

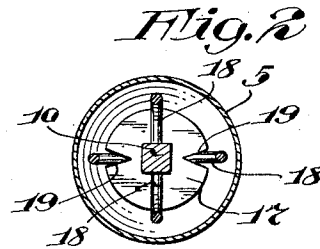
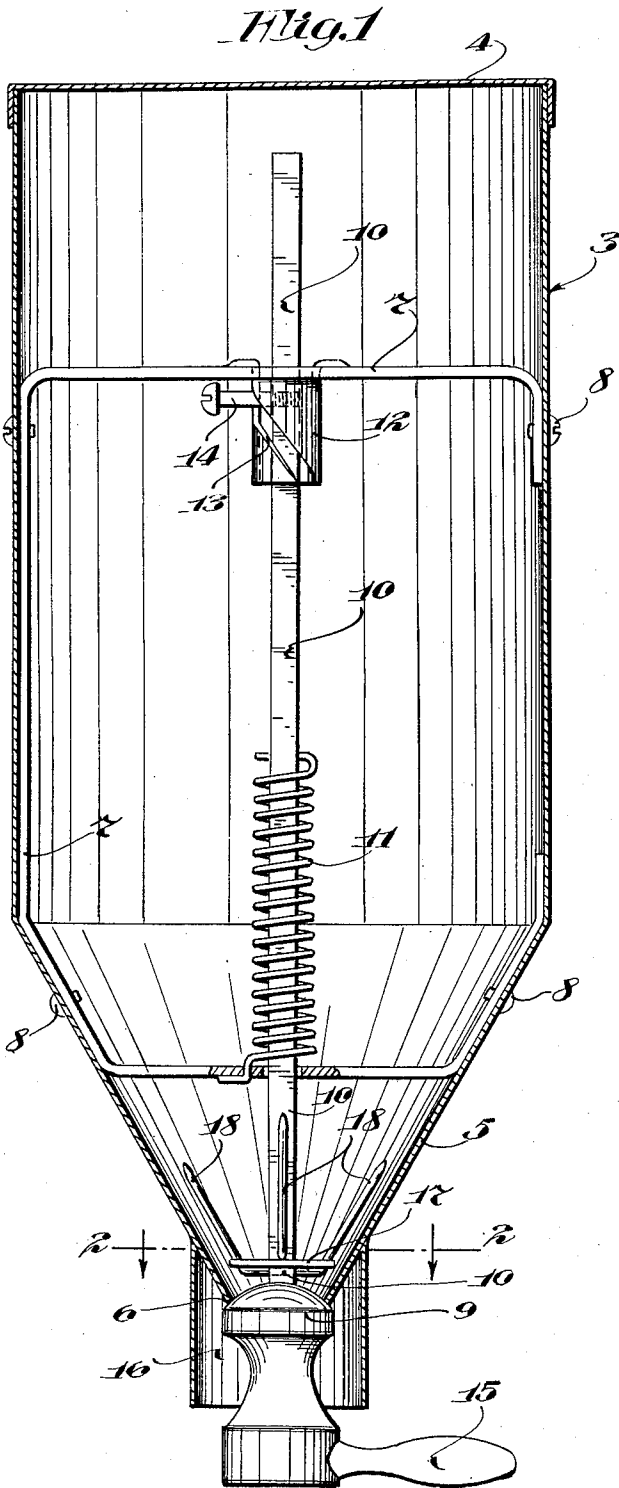
July 19, 1932.

O. WALLO

1,868,298

POWDER DISPENSING DEVICE

Filed Dec. 26, 1930



Inventor
Olay Wallo
By his Attorneys
Mercant and Wilson

UNITED STATES PATENT OFFICE

OLAV WALLO, OF MINNEAPOLIS, MINNESOTA

POWDER-DISPENSING DEVICE

Application filed December 26, 1930. Serial No. 504,789.

My invention relates to powder-dispensing devices intended for general use but especially well adapted for dispensing powdered soap and has for its object the provision of such a device that is simple in construction, easy to operate, positive in its action, and when closed, protects the contents of the container from dust, dirt and moisture and prevents waste of the powder during the dispensing thereof. Moisture in the container often causes the powder to become lumpy and thus interferes with the operation of the device.

To the above end, generally stated, the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

In the accompanying drawing, which illustrates the invention, like characters indicate like parts throughout the several views.

Referring to the drawing:

Fig. 1 is a view partly in side elevation and partly in central vertical section; and

Fig. 2 is a view in transverse section taken on the line 2—2 of Fig. 1.

The numeral 3 indicates a powder-dispensing cylindrical container having a displaceable cover 4 and a bottom 5 in the form of an inverted truncated cone with a gravity feed discharge opening 6 at its apex.

