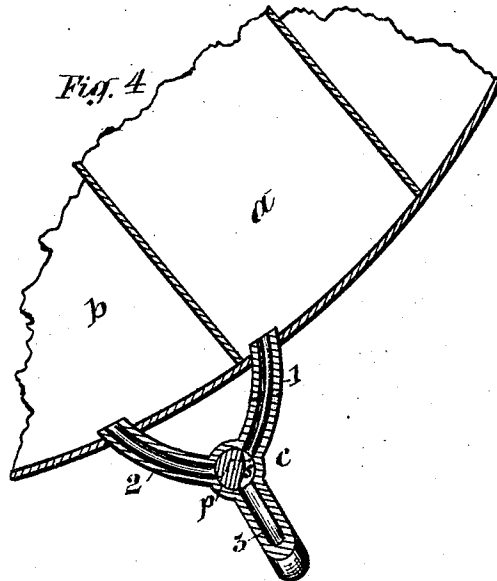
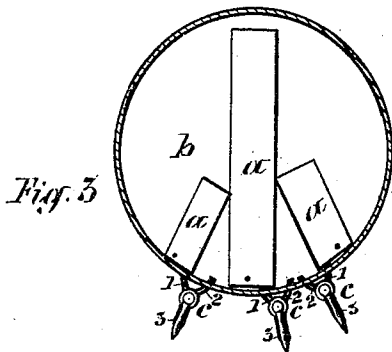
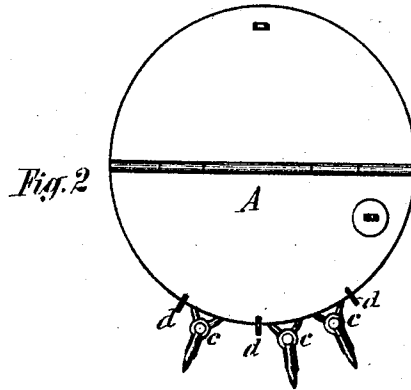
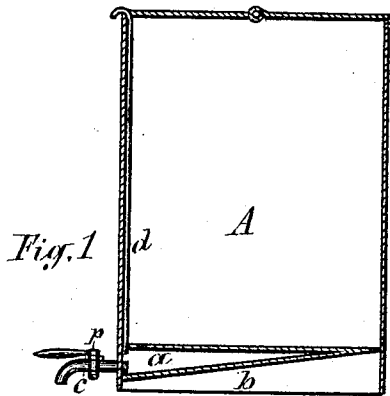


J. J. ROBERTS.
LIQUID MEASURE.

No. 178,803.

Patented June 13, 1876.



WITNESSES

INVENTOR

Frank J. Plumb
W. Holmstrup, Jr.

James J. Roberts
Jr. E. Laess Atty.

UNITED STATES PATENT OFFICE.

JAMES J. ROBERTS, OF GEDDES, NEW YORK, ASSIGNOR OF ONE-HALF HIS
RIGHT TO FRANK J. PLUMB, OF SAME PLACE.

IMPROVEMENT IN LIQUID-MEASURES.

Specification forming part of Letters Patent No. **178,803**, dated June 13, 1876; application filed
April 8, 1876.

To all whom it may concern :

Be it known that I, JAMES J. ROBERTS, of Geddes, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Self-Measuring Liquid-Tanks, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

The object of this invention is to provide a measuring-tank, in which the measures shall be protected from being crushed, and from other injuries which those that are exposed are liable to, and which, at the same time, shall afford great facility for drawing the liquid in measured quantities therefrom, and, to a considerable extent, avoid the drippings from the faucet, and also admit of a ready attachment of the extra wooden bottom. It consists in inclining the bottom of the tank, or a portion thereof, toward the front, and placing upon this inclined portion one or more measuring-chambers, and in attaching to the front end of the latter a three-way cock, having one branch or way connected with the measure, a second with the can or tank, and a third or free end for the discharge or delivery of the liquid from the measure, and with a plug having a vent so arranged that the passage between the tank and measuring-chambers shall normally remain open, and the exit from the measuring-chambers shall normally remain closed, this relation being reversed whenever it is desired to withdraw the contents of a measuring-chamber, all constructed and arranged to operate as hereinafter fully described.

The accompanying drawing fully illustrates my invention, wherein Figure 1 is a vertical section, Fig. 2 a top view, Fig. 3 a horizontal section above the measures, and Fig. 4 an enlarged horizontal section, of the three-way cock and its connections with the measures and tank.

Similar letters of reference indicate corresponding parts.

A is the liquid can or tank, made of any desirable shape and dimensions, and having its bottom *b*, or a portion thereof, inclined toward the front. *a a* are the measuring-chambers, either built upon the said inclined bot-

tom, or constructed independent thereof, and properly secured upon same. *c* is the three-way cock, having one of its ways or branches, 1, connected with the front end of the measure, the second, 2, tapping the side of the tank near the bottom, and the third or free end, 3, for the discharge or delivery of the liquid. For the purpose of lubricating as much as possible the plug-seat, and at the same time simplifying and reducing the cost of construction of the cock, I form a channel, *s*, on the side of the plug *p*, of a length to form a connection between two of the ways or branches of the cock, so that when the plug is turned, as shown by full lines in Fig. 4 of the drawing, the connection between the tank and measure is closed, and the liquid drawn from the measure, and discharged at the outer or free end, 3, of the cock; and when the plug *p* is turned as indicated by dotted lines in the same figure the discharge is closed, and the connection between the tank and measure opened to allow the liquid to flow from the tank into the measure, and fill the same, thus dispensing with the extra valves heretofore employed for that purpose.

It will be observed that the length of the channel *s* in the side of the plug *p* does not allow of opening either of the connections until the other is closed; and that, by carrying the oil or liquid around the plug-seat, I lubricate the same, and therefore render it more durable.

d is the vent-tube, to admit air into the measuring-chamber, and facilitate the emptying and filling of same. It is placed inside of the tank to protect it from injury, and extended to the top of the tank, where it may be either bent downward, to prevent the dust from entering it, or provided with a suitable valve for that purpose, and also for retaining the oil in the tube when drawing the liquid from the measure, so as to render the measure more reliable. By placing the measures above the bottom in the manner described they are protected from crushing or other injury, which those that are attached to the outside of the can or under the bottom are subject to, and the extra wooden bottom usually attached under the bottom proper is easier applied.

It will furthermore be observed that by my arrangement the measures are kept filled and ready for drawing the liquid therefrom; whereas, in measures that are graduated for various quantities, as heretofore arranged, the liquid is not allowed to enter the measure until required to be drawn, thus causing considerable delay and inconvenience. Neither does the latter arrangement admit of drawing all the liquid from the tank without giving additional depth to the foot or base below the bottom, and thus increasing the height of the tank, and rendering the filling of same more inconvenient, and increasing the expense of the manufacture of the tank. It is also obvious that this invention avoids the drippings from the faucet which are caused when connected with graduated measures that compel the faucet to be left with the discharge open.

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

The combination, with a tank having the inclined bottom *b*, and with one or more measuring-chambers, *a*, placed on said bottom, of one or more three-way cocks, (one for each measuring-chamber,) having one branch connected with the tank, one with a chamber, and one for delivering, and having the vent of the plug so arranged that the passage between the tank and measuring-chamber shall normally remain open, and the delivery normally closed, substantially as and for the purpose set forth.

In testimony whereof I have signed my name, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga and State of New York, this 6th day of April, 1876.

JAMES J. ROBERTS.

Witnesses:

FRANK J. PLUMB,
C. HOLMSTRUP, Jr.