

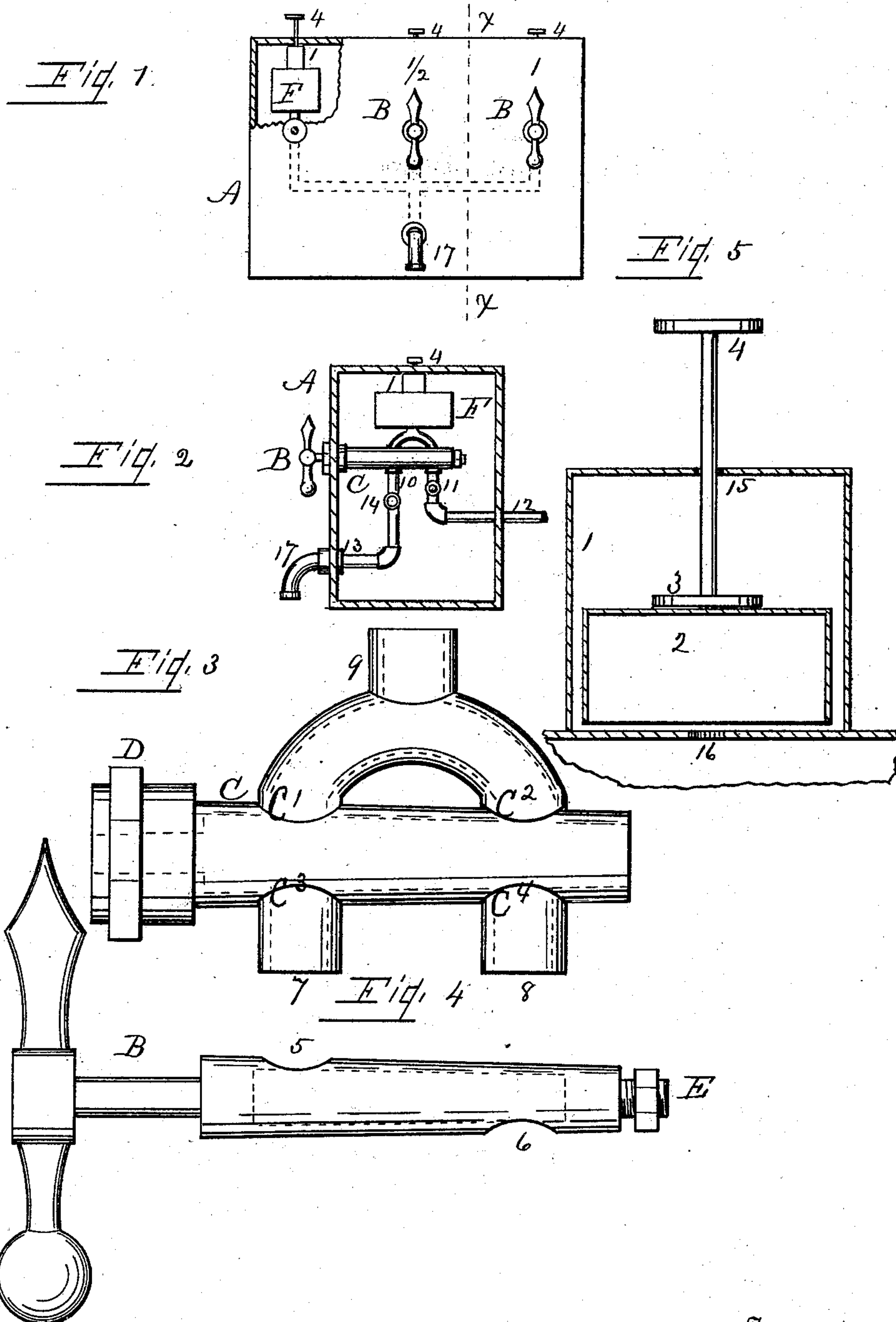
(No Model.)

2 Sheets—Sheet 1.

J. FREYTAG.
MEASURING VESSEL.

No. 406,641.

Patented July 9, 1889.



