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A. H. HERRON & H. W. WICHMAN.

DISPENSING AND MEASURING APPARATUS.

(Application filed June 2, 1899.)

(No Model.)

Fig. 1.

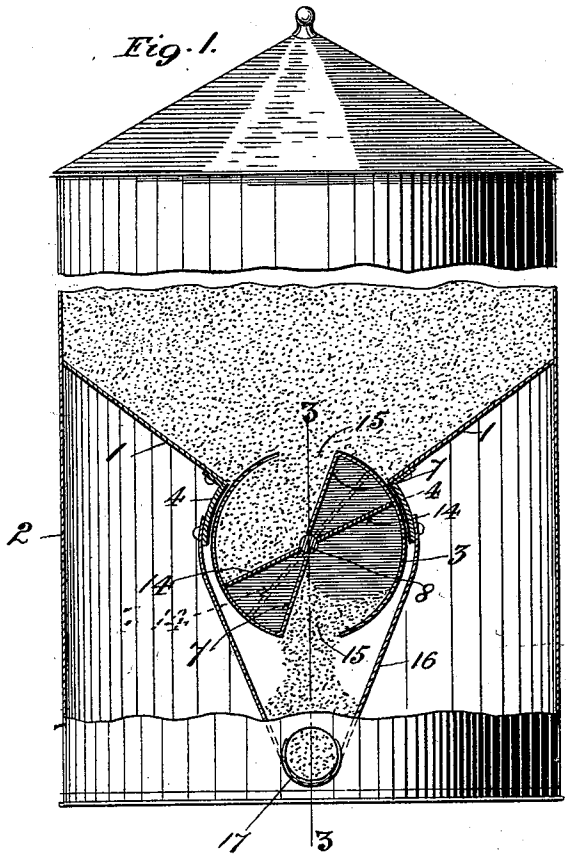


Fig. 2.

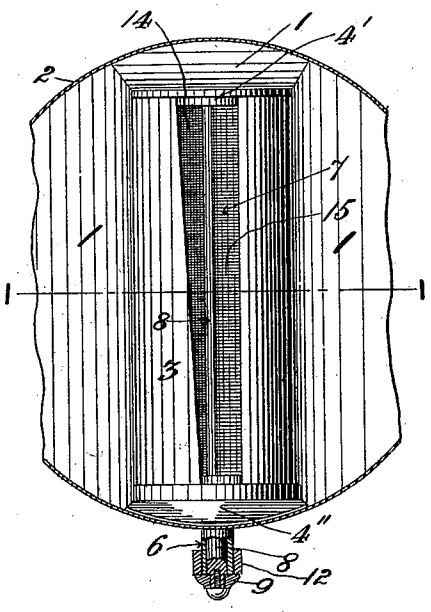


Fig. 3.

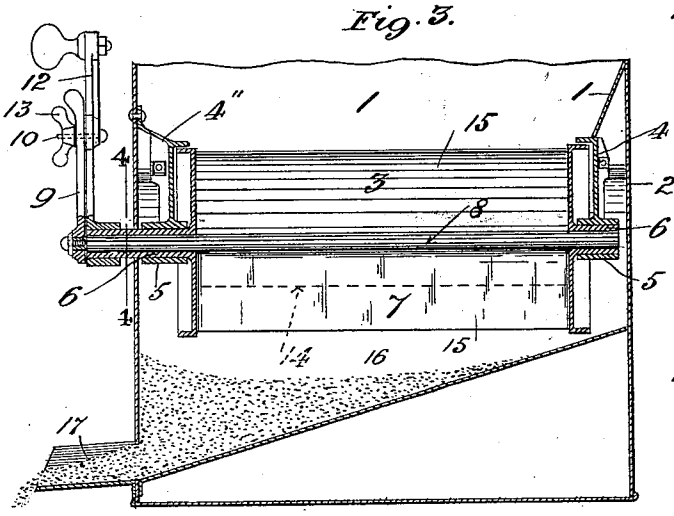


Fig. 4.

