished so that wire ends 39 project into said openings. Preferably the openings are located in offset relation to the center of the cover outlet of the device 10, for instance at the edge of the screen. These openings will break up especially caked or wet lumps of the granulated sugar and will be of such size as to permit only such lumps to pass as will pass through the cover outlet. The openings will also afford a finger hold at the rim for the manual removal of the screening device from the cover.

It will be appreciated that various changes and modifications may be made in the device as shown in the drawing, and that the same is submitted in an illustrative and not in a limiting sense, the scope of the invention being defined in the following claims.

I claim:

1. A dispenser including a container, a cover therefor having an outlet, and means including a screen back of said outlet, said cover having a continuous recess and the first mentioned means having a marginal portion releasably sprung into said recess in substantially sealing engagement with a wall portion of the recess.

2. A dispenser including a container having a relatively large outlet, a conical cover having a base portion detachably connected

to the container, said cover having an annular recessed portion above and in close proximity to said base portion, a screen having a narrow continuous rim, said rim being detachably engaged in said recessed portion, whereby the area of the screen is approximately equal to the area of the container outlet.

3. A dispenser including a cover having an outlet, and a screen having a marginal rim member bent around the edge of the screen, the cover having means for detachably engaging said rim member with either side of the screen disposed toward the outlet.

4. A dispenser including a cover having an outlet, and a screen having a marginal rim member bent around the edge of the screen to form annular flanges on opposite sides of the screen, the cover having means for detachably engaging the rim member, one of said flanges having a raised portion to afford a finger grip for removing the screen from said engaging means.

5. A dispenser including a cover having an outlet and engagement means spaced from said outlet, and a wire screen in the base of the cover connected to said engagement means, said screen having an opening formed therein, the edge of the opening being interrupted by projecting wires of the screen.

6. A dispenser including a cover having an outlet, and means including a wire screen having a narrow resilient marginal rim, said cover having an annular recess in a wall thereof, and said rim being sprung into said recess to mount the screen in relation to said outlet.

7. A sugar spill including a glass container, having its bottom provided with an outstanding integral bead, a metal ring spun on said bead and extending under said bottom, and resilient means between the bottom and said ring.

8. A sugar spill including a glass container having its bottom provided with an outstanding integral bead, a metal ring spun on said bead and extending under said bottom, and resilient means between the bottom and said ring, said resilient means being located at a plurality of angularly spaced points.

9. A device including a container having a laterally extending bead at the bottom thereof, a base consisting of a thin sheet material and having a plurality of downwardly extending portions pressed therefrom, said base having a portion spun over said bead.

10. A device including a container having a laterally extending bead at the bottom thereof, a base consisting of a thin sheet material and having a plurality of downwardly extending portions pressed therefrom, said base having a portion spun over said bead, and a plurality of resilient elements between said base and the bottom of the container, said elements being secured in the re-

spective recesses formed by the downward pressed portions.

11. A sugar spill including a container, a base secured to the container at the bottom thereof, said base consisting of a thin sheet material and having downwardly pressed supporting portions, said supporting portions forming recesses on the upper side of the base, and resilient elements connected to the base in said recesses and bearing upward on the bottom of the container.

12. A sugar spill including a glass container, a cover therefor having an outlet, a screen resiliently detachably secured in said cover so as to be removable therefrom by a strong impact on the sugar spill, a metal ring secured around a bottom edge of the container and having a flange spaced below the bottom thereof, and resilient means in said space acting between said flange and the container bottom.

In testimony whereof I affix my signature.
HARRY C. GESSLER.

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