

(No Model.)

B. BURTON.

AUTOMATIC MEASURING DEVICE FOR LIQUIDS.

No. 395,652.

Patented Jan. 1, 1889.

Fig. 1.

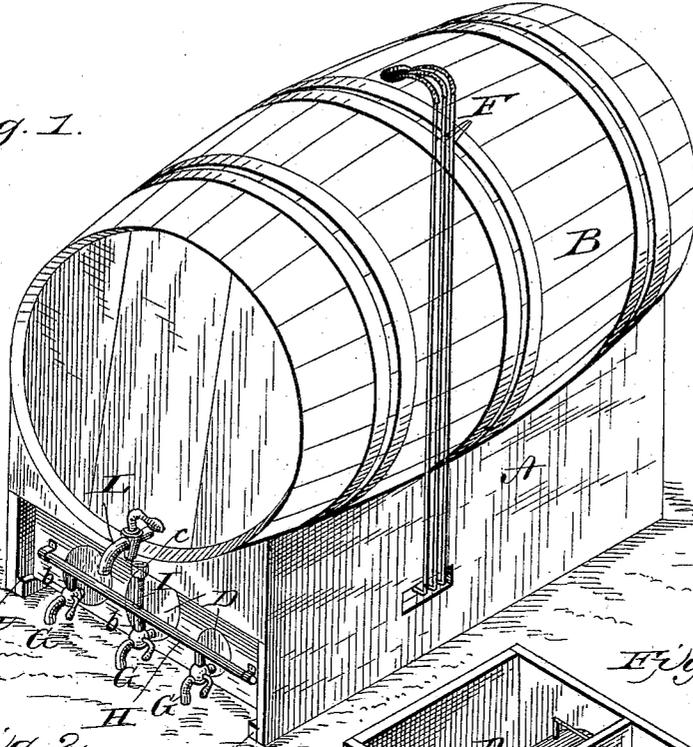


Fig. 2.

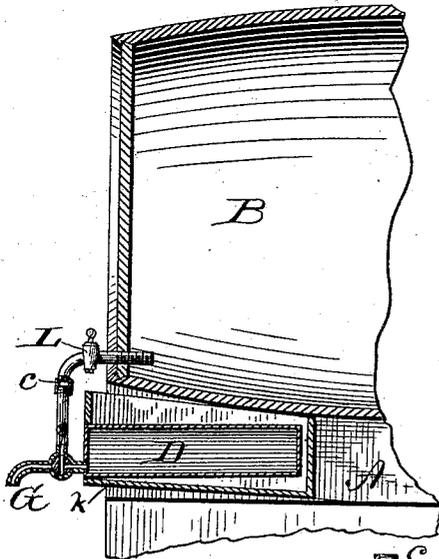


Fig. 3.

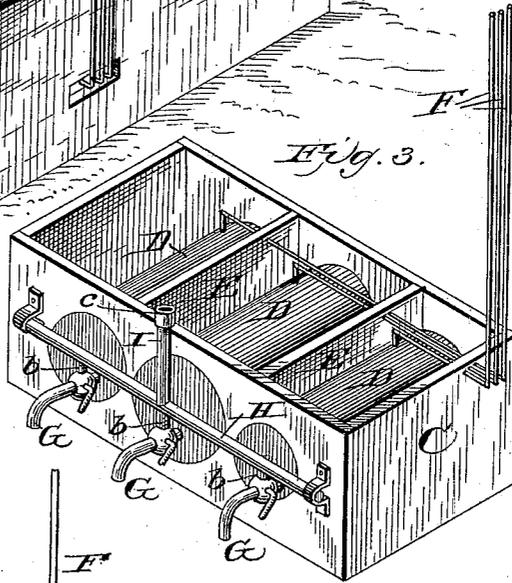


Fig. 5.

