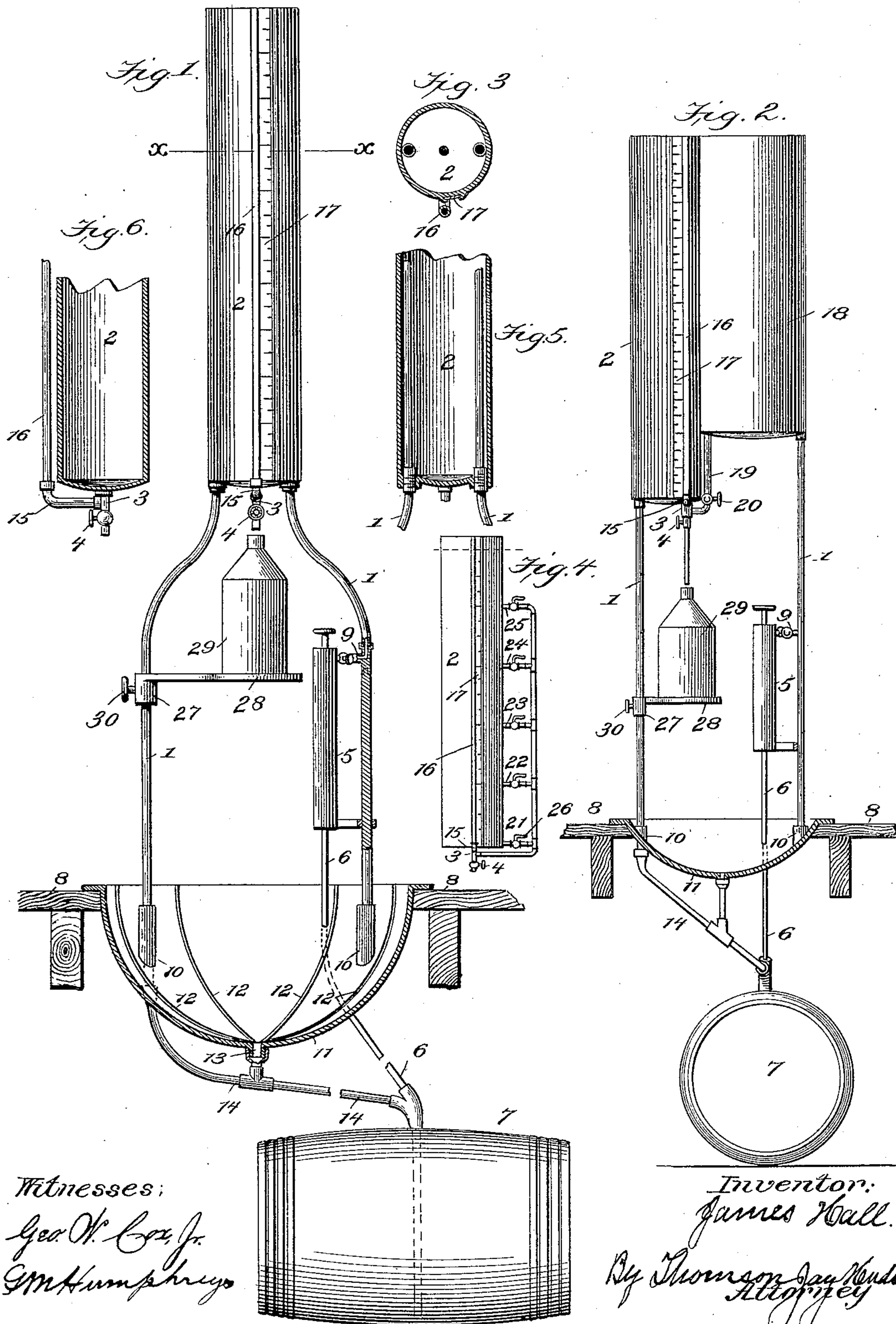


(No Model.)

J. HALL.
MEASURING TANK.

No. 529,326.

Patented Nov. 13, 1894.



Witnesses:
Geo. W. Cox, Jr.
G. M. Humphreys

Inventor:
James Hall.
By Thomson Jay Hendon,
Attorney

UNITED STATES PATENT OFFICE.

JAMES HALL, OF CHICAGO, ILLINOIS.

MEASURING-TANK.

SPECIFICATION forming part of Letters Patent No. 529,326, dated November 13, 1894.

Application filed June 21, 1894. Serial No. 515,253. (No model.)

To all whom it may concern:

Be it known that I, JAMES HALL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have
5 invented certain new and useful Improvements in Gravity Measuring-Tanks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which
10 it appertains to make and use the same.

My invention relates to improvements in tanks for measuring liquids as they are drawn from the tank; and the objects of my improvement are, first, to provide means for determining the exact amount of liquid drawn from
15 the tank at any given time; second, to provide means for filling the tank from a reservoir situated at a point remote from the tank; third, to provide means for carrying the
20 drippings or overflow directly back of the reservoir; and, fourth, to provide facilities for drawing a predetermined amount of liquid into a receptacle without waste and without the necessity of employing the ordinary
25 measuring vessels. I attain these objects by means of the mechanism illustrated in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation of the device
30 partly in vertical section. Fig. 2 is a modification of the device showing an extra reservoir tank. Fig. 3 is a cross section of the tank on line $x-x$, of Fig. 1. Fig. 4 is a modification of the tank, drawn to a smaller scale;
35 and Figs. 5 and 6 represent vertical central cross sections of the lower part of the tank, showing details of construction.