Witnesses

L. C. Adams
B. J. Adams

Inventor

John Freytag
By His Attorney B. Pickering

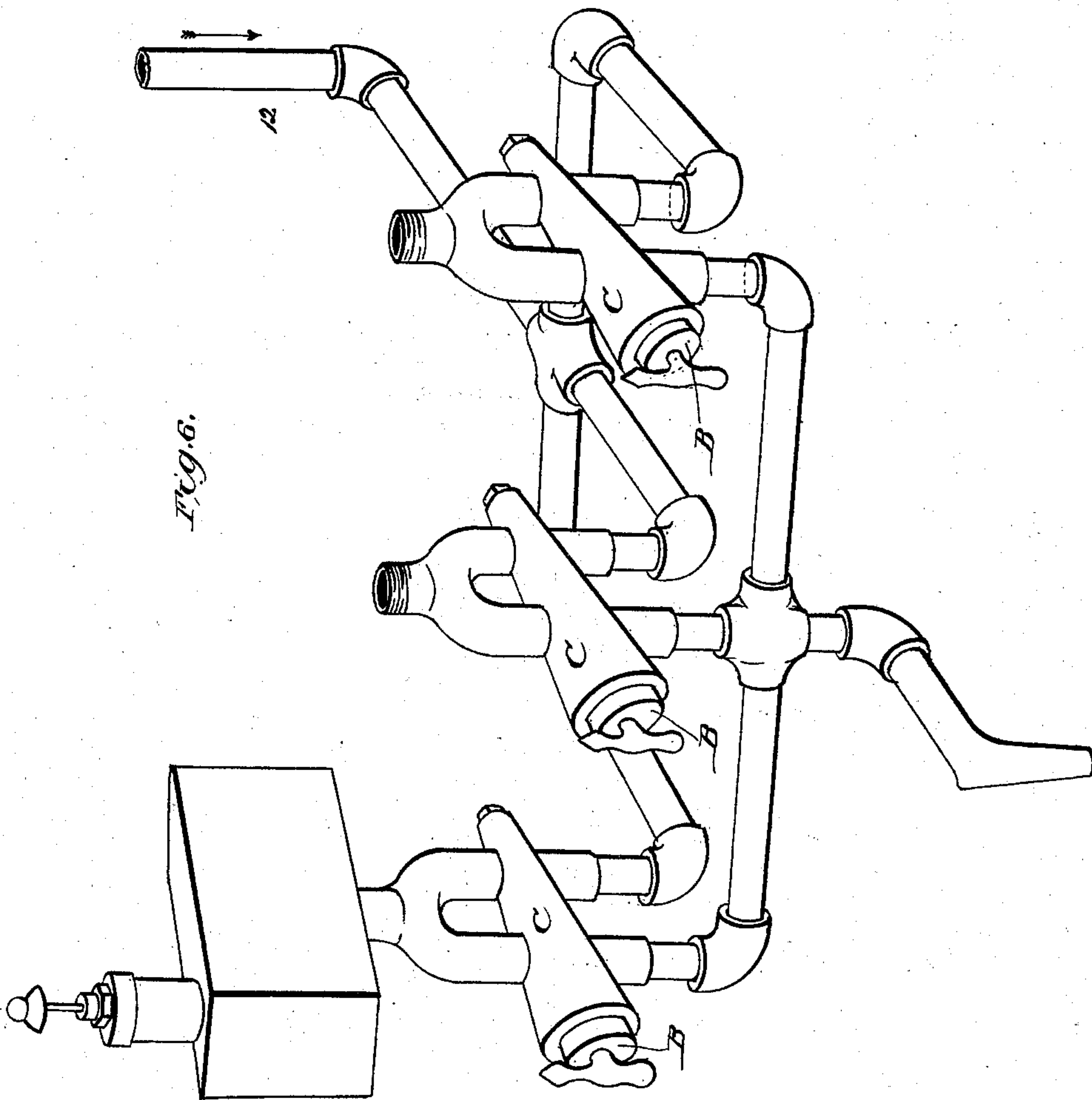
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WITNESSES:
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JOHN FREYTAG, OF DAYTON, OHIO.

MEASURING-VESSEL.

SPECIFICATION forming part of Letters Patent No. 406,641, dated July 9, 1889.

Application filed November 26, 1888. Serial No. 291,842. (No model.)

To all whom it may concern:

Be it known that I, JOHN FREYTAG, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Measuring-Vessels; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in measuring-vessels, the several features of which will be fully hereinafter set forth. The object is to conveniently measure fluids by a series of vessels holding each a specific quantity conveniently arranged in a case, and all of which have in common an influent and an effluent pipe. My invention involves, also, a form of stop-cock adapted to the purpose.

The mechanism is illustrated in the accompanying drawings, in which—

Figure 1 is a front view of the measuring-case with a portion cut away to exhibit a part of the interior. Fig. 2 is a transverse section of the same on line *x*, Fig. 1. Fig. 3 is an enlarged view of the exterior or case of the two-way stop-cock. Fig. 4 is an enlarged view of the plug of the same. Fig. 5 is an enlarged view of the air-chamber. Fig. 6 is an enlarged detail view of the pipe-connections.

