J. VAN GEEM.

MEASURING DEVICE.

APPLICATION FILED JAN. 7, 1918.

1,359,004. **Patented Nov. 16, 1920.**

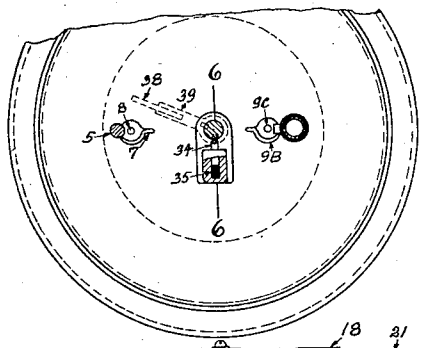


FIG. 3

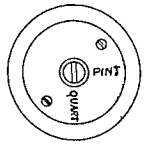


FIG. 2

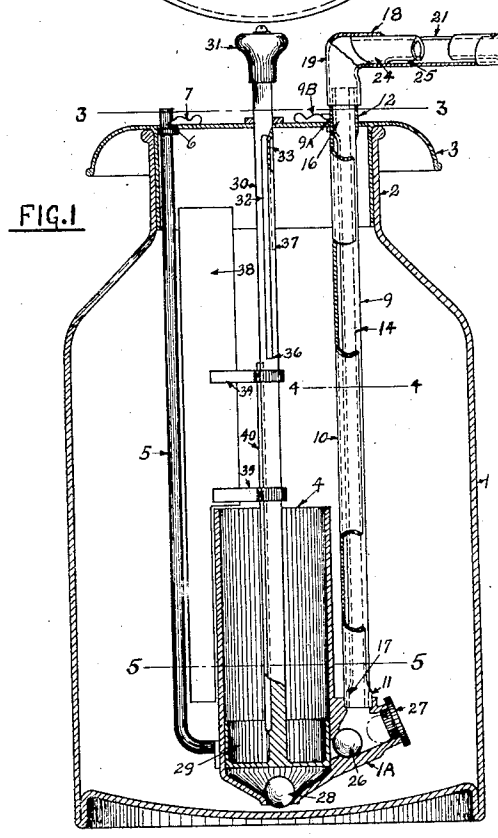
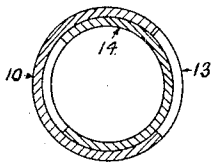


FIG. 1

FIG. 4



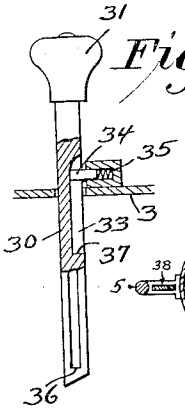
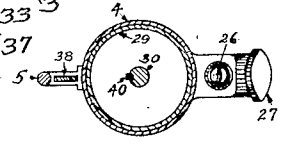


Fig. 6.

FIG. 5



Inventor

John Van Geem

By

Attorney

UNITED STATES PATENT OFFICE.

JOHN VAN GEEM, OF ERIE, PENNSYLVANIA.

MEASURING DEVICE.

1,359,004. Specification of Letters Patent. Patented Nov. 16, 1920.

Application filed January 7, 1918. Serial No. 210,622.

To all whom it may concern:

Be it known that I, JOHN VAN GEEM, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented new and useful Improvements in Measuring Devices, of which the following is a specification.

This invention relates to measuring devices and consists in certain improvements in the construction thereof as will be hereinafter fully described and pointed out in the claims.

More particularly the invention is designed for measuring milk and for use in connection with standard milk cans.

The invention is illustrated in the accompanying drawings as follows:—

Figure 1 shows a central vertical section through a milk can having the measuring device in place therein.

Fig. 2 a plan view of the plunger operating handle.

Fig. 3 a section on the line 3—3 in Fig. 1.

Fig. 4 a section on the line 4—4 in Fig. 1.

Fig. 5 a section on the line 5—5 in Fig. 1.

Fig. 6 is a fragmentary sectional view on the line 6—6 in Fig. 3.

1 marks the can, 2 the open end of the can and 3 the cover. These are of ordinary construction.

A measuring cylinder 4 is arranged near the bottom of the can, the cylinder being open at the top. This cylinder is supported at one side by a supporting rod 5 which extends through the cover 3. The rod has a notch 6 into which the locking cam 7 projects so as to detachably lock the rod with the cover. The cam 7 is carried on a pin or screw 8.

A discharge pipe 9 also extends through the cover and forms a means of support for the measuring cylinder. It has the notch 9^a into which the cam 9^b extends, a cam catch being carried by a pin 9^c.

In order to successfully use these devices in connection with milk to conform with the usual rules of the Board of Health it is necessary to have all parts so that they can be readily accessible for inspection and cleaning. A closed pipe the length of the discharge pipe 9 would in most cities be prohibited. I, therefore, make this discharge pipe of open-sided severable parts so that all parts can be readily inspected and cleaned. One of the parts 10 has the complete rings 11 and 12 at its ends and the cut-out portion 13 extending practically its whole length. The other companion part of the pipe is formed by a part 14. This is cut-out at one side practically the entire length of the pipe but is united by the rings 16 and 17 at the ends. The part 14 slides within the part 10 so that they are telescopically assembled. When placed together the cut-out portions are opposite each other so that there is a complete closure of the pipe. By withdrawing the part 14 from the part 10 all parts of the pipe are exposed so that they can be readily cleaned without brushes or similar devices used for cleaning closed pipe. The discharge spout 18 is also made of telescoping severable parts. One part 19 has an elbow formed in it. It has the cut-out portion 21 and a ring 20 at its outer end. The companion part 22 has the peripherally closed downwardly extending part 23, cut-out portion 25 and the ring 24. The part 22 can be readily pushed into the part 19 forming a peripherally closed discharge spout but when withdrawn the openings 21 and 25 give access to all parts of this spout.