Within the container 3 is a frame 7 formed from a single metal strap bent to form a pair of diametrically opposite side members, which bear against the sides of said container, and upper and lower cross-tie members. This frame 7 is detachably but rigidly secured to the container 3 by screws 8. The lower end portions of the side members of the frame 7 are in converging relation and rest on the bottom of the container 3 with the lower cross-tie member within the bottom of the container.

The passageway 6 is normally closed by a valve 9 which is below the apex of the bottom of the container 3 and arranged to seat

thereon when closed. This valve 9 has at its axis an upwardly projecting square stem 10 which extends axially into the container 3 through the passageway 6 and apertures in the upper and lower members of the frame 7 with freedom for compound endwise and rotary movement. A coiled spring 11 encircling the valve stem 10, between the cross-tie members of the frame 7, is anchored at its lower end of the lowermost of said members and attached at its upper end to the stem 10. This stem 10 also extends axially through a relatively fixed depending sleeve 12 on the upper cross-tie member of the frame 7 with freedom for endwise and turning movements. Formed in the sleeve 12 is a spiral groove or channel 13 and cooperating therewith is a fixed cam stud 14 on the stem 10. The valve 9 is constructed and arranged to open and close by a compound endwise and rotary movement imparted thereto by the cam device 13—14. The spring 11 normally holds the valve 9 closed and which valve is provided at its lower end with a radially projecting handle 15 by which it may be turned to cause the cam device 13—14 to move the valve 9 axially downward to open the same.

A depending spout 16 is secured to the bottom of the container 3 in axial alignment with the passageway 6 and radially spaced therefrom and the valve 9. This spout 16 terminates above the handle 15 so as to not interfere with the action thereof. The top of the valve 9, which closes the passageway 6, is spherical and facilitates the escape of the powder from the container 3 through the discharge passageway 6 when said valve is open.

A second valve 17 on the valve stem 10 and in the form of a disk is vertically spaced above the main valve 9. This valve 17 is constructed and arranged to open and close in reverse order from the main valve 9 and when closed seats on the walls of the bottom of the container 3.

Secured to the valve stem 10 is an agitator

comprising two pairs of circumferentially spaced rods that project upward parallel to the walls of the bottom of the container 3 and spaced therefrom. The two pairs of agitator rods 18 are secured at their lower ends to the valve stem 10 at vertically spaced points and the valve 17 is held thereby against axial movement on said stem. Formed in the periphery of the valve 17 are V-shaped notches 19 through which the agitator rods 18 of the lower pair extend.

Any suitable separable fastener may be provided for mounting the container on a wall or other relatively fixed support.

From the above description it is evident that by means of the handle 15 the valve 9, and hence its stem 10, may be turned in a direction to cause the cam device 13-14 to positively move the valve 9 downward and open the same to allow the powder between the valves 9 and 17 to flow through the passageway 6 and be directed by the spout downward into a hand held thereunder.

At the completion of the opening movement of the valve 9 the valve 17 will close and prevent further flow of powder from thereabove. Upon releasing the handle 15 the spring 11, which was tensioned by the opening of the valve 9, will lift said valve and at the same time turn the same and thereby cause the cam device 13-14 to close the valve 9 and open the valve 17.

During the rotation of the valve 9 the agitator rods 18 are turned about the axis of the stem 10 and thereby keep the powder loose so that the same will freely flow between the bottom of the container 3 and the valve 17 and over the valve 9 and through the discharge passageway 6.

What I claim is:

1. A powder-dispensing device comprising a container having a discharge opening, a valve for closing the discharge opening, said valve having a stem mounted for compound turning and endwise movement to operate the valve, a relatively fixed sleeve through which the stem loosely extends axially, said sleeve having a spiral cam groove, a cam stud on the stem and extending into the cam groove, a coiled spring encircling the stem with one of its ends anchored and its other end connected to the stem and normally holding the valve closed, said spring being arranged to be tensioned by the opening of the valve, and means by which the valve stem may be turned to cause the cam stem to move in the cam slot in a direction to move the stem endwise and open the valve.

2. A powder-dispensing device comprising a container having in its bottom a discharge passageway, upper and lower internal axially aligned guides, one of which has a spiral cam slot, a valve for closing the discharge passageway and having a stem loosely extending through the guides with freedom for end-

wise and turning movements, a cam pin on the valve stem extending into the cam slot, a coiled spring encircling the stem between the guides anchored to one thereof and attached to the stem, said spring normally holding the valve closed and arranged to be tensioned by the opening of the valve, and a handle on the valve by which it may be turned.

In testimony whereof I affix my signature.

OLAV WALLO.

70

75

80

85

90

95

100

105

110

115

120

125

130