Similar letters refer to similar parts throughout the several views.

A is a wooden case in which are supported by the pipe-connections and the stop-cocks three square tin boxes. The first, beginning at the left, has the capacity of one-fourth of a gallon, (a quart,) the second one-half, and the last one gallon. Each of the vessels F is attached at its bottom to one of the two-way stop-cocks. To the top of each of these vessels is attached a small circular air-chamber 1, with orifices 15 at the top and 16 at the bottom to admit air into and out of the measuring-vessels, as the same are closed vessels.

The inverted vessel 2 forms a float, to the top of which is attached a stem terminating in the button 4 at the top. On the top of this

vessel, and surrounding the stem, is a circular rubber disk 3, which, when the float is carried to the top of the air-chamber, closes the orifice and arrests the flow of air through the same. When the fluid is being withdrawn, the float descends, letting the air first into the air-chamber and then into the measuring-vessel. The use of the button is to show that when the vessel is filled it is up, as at 4, Fig. 1, and if it is empty, as at 4 center and 4 to the right.

The two-way stop-cock B is shown in its relation to the other parts at Fig. 2, and the parts of the same are shown in detail at Figs. 3 and 4. The case C comprises the longitudinal part, having curved conduits at the top terminating in the boss 9, and on the bottom having two bosses 7 and 8. To the left end is attached the nut D, which serves no purpose other than to bind the same to the case. The orifices throughout are indicated by dotted lines. The plug B comprises the handle, the tapering part or bearing, and thread for the nut E, and the tapering part is hollow, having two external openings 5 and 6 on opposite sides, and these are coincident with the conduits of the case. Two pipes 10 are connected to the bottom of the case. The right is the inlet-pipe, and the left the outlet-pipe. The T-joints 14 and 11 are for the side pipes leading to the other vessels. 12 is the pipe for connection with a barrel; 13, pipe-connection with the spout 17.

The operation is thus: When the stop-cock is closed, the rounded end of the handle is up. On turning the same down the liquid flows through the opening 6, through the orifice in plug, out of opening 5, thence into the measuring-vessel, the air escaping at the top of the air-chamber, as before explained, the flow stopping only when the vessel is filled. By reversing the position of the plug, point up, the fluid flows into the same at 6 and out at 5, and thence to spout, thus alternately filling and emptying the measuring-vessel. For ordinary use three vessels would be sufficient; but less or more may be used, as the circumstances may demand.

The case C has channels C' and C³ and C² and C⁴, the plug B turning in said case being provided with the ports 5 and 6, port 5 being

arranged to register with channel C' or C³, and port 6 being arranged to register with channel C² or C⁴. It will be seen that the plug may be turned to register port 6 with channel C⁴ and port 5 with channel C', channels C³ and C² being closed, so that the fluid will pass from the reservoir into the measuring-tank. When the tank is filled, the plug may be reversed, closing channels C' and C⁴ and opening channels C² and C³, so that the fluid will discharge into the vessel placed to receive it from discharge 17.

In Fig. 6 I show the pipe-connections, from which it will be seen that the supply-pipe 12 is connected by branches with each of the casings or chambers C, and the outlet C³ of each of such chambers is connected by branch pipes with the single discharge-pipe, so that the oil is received by each of the casings C through the same pipe and discharged therefrom through the same pipe.

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

1. An improved measuring apparatus, substantially as described, comprising a supply-pipe, a discharge-pipe, a number of measuring-chambers, faucets controlling the inlet to and discharge of said measuring-chambers, branch pipes connecting the faucets of each of said measuring-chambers with the supply-

pipe, and branch pipes connecting each of such faucets with the discharge-pipe, all being constructed substantially as described, whereby all of said measuring-chambers may be filled through the same pipe and emptied through the same pipe, as and for the purposes set forth.

2. An apparatus, substantially as described, consisting of the casing or cabinet, the measuring-chambers arranged in said cabinet, the faucets arranged in the cabinet and controlling the inlet to and discharge from said measuring-chambers, the handles of said faucets being arranged outside the cabinet, the supply-pipe, the branch pipes arranged in the cabinet and connecting the supply-pipe with the faucets of each of the measuring-chambers, the discharge-pipe extended through the front wall of the casing or cabinet, and the branch pipes arranged in the cabinet and connecting the discharge-pipe with the faucets of each of the measuring-chambers, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN FREYTAG.

Witnesses:

B. PICKERING,
CHAS. A. WALTMIRE.