No. 882,378. PATENTED MAR. 17, 1908.

E. FRIENDLICH.

DRINKING VESSEL.

APPLICATION FILED JAN. 23, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

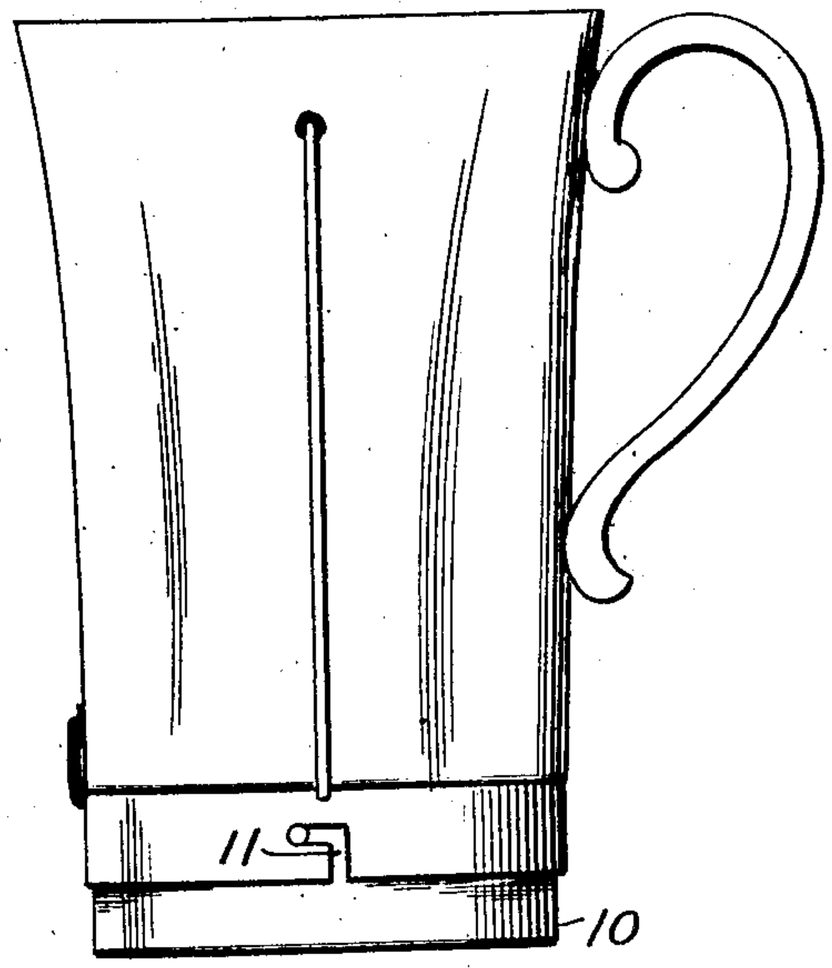


Fig. 2.

