

P. COLOZZA.
LIQUID MEASURER.
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1,002,224.

Patented Sept. 5, 1911.
2 SHEETS—SHEET 1.

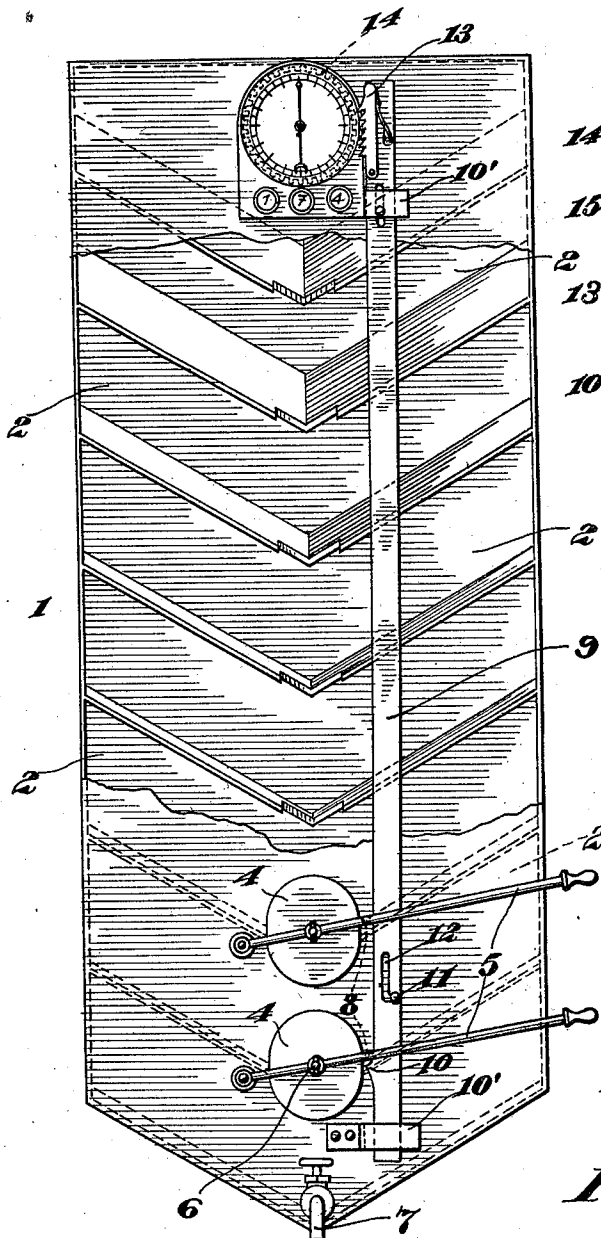


Fig. 1

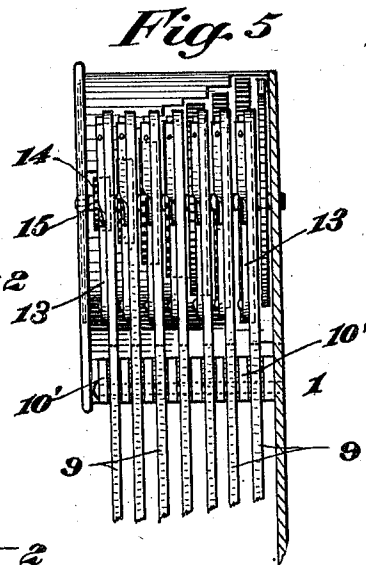


Fig. 5

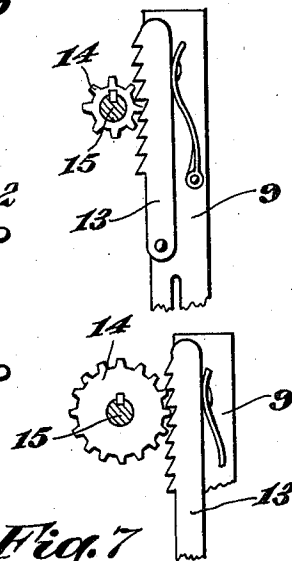


Fig. 7

PAMPHILE COLOZZA

Inventor

Witnesses:

L. A. Gavrin
E. Gavrin

By

Marion Marion

Attorneys

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Fig. 2

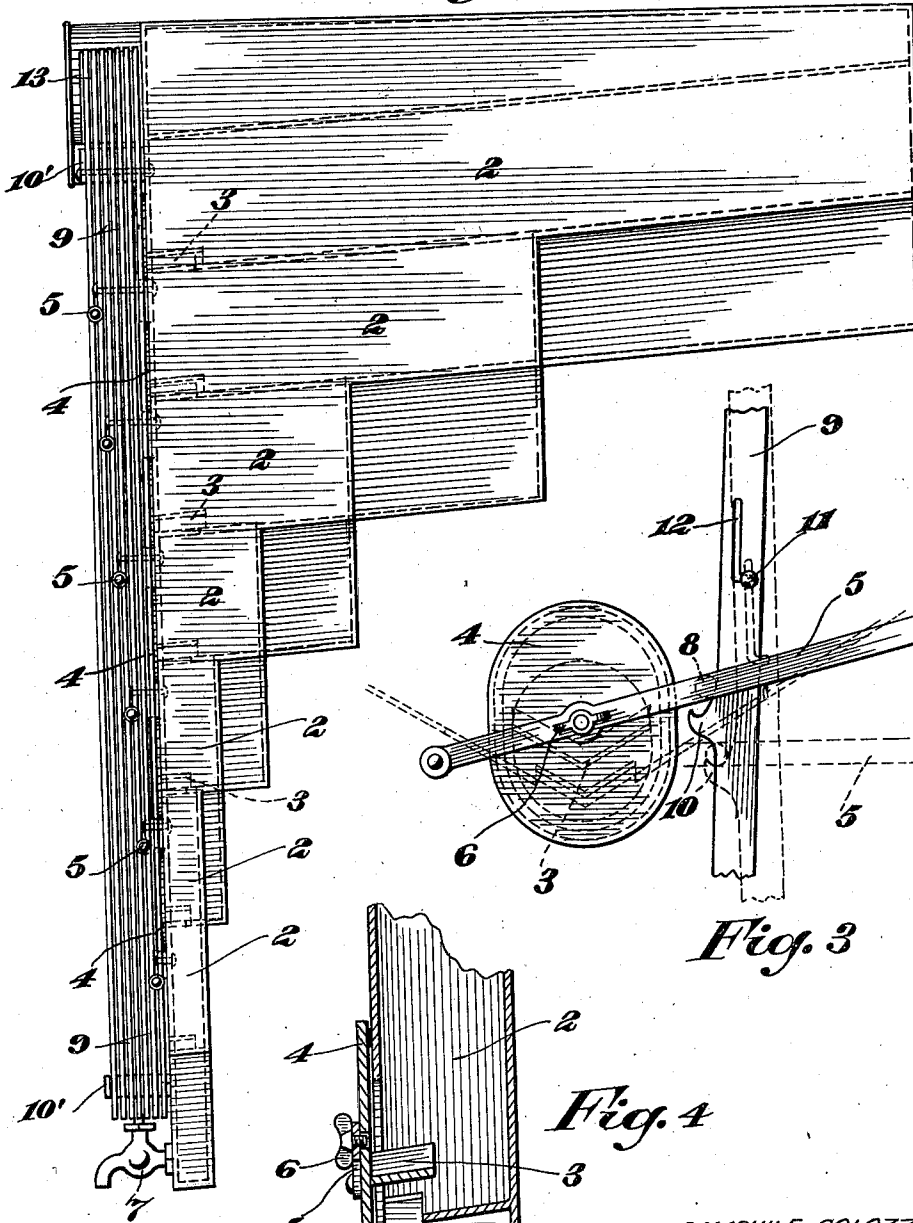


Fig. 3

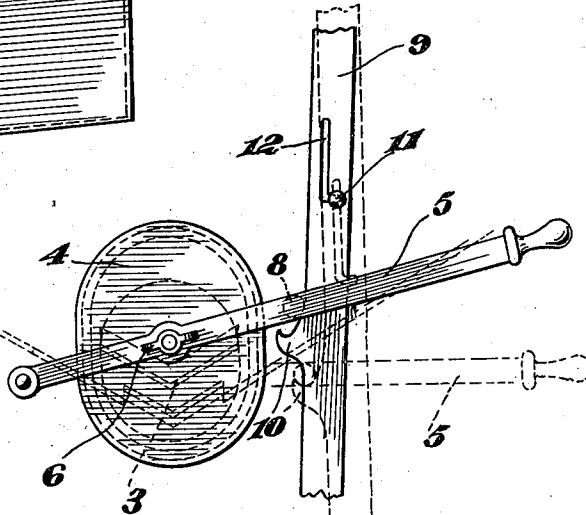
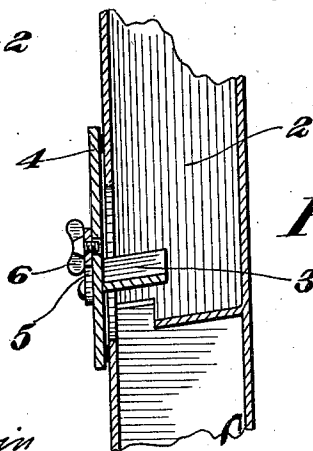


Fig. 4



Witnesses:

L. A. Gauvin
L. J. Gauvin

PAMPHILE COLOZZA

Inventor

By

Marion Marion

Attorneys

UNITED STATES PATENT OFFICE.

PAMPHILE COLOZZA, OF CHICOUTIMI, QUEBEC, CANADA.

LIQUID-MEASURER.

1,002,224.

Specification of Letters Patent.

Patented Sept. 5, 1911.

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To all whom it may concern:

Be it known that I, PAMPHILE COLOZZA, a subject of the King of England, residing at Chicoutimi, in the Province of Quebec, Canada, have invented certain new and useful Improvements in Liquid-Measurers; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention to be hereinafter described relates to measuring faucets.

In order to more clearly disclose the construction, operation, and use of the invention, reference should be had to the accompanying drawings forming part of the present application.

Throughout the several figures of the drawings like reference characters designate the same parts.

In the drawings: Figure 1 is a front view of the invention, partly broken away; Fig. 2 is a side elevation; Fig. 3 is an enlarged front view of the operating devices; Fig. 4 is an enlarged cross section of the valve and correlated parts; Fig. 5 is an enlarged side elevation of the register operating devices; Fig. 6 is an enlarged, fragmentary, front view of one of the register operating devices; and Fig. 7 is a similar view of a second register operating device.

The main objects of the invention are to provide a measuring faucet from which any desired quantity, and including 1 gallon may be drawn and the quantity automatically registered as it is drawn out.

