To all whom it may concern:

Be it known that I, Joseph Johnson Wells, a citizen of the United States, residing at Mount Carmel, in the county of Abbeville and State of South Carolina, have invented a new and useful Measuring-Faucet, of which the following is a specification.

This invention relates to that class of measuring-faucets wherein a measure-chamber is provided and supplied at its upper end with a faucet or cock which may be connected with the barrel and at its lower end with a second faucet or cock, the upper faucet being designed to permit the filling of the measure-chamber, while the lower faucet is to permit the withdrawal of the liquid deposited in the measure-chamber. These devices are usually constructed principally of glass—that is, the measure-chambers are formed of glass and supplied with the faucets or cocks, which are of course formed of metal.

The object of the present invention is to simplify and improve the construction of measuring-faucets and to provide an article of the nature above referred to having an upper faucet capable of connection with the receptacle from which the liquid is drawn, a lower faucet for drawing off the liquid from the measuring-chamber, and an interposed measuring chamber or body, said parts being constructed, arranged, and combined in such manner as to secure certain advantages and points of superiority, that will hereinafter appear.

To this end the invention consists in certain novel features and details of construction and arrangement of parts hereinafter fully described, illustrated in the drawings, and finally embodied in the claims.

In the drawings, Figure 1 represents a perspective view of the lower portion of a barrel supplied with my improved measuring-faucet; Fig. 2, a vertical section of the measuring-faucet; Fig. 3, a detail perspective of the clamping-plate which is secured to the lower end of the measure-chamber; Fig. 4, a detail section illustrating the construction and arrangement of the vent-orifice which I provide.

The reference numeral 1 indicates the measure-chamber, which is substantially frustoconical in shape, and which has its upper end open and its lower end provided with a bottom 2, having at its center the opening 3, with which the pipe 4 communicates. The pipe 4 bends at a point directly below the bottom 2 and proceeds horizontally to a point beyond the side of the measure-chamber, where it is provided with a controlling-valve 5. This valve may be of any kind, but is preferably of the swinging-gate class, as shown in the drawings.

6 indicates a brace, which is rigidly secured to the outer end of the pipe 4 and which projects upwardly to the lower front side of 65 the measure-chamber, to which it is also rigidly secured.

The faucet for connection with the barrel comprises a threaded portion or neck 7, which is secured in the bung-hole and which has its 70 outer end formed with a casing 8, in which the plug 9 fits and operates, all of which is of the usual construction. The casing 8 has an opening at its lower end, which is the emitting-orifice of the faucet. Formed integral with the lower end of the casing 8 is the flange 10, which is extended horizontally and which forms a square plate. This plate or flange 10 is provided on its under side with an annular groove 11, provided for the reception of the upper end of the measure-chamber, whereby a close and air-tight connection between the two parts is effected.

12 indicates a screen, which is formed of wire, and which is arranged in the upper portion of the measure-chamber and has its edges extended over the upper edge of said chamber, so as to be forced into the groove 11 when the parts are assembled, and to insure an air-tight connection the packing-gasket 13 is interposed between the parts and within the groove 11. The purpose of the screen 12 is to strain the liquid which passes through the faucet at the upper end of the measure-chamber, all of which will be understood.

14 indicates the clamping-plate or disk referred to hereinbefore, and this consists of a dished sheet-metal disk provided with the peripheral lugs 15, arranged at equidistant points on its periphery and perforated for the passage of the rods 16. The rods 16 are provided at their lower ends with suitable heads, and these heads bear upon the under sides of the lugs 15, while the major portions of the
rods 16 project upwardly parallel with the sides of the measure-chamber and through the openings 17 in the flange or plate 10 of the upper faucet. Here the rods 16 terminate, and their ends are screw-threaded and provided with nuts 18, by which the rods may be tightened. Through the medium of this construction the disk or plate 14 may be clamped firmly against the bottom 2 of the measure-chamber, and the flange or plate 10 of the upper faucet may be drawn tightly down upon the upper end of the measure-chamber, thereby effectively connecting all the parts of my invention and holding them in operative adjustment.

19 indicates a slot, which is formed in the disk or plate 14, and which proceeds from the center thereof radially to its side. The purpose of this slot is to permit the pipe 4 to have the necessary space and to allow the disk 14 to be replaced and removed without conflict with said pipe, all of which will be understood.

20 is formed in the measure-chamber and at the side thereof is the observation-slot 20, which extends throughout the length of the measure-chamber, and which is surrounded by the flanges 21. These flanges operate to hold the glass plate 22 in place, and the said glass plate extends the entire length of the slot 20 and furnishes means for observing the condition of the liquid within the measure-chamber. Rigidly secured to the flanges 22 at various points throughout the length thereof are the bars 23, which are preferably five in number, but which may be increased or diminished at will. The purpose of these bars is primarily to protect the glass plate 22 from fracture, and they may be used incidentally as indicators for the scale which is marked on the measure-chamber.

