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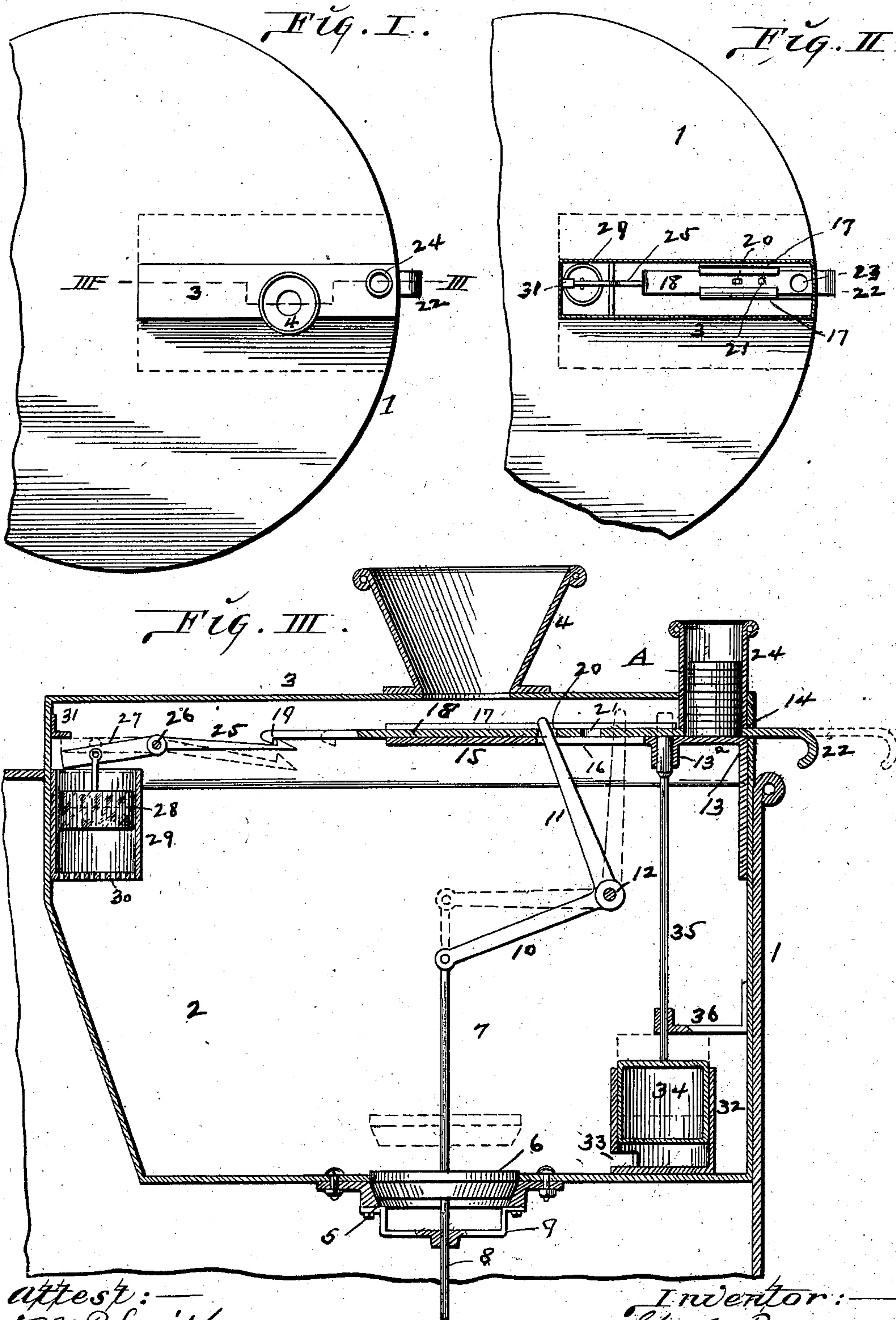
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G. E. BERNARD.

OIL MEASURE.

(Application filed Sept. 3, 1901.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

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## OIL-MEASURE.

SPECIFICATION forming part of Letters Patent No. 702,767, dated June 17, 1902.

Application filed September 3, 1901. Serial No. 74,054. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE E. BERNARD, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have  
5 invented certain new and useful Improvements in Oil-Measures, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.  
10 My invention relates to a measure for application to oil storage-tanks used by storekeepers.

The device comprises a measure into which oil is delivered by the wholesale dealer and  
15 from which it is discharged when the measure has been filled into the storage-tank.

