

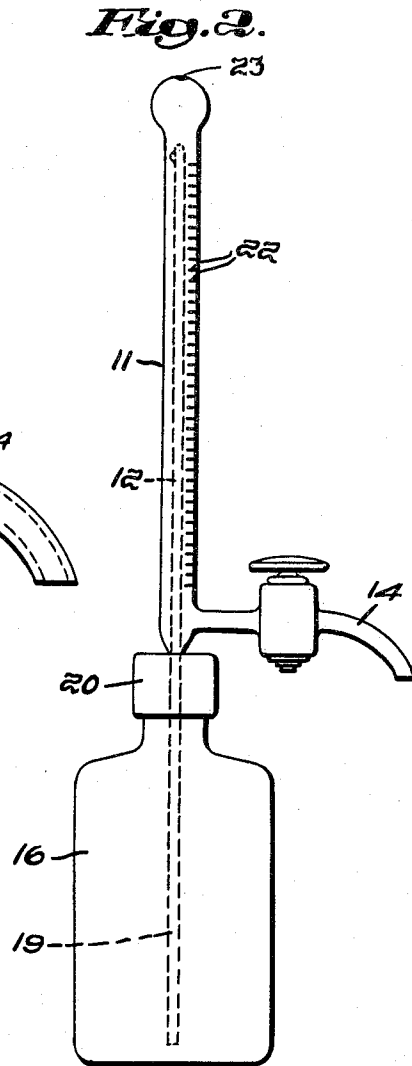
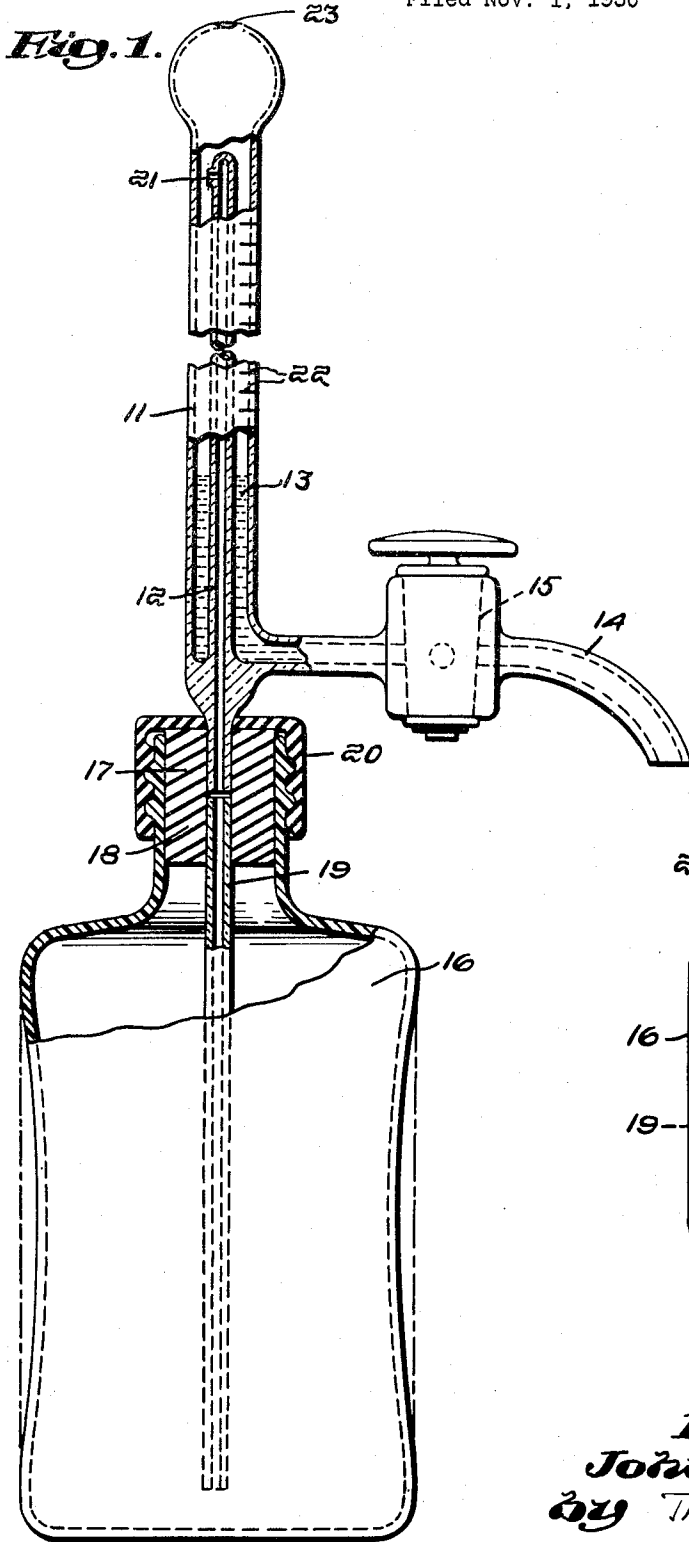
May 8, 1956

J. H. WHITE

2,744,663

BURETTE ASSEMBLY

Filed Nov. 1, 1950



Inventor:
John H. White,
by Thomson & Thomson
Attorneys

1

2,744,663

BURETTE ASSEMBLY

John H. White, Needham, Mass., assignor to Hagan Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Application November 1, 1950, Serial No. 193,319

2 Claims. (Cl. 222-207)

This invention relates to a burette assembly and pertains more particularly to improvements in burettes used for titration or for dispensing measured quantities of liquid from a bottle.