The reference-numeral 24 designates the scale, which is arranged on the outer side of the measure-chamber and directly adjacent to the glass plate 22. This scale is the liquid-measure scale, and will vary in denominations according to the capacity of the measure-chamber, the principle thereof being that it will register the amount of liquid within the measure-chamber by the alignment of the surface of the liquid with any particular point or graduation thereon. This principle is old in the art to which my invention is applicable and will be understood without further description.

55. It will be seen that the bars 23 may be increased in number and made one for every important graduation on the scale 24. This will make the observation of the liquid an easier matter, and will be an improvement though not a necessity.

24 indicates a square opening, which is formed in the right-hand side of the measure-chamber, and which is surrounded by the flanges 25, said flanges being offset from the side of the measure-chamber and provided for holding the glass plate 25 in position. The purpose of the opening 24 is to permit the passage of light into the measure-chamber, to the end that the condition of its contents may be ascertained. Thus during the 70 day this opening furnishes light sufficient for this purpose, and at night, or if the apparatus is to be used in a dark apartment, the opening will make it possible for light from a lamp or other source of artificial light to be introduced into the measure-chamber.

The flange or plate 10 is provided with a vent-opening 27, which is provided to permit the egress and ingress of air during the operations of filling and emptying the measure-chamber. Thus when the measure-chamber is to be filled this opening 27 should be uncovered, so that the atmosphere contained within the measure-chamber may be expelled as the incoming liquid may require by division of the displacement of air caused by the same. On the other hand, as the liquid is withdrawn it will be necessary to allow the ingress of air into the measure-chamber to fill the space left by the withdrawn liquid.

90 This opening is commanded by a pin or plug 28, which fits therein and which is capable of effectively closing the opening. The pin may be provided with a cord or chain 29, which may be connected to the plug 9 of the upper faucet, and by which the pin may be held conveniently and its loss or misplacement prevented.

In the use of my invention the upper faucet is disconnected from the measuring-chamber and from the remaining parts of the apparatus, so as to permit the insertion of the threaded portion or shank 7 thereof into the bunghole of the barrel. When this has been effected, the parts should be assembled, whereupon the apparatus will be in operative adjustment. The practical operation of the device is performed by first closing the valve 5 and subsequently opening the upper valve or faucet, so as to permit the liquid contained in the barrel to pass into the measure-chamber. This passage of the liquid is allowed to continue until the same arises to the height which will indicate the amount desired to be withdrawn, whereupon the upper faucet should be closed and the lower valve or faucet opened. This will permit the liquid to pass off into a suitable receptacle, whereupon the operation will be completed. It will be understood that during this operation it will be necessary to manipulate the pin 28 of the vent-opening 27 in the manner described above. Thus it should be removed during the operation of filling the measure-chamber and of emptying the same, after which it should be replaced, so as to prevent the passage of dust and other foreign matter into the measure-chamber.

Having described the invention, I claim—

1. In a measuring faucet, the combination of a cock or faucet proper capable of connection with the receptacle from which the liquid is drawn and having at its lower end a flame or plate extended horizontally and
formed with vertical openings therein, a measure chamber frusto-conical in shape and having a bottom permanently secured to its sides and having an open upper end, the flange or plate of the said cock or faucet being formed with an annular groove on its under side in which the open upper end of the measure chamber may be received, a pipe passing horizontally beyond the lower side of the measure chamber and in communication with the interior thereof, the pipe being provided with a cock or faucet commanding the same, a dish-shaped disk provided with a series of peripheral lugs, and tie-rods passed through said lugs and through the openings in the flange or plate aforesaid, whereby the measure chamber is rigidly connected to the first cock or faucet, the said disk having a radial slot formed therein for the passage of the pipe which passes out of the bottom of the measure chamber, substantially as described.

2. In a measuring faucet, a cock or faucet proper capable of connection with the receptacle from which the liquid is drawn, and having at its lower side a horizontally-extending flange or plate formed with a downwardly-opening circular groove, a measure chamber having an open upper end capable of fitting snugly within said groove, a sheet of wire gauze arranged within the upper portion of the measure chamber and having its edges resting upon the upper edge of the measure chamber, a packing gasket located within the groove of the flange or plate, and means for holding the measure chamber up snugly against the flange or plate, substantially as described.

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

JOSEPH JOHNSON WELLS.

Witnesses:
T. P. PASCHAL,
J. W. MORRAH.