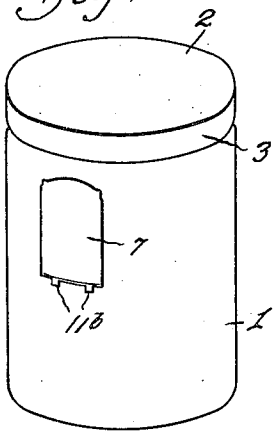
Oct. 22, 1935. J. B. MYERS 2,018,278

MEASURING AND DISPENSING CONTAINER

Filed Feb. 5, 1935

Fig. 1



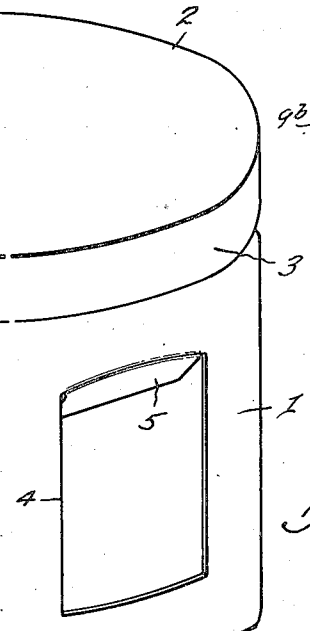


Fig. 2

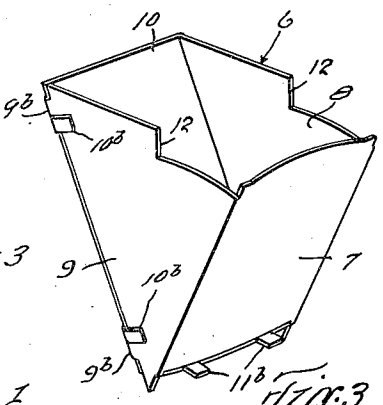


Fig. 3

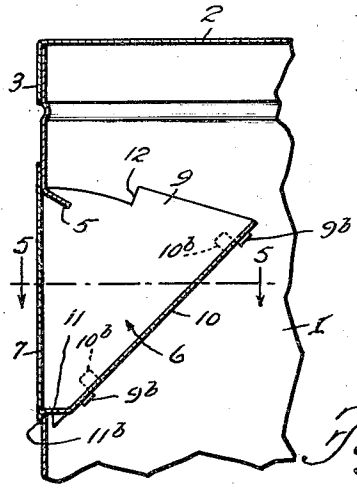


Fig. 4

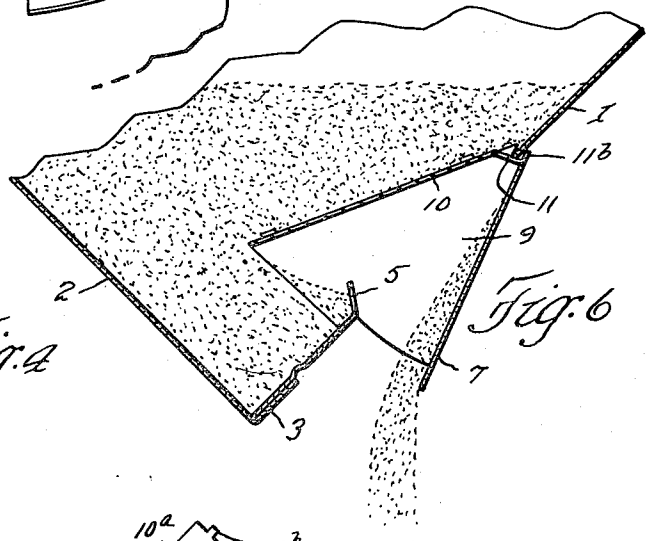


Fig. 6

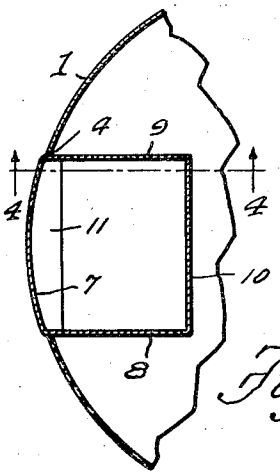


Fig. 5

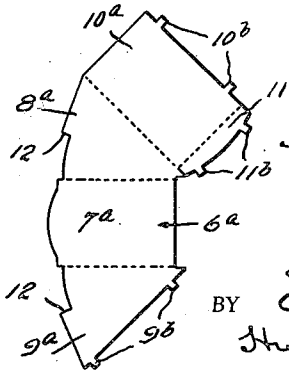


Fig. 7

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MEASURING AND DISPENSING CONTAINER

John B. Myers, Lakewood, Ohio

Application February 5, 1935, Serial No. 5,075

8 Claims. (Cl. 221—98)

This invention relates to improvements in measuring and dispensing containers.