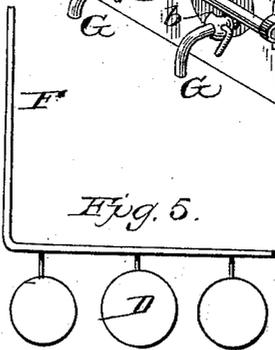
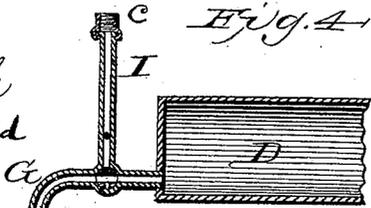


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## AUTOMATIC MEASURING DEVICE FOR LIQUIDS.

SPECIFICATION forming part of Letters Patent No. 395,652, dated January 1, 1889.

Application filed August 9, 1888. Serial No. 282,338. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN BURTON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Automatic Measuring Devices for Liquids; 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 it appertains to make and use the same.

My invention relates to certain improvements in automatic measuring devices for liquids; and it consists in certain details of construction and arrangement of parts, as hereinafter more specifically described, illustrated in the drawings, and pointed out in the claims. Its object is to provide a receptacle having a series of measuring-chambers adapted to be placed within or beneath a support for a barrel, cask, or tank for oil, spirits, or other fluid, and detachably connected with the barrel or tank by means of a pipe communicating between the barrel and measuring-chambers, and provided with suitable two-way cocks, whereby the fluid may be discharged from the cask through either or all of the measuring-chambers, as desired, and automatically measured when drawn; also, in providing suitable means for ventilating or admitting air into the chambers as the fluid is withdrawn.

In the accompanying drawings, Figure 1 is a perspective view of my invention. Fig. 2 is a longitudinal vertical section with the rear of the support and barrel broken away. Fig. 3 is a perspective view of the drawer or receptacle for the measuring-chambers, designed to be placed within the support beneath the front end of the barrel. Fig. 4 is a longitudinal vertical section through the central or middle measuring-chamber and supply-pipe. Fig. 5 is a detail showing a modification in the form and arrangement of the ventilating-tube.

Referring more specifically to the drawings, A represents the support for the barrel, cask, or tank, and B the barrel or cask containing the fluid.

C is a drawer or receptacle, designed to be

placed within the front of the support and rest upon cleats *a* beneath the front end of the barrel.

D D D represent a series of closed measuring-chambers of varying capacities placed within the drawer or receptacle C, having their front ends projecting through the front face of the drawer and flush therewith.

E E are partitions in the receptacle between the measuring-chambers.

F represents a series of ventilating-pipes, each of which is designed to connect with one of the measuring-chambers and with the barrel.

G represents a spigot or cock, one of which is in the front of each measuring-chamber and communicates with its interior.

H is a horizontal pipe extending across the front of the receptacle C slightly above the spigots, and communicating with each by a down pipe, *b*.

I is a vertical pipe extending upward from the horizontal pipe H, and designed to connect with the discharge-cock of the barrel or cask by means of an interior threaded collar or flanged union, *c*, at its upper end.

My invention is designed especially for the convenience of dealers in oil and other fluids, who are by means of it furnished with a convenient support for a barrel or cask of fluid, combined with means for automatically measuring the fluid as drawn, and whereby they are enabled to avoid the usual troublesome method of first pumping the oil or other fluid into a tank or receptacle.

In order to operate my invention the support A is placed in any convenient and desired position, with the drawer or receptacle C, containing the measuring-chambers, placed within and resting on the cleats *a*, and having the series of vertical ventilating-tubes F, each one of which connects at its lower end with the top one of the measuring-chambers.

The barrel of oil, naphtha, or other fluid is then rolled or lifted upon the support A, and the upper ends of the ventilating-tubes F are inserted into the barrel through the bung, as shown in Fig. 1. The spigot L in the front or head of the barrel is then connected with the vertical pipe I by slightly raising the recep-

tacle C, containing the measuring-chambers, by means of the wedges inserted in the space *k* above the cleats until the mouth of the spigot, which is screw-threaded, is in contact with the collar *c*. The collar is then adjusted to the position shown in Fig. 2, thereby connecting the barrel with the measuring-chambers.