The object of the invention is to provide a measure of the class named by which fraudulent measurement in delivering oil to the  
20 storekeeper may be prevented.

My invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a top view of an oil-storage tank  
25 equipped with my measure. Fig. II is a similar view to Fig. I with the top extension of the measure shown in horizontal section and the parts of the measure within said extension shown in top view. Fig. III is an enlarged vertical sectional view taken on line  
30 III III, Fig. I.

1 designates a storage-tank of any desirable shape or form.

2 designates a measure-tank suitably supported in the upper end of the storage-tank and having an extension 3 of box form that extends upwardly through an opening in the top of the storage-tank and occupies a position exterior thereof. Mounted on the extension 3 is a funnel 4, through which the  
40 oil is introduced into the measure-tank.

5 designates an outlet in the bottom of the measure-tank that is adapted to be closed by an outlet-valve 6, carried by a stem 7, having a lower extension 8, that is fitted in a guiding-slide 9.

10 and 11 are the arms of a bell-crank swingingly mounted on a rock-shaft 12, supported in the walls of the measure-tank 2, the arm 10 of said bell-crank being pivotally  
50 connected to the valve-stem 7.

13 designates a bracket fixed to the meas-

ure-tank at the outer end thereof and provided with a flat surface 14, located next to the outer wall of said tank. Extending from  
55 the flat portion of the bracket is an arm 15, that is provided with a slot 16 and has upwardly and inwardly extending lips 17.

18 designates a slide provided at its inner end with a hook 19 and adapted to move  
60 within the lips 17, by which it is confined. This slide contains an aperture 20, that receives the end of the bell-crank arm 11, which passes through the slot 16 in the bracket-arm 15 to seat in the slide. The  
65 slide also contains an orifice 21 for the reception of the part hereinafter mentioned. The slide 18 extends exterior of the measure-tank, and its outer end is formed into a fingerhold 22.

24 is a check-receiving pocket adapted to  
70 contain checks A to be withdrawn by the person delivering oil into the storage-tank when the measure has been filled, the said checks being designed to fall into an opening 23 in  
75 the slide 18 and being extracted from the lower end of the pocket on the withdrawal of the slide 18 after the measure has been filled and the contents are delivered therefrom into the storage-tank, as will hereinafter more  
80 fully appear.

25 is a hook adapted to receive the engagement of the hook 19 and swingingly mounted on a rod 26, seated in the extension 3 and having a rearwardly-extending arm 27, that  
85 receives the pivotal connection of a float 28. The float 28 is located in a well 29, having a perforated bottom 30 and supported on the rear wall of the measure-tank 2.

31 is a stop fixed to the measure-tank wall  
90 immediately above the hook-arm 27, adapted to limit the movement of said arm and hook.

32 designates a cup seated on the bottom of the measure-tank and provided with an inlet-opening that permits the entrance of oil  
95 from said tank into the lower end of the cup. In the cup 32 is a float 34, that has attached to it a vertical stem 35, arranged to travel in a bracket 36. The upper end of the stem 35 is loosely positioned in a boss 13<sup>a</sup>, extending  
100 downwardly from the bracket 13, and it is adapted to enter the orifice 21 in the slide 18 when said orifice is brought into alinement therewith on the outward movement of the



slide in delivering oil from the measure-tank to the storage-tank. I have shown the stem 35 with an enlarged upper end; but it may be of the same diameter throughout.

5 In the practical use of the measure the parts are placed in the position seen in Fig. III when the measure is to be filled. The oil to be delivered into the storage-tank is introduced into the measure-tank through the funnel 4 until the full quantity which the measure is designed for has been introduced. When full measurement has been introduced, the float 28 is raised by the oil present in the measure-tank, with a result that the hook 25 is lowered into the position seen in dotted lines, Fig. III, thereby raising the hook 19 of the slide 18 from retention. The person delivering the oil and measuring it is then enabled to withdraw the slide 18 for the purpose of obtaining one of the checks A in the pocket 24, which indicates the delivery of the oil and for which collection may be made from the storekeeper. In drawing the slide 18 outwardly to obtain the check A the operator rocks the bell-crank arm 11 by reason of its engagement with the slide, and the arm 10 is caused to partake of a similar movement, so that the outlet-valve 6 is unseated and the oil is permitted to flow from the measure-tank into the storage-tank. When the slide is pulled outwardly until the orifice 21 therein is brought into alinement with the float-stem 35, the upper end of said stem passes through said orifice, being raised thereinto by the float 34, beneath which the oil enters as the float descends. The slide is thereby retained from movement in an inward direction until the oil has all escaped from the measure-tank, thereby preventing actuation of the slide for the purpose of removing additional checks and also preventing its actuation to seat the outlet-valve until the oil has been completely delivered from the measure.

