(No Model.)

# L. G. SOUDER.

## MEASURING CAN.

No. 480,146. Patented Aug. 2, 1892.

Fig. 1.

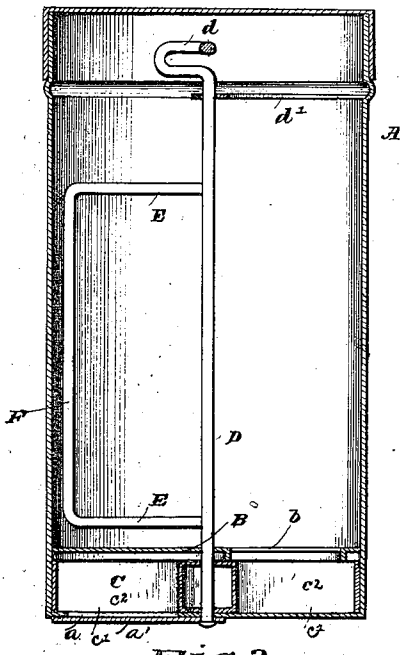



Fig. 2.

Fig. 4.

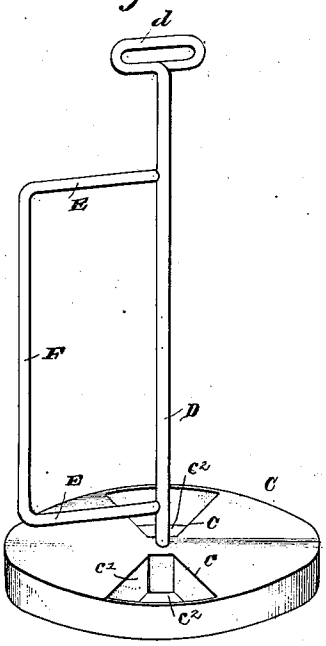
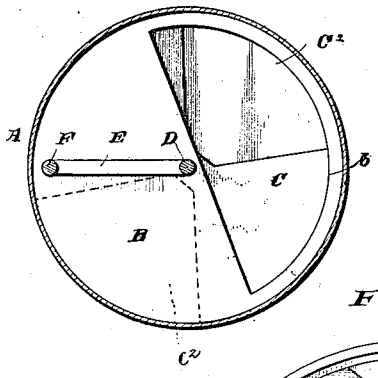



Fig. 3.



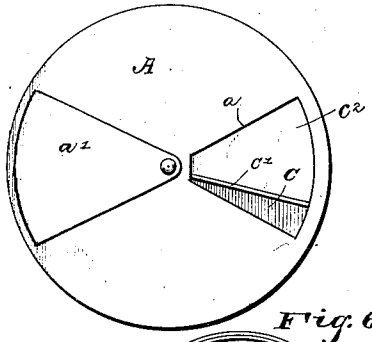




Fig. 5

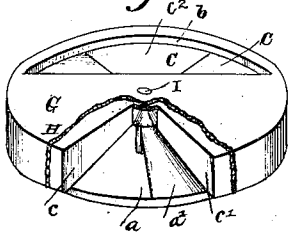
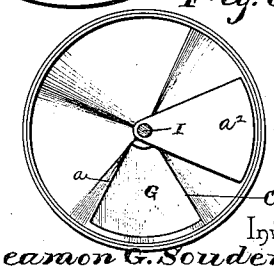



Fig. 6.




Witnesses

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# UNITED STATES PATENT OFFICE.

LEAMON G. SOUDER, OF PHILADELPHIA, PENNSYLVANIA.

## MEASURING-CAN.

SPECIFICATION forming part of Letters Patent No. 480,146, dated August 2, 1892.

Application filed August 18, 1891. Serial No. 403,042. (No model.)

*To all whom it may concern:*

Be it known that I, LEAMON G. SOUDER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Measuring-Can, of which the following is a specification.

My invention relates to measuring cans or canisters; and it has for its object to provide a can of the ordinary construction that while it can be used for shipping the article which it may contain—such as coffee, tea, spices, baking-powder, or similar supplies—and for retailing the same can also at the same time be used for regularly and accurately measuring and discharging therefrom definite quantities of the article which may be inclosed within the can or canister; and with these objects in view the invention consists of an ordinary can or canister provided with measuring and discharging mechanism, which will be hereinafter more fully described, illustrated in the accompanying drawings, and specifically pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a vertical sectional view of a can provided with my invention. Fig. 2 is a central horizontal sectional view of the same. Fig. 3 is a bottom view of a can, illustrating the discharge-outlet thereof with the pivoted gate slid open. Fig. 4 is a detail in perspective of the agitator and measuring-disk. Fig. 5 is a detail in perspective of a modification. Fig. 6 is a bottom view of the modification.

Referring to the accompanying drawings by letter, A designates a cylindrical can of ordinary construction, which is particularly designed for the reception of any powdered or pulverized substances and is provided with a triangularly-shaped discharge-opening *a*, which is normally closed by the gate *a'*, centrally pivoted to the bottom of the can and of the same approximate shape as the discharge-opening referred to. Located a suitable distance from the bottom of the can and within the same is the stationary diaphragm or plate B, rigidly secured therein and provided with the semicircular opening *b*, which is directly opposite the solid portion of the bottom of the can, while the solid portion of said plate or diaphragm is directly opposite the opening in the bottom of the can, and thus unless regulated by the mechanism to be described the material within the can cannot escape and, being inclosed within the can by the ordinary cap, can be shipped and retailed in the ordinary manner within this can.

