Aug. 19, 1952 P. F. SIEWENIE 2,607,512

MULTIPLE-COMPARTMENTED POWDER CONTAINER WITH SELECTIVE GRAVITY DISPENSING MEANS

Filed May 4, 1949 2 SHEETS—SHEET 1

Fig. 1

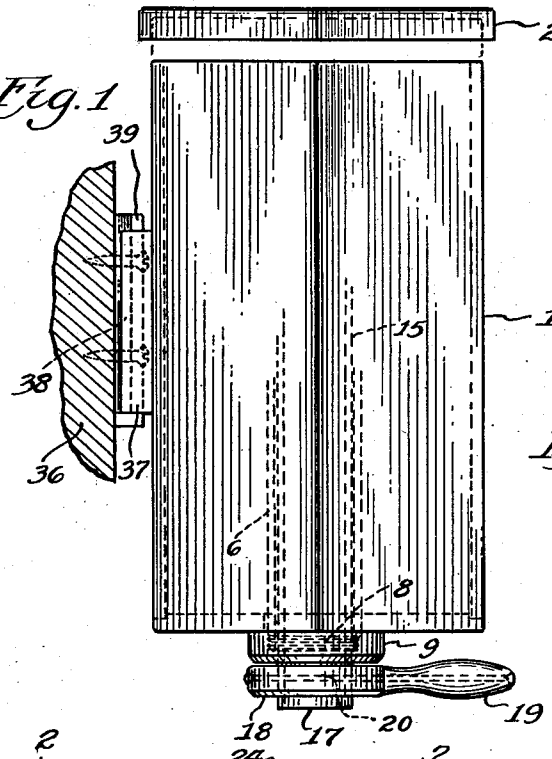


Fig. 10.

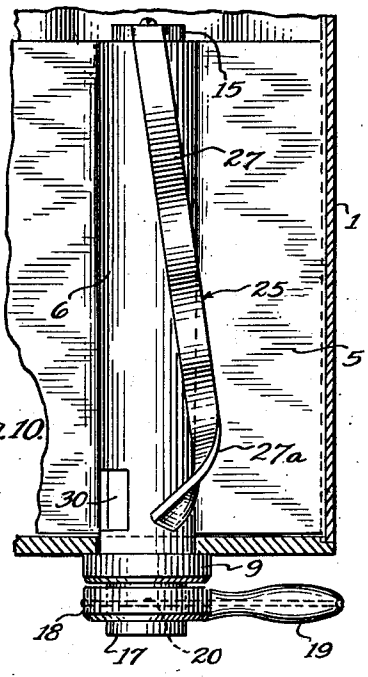


Fig. 2.

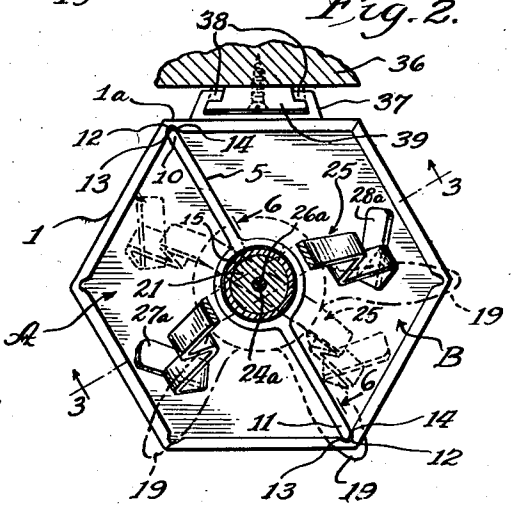
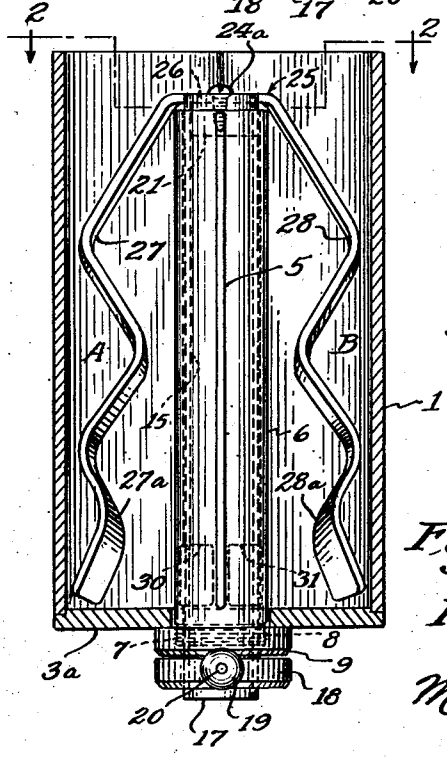


Fig. 3.