The general purpose of the invention is to produce a simple and inexpensive container incorporating means by which measured quantities of the contents may be conveniently dispensed, said means automatically responding to the inversion or tilting of the container as it occurs in the natural pouring operation, the dispensed quantities being measured with a degree of accuracy sufficient for all practical purposes.

The invention is intended especially for household use, although it is not necessarily limited to this purpose, and provides a container in which commodities whose bulk is made up of small particles, such as ground coffee, or other granular material, may be kept for protection and proper preservation and at the same time readily accessible.

More limitedly, the invention has for its object the production of a container having a discharge opening in one of its walls, preferably its side wall, and within which opening is supported for free rocking movement a measuring receptacle which serves as a closure for said opening when in normal position, and as a discharge spout when the container is tilted or inverted in the pouring operation, the receptacle gravitating to normal position as the container resumes upright position.

A further object is to construct the measuring receptacle of a single piece of sheet metal, folded to give it the proper shape, and held in such condition by integral interlocking parts; and to retain the receptacle within the discharge opening of the container for free swinging movement by cooperating parts of the receptacle and container wall, there being no other means of connection between the vessel and the container. These features contribute to simplicity and economy, facilitate assembly, and insure the freedom of movement of the receptacle essential to its automatic operation.

Additional objects and advantages will appear as I proceed to describe the invention by reference to the accompanying drawing wherein Fig. 1 is a perspective view of a container incorporating my improvements; Fig. 2 is a perspective view on a somewhat larger scale of the portion of the container in the region of the discharge opening; Fig. 3 is a similar view of the measuring receptacle; Fig. 4 is a fragmentary sectional side elevation of the container on the line 4—4 of Fig. 5, showing the measuring receptacle in normal position with its front closing the discharge opening; Fig. 5 is a sectional detail on the line 5—5 of Fig. 4; Fig. 6 is a fragmentary sectional view of the container tilted as in a pouring operation, showing the measuring receptacle in dispensing position, and Fig. 7 is a view of the blank from which the dispensing receptacle is formed.

As herein illustrated, the container 1 is cylindrical and may consist of a tin can, the same being provided with a cover 2 that is held to the container preferably by frictional engagement of its peripheral flange 3 with the top portion of the container, although other well known expedients may be employed for holding the cover in place.

A discharge opening 4, rectangular in shape, is made in the peripheral wall of the container a suitable distance below the upper edge thereof, and when the same is formed, a part 5 is left along the top, the lateral edges of which part are spaced from the adjacent sides of the opening. The part 5 is bent inwardly at an obtuse angle to the plane of the wall for a purpose which will hereinafter appear.

Occupying the discharge opening 4 is the measuring receptacle 6 composed of a front wall 7, side walls 8 and 9, rear wall 10, and a relatively narrow bottom wall 11. Fig. 7 shows the blank, designated 6^a, from which the measuring receptacle is formed, the parts corresponding to the various walls thereof being designated by the same numerals, augmented by the exponent *a*. When the blank is folded on the dotted lines, so that the portions 8^a and 9^a are at right angles to the portion 7^a, and the portion 10^a is disposed at right angles to the part 8^a, the free edges of the parts 9^a and 10^a meet; and the lugs 10^b are then turned over against the part 9^a and the lugs 9^b folded about the adjacent portions of the part 10^a, to retain the parts in proper relation. The part 11^a is then bent forwardly so that its curved forward edge meets the lower edge of the part 7^a, which part 7^a is transversely curved approximately on the radius of the cylindrical wall of the container 1. Lugs 11^b project from the aforesaid edge of the part 11^a and when the vessel is formed in the manner described, these lugs are extended forwardly at right angles to the front wall 7. It will be observed that the lower corners of the generally triangular side walls 8 and 9 extend an appreciable distance below the bottom wall 11, and the forward top edge portions of said walls 8 and 9 are curved on a radius which has for its center the forward underneath side of the bottom wall 11, the distance between the underside of said bottom wall and said curved edge portions of

the side walls being very slightly less than the vertical dimension of the discharge opening 4. By reason of this, when the vessel 6 is set within the opening so that its bottom wall rests upon the lower edge thereof, the curved edges of the walls 8 and 9 occupy the notches formed between the ends of the part 5 and the adjacent portions of the sides of the opening 4.

