This invention relates to a material container from which the material is fed by gravity into a complemental receiver. The container embodying the improved dispensing hopper constituting the principal subject matter of the instant presentation;

Figure 2 is what may be called a side elevation of the same, that is a view in which the observer sees the construction of Fig. 1 in a direction right from left;

Figure 3 is a view of a fragmentary type and in section and elevation taken on the plane of the vertical line 3—3 of Figure 1 looking in the direction of the arrows;

Figure 4 is a view at right angles taken on the line 4—4 of Figure 3;

Figure 5 is a horizontal section on the line 5—5 of Figure 2;

Figures 6, 7 and 8 are diagrammatic views showing the manner in which the valve operating knob or hand wheel may be adjusted to assist in regulating the degree of rotation of said hand wheel.

Refering now to the drawings with the aid of reference numerals it will be seen that the container may be specifically described as a jar, bottle or the like which is preferably of transparent material, the same being here denoted by the numeral 10. It has a screw threaded neck 12 which is screwed into the threads provided therefor in the annular wall or rim portion 14 of the screw cap 16. The screw cap is here more specifically treated as a receiving and dispensing hopper and the domical portion 18 defines a partly-spherical bowl 20 in which the granular or other material (not detailed) is delivered for valued dispensing. The spout or neck, which may be said to be depending in respect to the central or crown portion of the dome 18, is denoted by the numeral 22 and this has a restricted open-ended axial passage 24, by way of which the granular material, if it be soap powder for example, may be delivered into the palm of the hand of the user by simply holding the hand underneath of the neck in a well known manner. Part of the neck, that is where it joins with the domical portion, is hollowed out to provide a substantially spherical well or pocket 26. It is in this pocket that the bladed valve 28 is confined for operation. The valve is made up of equidistant circumferentially spaced substantially semi-circular flat faced blades 28 mounted on a hub which is in turn mounted on an oscillatory shaft 32. The shaft is mounted for angular rotation in bearing means 34 as perhaps best shown in Fig. 3. One end of the shaft, the left hand end in Fig. 3, extends beyond an adjacent face of the bowl-like portion of the hopper where it is provided with an operating hand wheel or knob 36. This is held in place by a setscrew or the like 38 and it is a disk-like plate, the margin of which is serrated with the serrations 40 providing nodular-like finger grips. This makes it handy and convenient to turn the wheel back and forth in an obvious manner. As before touched upon the wall portion of the hopper adjacent to what may be called the inward side of the hand wheel is provided with a segmental member 42 which is shown perhaps best in Figs. 6, 7 and 8 and has a surface portion thereof hollowed out as at 44, at opposite ends of which are radial stop shoulders 46 and 48. The cooperating surface of the hand wheel is provided with a check lug 50 which under normal circumstances is arranged in the recess 44 and swings back and forth in the direction of the arrows in Fig. 6 as permitted by the limiting shoulders 46 and 48. By removing the hand wheel 36 and turning it upside-down but keeping the check lug 50 still on the inside the latter lug may now be caused to swing to an approximate half circle of 180° engaging the lower edges of the segmental member 42 which then function as additional shoulders 52 and 54. In fact it is within the purview of the invention to remove the hand wheel entirely and turn it over completely so that the lug is then on what may be called the outside surface as shown in Fig. 8 whereupon the turning of the hand wheel...
is unrestricted, that is, it may be turned through a 360° circle. In any event the oscillatory shaft on which the wheel is mounted turns in a manner to correspond with the operation of the wheel and the valve.  

A hopper or screw cap is constructed and lends itself to manufacture from commercial plastics of an appropriate grade and makes it practical to provide a convenient shank 56 on one side which radiates therefrom and is formed with a suitably shaped head 58 to be releasably engaged in a bracket 60 fastened at 62 to a wall or other support surface 64 all as perhaps best brought out in Figs. 2 and 5. The wall bracket and attaching means is of no particular patentable significance in the instant presentation, the novelty having to do with the valve 28 operating in the confining pocket 26 between the neck 22 and space 20 in conjunction with the sector-shaper member 42 with the shoulders and the cooperating hand wheel with the stop lug coating with the shoulders.  

Briefly with this invention any ordinary glass jar may be used and the contents are visible. The screw cap may be made of plastic and, in fact, the wall bracket may be made a part of the screw cap if desired. The three positions of the swivel knob make it possible to procure any desired regulation of the flow of the material from the hopper by way of the discharge neck into one’s hand or other receptacle. Assuming that the check lug 59 has the shape of a segment of 10° when it revolves in the space 44 of 100°, the stroke of the swivel knob will be equivalent to one-fourth (90°) of a complete stroke of said swivel knob. If the swivel knob is turned down (Fig. 7) so that the check lug revolves in the lower side of the semi-circle, the stroke of the swivel knob will be equivalent to one-half (180°) of a complete stroke of said swivel knob. If the position of the swivel knob is reversed, the stop will have complete freedom of motion having a 100% rotation.  

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed is as new is as follows:

For use in conjunction with a container having a screw-threaded neck, a dispensing-type screw cap attachable to said neck and having a body portion provided with bearings and a concavo-convex domical portion defining a hopper, said domical portion being centrally apertured and having a registering pouring neck, and also having an exteriorly positioned segmental member having a vertical surface formed with spaced stop shoulders, a shaft mounted for oscillation in said bearings, a portion of said shaft spanning the passage in said neck, an agitating valve located in the passage in said neck and fixed to said shaft, and a hand-grip carried by one end of said shaft and having an inward vertical face opposed in spaced parallelism to the complementary vertical surface of said segmental member and provided with a single eccentrically positioned outstanding check-lug swingable back and forth in the space between and selectively engageable with said shoulders, the portion of said neck where it merges with the bottom of said hopper provided with a pocket-like recess communicatively allined with said passage in which the blades of the valve are confined for operation, and said body portion being provided at a place diametrically opposite to said hand wheel with means whereby said body portion may be bracketed on a wall or an equivalent fixed support member.

References Cited in the file of this patent

**UNITED STATES PATENTS**

1,022,774  De Julio ------------ Apr. 9, 1912
1,165,508  Irish -------------- Dec. 28, 1915
2,064,719  Baldwin ------------ Dec. 15, 1936
2,575,967  May -------------- Nov. 20, 1951
2,740,562  Bello -------------- Apr. 3, 1956
464,357  Canada -------------- Apr. 11, 1950

**FOREIGN PATENTS**

464,357  Canada -------------- Apr. 11, 1950