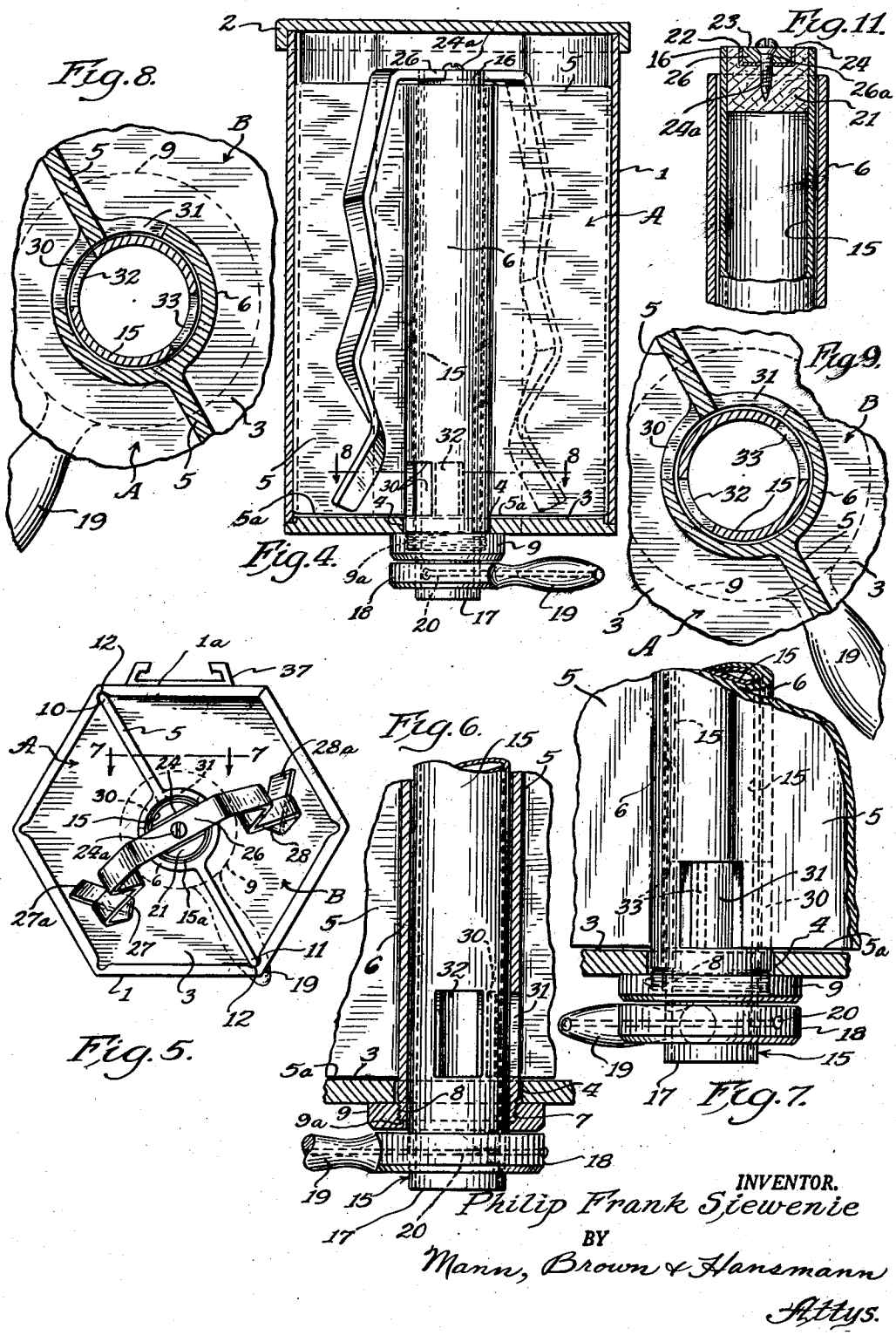


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MULTIPLE-COMPARTMENTED POWDER CONTAINER WITH SELECTIVE GRAVITY DISPENSING MEANS

Philip Frank Siewenie, Chicago, Ill.