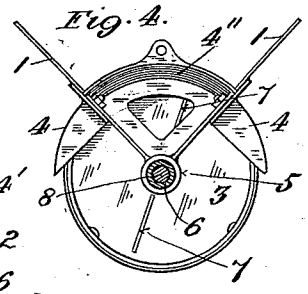
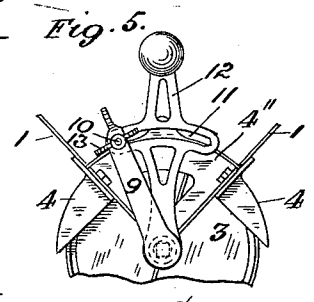


Fig. 5.



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DISPENSING AND MEASURING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 647,965, dated April 24, 1900.

Application filed June 2, 1899. Serial No. 719,111. (No model.)

To all whom it may concern:

Be it known that we, AL H. HERRON and HERMAN W. WICHMAN, citizens of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Dispensing Apparatus for Grocers' and Similar Bins, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention has relation to improvements in dispensing attachments for grocers' and other bins; and it consists in the novel arrangement and combination of parts more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a transverse section taken through the weighing-cylinder on line 1 1 of Fig. 2, the bin being shown broken away. Fig. 2 is a top plan of the device, showing the bin partly broken away and the cover thereof removed and showing also certain details in section. Fig. 3 is a longitudinal section taken through the weighing-cylinder on line 3 3 of Fig. 1. Fig. 4 is a section on line 4 4 of Fig. 3, showing a front end view of the hopper-frame by which the cylinder is carried; and Fig. 5 is a front end view of the frame and cylinder attached.

The object of our invention is to provide grocers' bins with a dispensing attachment which will deliver a predetermined weight of coffee, tea, or other commodity to the customer direct from the bin without the necessity of weighing the same, thereby doing away with the use of scoops, scales, weights, and the like, as will more fully appear from a detailed description of the device, which is as follows:

Referring to the drawings, 1 represents the inclined walls of a hopper supported within an ordinary grocer's bin 2, the base of the hopper terminating in a sectional frame, by which the rotatable hollow weighing-cylinder 3 is directly supported. The hopper-frame is formed of the longitudinal members 4, to which the lower edges of the side hopper-walls are directly secured and from which they flare outwardly, and the rear and front members 4′ 4″, respectively. The member 4′ has secured thereto the lower edge of the rear inclined wall of the hopper, (see Figs. 2 and 3,) the front member 4″ being directly secured to the wall of the bin. The end members 4′ 4″ of the hopper-frame are provided with hollow bearings 5, within which the terminal hollow gudgeons or bosses 6 of the cylinder 3 are adapted to rotate. The heads of the cylinder have fitted therein the opposite ends of suitable division plates or walls 7 7, which are disposed in the same plane and together serve to divide the interior of the cylinder into two equal longitudinal compartments. The width of the plates 7 is such as to bring their inner longitudinal edges in close proximity to an axially-disposed rotatable rod 8, whose opposite ends are mounted within the hollow bosses of the cylinder, the forward polygonal end of said rod being extended outwardly beyond the end of the front boss, said polygonal end having secured thereto an arm 9, the free end of which is provided with a bolt 10, whose smooth portion travels in a curved slot 11, formed in the handle 12, which is rigidly secured to the forward extension of the front boss of the cylinder, the screw-threaded portion of the bolt carrying a tightening-nut 13, by which the arm 9 may be clamped to the handle 12 when the parts are once properly adjusted.

Secured to the rod 8 are wings 14, which are adapted to sweep along the interior peripheral and terminal surfaces or walls of the respective compartments into which the cylinder is divided, the available capacity or volume of the compartments depending on the position of the wings, and when the rod 8 is rotated so as to bring or fold the wings against the division-plates 7 the entire cubical capacity of the respective compartments of the cylinder becomes available. Formed on opposite sides of the common division-wall made by the plates 7 and cut from the peripheral wall of the cylinder are longitudinal openings 15 15, leading directly into the compartments formed by said plates. As best seen in Fig. 2, one longitudinal edge of the opening or mouth 15 is parallel to the axis of

the cylinder, the opposite edge being inclined thereto, making the mouth narrower at the front end of the cylinder, this arrangement enabling the inclined edge to exert a shear cut on the contents of the hopper as said edge passes beyond the hopper during the rotation of the cylinder. As best seen in Fig. 1, the outer edge of each of the plates 7 7 is disposed along that edge of the mouth 15 which is parallel to the cylinder-axis, the cylinder in the operation of the device rotating to the right.

