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H. GESSLER

MEASURED SUGAR DISPENSER

Filed Jan. 22. 1924

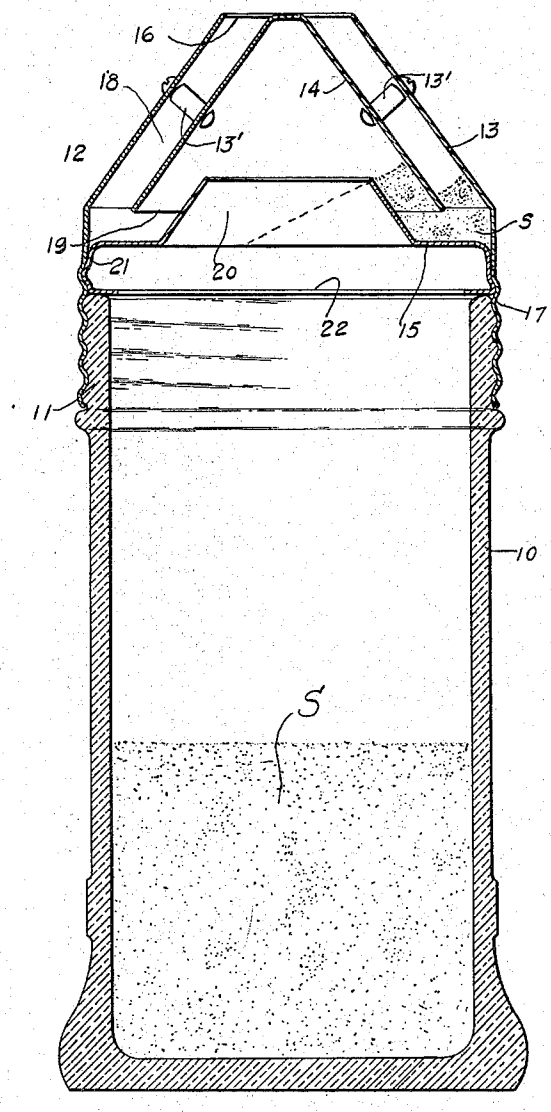

FIG. 1

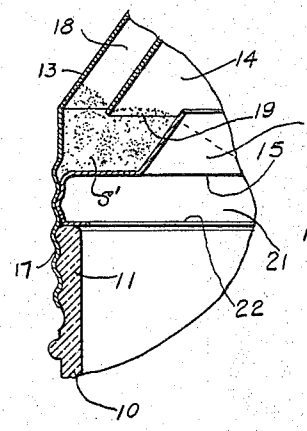

FIG. 3

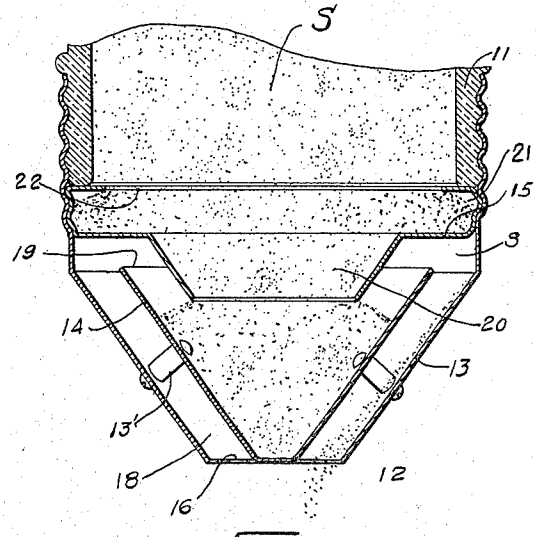

FIG. 2

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UNITED STATES PATENT OFFICE.

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MEASURED-SUGAR DISPENSER.

Application filed January 22, 1924. Serial No. 687,683.

To all whom it may concern:

Be it known that I, HARRY GESSLER, a citizen of the United States, residing at New York city, borough of Manhattan, in the county of New York and State of New York, have invented certain new and useful Improvements in Measured-Sugar Dispensers, of which the following is a specification.

This invention relates to dispensing receptacles or containers and has particular reference to such containers intended for use for dispensing measured quantities of bulk, granulated, or pulverulent commodities such as sugar or the like.