The pipe 9 is secured in an extension 1^A on the cylinder. A check 26 is arranged in this extension and a removable plug 27 is provided so as to give access to the passage in the extension. A check 28 is also formed in the bottom of the measuring cylinder.

A plunger 29 operates in the cylinder. A rod 30 extends from the plunger through the cover and is provided with a handle 31. The rod is provided with two grooves 32 and 33 extending longitudinally along the rod. A stop pin 34 is adapted to enter either of these grooves 32 and 33 and is pressed into said grooves by a spring 35. The groove 32 has a stop shoulder 36 at its bottom and the groove 33 a stop shoulder 37 at its bottom. The shoulders 36 and 37 are placed so as to limit the movement of the plunger so that when the plunger is drawn up so as to bring the pin 34 into engagement with the shoulder 36 one quart will be drawn into the cylinder. When the pin is working in the groove 33 and the plunger is drawn up so as to bring the pin into engagement with the shoulder 37 one pint is drawn into the cylinder. The upper ends of the grooves 32 and 33 are sufficiently slanting so that when the plunger is pushed down and the rod brought to its bottom position the pin 34

passes out of the groove so that the rod 30 may be readily turned.

An agitator blade 38 is mounted on arms 39 and these arms are locked on the rod 30 by means of the spline 40. The rod, therefore, can be drawn up and down without raising the blade 38 but the blade 38 is rotated with the rod.

It is desirable, in fact, necessary that the content of the can should be agitated. This is particularly true with the can nearly full. It will be noted that the upper end of the measuring cylinder is open so that each time the plunger is reciprocated the milk is expelled and drawn into the cylinder from the top thus agitating the milk in this respect. The milk can also be agitated by turning the rod, thus rotating the blade 38. The grooves 33 and 32 are so arranged as to compel a rotation of the blade and consequently an agitation of the milk whenever the rod is shifted in position so as to change the measurement from pints to quarts.

What I claim as new is:—

1. In a measuring device, the combination of a receptacle; a measuring cylinder connected with the receptacle; a plunger operating in the cylinder and revoluble therein; and an agitator carried with the plunger.

2. In a measuring device, the combination of a receptacle; a measuring cylinder open at the top to the receptacle and arranged in the cylinder and having a check inlet; a plunger in the cylinder; an agitator; means for limiting the travel of the plunger to effect a predetermined desired displacement; a discharge leading from the cylinder; a check in the discharge; and mechanism varying the means to vary the amount measured, the action of said mechanism in varying the means rotating the agitator.

3. In a measuring device, the combination of a receptacle; a measuring cylinder arranged in the receptacle; a cover for the receptacle; a mounting for the cylinder carried by the cover; a plunger in the cylinder; a plunger rod extending from the cylinder through the cover; grooves in the plunger rod of varying lengths; and mechanism operating in the grooves for limiting the movement of the rod and plunger.

4. In a measuring device, the combination of a receptacle; a measuring cylinder arranged in the receptacle; a cover for the receptacle; a mounting for the cylinder carried by the cover; a plunger in the cylinder; a plunger rod extending from the cylinder through the cover; grooves in the plunger rod of varying lengths; and mechanism operating in the grooves for limiting the movement of the rod and plunger, the movement of the rod carrying the mechanism out of the grooves in one position of the plunger and permitting the rotation of the rod to change the groove in which the mechanism operates.

5. In a measuring device, the combination of a receptacle; a measuring cylinder arranged in the receptacle; a cover for the receptacle; a mounting for the cylinder carried by the cover; a plunger in the cylinder; a plunger rod extending from the cylinder through the cover; grooves in the plunger rod of varying lengths; mechanism operating in the grooves for limiting the movement of the rod and plunger; and an agitator blade carried by the rod.

6. In a measuring device, the combination of a receptacle; a measuring cylinder connected with the receptacle; and a discharge pipe leading from the cylinder, said discharge pipe being formed of open-sided severable parts.

7. In a measuring device, the combination of a receptacle; a measuring cylinder connected with the receptacle; and a discharge pipe leading from the cylinder, said discharge pipe being formed with telescoping open-sided severable parts.

8. In a measuring device, the combination of a receptacle; a measuring cylinder connected with the receptacle; a discharge pipe leading from the cylinder, said discharge pipe being formed of open-sided severable parts; and a delivery spout on the discharge pipe, said delivery spout being formed of open-sided severable parts.

9. In a measuring device, the combination of a receptacle; a measuring cylinder connected with the receptacle; a discharge pipe leading from the cylinder, said discharge pipe being formed of open-sided severable parts; and a delivery spout secured to the discharge pipe, said delivery spout being formed of telescoping open-sided severable parts.

In testimony whereof I have hereunto set my hand.

JOHN VAN GEEM.