Secured to the longitudinal members of the hopper-frame are inclined plates 16, which are continued at the bottom of the bin along an incline leading directly to the delivery-spout 17 of the bin. It is apparent, of course, that the construction is susceptible of many changes without departing from the spirit of our invention.

The operation will be readily understood from the description. The device is primarily designed for dispensing predetermined weights of coffee, but of course may be used for dispensing any kind of commodity sold by grocers. Different grades and different roasts of coffee have different specific gravities, and it is apparent that the weight of the contents of either cylinder-compartment would depend on the brand of coffee sold. The compartments of the weighing-cylinder may be made to hold one pound of coffee of the lightest specific gravity. If the specific gravity of the coffee is such that a compartment filled therewith would weigh more than a pound, the available volume of the compartment may be correspondingly decreased by adjusting the position of the wings 14. This is accomplished by loosening the tightening-nut 13 and turning the arm 9, to which the wings are secured, sufficiently to cause said wings to correspondingly reduce the available capacity of the compartments of the cylinder. When the wings are once adjusted, the arm 9 is once more clamped to the handle 12 by the tightening-nut, after which the handle and arm move in unison during the rotation of the cylinder. The slot 11 of the operating-handle 12 is of sufficient length to allow for the necessary travel and guidance of the bolt 10 during the sweep of the arm 9 in the adjustment of the wings. When the parts are once adjusted, the cylinder is rotated by the handle 12, and, as seen in Fig. 1, one compartment of the weighing-cylinder discharges as the opposite one is filled.

By the use of the present dispensing apparatus (which may be of any size) predetermined quantities of any commodity may be delivered directly to the customer without the use of scales and weights and without danger of overweight on the part of the grocer. It is of course obvious that we do not limit ourselves to the number of compartments, and while we here make use of two we could use only one or use more than two without departing from the spirit of our invention.

Having described our invention, what we claim is—

1. A dispensing apparatus comprising a hollow rotatable cylinder, division walls or plates disposed in the plane of the axis of rotation thereof and separating the contents of the cylinder into a series of compartments opening outward through the peripheral walls of the cylinder, rotatable wings within the several compartments adapted to sweep between the end walls and peripheral wall of each compartment, means for simultaneously rotating said wings, devices located on the outside of the cylinder for retaining the wings in their adjusted positions, a hopper for feeding the compartments, and a discharge-hopper, substantially as set forth.

2. A dispensing apparatus comprising a hollow rotatable cylinder, division walls or plates disposed in the plane of the axis of rotation thereof and separating the contents of the cylinder into a series of compartments, the latter opening outward through the peripheral walls of the cylinder, one longitudinal side or edge of each opening being inclined to the opposite side, rotatable wings within the several compartments adapted to sweep between the end walls and peripheral wall of the cylinder, means for simultaneously rotating said wings from the outside of the cylinder, and means carried by the end of the cylinder for clamping the wings in their adjusted position, substantially as set forth.

3. A dispensing apparatus comprising a hollow rotatable cylinder, hollow bosses located at the center of each head thereof, division walls or plates forming two equal and separate compartments within the cylinder, the compartments opening outward through the peripheral walls of the cylinder, one longitudinal side or edge of each opening being inclined to the opposite side, a rotatable rod passing axially through the cylinder and through the hollow bosses, wings carried by said rod and sweeping between the end walls and peripheral wall of each compartment, means for rotating said inner rod and thus actuating the wings, from the outside of the cylinder, means for clamping the rod and wings when once adjusted, means for rotating the cylinder, a hopper for feeding the compartments of the cylinder, and a discharge-hopper, the parts operating substantially as and for the purpose set forth.

4. In a dispensing apparatus, a suitable hollow rotatable cylinder, provided with suitable compartments, means for supporting the same, hollow terminal bosses for said cylinder, a rod passing through said bosses, one end of said rod projecting beyond the boss, an arm rigidly secured to said projecting end, a handle secured to the adjacent boss of the cylinder, a curved slot formed in said handle,

a bolt carried by the arm and traveling in said slot, a tightening-nut for said bolt, wings carried by the rod and confined within the cylinder-compartments, mouths or openings leading from the compartments through the peripheral walls of the cylinder, the parts operating substantially as, and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

AL H. HERRON.
HERMAN W. WICHMAN.

Witnesses:
EMIL STAREK,
GEORGE L. BELFRY.