Among the objects of the invention is to provide a dispensing device of the nature indicated that will deliver substantially precise measured quantities of the commodity irrespective of the variations in the manipulation of the device incident to the use thereof by different individuals who may manipulate the container in various ways, to different degrees of inclination, at various speeds, or the like.

A further object of the invention is to provide a container for sugar that will be of a most sanitary nature, one that is practically dust-proof, and into which it will be impossible for various users to insert their spoons for withdrawing sugar and also one that is adapted for use in either hand and when grasped from any direction, inasmuch as the construction is perfectly symmetrical as to its vertical axis and so will deliver irrespective of the direction in which it may be tilted.

A still further object of the invention is to provide a construction for dispensing quantities of sugar of variable volumes according to the desire of the management or owner and for the adjustment to be effected in the most simple, cheap, and reliable physical manner.

With the foregoing and other objects in view the invention consists in the arrangement and combination of parts hereinafter described and claimed, and while the invention is not restricted to the exact details of construction disclosed or suggested herein, still for the purpose of illustrating a practical embodiment thereof reference is had to the accompanying drawings, in which like reference characters designate the same parts in the several views, and in which—

Figure 1 is a vertical sectional view of a preferred embodiment of the invention in normal upright position and with the volume adjusting device adjusted for a minimum discharge.

Fig. 2 is a view of the same mechanism inverted, one charge being delivered and another charge being directed toward the volume adjusting device.

Fig. 3 is a fragmentary detail view corresponding to Fig. 1, but showing an adjusted position of the volume adjusting device for the discharge of a larger quantity of sugar.

Referring now more specifically to the drawings 1 shows a container 10 of any suitable composition, size, or design, but indicated as of glass and having a threaded open end or neck 11. Otherwise the container is solid or imperforate and hence adapted to be filled only through the threaded neck.

Fitted upon and normally closing said container and neck is a top 12 made preferably of sheet material such as metal and comprising three principal parts as follows which are relatively easily constructed and assembled: A discharge member or nozzle 13, a baffle member 14, and a volume adjusting member or device 15. In the usual practice of this invention these three parts of the top are permanently connected to one another and are removable as a unit from the container when the latter is being filled.

The discharge member or nozzle 13 is shown as of frusto-conical form and having an outlet 16 at its upper end while the lower portion or base is in the nature of a flange 17 having an internal or female thread for direct co-operation with the threaded neck 11.

The baffle member may be of any suitable design but is shown as in the nature of a conical cup inverted within the nozzle and held in fixed spaced relation thereto by means of studs or spacers 13', thus providing an annular discharge space 18 between the nozzle and the baffle. The rim 19 of the baffle is located preferably at about the plane of the union between the threaded base 17 and the tapered discharge nozzle.

The volume adjusting device 15 may be described broadly as comprising a flat horizontal ring, or body portion from which there extends upward from its center a cut-off flange 20 of frusto-conical form as shown and having its cut-off edge extended within the cup-shaped baffle and hence above the

plane of the rim 19 and similarly equally spaced from all points of the rim. Extending downward from the ring or body portion of the volume adjusting device is a flange portion 21 provided with an outside or male thread adapted to co-operate directly with the threaded base 17. The lower portion of this flange may be flanged inward at 22 so as to serve not only as a better means for grasping and manipulating the volume adjusting device for assemblage and adjustment, but also as a positive stop against which the edge of the neck of the container is caused to abut when the top is screwed upon the container.

The device assembled and adjusted as shown in Figs. 1 and 2 will deliver a predetermined fixed and minimum quantity of the material, the measure of such quantity being the capacity of the space between the rim 19 of the baffle, the upper portion of the vertical base, and that part of the body of the volume adjusting device 15 lying outside the downward projection of the rim 19 thereon, this space and measure quantity being indicated at *s* in Fig. 1 and *s'* in Fig. 3. While that portion of material shown at *s* or *s'*, Figs. 1 and 3, will flow out through the nozzle at the next turn, that portion lying between the rim 19 and the cutoff flange 20 will not be discharged but will flow back again into the baffle cup. This is why a substantially uniform discharge is always obtained irrespective of the speed or degree of inversion of the container. Furthermore, it must be remembered that in the extensive use of these devices in public lunch rooms, hotels, and restaurants, the successive manipulations of a single device are performed usually by different persons, who, having different personal equations, manipulate the device not only in different directions but at different speeds and to various angles. It is to be observed also that each user leaves a measured charge to be delivered by the next person who tilts the container.

