J. L. GEIER.

MEASURING TANK.

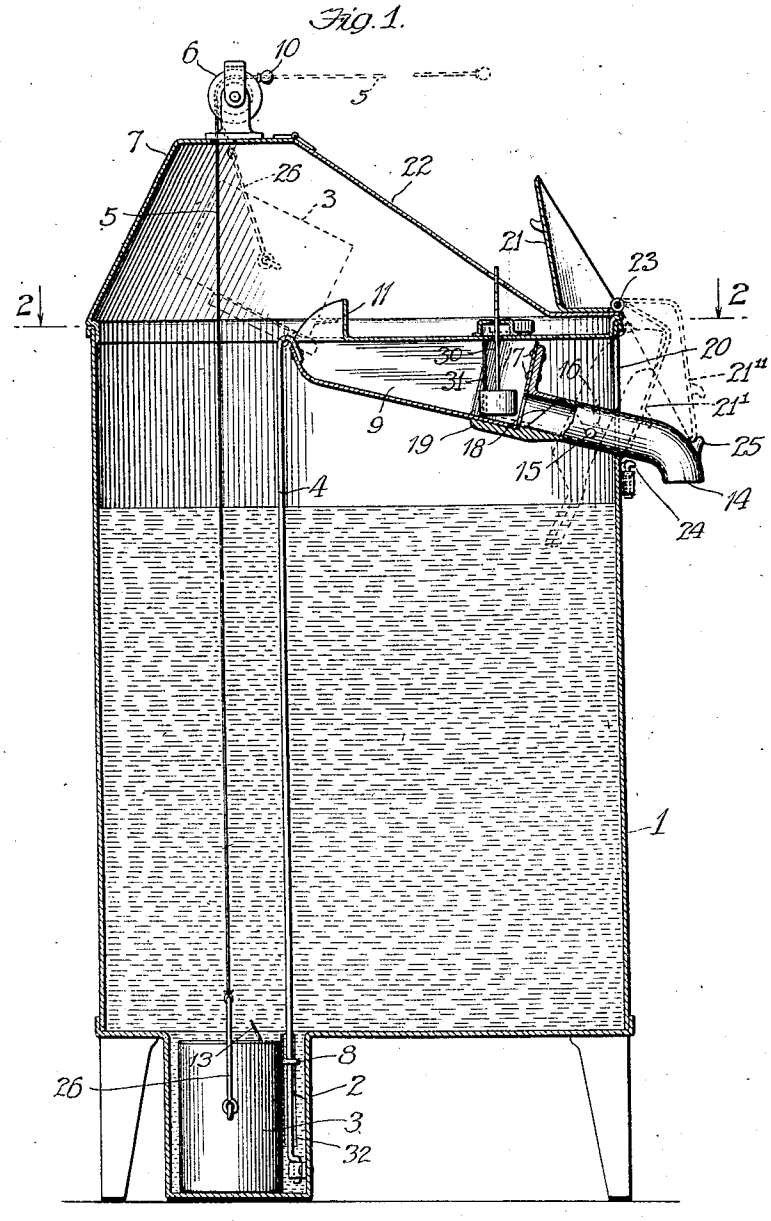
APPLICATION FILED FEB. 15, 1919.

1,304,305.

Patented May 20, 1919.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

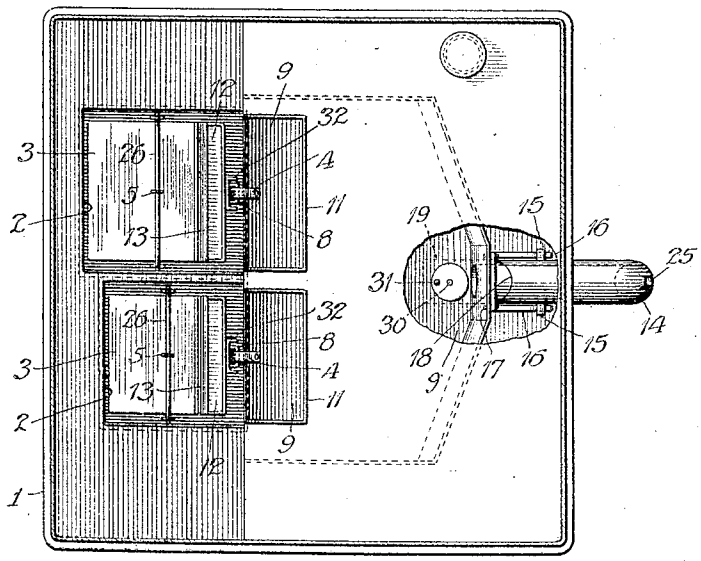
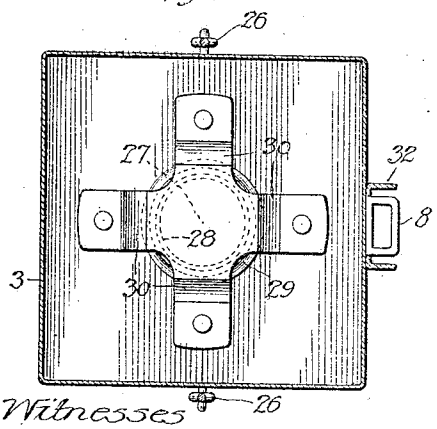