Referring to the drawings in detail, 1 indicates a tank of considerable size and of substantially triangular shape in side elevation. This tank is divided into seven compartments 2 of successively increasing depth and each adapted to contain a definite measured quantity. The bottom of each compartment is substantially V shaped in cross section and slightly inclined from rear to front so that all liquid will run off easily from the compartment. The forward part of the bottom of each compartment is provided with an opening or passage leading into the next compartment below. For each of these passages a closure plate or valve 3 is provided. This valve, when seated, completely closes the passage. It projects inwardly through a vertically arranged elliptical opening in the front of the tank, and,

preferably, is formed integral with a cover plate 4 slidably mounted on the front face of the tank. This cover plate overlaps the opening considerably and is of sufficient size to completely cover the opening in all positions of the plate. It is essential, of course, to keep a liquid tight joint between the cover plate and the front of the tank. A rubber gasket or the like may be used for this purpose. It is necessary to slide plate 4 in order to raise or lower the valve 3. For this purpose, a hand lever 5 is provided. This lever is fulcrumed to the front of the tank 1 at one side of the plate 4 and extends across the front of the plate and out beyond the opposite side of the tank. It is connected to the center of the plate by means of a thumb screw 6 threaded through the lever and into the disk. Each valve 3 controls the flow or passage of liquid from one compartment to the one next below. In the lowermost compartment of the tank is secured the faucet 7 through which the liquid is drawn off.