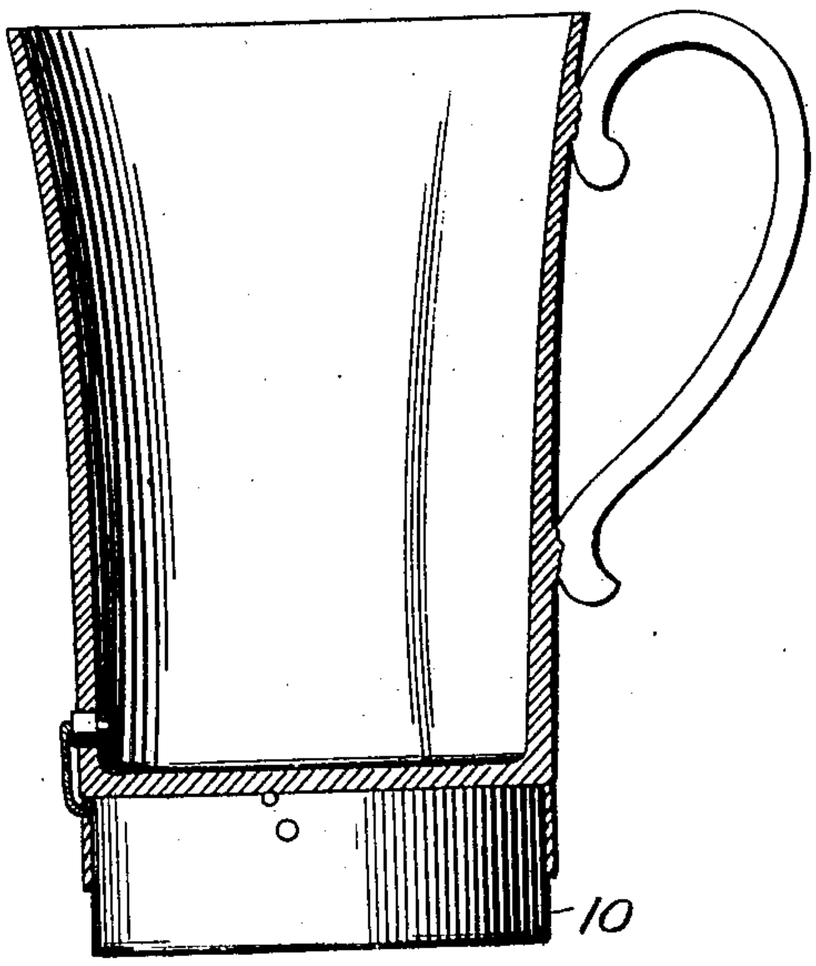


Fig. 3.