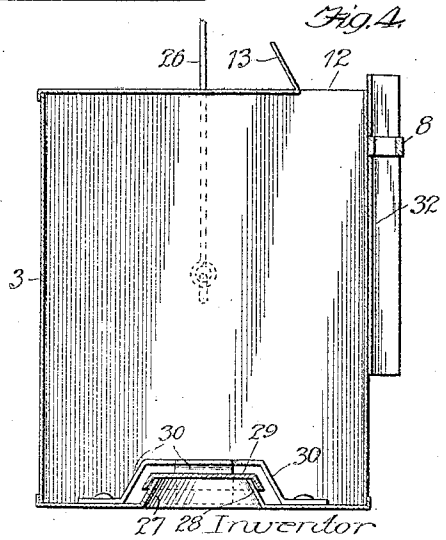
Fig. 3.



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Fig. 4.



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JOHN L. GEIER, OF CHICAGO, ILLINOIS.

MEASURING-TANK.

1,304,305. Specification of Letters Patent. Patented May 20, 1919.

Application filed February 15, 1919. Serial No. 277,262.

To all whom it may concern:

Be it known that I, JOHN L. GEIER, a citizen of the United States of America, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Measuring-Tanks, of which the following is a specification.

This invention relates to measuring tanks of the general character described in applicant's Patent No. 360,289, dated March 29, 1887.

The tank is intended mainly for the use of retailers in measuring such fluids as oil and for delivering the measured fluid to an oil can which is preferably hung on a nozzle attached to the tank. The objects of the invention are to provide in a tank of the type described, a counter-weighted nozzle which will automatically, after a measuring operation, oscillate back into position to permit any oil which remains in the nozzle to drip back into the tank; and to provide a hinged cover for closing the recess in which the nozzle is pivoted for the purpose of making the apparatus safer and preventing the escape of any oil vapor. A further object of the invention is to provide a design of nozzle which may be rocked into operative position by, and to support, the can which is to receive the oil.

An illustrative embodiment of the invention is shown in the accompanying drawings, in which—

Figure 1 is a vertical sectional view of a tank constructed according to this invention.

Fig. 2 is a plan view on the line 2—2 of Fig. 1.

Fig. 3 is a sectional plan view of one the measuring cans.

Fig. 4 is a vertical sectional view of one of the measuring cans.

The apparatus shown in the drawings comprises a cylindrical oil tank 1 having a plurality of depressions 2 in the floor of the tank in which normally rest the measuring cans 3. These cans may be reciprocated along guide bars 4 by means of wire cords 5 passing over guide pulleys 6. The guide pulleys 6 are mounted on the top of a hood 7 covering the top of the tank.

Each can 3 carries an eye 8 encircling one of the guides 4, and the guides are curved or bent at their upper ends to limit the upward motion of the cans 3 and cause them to be tilted and empty into the hopper 9 when reaching their uppermost position, due to the operator pulling outwardly on one of the handles 10 of cords 5. The hopper 9 is provided with flanged mouths 11 to prevent oil from splashing back into the tank when it is emptied from the cans into the hopper. The cans are also closed at their upper ends as shown in Fig. 4, with the exception of the outlet opening 12. The bent flanged portion 13 at the upper ends of the cans is intended to catch any oil which may rest on the top of the can, and thus prevent an excess quantity from being delivered into the hopper 9, which might result in some slight overflow from the receiving can suspended from nozzle 14.

The nozzle 14 is pivotally supported by its trunnions 15 resting on hook-shaped projections 16 secured to the face of the hopper 9 by the rivets 17. An inclined seat 18 for the nozzle is formed integrally with the hooks 16. The nozzle carries a counterweight 19 at its rear end which causes it to normally assume the position indicated by dotted lines in Fig. 1. The aperture 20 in the tank 1 through which the nozzle 14 extends is closed by the cap 21. This cap is carried at the forward end of a hinged lid 22 for the cover 7 and preferably by a spring hinge 23. When the cap is in its closed position 21′, it is retained firmly against the tank by the spring latch 24. The nozzle 14 is provided with a lug 25 whereby the nozzle may engage the handle of an oil-receiving can and support the latter, or the nozzle may be held in its operative position by means of the cap 21 as indicated at 21″.