The same symbols of reference indicate identical or equivalent parts throughout the
40 several views.

Mounted upon a frame 1, 1, is a tank, 2, made of sheet metal or any other suitable material. In the bottom of the tank an outlet
45 pipe, 3, is situated, having a faucet, 4, through which the contents of the tank are drawn.

The legs or framework, 1, of the tank are made of gas pipe and project up through the bottom of the tank and terminate near the top thereof, the end of each being left open.
50 To the one on the right hand of Figs. 1 and

2 is attached a pump, 5, which is connected by means of a pipe, 6, to a reservoir, 7, which may be situated below the floor 8, or entirely outside the building in which the tank is located. The leg to which the pump
55 is attached is solid as far up as the outlet pipe, 9, of the pump, and from that point upward it is made of gas pipe and serves as a supply pipe for the tank 2. The other leg is made wholly of gas pipe and serves as an
60 overflow pipe when the tank, 2, is full. The lower end of each leg is set into a socket, 10, which is cast integral with, or is attached to, the inside of a flanged pan, 11, which is set into the floor, 8, and serves the double pur-
65 pose of sustaining the tank, 2, by means of the legs, 1, and of catching the drippings of the tank, and conveying them, by means of the grooves, 12, and the outlet, 13, to the pipe, 14, and thence to the reservoir, 7. The over-
70 flow pipe, 1, at the left of the tank, is connected to the pipe, 14, through the bottom of the pan, 11, thus conveying the overflow of the tank directly to the reservoir.

Connected to the outlet pipe, 3, of the tank, 75 is an elbow joint of pipe, 15, into which is inserted a glass tube, 16, which serves as a means of observing the height of the liquid in the tank. Situated by the side of the glass tube is an index plate, 17, upon which marks
80 are placed indicating quarts, gallons, &c., as desired. The index plate is movable up and down for convenience of measurement in drawing the liquid, as will be readily understood.
85

Fig. 2 is a modification of the device shown in Fig. 1, in which an additional reservoir tank, 18, is shown, and which is connected to tank, 2, by means of pipe, 19, having a cock,
90 20 for the purpose of regulating the flow from one tank to the other. It is obvious that the tank, 18, may be situated higher up than it is shown in the drawings, and in some cases it would be advantageous to so locate it.

Fig. 4 shows another modification of my
95 tank, in which there is a plurality of outlets, 21, 22, 23, 24, and 25, each outlet representing a certain quantity of liquid to be drawn, as will be readily understood, and each provided with a stop cock, 26, as shown.
100

Attached to the left leg, 1, of the tank, by means of a sleeve, 27, is a shelf, 28, upon which a can, 29, or other receptacle, may be placed. This shelf may be moved up and down on the leg and fastened in any desired location by means of the thumb-screw, 30, thus enabling the operator to adjust the receptacle into which he wishes to draw the liquid to the most convenient point for doing so without waste.

The operation of my device is as follows: The tank, 2, is filled from the reservoir, 7, by means of the pump, 5, the stop cock between the pump and the leg being opened for that purpose. As soon, however, as the tank is filled said faucet is closed for the purpose of retaining enough priming in the pipe to start the pump again when required. The tank being full holds, say five gallons, which is indicated by the glass tube. The receptacle is adjusted underneath the outlet and the faucet, 4, is opened and remains open until the required amount is drawn as indicated by the glass tube and the index plate, after which it is closed. When the tank is emptied it is again filled by means of the pump. If the device shown in Fig. 4 is used, the faucet may be opened which corresponds to the number of gallons desired, they being so located that the upper one represents one gallon, the second two gallons, and so on down, the lower one representing five gallons, or the full capacity of the tank. It is obvious that the pipes and faucets shown in Fig 4 may be attached to the tank shown in Fig. 1, and that either system may then be used, as may be, for the time being, most convenient.

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

1. In an apparatus of the character described, the combination of the tank with a glass indicator tube located outside of said tank and connected therewith through an opening in the bottom of said tank, and an adjustable index plate, and means for draw-

ing off the contents of said tank, substantially as and for the purpose set forth.

2. In an apparatus of the character described, the combination of the tank, with the two hollow legs upon which it is mounted, each resting in a drip pan, one of said legs having a pump mounted thereon and serving as a supply pipe for the tank, and the other serving as an overflow pipe for conveying the overflow to the source of supply, substantially as and for the purpose set forth.

3. In an apparatus of the character described, the combination of the tank mounted upon the hollow legs, one of said legs projecting through the drip pan and terminating in a pipe adapted to convey the overflow to the source of supply, with the drip pan having an outlet in its bottom adapted to discharge its contents into said pipe and thence to the source of supply, substantially as and for the purpose set forth.

4. An apparatus of the character described, comprising the tank mounted upon a drip pan by means of two hollow legs one of said legs having a pump mounted thereon and connected therewith and with the source of supply, and the other having an adjustable platform mounted thereon adapted to receive the vessel into which the contents of the tank are drawn, substantially as set forth.

5. In an apparatus of the character described, the combination of the measuring tank mounted upon two hollow legs, each communicating with the source of supply, one serving as a supply pipe and the other as an overflow pipe, with an auxiliary supply tank mounted upon said hollow legs and communicating with the measuring tank, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES HALL.

Witnesses:

F. D. GIFFORD,
ALBERT C. C. TIMM.