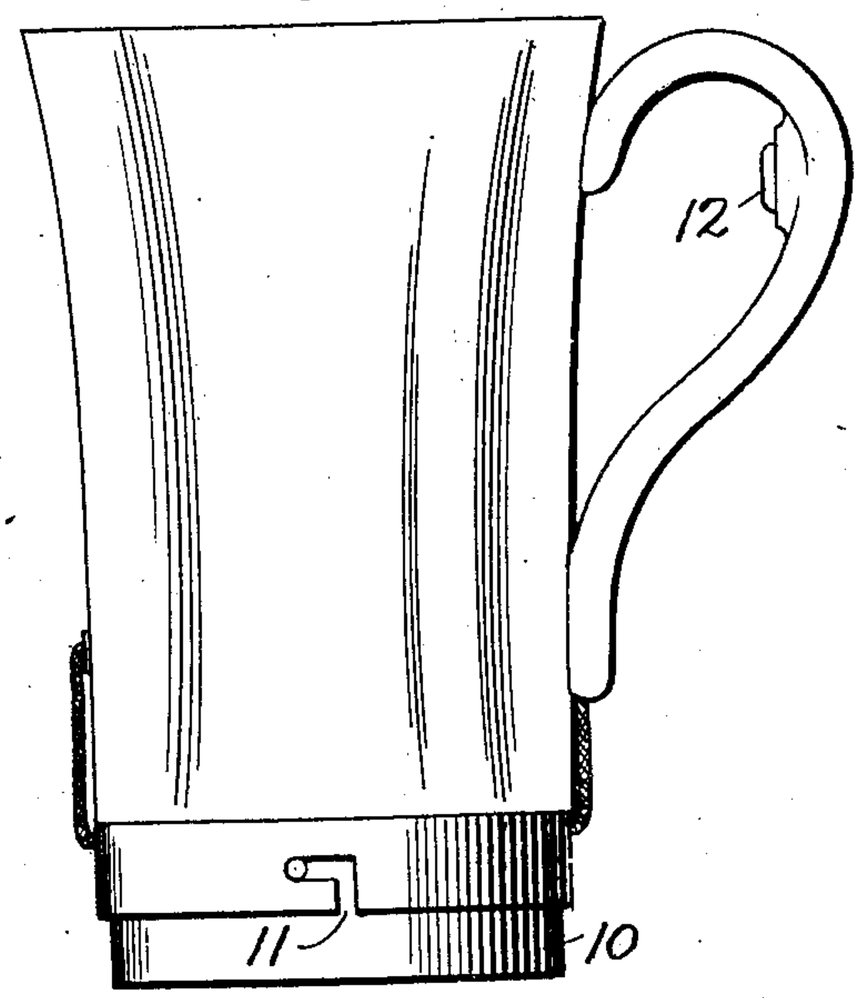
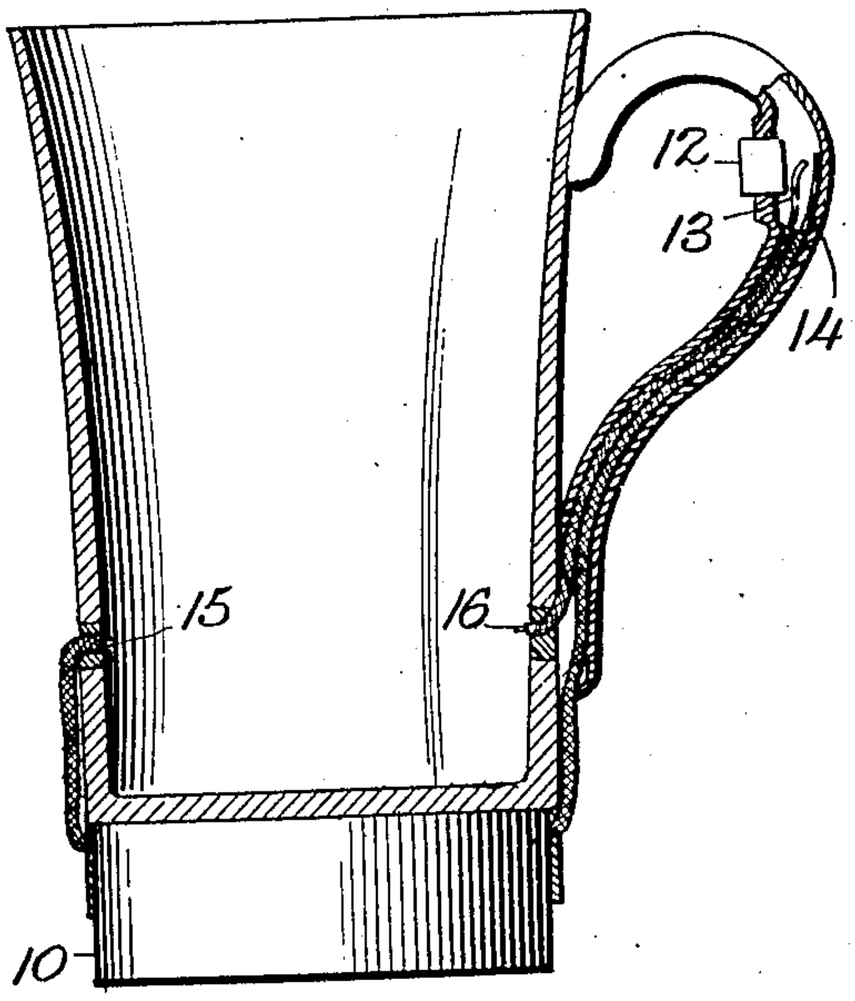


Fig. 4.



WITNESSES

James F. Duhamel.

Annie Brown.

INVENTOR

Emanuel Friendlich

BY

Victor J. Evans

ATTORNEY

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2 SHEETS—SHEET 2.

Fig. 5.