The purpose of providing means for holding the nozzle in its operative position, other than the weight of the receiving can, is to permit it to deliver several quarts or gallons, by a tube connection, to a cam resting on the floor.

The hopper 9 having a certain limited capacity and since the measuring cans 3 may be operated quite rapidly, a float indicator 30 serves to show when the hopper is empty. This indicator is guided in its vertical motion by wires 31.

The bale 26 of each measuring can 3 has a pivotal connection with its respective can, suitably located to facilitate an easy rocking motion of the can when it arrives above the hopper 9. The inlet opening 27 of each

measuring can 3 is preferably located at the bottom of the can and is surrounded by an inclined flange 28 which forms a seat for a cup-shaped valve 29. When the measuring cans lower into the oil in the tank 1, the valves 29 float upwardly as limited by their surrounding cages 30, which are riveted to the bottom of the cans.

In the operation of the device, the cap 21 is permitted to swing to its upper position by depressing the latch 24. The can which is to receive the measuring fluid is hung from the nozzle, causing the nozzle to swing downwardly to the position shown by full lines in Fig. 1. In this position of the nozzle, it fits tightly against the seat 18 and forms a continuation of the outlet of the hopper. The operator, in drawing outwardly on the handle 10 of one of the cords 5, causes the measuring can suspended from such cord to rise and empty its contents into the hopper 9, from which fluid is delivered by the nozzle 14 of the receiving can. Upon the release of the measuring can, it returns by gravity to its pocket 2 in the bottom of the tank. During its return, the valve 29 in the bottom of the measuring can floats upwardly, permitting the can to fill. Upon the rise of the can, the weight of the fluid therein firmly holds the valve 29 to its seat.

Although but one specific embodiment of this invention has been herein shown and described, it will be understood that numerous details of the construction shown may be altered or omitted without departing from the spirit of this invention as defined by the following claims.

I claim:

1. The combination with a tank having an opening in one side thereof, of a nozzle pivotally mounted in said opening, a counterweight normally urging said nozzle into a retracted position within said tank, and means on said nozzle adapted to support a receptacle to receive the contents of said tank through said nozzle, said nozzle being adapted, when a receptacle is placed thereon, to swing into an operative position.

2. The combination with a tank having an opening in one side thereof, of a nozzle pivotally mounted in said opening, a counterweight on the inner end of said nozzle normally urging said nozzle into a retracted position within said tank, and a hook on the outer end of said nozzle adapted to support a receptacle to receive the contents of said tank through said nozzle, said nozzle being adapted, when a receptacle is placed thereon, to swing into an operative position.

3. The combination with a tank having an opening in one side thereof, of a nozzle pivotally mounted in said opening, a counterweight normally urging said nozzle into a retracted position within said tank, means on said nozzle adapted to support a receptacle to receive the contents of said tank through said nozzle, said nozzle being adapted, when a receptacle is placed thereon, to swing into an operative position, and a closure shiftable into and out of position to close said opening when said nozzle is retracted.

4. The combination with a tank having an opening in one side thereof, of a nozzle pivotally mounted in said opening, a counterweight normally urging said nozzle into a retracted position within said tank, means on said nozzle adapted to support a receptacle to receive the contents of said tank through said nozzle, said nozzle being adapted, when a receptacle is placed thereon, to swing into an operative position, and a cover shiftably mounted on said tank and adapted to close said opening when said nozzle is in its retracted position, said cover being also adapted to be shifted toward its closed position for engaging said means so as to hold said nozzle in its operative position independent of a receptacle.

5. The combination with a tank having an opening in one side thereof, of a nozzle pivotally mounted in said opening, a counterweight on the inner end of said nozzle normally urging said nozzle into a retracted position within said tank, a hook on the outer end of said nozzle adapted to support a receptacle to receive the contents of said tank through said nozzle, said nozzle being adapted, when a receptacle is placed thereon, to swing into an operative position, and a cover hinged at its upper end to said tank, adapted to close said opening when said nozzle is retracted, said cover being also adapted to be shifted toward its closed position so as to cause its lower end to engage said hook for holding said nozzle in its operative position independent of a receptacle.

6. The combination with a tank having an opening in one side thereof, of a nozzle pivotally mounted in said opening, a counterweight normally urging said nozzle into a retracted position within said tank, means on said nozzle adapted to support a receptacle to receive the contents of said tank through said nozzle, said nozzle being adapted, when a receptacle is placed thereon, to swing into an operative position, a closure shiftable into and out of position to close said opening when said nozzle is retracted, a spring normally urging said closure into its open position, and a latch for holding said closure in its closed position.

Signed at Chicago this 23rd day of January, 1919.

JOHN L. GEIER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."