Application May 4, 1949, Serial No. 91,392

4 Claims. (Cl. 222—144.5)

1

This invention relates to dispensers of different powdered materials separately contained in multiple compartments from which the content of each may be selectively dispensed by gravity through a common rotatable tubular outlet projecting through the bottom of the dispenser.

The objects of the invention are to provide a wall-suspended dispenser adapted to selectively release by gravity portions of powder content from any one of multiple compartments thereof through a common outlet; to provide a hexagonally sided casing internally divided into compartments by means of a partition integrally provided with a central tubular column extending through the bottom of the casing, the casing and the column being of plastic material; to provide a plastic agitator carried by a tubular member rotatably inserted within said column, the agitator having arms of zig-zag formation each operable within a compartment; to provide selective means of communication between each compartment and the rotatable tubular member; to provide spade terminal to each of the agitator arms, each spade adapted to deliver portions of powder content of a compartment for gravity release thereof; and to provide a manually operable means for rotating the tubular member.

Fig. 1 is an elevation of the dispenser and its cover including a fragmentary portion of a wall to show the dispenser secured in place on a wall;

Fig. 2 is a top view of the dispenser with the cover removed and is taken on the line 2—2 of Fig. 3;

Fig. 3 is a cross-section taken on the line 3—3 of Fig. 2 and including the means whereby the agitator is fastened to the central tubular column;

Fig. 4 is an elevation with the outer casing and top in cross-section showing the compartment divider, one of the agitator arms, and the operating mechanism;

Fig. 5 is a top view of the dispenser of Fig. 1 with the cover removed;

Fig. 6 is a cross-section taken along the lines 6—6 of Fig. 3 showing one set of communicating openings in the walls of the rotatable and column parts;

Fig. 7 is a cross-section taken along the lines 7—7 of Fig. 5 showing the other set of communicating openings in the walls of the rotatable and column parts;

Fig. 8 is a cross-section taken along the lines 8—8 of Fig. 4 showing open communication between the compartment and rotatable member;

Fig. 9 is a view similar to Fig. 8 but showing the

2

compartment in closed communication with the rotatable member;

Fig. 10 is an elevation of one agitator arm illustrated in inclined position with the bent spade in substantial alignment with the center of the overhead cross-bar; and

Fig. 11 is a detail illustrating the connection between the cross-bar and the rotatable member.

With more particular reference to the accompanying drawing, the numeral 1 designates the hexagonally sided plastic casing of the dispenser and 2 the cover thereof, the bottom 3 being provided with a circular opening 4. The plastic partition 5 includes the tubular column 6 projecting therebelow, the projecting portion 7 of the column 6 inserted within the opening 4 and having at its extremity an external thread 8 upon which an internally threaded plastic shaft collar 9, having an internal shoulder 9A is turned so that it co-operates with the bottom edge 5A of the partition 5 in engagement with the inner surface of the bottom 3 to positively secure the partition 5 thereto, the side edges 10 and 11 of the partition 5 each being held within an acute angle juncture 12 of adjacent side portions 13 and 14 thereby dividing the dispenser into two separate compartments A and B.

A rotatable tubular member 15 of thin metal wall is inserted within the tubular column 6 above which an upper extremity 16 projects as does also a lower end 17, which extends within and below the shouldered portion 9A of the shaft collar 9 and within a plastic shaft collar 18 integral with a plastic handle 19, a metal pin 20 extending longitudinally through the handle 19, collar 18 and metal rotatable member 15, the pin 20 being headed at both ends and securing the combined members 19 and 18 to the member 15. The upper projecting extremity 16 of the rotatable tubular member 15 is internally plugged, as at 21 and a groove 22 is provided across the top of metal and wooden surfaces 23, and a thin metal lining 24 is fitted within the groove 22 to prevent wear of the wooden plug 21.