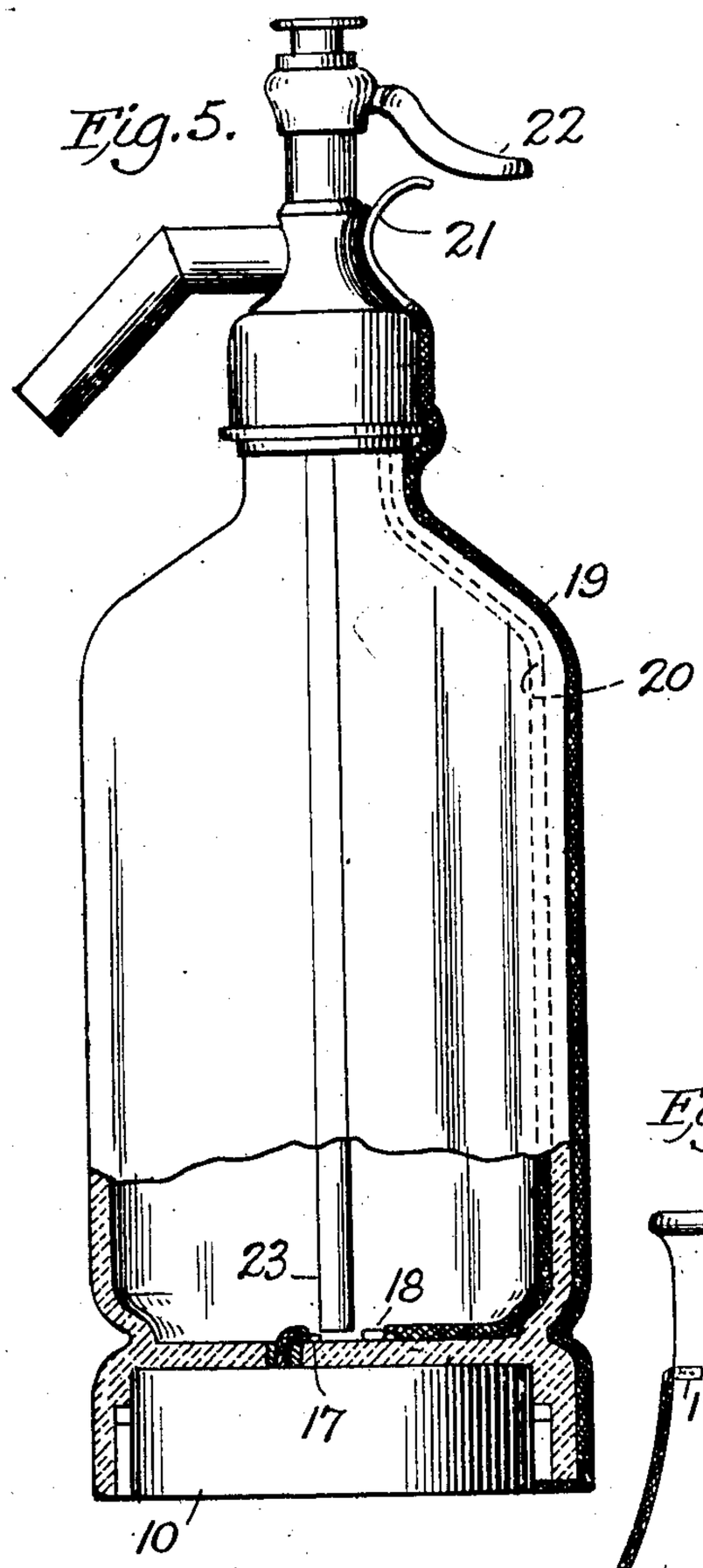


Fig. 6.