Within the space inclosed between the bottom of the can and the plate or diaphragm thereover a revolving measuring and regulating disk C is revolubly located. Said disk is provided with angular openings or recesses *c*, formed in opposite sides of the same, and from the edges of which recesses depend the flanges *c'*, following the contour of said recesses, and are of the exact width of the inclosed space between said diaphragm and the bottom of the can, and, besides forming the pockets $c^2$, within which the substance within the can is designed to fall and subsequently be carried to the discharge-opening in the bottom of the can, also serve to space the said disk within the inclosed space, so that the same will snugly and tightly revolve beneath the diaphragm and accurately carry the exact amount, according to the size of the pockets, of the material to said discharge-opening. The pockets thus formed in said disk are of a shape approximating the triangular opening in the bottom of the can and are designed to register therewith and are so arranged that while one pocket in the disk is being filled under the circular opening in the diaphragm or plate within the can the opposite pocket is discharging its contents under the solid portion of said diaphragm or plate and through the discharge-opening in the bottom of the can. An operating-rod D passes through said diaphragm, and the bottom thereof is rigidly connected with the revolving measuring-disk and is designed to operate the same, and extending up through the body of the can terminates in an operating thumb-piece or handle *d*, while the upper end thereof revolves in and is braced by the transverse brace *d'*, secured horizontally across the upper end of the can. The said operating-rod is provided with horizontally-extending arms E, located near the top and bottom thereof between the diaphragm and the bottom of the can and the transverse brace near the top and are connected with the vertical rod F, which as the operating-rod D revolves travels around the inner periphery of the can and scrapes any particles of the inclosed substance that

might have adhered to the sides of the can and also agitates and breaks up any clots or lumps that might have formed, and thus insures the ready filling of the pockets in the revolving disk with the full amount of material for which said pockets are designed to accommodate.

The construction and operation of my invention is now thought to be apparent without further description. Although the construction of the revolving disk has been herein specifically described, it will nevertheless be readily understood that the same may be constructed of a single block of suitable substance and provided with any suitable openings of any suitable size and shape without departing from the spirit of my invention. It can be also readily seen as the operating-rod and scraper are revolved the said measuring-disk will alternately fill up and discharge its pockets of the regulated amount of substance within the can, as has already been fully described. An optional construction or modification of the herein-described measuring device is illustrated in Fig. 5 of the drawings. Instead of having the measuring device constructed in the bottom of the can, the same may be formed in such a manner as to allow for its insertion in the bottom of the can separately, or which may be placed in the top of an ordinary can when the lid is removed, in either event the operation being substantially the same. The modification seen in Figs. 5 and 6 illustrates a cap having a bottom G constructed similarly to and designed to correspond with the diaphragm B, herein described, while the portion of said cap corresponding to the bottom of the can is inwardly concaved, while between the corresponding diaphragm and said bottom is located the revolving disk H, provided with triangular graduated pockets and constructed of such a shape as to revolve under said concaved conical body. An operating-rod I is rigidly connected with said revolving disk and is designed to project through the cone-shaped bottom or disk and out to the edge of the can, by means of which the material within the can may be discharged whether said attachment is secured in the bottom or top of the can.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A measuring-can or other vessel provided with a bottom discharge-opening, a parallel stationary perforated diaphragm located within said can and secured therein so that its perforation or opening lies directly opposite the solid portion of the bottom, and a revolving measuring-disk provided with graduated pockets adapted to revolve between said stationary diaphragm and the bottom of the can, substantially as set forth.

2. A measuring-can or other vessel provided with a bottom triangular discharge-opening, a triangular-pivoted gate inclosing said discharge-opening, a parallel stationary perforated diaphragm located within said can and secured therein so that its perforation or opening lies directly opposite the solid portion of the bottom, a revolving disk provided with opposite angular pockets adapted to register alternately with said discharge-opening and the perforation in said stationary diaphragm, and an operating-rod and agitator secured in the can and to said revolving disk, said agitator traveling around within said can adjacent to the inner periphery thereof to stir the contents of the can simultaneously with the rotation of said disk, substantially as set forth.

3. A measuring-can or other vessel provided with a triangular discharge-opening, a triangular pivoted gate inclosing said discharge-opening, a diaphragm having a semicircular opening located within the can parallel with the bottom thereof, a revolving disk provided with opposite angular recesses, and flanges depending from the sides of said recesses and forming graduated pockets, said disk being seated within the space inclosed by said diaphragm in the bottom of the can, an operating-rod rigidly secured to said revolving disk, a transverse bearing-brace located near the top of said can, and an agitator secured to said operating-rod and traveling around within said can adjacent to the inner periphery thereof, substantially as set forth.

4. A measuring-can or other vessel having a discharge-opening, a parallel stationary perforated diaphragm located over said discharge-opening and having its perforation or opening opposite the solid portion of the bottom, and a revolving measuring-disk provided with graduated pockets adapted to revolve between said diaphragm and discharge-opening, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

LEAMON G. SOUDER.

Witnesses:

H. KENNEDY,

E. L. SOUDERS.