An agitator 25 including a cross-bar 26 fitted within the metal lined groove 22, the agitator 25 having arms 27 and 28 of zig-zag formation integrally depending from opposite ends of the cross-bar 26 and extending the entire length of the dispenser within compartments A and B, each arm 27 and 28 including at its extremity a rearwardly bent spade 27A or 28A, the cross-bar being twisted to outwardly incline both arms 27 and 28. A screw 24A within a bore 26A in the cross-bar 26, the metal lining 24 and the wooden plug

21 secures the cross-bar 26 to the wooden plug 21 within the groove 22.

Both compartments A and B are permanently provided with communication with the interior of the tubular column 6 of the partition 5 by means of openings 30 and 31, each provided by the column 6 upon opposite sides of, and close to, the rear portion of the partition 5, such communication however may be closed to either one or both compartments A and B by means of the inserted metal tubular member 15. The wall 15A of the tubular member 15 is provided, at diametrically opposite places in alignment with the overhead cross-bar 26, with substantial openings 32 and 33, each separately registerable with the openings 30 or 31 upon the proper rotation of the tubular member 15.

Soap powder being a finer grain than that of cleaning powder, and therefore likely to move more freely, it might be desired that the spade 27A be made a little shorter than the spade 28A.

The operation of the improved selective powder dispenser from the neutral position illustrated by the Figure 5, in which all communication between both compartments A and B is normally closed, is had by moving the handle 19 either to the extreme left or to the right according to which soap powder or cleaning powder is to be dispensed, it being assumed that the compartment A has a content of soap powder and that the compartment B has a content of cleaning powder and the dispenser is hung conveniently on a wall adjacent its place of use.

If soap powder is desired the handle 19 is manually moved in a direction that is clockwise, looking axially downward on the column 15, carrying therewith the metal tubular member 15, the cross-bar 26, and the arms 27 and 28. With this rotation of the handle 19, the arm 27 in compartment A will move rearwardly and the arm 28 in compartment B will move forwardly. In this clockwise movement of the handle 19 the arm 28 merely loosens the content of the compartment B, but the arm 27 not only loosens the powder content of the compartment A, it also by means of the spade 27A scoops up and delivers to the opening 30 of the plastic column 6 now communicating with the interior of the tubular member 15 through the opening 32 whereupon soap powder has been forced therethrough and dispensed by gravity down and out of the tubular lower extremity of the rotatable member 15. If sufficient quantity of powder is not dispensed by means of one such operation, the handle 19 may be returned toward neutral position and then again operated in the same direction.

To obtain cleaning powder, the handle 19 is operated as explained but in a direction that is counterclockwise looking axially downward on column 15, whereby the arm 27 just loosens the powder content of the compartment A and the arm 28 not only loosens the powder content of the compartment B but also, by means of the spade 28A scoops up and delivers powder to the opening 31 of the plastic column 6 with which the opening 33 of the rotatable member 15 is now registered. Upon returning the handle 19 to its neutral position the communication between the compartments A and B and the member 15 is closed.

As shown in Figs. 1 and 2, the means by which the dispenser is hung upon a wall 36 comprises two plastic members, one, 37, being secured to the rear plastic section 1a of the casing, which with the other member 39 is secured preferably by

screws to the wall 36. These members 37 and 39 are shaped in truncated V-sections adapted to form a wedging relationship when one of these members is inserted within the other. As shown in the drawings, the member 37 is adapted to slide with respect to the member 39. This member 37 is also provided with anteriorly reinforced portions 38 extending inwardly therefrom to give rigidity to the plastic member 37 when it is fixed in relationship to the supporting member 39.

It also is to be noted that the lower edges 5A of the partition 5 are held down upon the upper surface of the bottom 3 by means of the shaft collar 9 turned tightly against the exterior surface 3A of the bottom 3 in its threaded connection with the lower projection 7 of the column 6 thereby rigidly securing the partition 5 within the dispenser.

As pointed out hereinbefore, the handle 19 may be moved into one position when the contents of one compartment is desired, and may be moved in an opposite direction when the contents of the other compartment is desired. It has also been explained that handle 19 may be moved to a neutral position closing the communication between the central hollow member and both compartments. It is, of course, obvious that any indicating means may be used to enable the operator of the dispenser to determine when the handle 19 is in the neutral position.