The tank is filled through a short pipe connected to a cask, barrel, or the like, and provided with any well known form of valve or stop cock. As soon as the tank is filled this valve is closed. Normally, all of the valves 3 are raised and inoperative. Thus, it is possible to empty the entire tank by simply opening the faucet 7 until the liquid stops running, after first turning off the faucet in the supply pipe, of course. In the case shown—see Fig. 2—the entire tank is adapted to contain one full gallon. It is divided into 7 compartments. The two smaller compartments each hold $\frac{1}{2}$ gill, the next 1 gill, the next 2 gills, the next 1 pint, the next 1 quart, and the next 2 quarts. We will suppose that it is desired to draw off $\frac{1}{2}$ gallon. In such case, the valve controlling the opening of the 2 quart compartment will be closed and the others left open. Then the faucet 7 will be open. The contents of all the compartments except the top one will flow downward through the successive openings and out through the faucet 7. The combined amounts of these compartments will be $\frac{1}{2}$ gallon, of course. In the same way, $\frac{1}{2}$ gill, 1 gill, 2 gills, 1 pint, 1 quart, and 1 gallon, may be drawn off at will. The total amount of 1 gallon does not require registration or visible indication, because it is the greatest quantity that can be drawn. However, the other quantities do require

such registration and indication in order that the exact amount drawn off may be definitely known. For this purpose, each of the levers 5 is provided with a small pin 8 adapted to slidably engage the adjacent edge of a rod 9. The lower end of the rod is mounted to have limited lateral swinging movement in a strap 10 secured to the front of the tank near the bottom. As each lever 5 is swung downwardly to seat its valve 3, its pin 8 will engage the adjacent edge of one of the rods 9 and forces the rod to swing outwardly toward the side of the tank. Continued downward swing of the lever will bring the pin 8 into engagement with a hook 10 projecting from the edge of the bar. From this point onward, the bar will follow the lever downward. The first or outward movement of the bar 9 acts to free the bar from a supporting pin 11 so that the bar may be free to move downward as the pin 8 engages hook 10. The pin 11 projects freely in an L shaped slot 12 in the bar 9. When in the short or horizontal arm of the slot 12, the pin acts as a support to hold the bar in raised or operative position. The upper end of each bar is also provided with a short vertical guide slot in which is seated a cooperating guide pin, the slot and pin cooperating to prevent any considerable lateral movement of the bar. On the upper end of each bar is pivotally mounted a spring pressed dog or pawl 13 provided with teeth adapted to engage and operate a toothed wheel or pinion 14 keyed to a short shaft 15 provided with an index needle 16 which cooperates with a graduated indicating dial 17. Each rod 9, of course, has exactly the same amount of vertical movement. Likewise, each rod is operated by a different lever which actuates one of the valves, and each valve controls the delivery of a different quantity.

45 In order to register the exact amount delivered by the operation of any particular lever, the gears 14 have to be graduated or constructed in certain relative proportions. Thus, we will assume that one complete revolution of the shaft 15 and its needle 16 indicates the withdrawal of $\frac{1}{2}$ gallon and that the face of the dial is divided into 16 equal parts, one for each $\frac{1}{16}$ gill, the gills, pints, and quarts, all being properly indicated. In

such case, the gear 14 engaged and operated by the rod 9 which is actuated by the lever of the top compartment, will be so proportioned as to make one complete revolution as the rod 9 completes its downward movement, thus indicating $\frac{1}{2}$ gallon. Likewise, the gear engaged and operated by the rod 9 which is engaged and operated by the lever of the next lower compartment, will be so proportioned as to make one half of a complete revolution as its rod 9 completes its downward movement, &c. The rods 9 are restored to normal or inoperative position by simply lifting them and swinging them laterally until the pins 11 are in the short arms of the L shaped slots. Each rod, as it is returned to inoperative position, carries its lever 5 with it and raises the valve 3 to open the passage through that particular compartment. The engaging teeth of the bars are so formed as to permit upward movement without operation of the gears, as will be evident.

It is thought that the operation and use of the invention is clear from the preceding detailed description.

Changes may be made in the construction, arrangement, and disposition of the several parts of the invention without in any way departing from the field and scope of the same and it is meant to include all such within this application wherein only a preferred form has been disclosed.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In combination, a tank divided into a plurality of communicating compartments, valves controlling said compartments, means for actuating said valves independently, a register, and means for actuating said register from said valve actuating means.

2. In combination, a tank divided into a plurality of compartments, valves controlling said compartments, a lever for operating each of said valves, a bar operated by each of said levers, and a registering device operated by each of said bars.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

PAMPHILE COLOZZA.

Witnesses:

JEAN MALTAIS,
D. MALTAIS.