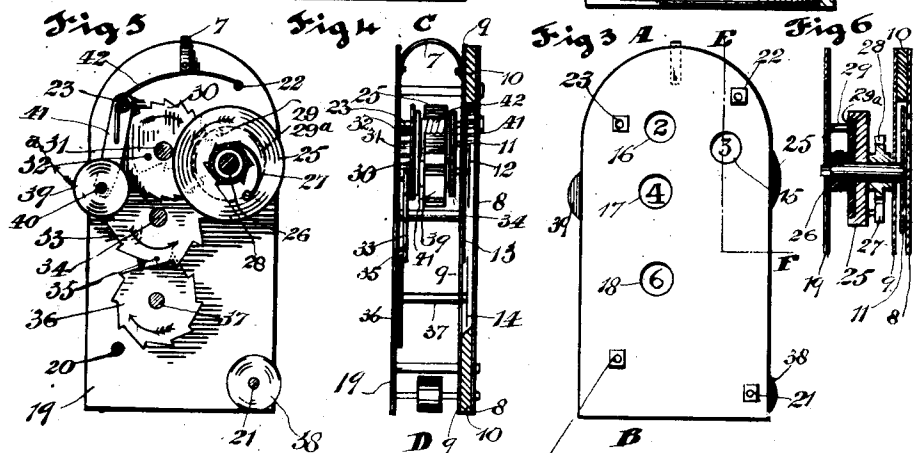
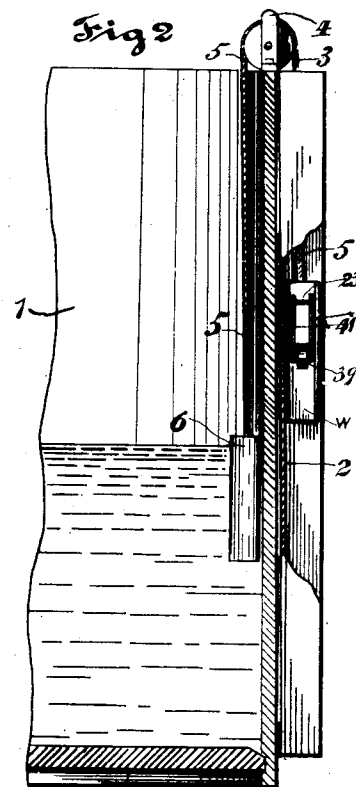
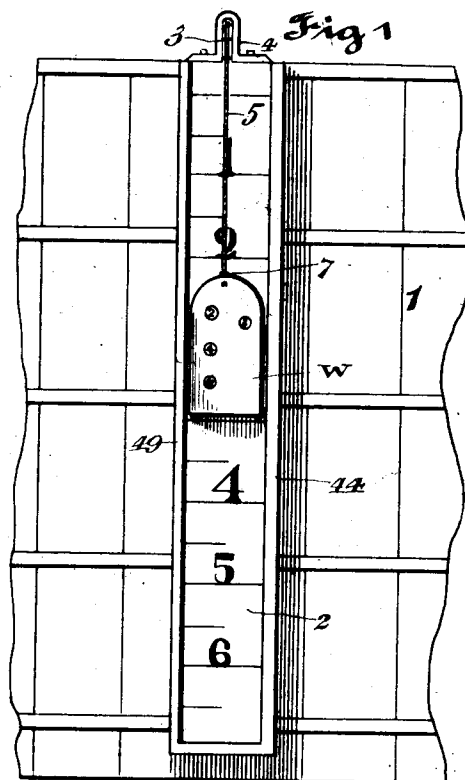


No. 872,753.

PATENTED DEC. 3, 1907.

J. RUNYON.
INDICATING AND REGISTERING DEVICE.
APPLICATION FILED MAY 29, 1905.



WITNESSES:

Wm O. Morik

F. Gimbel.

INVENTOR

Joseph Runyon
BY
Thompson & Lee
ATTORNEY

UNITED STATES PATENT OFFICE.

JOSEPH RUNYON, OF ROME, INDIANA.

INDICATING AND REGISTERING DEVICE.

No. 872,753.

Specification of Letters Patent.

Patented Dec. 3, 1907.

Application filed May 29, 1905. Serial No. 262,788.

To all whom it may concern:

Be it known that I, JOSEPH RUNYON, citizen of the United States, residing at Rome city, in the county of Noble and State of Indiana, have invented certain new and useful Improvements in Indicating and Registering Devices, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to an indicating and registering device to be attached to water tanks or reservoirs, particularly railroad tanks or reservoirs, and consists in the device hereinafter more fully described and particularly pointed out in the claims.

The object of this invention is to provide a device whereby, not only the height of the water contained in the tank or reservoir will be indicated, but also the amount of water pumped into the tank from time to time will be registered; also to construct such registering means to be inclosed in the gravity or indicating weight of the device itself; also, to inclose such registering and indicating weight, in an inclosing casing to protect the same from weather. I attain these objects by means of the mechanism illustrated in the accompanying drawings in which similar numerals of reference designate like parts throughout the several views.

Figure 1. is a broken front elevation of a tank showing my invention of an indicator and register applied thereto; Fig. 2. is a broken sectional view of the same; Fig. 3. is an enlarged detail front view of the indicating registering weight; Fig. 4. is a part sectional side elevation of the same taken through the line A B; Fig. 5. is a sectional view of the same showing the interior adding or registering mechanism thereof and taken through the line C D; and, Fig. 6. is an enlarged detail view of the friction or unit counter-wheel.

1 designates a tank or reservoir for containing and storing water for future use, from which supplies are taken from time to time, as in such cases as railroad tanks.