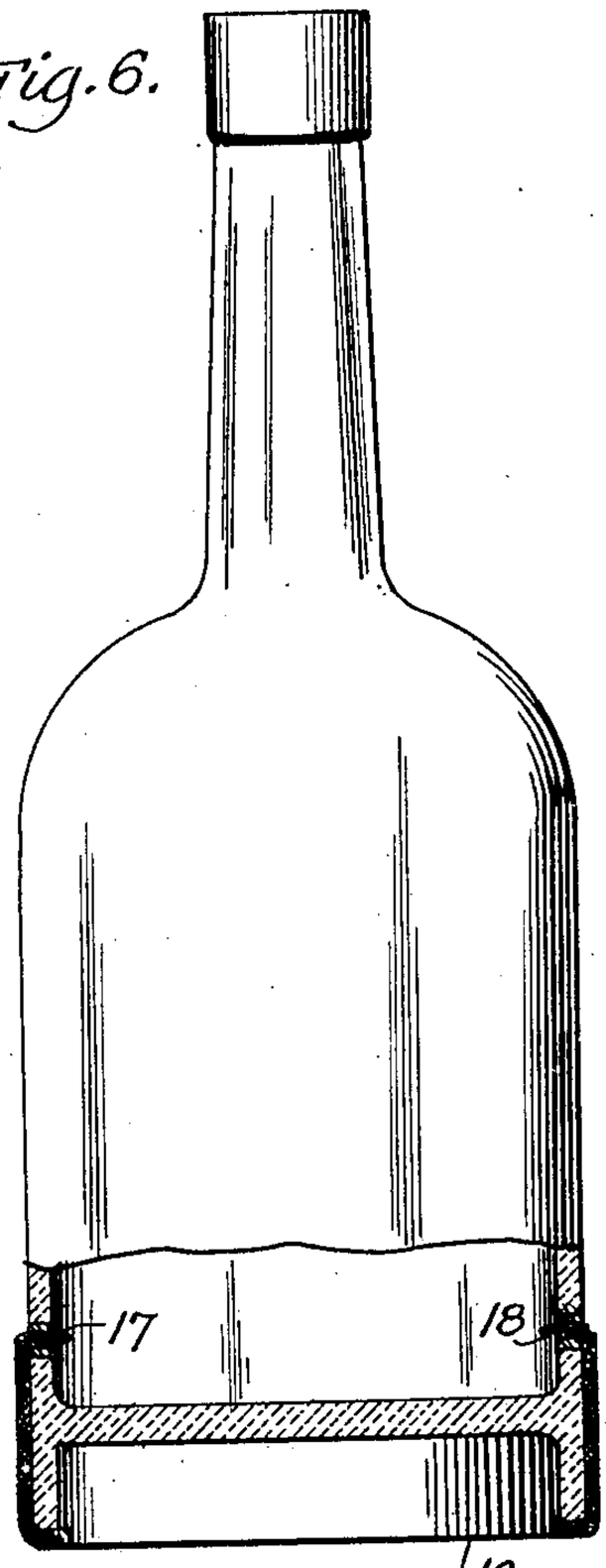
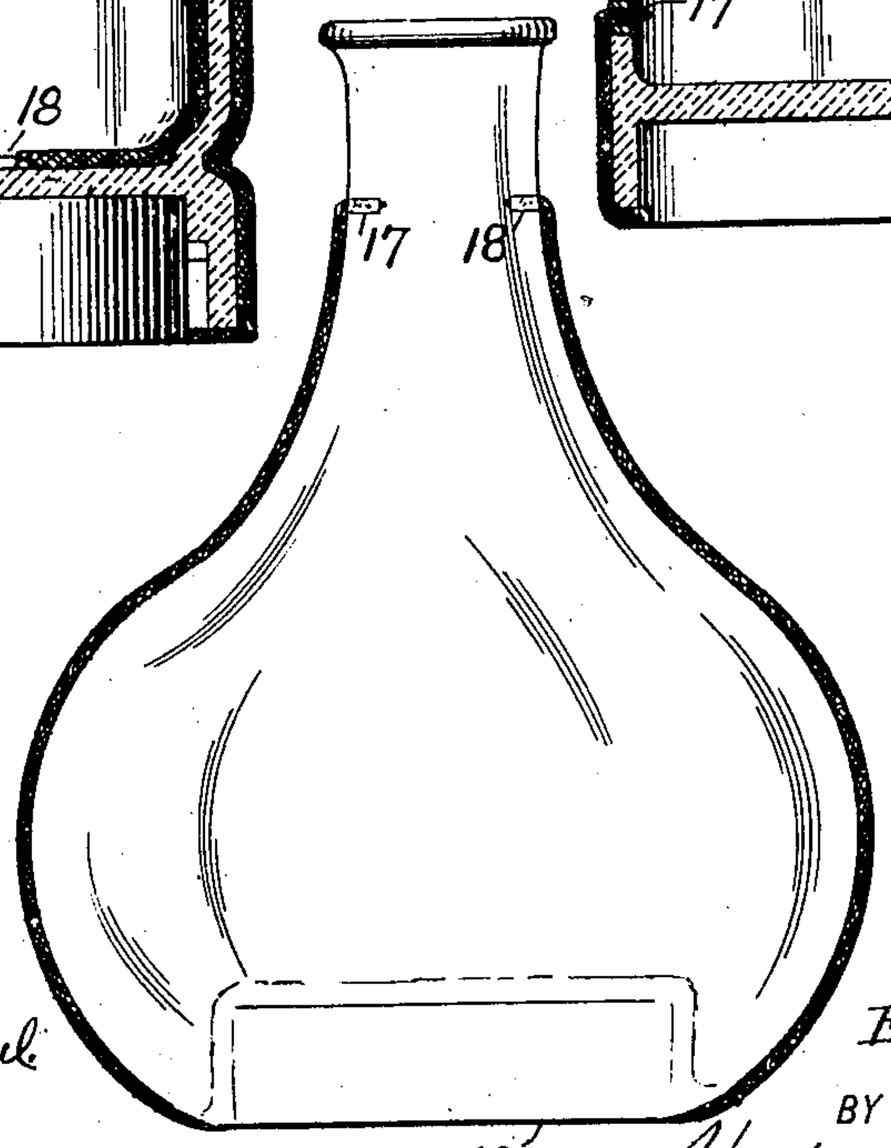