The extension 3 of the measure-tank is of less dimensions than the main body of said tank, being so constructed in order that the oil when it reaches said extension will be confined in a more limited area and will for this reason act upon the float 28 more quickly, with the result that the oil can be measured to a greater accuracy than would be possible if the float were acted upon to trip the hook 25 when the oil was only present in the main portion of the measure-tank.

55 The float-well 29 being perforated at the bottom thereof causes the oil to be retarded in its passage to the float 28 in said well, and for this reason the float is protected against being carried upwardly to trip the hook 25 in the event of oil being poured suddenly into the measure-tank and splashed in waves against the float. In such event of the oil being splashed against the float, as it would in the absence of the perforated well, the hook 25 might be momentarily tripped to permit the fraudulent withdrawal of the slide 18; but this is not possible where the perfo-

rated well is employed, and such well is therefore a valuable feature.

The float-cup is of material merit in connection with the retention of the slide 18 in that when the float 34 has been elevated in said cup and the oil is being allowed to escape from the measure-tank through the outlet the oil that is in the float-cup escapes less rapidly through the aperture 33 therein than it does through the outlet from the measure-tank, with the result that the oil has entirely escaped from the tank with the exception of a little in said float-cup before the float has entirely descended and the slide 18 is free. Then as the float descends the remainder of its travel the rest of the oil in said cup is forced therefrom by the float and passes through the outlet before the outlet-valve is closed, thereby providing for the discharge of the entire quantity of oil measured.

I claim as my invention—

1. The combination with a measuring-tank, a check-holder and a check-extractor; of means within the tank locking said extractor against movement until a predetermined amount of fluid has been introduced into the tank.

2. The combination with a measuring-tank having an inlet and an outlet, and an outlet-valve, of a check-holder, and means for extracting checks from said holder and operating said valve adapted to be released for actuation by a predetermined amount of fluid introduced into the measuring-tank.

3. The combination with a measuring-tank having an inlet and an outlet, and an outlet-valve; of a check-holder, means for extracting checks from said holder and operating said valve, released by a predetermined amount of fluid introduced in the measuring-tank.

4. In a measure of the class described, the combination of a tank having an inlet and an outlet, an outlet-valve, an apertured slide, a bell-crank forming connection between said slide and said outlet-valve and occupying an aperture in said slide, means for holding said slide in its inner position, and means for holding said slide in its outer position, substantially as described.

5. In a measure of the class described, the combination of a tank provided with an inlet and an outlet, an outlet-valve, an apertured slide, a bell-crank forming connection between said slide and said valve and occupying an aperture in said slide, a hook carried by said slide, a swinging hook adapted for engagement with said slide-hook, and a float having connection with said swinging hook, substantially as described.

6. In a measure of the class described, the combination of a tank provided with an inlet and an outlet, an outlet-valve, a slide having connection with said valve, a hook carried by said slide, a swinging hook adapted to engage said slide-hook, and having a rearwardly-extending arm, a float connected to said arm,



and a perforate well in which said float is arranged to move, substantially as described.

7. In a measure of the class described, the combination of a tank provided with an inlet and an outlet, an outlet-valve, an apertured slide having connection with said valve, means for holding said slide when in its inner position, a float, and a stem carried by said float adapted to enter an aperture in said slide when the slide is in its outer position, substantially as described.

8. In a measure of the class described, the combination of a tank having an inlet and an outlet, an outlet-valve, a slide having connection with said valve, a check-holding pocket located above said slide, said slide being provided with an opening adapted to receive checks from said pocket for the extraction thereof, substantially as described.

9. In a measure of the class described, the combination of a tank having an inlet and an

outlet-valve, means for actuating said valve, a hook arranged for engagement with said valve-actuating means, a float carried by said hook, and a well in which said float is seated, said well being provided with a perforated bottom, substantially as and for the purpose set forth.

10. In a measure of the class described, the combination of a tank having an inlet and an outlet, an outlet-valve, means for actuating said valve, a float, a stem carried by said float adapted to engage said valve-actuating means, a cup in which said float is seated, said cup having an opening at the lower end thereof through which oil may enter and escape in the rise and fall of said float, substantially as and for the purpose set forth.

GEORGE E. BERNARD.

In presence of—

E. S. KNIGHT,

N. V. ALEXANDER.