The gage 2 is secured to the side of the tank and is graduated and numbered as shown to indicate certain numbers of cubic feet of water contained in said reservoir or tank, as for instance, 100's or 1000's as the case may be, as for instance, 1 may indicate that 100 cubic feet are contained in the tank; 2, 200 cubic feet etc.

A rope-pulley 3 is revolubly mounted in it supporting stand 4, which latter is secured on the top edges of the tank 1. A rope 5 extends over the said pulley into the interior of the tank 1 and has a float 6 secured at this end, and the other end of the rope is secured to the clevis 7 secured at the back and forward side-plates of the indicator weight.

The indicator weight comprises a forward portion or face, which face comprises a forward plate 8 and a rearward plate 9 between which is the distance plate 10, of lead or other weighty or metal material, which distance plate 10 is situated between said plates 8 and 9 and cut out at its central portion to provide a space or chamber between said forward and rearward plates 8 and 9 in which the dials 11, 12, 13 and 14 are situated; and a back plate 19.

The forward plate 8 is provided with sight-apertures 15, 16, 17 and 18 to and opposite which the figures on the dials 11, 12, 13 and 14 are moved to be each alternately exposed to view to take the readings of the registering and counting mechanism. The forward plate 8, the rear plate 9 and the back plate 19 are connected together by connecting bars or bolts 20, 21, 22 and 23, to form a main supporting frame.

The clevis 7 is secured between the plates 9 and 19 at the top portion thereof and is provided for the purpose of forming a means for securing the outer free depending end of the rope 5.

The counter mechanism is situated between the plates 9 and 19 and comprises a friction wheel 25 mounted to revolve on the axle 26, and adapted to contact with the side wall 44 of the gage and indicator 2 to be rotated while the weight "W" ascends or descends. A spring pawl 27 is secured on the side of the friction wheel 25 and is adapted to engage the ratchet wheel 28 so that when the weight or indicating frame, which constitutes the weight "W" is descending, the ratchet 28 will revolve with the friction wheel 25 to revolve the axle 26 and the collar 29^a carrying the pin 29 so as to cause said pin 29 to operate the counting mechanism, and register the water pumped into the tank, and when the said weight is ascending, the friction wheel 25 will revolve without imparting motion to the ratchet 28 and consequently will not impart motion to the counter mechanism to which said ratchet is connected. The ratchet 28 is fast on the axle 26 to turn

therewith and a collar 29^a is situated between the friction wheel 25 and the back plate 19 and is secured on said shaft 26 to revolve therewith.

- 5 The friction or unit counter-wheel 25 is mounted on the axle 26 to turn thereon and the collar 29^a is provided with a trip-pin 29, which pin, for each revolution of the unit counter-wheel 25 during the downward
10 movement of the weight W engages one of the teeth of the secondary counter-wheel 30 which latter wheel is secured on its axle 31. A similar trip-pin 32 is secured on the secondary counter-wheel 30 to operate to en-
15 gage the teeth of the counter-wheel 33; one at a time, for each revolution of the counter-wheel 30 to move the 100's wheel mounted on its shaft 34, one tooth; and a similar trip
20 wheel 33 and is adapted to engage the 1000's wheel 36, secured on its shaft 37, to move the same one tooth for each revolution of said counter wheel 33, and thus are arranged a series of counting and adding wheels whereby
25 a true register is made of the water supplied to the reservoir or tank.

The end of the shaft 26 projecting through the plate 9, the prolonged end of which is situated within the space between the inner
30 plate 9 and the plate 8 of the forward portion of the weight frame and secured on said prolonged end of the shaft 26, is the dial 11 on the face of which and arranged in a circle are numbers from 1 to 10. Similarly on the
35 shafts 31, 34 and 37 are the dials 12, 13, and 14 from which dials true readings may be made by inspection of the total amount of water taken from the tank.

In addition to the friction wheel 25, which
40 is adapted to engage the side walls 44 of the indicator 2, is the friction wheel 38 which is journaled on the distance bar 21 to revolve freely thereon, and both said friction wheels are adapted to engage the side 44 of the in-
45 closing casing of the tank.

The friction wheel 39 is revolvably mounted on a pin or arbor 40 which arbor is secured at its ends to the free ends of the arms 41, which arms are swung at their top ends on the bolt

or distance bar 23. A spring 42 yieldingly
50 forces the wheel 39 outwardly in the direction indicated by the arrow "a" against the side wall 49 of the indicator 2 to yieldingly force the friction wheels 25 and 38 against the side wall 44 of said indicator 2.

Now it obvious that when the weight "W" descends to the bottom of the gage 2, the reservoir or tank has received its full supply of water, and in addition, the counting apparatus above described, by its reading, in-
60 dicates the volume of water supplied to the tank.

Having thus fully described this my invention what I claim as new and useful and desire to cover by Letters Patent of the United
65 States therefor is:—

1. In a tank indicator and register, the combination with a tank or reservoir, a float and a vertically extending gage secured to said tank, a weight suspended in front of said
70 gage, a float rope and a rope-pulley, so arranged that when said float ascends, said weight will descend, a registering mechanism mounted in the interior of said weight and operated by the movements of the latter
75 whereby the height of the water in the tank is indicated and the volume supplied registered.

2. In a tank indicator and register, the combination with a tank or reservoir, a float
80 and a gage having vertically extending side-walls secured to said tank, a weight suspended in front of said gage, a float rope and a rope-pulley, so arranged that when said float ascends, said weight will descend, a reg-
85 istering mechanism in the interior of said weight, a friction wheel operatively connected to said registering mechanism and arranged to contact with the fixed vertically extending wall to be rotated by the move-
90 ment of said weight.

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

JOSEPH RUNYON.

Witnesses:

WM. F. KERR,
ELMER RIFE.