Each of the cocks G is provided with a two-way valve, as shown in Figs. 2 and 4, so that by turning the valve in one direction an opening is afforded from the measuring-chamber through the horizontal and vertical pipes H I to the barrel and the outlet is closed, as shown in Fig. 2. By turning the valve in the opposite direction the inlet from the barrel is cut off and the outlet from the measuring-chamber opened, as shown in Fig. 4.

It will be observed that when the barrel is placed in position, the connections made, and the valves opened the measuring-chambers are at once automatically filled, and any desired quantity can be drawn through its cock G by turning the valve, whereby the inlet is cut off and the contents of the chamber discharged.

Instead of a series of independent ventilating-tubes, F, a single tube having branches communicating with each measuring-chamber, as shown in Fig. 5, may be employed.

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

1. In an automatic measuring device for liquids, the combination, with a support for a barrel or tank, of a series of measuring-chambers arranged beneath or within such support and adapted to be connected with the barrel or tank by a pipe, and a cock in each measuring-chamber having a two-way valve, whereby the outlet from the measuring-chamber may be opened and the communication with the barrel cut off, or vice versa, substantially as and for the purpose described.

2. In an automatic measuring device for liquids, the combination, with a support for a barrel or tank, of a receptacle containing a series of measuring-chambers adapted to be placed beneath or within the support, a cock in each measuring-chamber having a two-way valve, a pipe connecting with each cock and adapted by means of an adjustable screw-collar to connect with the discharge-faucet of the barrel or tank, and one or more ventilating-tubes connecting with the measuring-chambers, substantially as described.

3. In an automatic measuring device for liquids, the combination, with the support A for a barrel or tank, of the removable receptacle C, containing the series of measuring-chambers D, the cocks G, having the

two-way valves, the pipes H I *b*, connecting the cocks of the measuring-chambers, and the adjustable collar or coupling *c*, adapted to connect the measuring-chambers with the faucet of a barrel or tank, substantially as described.

4. The combination, in a measuring device for liquids, of the support A for a tank or barrel, the series of measuring-tanks D, the removable drawer or receptacle C, containing the measuring-tanks, the series of two-way cocks G, communicating with the measuring-tanks, the series of ventilating-pipes F, connecting with the measuring-tanks, the horizontal and vertical pipes H I *b*, connecting the two-way cocks, and the adjustable collar *c*, all constructed and arranged substantially as and for the purpose described.

5. The combination, in a measuring device for liquids, of the support for a barrel or tank, the series of measuring-chambers, each provided with a two-way cock and with ventilating-tubes, the receptacle containing the measuring-chambers adapted to be placed beneath or within the support, the pipes connecting the cocks of the measuring-chambers, the adjustable screw-collar adapted to connect said pipes with the discharge-spigot of a tank or barrel, and the wedges designed to enter the space beneath the receptacle for the measuring-chambers, substantially as described.

6. In an automatic measuring device for liquids, the combination, with a barrel or tank, of the independent support provided in its interior with a removable receptacle containing a series of measuring-chambers having ventilating-tubes and each provided with a two-way cock, and a pipe connecting said cocks having at its outer end an adjustable collar or flange-union for connecting it with the spigot of the barrel or tank, substantially as described.

7. The independent automatic measuring device for oil or other fluids, consisting of the support, the series of measuring-chambers provided with two-way cocks and ventilating-tubes, the removable drawer or receptacle containing the chambers, and the pipe connecting the two-way cocks having at its upper or outer end an adjustable flange-union for connecting said pipe with the spigot of a barrel or tank placed upon the support, all constructed and arranged substantially as and for the purpose described.

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

BENJAMIN BURTON.

Witnesses:

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C. G. BERRYMAN.