The burette assemblies heretofore provided for such purposes have usually comprised a conventional burette tube having a vent or small opening at the upper end, a lower extension of which tube is disposed in a bottle containing liquid and passes through a hole in the stopper of the bottle; and a second tube connected to an aspirator and leading into the bottle through another hole in its stopper. The bottles have been made of glass or other rigid material, and require a relatively wide mouth to accommodate a large stopper with two holes.

The principal purpose of the present invention is to eliminate the necessity of using a separate aspirator and aspirator tube and permit the use of a bottle with a normal sized mouth and stopper, with a single hole for the tube by providing a bottle made of compressible material, so that the liquid in the bottle may be forced through the tube and into the burette chamber by manually squeezing the wall of the bottle.

A recommended embodiment of the invention is shown in the accompanying drawings in which:

Fig. 1 is an elevation of the improved burette assembly, partly broken away and in diametrical section; and

Fig. 2 is an elevation of the assembly to smaller scale.

The improved liquid dispensing assembly comprises a conventional burette 11 with a small vent or opening 23 at the upper end and having an aspirator tube 12 and an outer chamber 13 leading to a discharge spout 14, under control of a valve 15; and a bottle 16 having its wall, at least, formed of flexible and resilient material, such as plastic polystyrene, rubber, or the like, which is normally shape sustaining but which may be manually squeezed or compressed. The bottom portion 17 of the tube 12 is received in an axial opening of the bottle stopper 18. As shown in Fig. 1, a separate section 19 of the aspirator tube is received in the lower portion of the bottle stopper and extends downwardly to a point adjacent the bottom of the bottle. If preferred, the extension 19 may be integral with the aspirator tube 12. An auxiliary cap 20, apertured to receive the tubular section 17 may be screw threaded on the mouth of the bottle, if desired.

When the compressible bottle 16 of the improved burette assembly is squeezed by hand, as indicated by the full lines of Fig. 1, the liquid in the bottle will be forced upwardly through the aspirator tube, and outwardly of said tube through its top port 21, into the chamber 13, until the chamber holds the desired quantity of liquid, as indicated by the scaled graduations 22 on the exterior of the burette. The valve 15 may then be

2

opened to dispense the measured quantity of liquid through the spout 14. It will be understood that when squeezing pressure on the wall of the compressible bottle is released, the elastic wall will resume its original shape, as shown in Fig. 2 and in broken lines in Fig. 1.

It will be apparent from the foregoing that the improved burette assembly not only eliminates the necessity for a separate aspirator and additional aspirator tube passing through the stopper of a wide mouthed bottle, as in the assemblies heretofore employed for this purpose, but also permits the use of a small mouthed bottle having a stopper with a single axial hole therethrough. The new appliance is thus relatively less expensive, more compact, and more convenient to use, than the burette assembly of the prior art.

The improved burette assembly may be used for titrating and/or dispensing measured quantities of liquids, in chemical testing or otherwise. It not only affords simplicity of construction, assembly, and operation, but also provides a more readily portable assembly, with better balance for convenient use and less liability to tip over. The unit can be operated with one hand; and the compressible plastic bottle is more resistant to most chemicals than ordinary glass.

I claim:

1. In combination a burette and a flexible walled container which container serves both as a pumping means and a reservoir from which liquid may be transferred into said burette, said combination comprising a container having a wall of flexible, resilient material, a stopper in the mouth of the container, said stopper having but a single hole positioned axially therethrough, and a burette extending axially through said single hole into the container, the upper end of said burette being vented to the atmosphere, an inner tube disposed axially throughout substantially the entire length of said burette and extending into said container, said burette having suitable discharge means connected thereto at a point intermediate the closure and the vented end of said burette, whereby manually squeezing the walls of said container forces the liquid therein upwardly through the inner tube into the burette.

2. In combination a volumetric burette and a container which container serves both as a pumping means and a reservoir from which a liquid may be transferred into said burette, said combination comprising a container having flexible side walls, a closure in the mouth of said container said closure having but a single hole positioned axially therethrough, and a burette extending axially through said single hole into the container, the upper end of said burette being vented to the atmosphere, an inner tube disposed axially throughout substantially the entire length of said burette and extending into said container, said burette having suitable discharge means connected thereto at a point intermediate the closure and the vented end of said burette, whereby manual pressure on the walls of said container causes liquid therein to be forced upwardly through the inner tube into the burette.

References Cited in the file of this patent

UNITED STATES PATENTS

| | | |
|-----------|------------|---------------|
| 7,276 | Starkey | Apr. 9, 1850 |
| 1,546,940 | Pennington | July 21, 1925 |
| 2,510,159 | Wiczner | June 6, 1950 |
| 2,531,745 | Schopmeyer | Nov. 28, 1950 |
| 2,599,446 | Greene | June 3, 1952 |