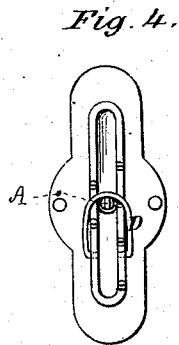
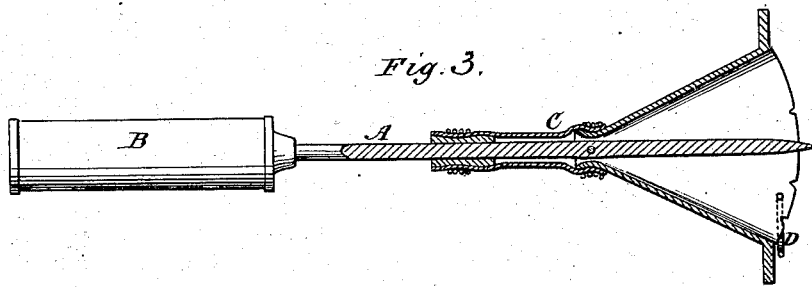
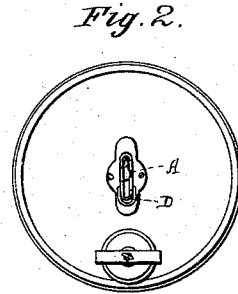
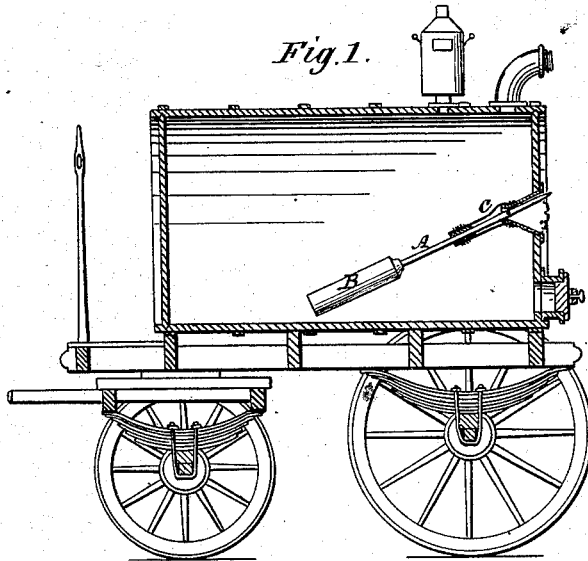


W. PAINTER.

Measuring Indicator for Night-Soil Tanks.

No. 160,703.

Patented March 9, 1875.



Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM PAINTER, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN MEASURING-INDICATORS FOR NIGHT-SOIL TANKS.

Specification forming part of Letters Patent No. 160,703, dated March 9, 1875; application filed December 22, 1874.

To all whom it may concern:

Be it known that I, WILLIAM PAINTER, of the city and county of Baltimore, in the State of Maryland, have invented a certain new and useful Measuring-Indicator for Night-Soil Tanks; and I do hereby declare that the following specification, taken in connection with the drawings furnished and forming a part of the same, is a clear, true, and accurate description thereof.

Tanks intended for the conveyance of offensive matter should be perfectly tight during the operation of filling, and, in fact, at all times, until opened for discharging. In filling them it is essential for the operatives to know to what extent the tanks are filled from time to time. It is particularly essential for the operatives to know whether the remaining capacity of a tank will warrant the undertaking of additional operations.

My invention affords a practically-operative means whereby, at any time, at a glance, the further receptive capacity of the tank may be determined; and it consists of a float within the tank mounted on a lever or arm, the outer end of which serves as an indicator, in connection with a properly-graduated face-plate; and in certain minor details hereafter more fully described.

Referring to the drawings, Figure 1 represents, in section, a tank provided with one of my indicators. Fig. 2 represents said tank in end view. Fig. 3 represents, partially in longitudinal section, the indicator detached and on an enlarged scale. Fig. 4 represents, in front view, the face-plate with a hook for holding the indicator-float in a horizontal position.

In each of the figures, A denotes the indicating-lever. At its inner end it is provided with a can-float, B, while at its outer end it serves as the indicating-finger, which, by its relation to certain predetermined gage-marks, discloses the position of the float within the tank.

As the contents of these tanks are offensive it is essential that all joints be perfectly tight, and at the same time they should not prevent a free movement of the indicating-device. The indicator-plate has a flange for securing it to the head of a tank, as shown. It also has an inward-projecting chamber,

which is in form like a flattened funnel. At the inner or small end an elastic tube, C, is secured by means of wire, which compresses the tube into an annular recess in the neck. Through the tube C the float-lever is passed, and a rubber collar on the lever is entered into the tube. When in proper position to sufficiently advance its outer end through the face-plate, the tube is secured to the lever and collar by wrapping with wire, as before described. The tube performs the double function of a packing to prevent leakage, and of a flexible joint which permits the free vertical movement of the float.

In practice the indicator-plate will be located in the center of the head of the tank, so that the float may range freely between the upper and lower interior walls thereof. Usually, in practice, a large discharge-gate is located beneath the face-plate, through which hoes or scrapers are introduced for the removal of solid matter. At such times the float, resting on the lower side of the tank, would prevent free operations with the scraper, and therefore I provide the bail-hook D, which is hinged to the lower portion of the face-plate, and is arranged to pass over the outer end of the lever when it is horizontal, and, by that means, keep the float out of the way during the use of the scrapers. As careless operatives are liable to start off the tank after its discharge with the float thus elevated, the jolting movement would be liable to strain and injure the elastic connection. I therefore incline the surface of the lever, with which the bail-hook engages, downward toward its outer end, so that, although the hook will hold the float up while the team is not in motion, the hook will, as soon as any jolting occurs, promptly be detached from the lever and allow the float to lie upon the bottom of the tank.

As the float is not closely adjacent to the point of induction, it is not liable to be loaded with heavy matter, and I find that its indications are practically uniform. It may be made of sheet metal and air-tight, or of cork or other sufficiently buoyant material. The graduation-marks on the face-plate may be made with every new tank, which, as it is gradually filled with measured water, will afford the desired information.

Having thus described my invention, I claim as new—

1. A measuring-indicator composed of a face-plate chamber, an indicating-lever, a float, and an elastic tubular connection for securing the lever to the neck of the chamber, substantially as described.

2. The combination of an indicating float-lever and face-plate with a bail-hook arranged to engage with the outer end of the indicating-

lever and maintain the float in an elevated position, substantially as described.

3. The combination, with a vibrating float-lever, of an elastic tube, which serves as a packed flexible joint-connection, substantially as described.

WILLIAM PAINTER.

Witnesses:

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