I claim:

1. A dispenser for selectively releasing various powders contained therein, comprising an outer shell having a bottom with a central opening therein, a partition dividing the space within the outer shell into a plurality of compartments, said partition having a central hollow column therein extending at its lower end through the opening in said bottom, openings in said hollow column communicating with each of said compartments, a collar secured to the bottom of said hollow column to hold said column within said container, a hollow tubular member rotatably inserted within said hollow column, the lower outlet end of which extends below the bottom of said dispenser, a closure secured to the upper end of said hollow tubular member, a cross-bar secured to said closure, arms secured to said cross-bar extending downwardly substantially to the bottom of said compartments, openings in said hollow tubular member for selective registry with the openings in said hollow column, a handle secured to the lower end of said hollow tubular member for rotating said tubular member and said arms secured thereto, whereby when said handle is rotated in one direction one of the openings in said tubular member is brought into registry with one of said compartments through the opening in one of said hollow columns and whereby said depending arms are operated to agitate the powder within said compartments.

2. A dispenser for selectively releasing various powders contained therein, comprising an outer shell having a bottom with a central opening therein, a partition dividing the space within the outer shell into a plurality of compartments, said partition having a central hollow column therein extending at its lower end through the opening in said bottom, openings in said hollow column communicating with each of said compartments, a collar secured to the bottom of said hollow column to hold said column within said container, a hollow tubular member rotatably inserted within said hollow column, the lower outlet end of which extends below the bottom of

said dispenser, a closure secured to the upper end of said hollow tubular member, a cross-bar secured to said closure, arms secured to said cross-bar extending downwardly substantially to the bottom of said compartments, each arm having a spade extremity adjacent said bottom, openings in said hollow tubular member for selective registry with the openings in said hollow column, a handle secured to the lower end of said hollow tubular member for rotating said tubular member and said arms secured thereto, whereby when said handle is rotated in one direction one of the openings in said tubular member is brought into registry with one of said compartments through the opening in one of said hollow columns and whereby said depending arms are operated to agitate the powder within said compartments.

3. A dispenser for selectively releasing various powders contained therein, comprising an outer shell having a bottom with a central opening therein, a partition dividing the space within the outer shell into a plurality of compartments, said partition having a central hollow column therein extending at its lower end through the opening in said bottom, openings in said hollow column communicating with each of said compartments, a collar secured to the bottom of said hollow column to hold said column within said container, a hollow tubular member rotatably inserted within said hollow column, the lower outlet end of which extends below the bottom of said dispenser, a closure secured to the upper end of said hollow tubular member, a cross-bar secured to said closure, arms secured to said cross-bar extending downwardly substantially to the bottom of said compartments, said arms having zig-zag portions throughout the substantial length of said arms, openings in said hollow tubular member for selective registry with the openings in said hollow column, a handle secured to the lower end of said hollow tubular member for rotating said tubular member and said arms secured thereto, whereby when said handle is rotated in one direction one of the openings in said tubular member is brought into registry with one of said compartments through the opening in one of said

hollow columns and whereby said depending arms are operated to agitate the powder within said compartments.

4. A dispenser for selectively releasing various powders contained therein, comprising an outer shell with recessed portions on the inner side thereof and having a bottom with a central opening therethrough, a partition adapted to be inserted within said recessed portions dividing the space within the outer shell into a plurality of compartments, said partition having a central hollow column therein extending at its lower end through the opening in said bottom, openings in said hollow column communicating with each of said compartments, a collar secured to the bottom of said hollow column to hold said column within said container, a hollow tubular member rotatably inserted within said hollow column, the lower outlet end of which extends below the bottom of said dispenser, a closure secured to the upper end of said hollow tubular member, a cross-bar secured to said closure, arms secured to said cross-bar extending downwardly substantially to the bottom of said compartments, openings in said hollow tubular member for selective registry with the openings in said hollow column, a handle secured to the lower end of said hollow tubular member for rotating said tubular member and said arms secured thereto, whereby when said handle is rotated in one direction one of the openings in said tubular member is brought into registry with one of said compartments through the opening in one of said hollow columns and whereby said depending arms are operated to agitate the powder within said compartments.

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