In assembling the parts consisting respectively of the container 1 and the receptacle 6, the latter is engaged through the opening 4 from inside the container with its upper front portion in advance of its lower portion. When the receptacle is lifted relative to the container and its bottom wall 11 is engaged through the opening so that the lower extended corners of the side walls abut the inner side of the container wall, the lugs 11b are turned downwardly in the plane of the wall 7a. The spacing of said lugs from the extended corners of the side walls is such as to permit a limited movement of the receptacle radially of the container, as will be apparent from Fig. 5. The side walls 8 and 9 of the receptacle 6 are sufficiently close to the side edges of the opening 4 as to prevent egress of material through the cracks between the two, although there must be sufficient clearance to permit freedom of movement of the receptacle in the opening. Rearwardly of the curved upper edge portions of the side walls 8 and 9, said walls rise somewhat to form stops 12 that are arranged to engage the inner side of the container wall to limit the outward movement of the receptacle 6.

With the parts formed and assembled as described, and with a quantity of granular material within the container and the cover 2 applied, the container may be tilted to the position shown in Fig. 6 at which time the granular material shifts downwardly about the receptacle 6 with a quantity of it accumulated between the open top of the receptacle and the lid 2. When the container is subsequently returned to upright position, the material above the receptacle drops into the latter and in so doing adds its weight to that of the receptacle, insuring the receptacle falling back to normal position with its front 7 closing the discharge opening 4. Now when the container is again tilted or inverted in a pouring operation, the quantity of material that had been deposited in the receptacle 6 is discharged therefrom through the spout formed by the forward portion of the receptacle, and simultaneously a fresh supply of material accumulates between the open top of the receptacle and the cover 2 whence it drops into the receptacle when the container is returned to upright position. The part 5 serves to prevent premature discharge of the material from above the receptacle during the reversal of the container.

Thus it will be seen that my invention provides a measuring and dispensing container that is relatively cheap, simple and reliable, which may be manufactured and sold as a household article for preserving and dispensing coffee or the like, or it may be used by distributors of coffee or other commodities as a package in which their goods are sold, in which case a label may be placed about the container or, at least, over the front of the receptacle for sealing the container while the goods are in stock, such label, or a portion of it, to be removed from the region of the measuring receptacle when the container is to be placed in readiness for use.

Having thus described my invention, what I claim is:

1. In combination, a container for granular material or similar commodity, the same having an opening in its wall, and an open top measuring and dispensing receptacle sustained for free swinging movement within said opening, the receptacle overbalancing inwardly when the container is upright, and having a front that closes said opening, the receptacle swinging outwardly by gravity when the container is tilted in a pouring operation, and means limiting the outward movement of the receptacle to considerably less than the inward and outward dimension of the receptacle thereby to simultaneously form a spout of its outer portion and a receiver for a fresh charge of material of its inner portion during each pouring operation.

2. In combination, a container for granular material or similar commodity, the same having an opening in its wall, and an open top measuring and dispensing receptacle sustained for free swinging movement within said opening by cooperating parts of the receptacle and wall, the receptacle overbalancing inwardly when the container is upright, and having a front that closes said opening, the receptacle swinging outwardly by gravity when the container is tilted in a pouring operation, the receptacle having a stop arranged to engage the container wall for limiting the outward movement of the receptacle to considerably less than the inward and outward dimension thereof so as to simultaneously form a spout of its outer portion and a receiver for a fresh charge of material of its inner portion during each pouring operation.

3. In combination, a container for granular material or similar commodity, the same having an opening in its wall, and an open top measuring and dispensing receptacle sustained for free swinging movement within said opening, the wall having a part that extends downwardly and inwardly within the top of the receptacle, the receptacle overbalancing inwardly when the container is upright and having a front that closes said opening, the receptacle swinging outwardly by gravity when the container is tilted in a pouring operation, and means limiting the outward movement of the receptacle to considerably less than the inward and outward dimension of the receptacle thereby to simultaneously form a spout of its outer portion and a receiver for a fresh charge of material of its inner portion during each pouring operation.