The baffle 14, as a cup, is in no sense a measuring device, and hence it has no bearing upon the charge measured except as its rim 19 may influence the charge in co-operation with the annulus or real volume adjusting member 15.

In assemblage the cup is fixed within the nozzle as indicated in the factory, and the volume adjusting device is inserted through the larger open end of the base, being screwed upward as far as desired toward the baffle. When adjusted for minimum discharge the member 15 will be turned snugly up against the end of the thread near the upper end of the base 17. Preferably the parts 13 and 15 are connected by a fairly tight thread so wherever the member 15 is adjusted it will remain until it is positively moved for a different adjustment. The container being supplied with sugar S the top will be screwed upon the neck in an obvious manner, the end of the neck coming snugly against the flange 22, locking all parts in operative position.

In operation, for the delivery of a measured quantity of sugar the container will be inverted or suitably inclined to cause the baffle cup to be filled substantially as shown in Fig. 2, but because it is a baffle and prevents direct discharge of the sugar none will be discharged as a result of the first tipping or inclination of the device. When, however, the container is brought again to or toward erect position a certain predetermined quantity of the sugar will be caught and retained in the space *s* ready for direct delivery through the space 18 when the device is again tilted. This measured quantity of sugar caught in the measuring space will presumably always be retained therein after once being supplied so that any user of the dispensing device will always be able to secure directly the desired quantity upon tilting the container. I wish to emphasize that as a result of extensive experience in the practice of this device I have found that there is barely any variation in the amount of sugar dispensed, with the volume adjusting device in fixed adjustment, irrespective of whether the tilting is done slowly or rapidly or according to the degree of inclination thereof. For instance, if the device is tilted slowly back from the position of Fig. 2 to that of Fig. 1, the measured quantity will be as shown in Fig. 1, all at one side. If, however, the user should return the device quickly to its erect position, the bulk of the material in the cup of Fig. 2 would be returned in bulk directly downward through the cut-off flange 20 and so the measured quantity of the commodity would be that portion of the sugar in the annular space surrounding the cut-off flange and all of this, or practically all of it, would be received directly upon the top of the volume adjusting member and be held in the form of a ring in the space *s*, ready for discharge through the space 18 when the device is again tilted for discharging. In all cases the quantity of sugar dispensed will be more uniform than if it were being dipped from an open bowl by the use of spoons in the hands of different people. The delivery of the sugar is not only reliable as to quantity but very prompt as to action, the pouring spaces being sufficiently large for free flow at all times.

From Fig. 3 it is plain that by lowering the volume adjusting device 15 with respect to the rim 19 of the cup the measuring space *s'* is accordingly enlarged while the action or mode of operation remains unchanged. The male and female threads between the

parts 15 and 17 afford therefore not only a cheap and easy manner of construction and assemblage of the parts but also a most satisfactory means for variation of the delivery capacity.

I claim:

1. A container, a discharge member attached thereto by means of threads, a baffle located within the discharge member, and a volume adjusting device attached to the discharge member by means of threads, the discharge member being threaded to the container and the volume adjusting device riding upon a continuation of the same threads, whereby the volume adjusting device is locked in position by the screwing of the discharge member upon the container and the volume of the discharge from the container is regulated.

2. A container having a neck, a discharge member, attached to the neck, a volume adjusting device within the discharge member and located wholly above the container neck, said volume adjusting device comprising a horizontal support for the material measured and having an inner upwardly directed cutoff flange providing a freely open center, and a baffle member of inverted cup formation located between the volume. adjusting device support and the upper end of the discharge member and within the rim of which baffle member the flange aforesaid projects in spaced relation, the measure of the material being dispensed being determined by the capacity of the space between the support and the rim and outside the downward projection of said rim upon said support.

In testimony whereof I affix my signature.

HARRY GESSLER.