4. In combination, a container for granular material or similar commodity, the same having an opening in its wall, and an open top measuring and dispensing receptacle sustained for free swinging movement within said opening by cooperating parts of the receptacle and wall, the receptacle overbalancing inwardly when the container is upright and having a front that closes said opening, the top of said front contacting with the wall to limit the inward movement of the receptacle, the receptacle swinging outwardly by gravity when the container is tilted in a pouring operation, the side walls of the receptacle being parallel with and operating in close proximity to the sides of the aforesaid opening and having parts intermediate their front and rear top edges for contacting the wall to limit the outward movement of the receptacle to considerably less than the inward and outward dimension of the receptacle thereby to simultaneously form a spout of its outer portion and a receiver for a fresh charge of material of its inner portion during each operation.

5. In combination, a container for granular material or similar commodity, the same having an opening in its wall, an open top measuring and dispensing receptacle sustained for free swinging movement within said opening by the bearing of its bottom wall upon the adjacent edge of the opening and having projections for retaining said wall upon said edge, the receptacle being restrained from appreciable vertical movement by the engagement of its top with the corresponding edge of the opening, the receptacle overbalancing inwardly when the container is upright and having a front for closing the aforesaid opening and whose top portion engages the container wall to limit the inward swinging movement of the receptacle, the receptacle swinging outwardly by gravity when the container is tilted in a pouring operation, the upper edges of the side walls of the receptacle having stops for engagement with the inner side of the container wall to limit the outward movement of the receptacle to less than its inward and outward dimension thereby to simultaneously form a spout of its outer portion and a receiver for a fresh charge of material of its inner portion during each pouring operation.

6. In combination, a container for granular material or similar commodity, the same having a rectangular opening in its wall, and an open top measuring and dispensing receptacle swingably supported in said opening and having substantially rectangular front and rear walls and side walls that are parallel with and operate in close proximity to the sides of the opening, the bottom wall of the receptacle resting upon the adjacent edge of the opening, the side walls having top edge portions curving inwardly from the front wall of the receptacle on a radius having its center at approximately the bottom of the receptacle and slightly less than the vertical dimension of the opening, the side walls having downward extensions on the inner side of the container wall and the receptacle having lugs depending from its forward portion outwardly of the container wall thereby to prevent dislodgment of the bottom wall of the receptacle from the aforesaid edge of the opening, the receptacle overbalancing inwardly when the container is upright and having a front that closes said opening, the top portion of said front engaging the container wall to limit inward movement of the receptacle, the receptacle swinging outwardly by gravity when the container is tilted in a pouring operation, the top edges of the side walls of the receptacle being elevated rearwardly of the aforesaid curved portions thereby to provide stops that engage the container wall for limiting outward movement of the receptacle to less than its inward and outward dimension so as to simultaneously form a spout of the outer portion of the receptacle and a receiver for a fresh charge of material of its inner portion during each pouring operation.

7. In combination, a container for granular material or similar commodity, the same having a rectangular opening in its wall, and an open top measuring and dispensing receptacle occupying said opening, said receptacle comprising substantially rectangular front and rear walls and a bottom wall connecting the lower edges of the front and rear walls, together with generally triangular side walls whose points extend below the bottom wall, the bottom wall bearing upon the adjacent edge of the aforesaid opening and having lugs turned downwardly on the outer side thereof while the aforesaid points of the side walls are disposed inwardly of said edge, the side walls of the receptacle having arcuate edge portions extending from the front wall to a point intermediate the front and rear walls of the receptacle, said arcuate portions being curved on a radius having its center contiguous to the bottom of the receptacle and corresponding in length with the approximate size of the aforesaid opening, the side walls of the receptacle rearwardly of said arcuate portions extending above said portions to form stops for limiting outward movement of the receptacle while inward movement of the receptacle is arrested by the engagement of the upper edge of the front wall of the receptacle with the container wall.

8. In combination, a container for granular material or similar commodity, the same having a rectangular opening in its wall, and an open top measuring and dispensing receptacle sustained within said opening for free swinging movement by engagement of the bottom of the receptacle with the adjacent edge of the opening, said receptacle being constructed of a single piece of sheet metal cut and formed to produce substantially rectangular front and rear walls, generally triangular side walls, and a bottom wall inset from the lower pointed ends of the side walls, said pointed ends being disposed inwardly of the container wall, the bottom wall having lugs disposed outwardly of said container wall, the parts of the receptacle being secured in proper relation to one another by integral interlocking parts, the upper edges of the side walls being curved rearwardly from the front wall for engagement with the top of the opening thereby to prevent dislodgment of the bottom wall of the receptacle from the aforesaid edge of the opening, the front and the side walls of the receptacle rising above said curved portions thereby to form stops for limiting the swinging movement of the receptacle.

JOHN B. MYERS.