Fig. 7.



WITNESSES:

James P. Duhamel.

Anna Brown.

INVENTOR

Emanuel Friendlich

BY

Victor J. Evans

ATTORNEY.

UNITED STATES PATENT OFFICE.

EMANUEL FRIENDLICH, OF NEW YORK, N. Y.

DRINKING VESSEL.

No. 882,378. Specification of Letters Patent. Patented March 17, 1908.

Application filed January 23, 1907. Serial No. 353,667.

To all whom it may concern:

Be it known that I, EMANUEL FRIENDLICH, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Drinking Vessels, of which the following is a specification.

My invention relates to vessels for holding beverages and drinking water and more particularly to mugs and cups for holding drinking water, and which are adapted while in the act of being emptied to be subjected to an electric current for the purpose of charging the water for medicinal and sanitary purposes as will be more fully explained in the following specification set forth in the claims and illustrated in the drawings, wherein like reference characters are used to designate the same parts in the various figures.

Figure 1 represents a drinking cup arranged to receive an electric circuit while the party using same is in the act of drinking. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a side elevation of a cup with the electric supply means provided with a switch. Fig. 4 is a vertical sectional view of the same cup. Fig. 5 illustrates a common form of siphon for aerated beverages and provided with means for electrifying same as the liquid is discharged. Fig. 6 is an elevation of a common type of bottle showing the liquid therein subjected to an electric current. Fig. 7 is an elevation of a carafe showing the application of the electric current when the water is being discharged from same.

It has been found advantageous in the use of drinking waters and beverages to subject same to the influence of an electric current in order to not only provide same with a sterilizing effect but also to electrify the same which is in some cases found very desirable and necessary. In order to accomplish this result I provide the vessel, which may be an ordinary cup or mug, or bottle, flask, or any other vessel for holding liquid with a battery 10 which may be secured to the vessel as shown in Figs. 1, 3 and 5 by means of a bayonet-joint 11 or molded or cast into the lower end of the vessel as shown in Figs. 6 and 7. This battery may be either primary or secondary and the bayonet-joint is for the purpose of removing same in order to recharge or provide a new battery. The poles of these batteries after leaving same are introduced into the interior of the vessel at different points as may be desired for accomplishing different results. In Figs. 1 and 2 where a drinking cup is employed the wires are introduced one at the bottom of the cup and another near the top or at a point near the mouth of the party who is about to drink from the cup. In thus disposing of the wires it will be seen that the upper wire is only immersed in the water when the user of the cup is about to drink and has tipped it to the drinking position thus completing the electric circuit and charging the water with electricity as the party drinks. This is also the case as illustrated in Fig. 7 where the carafe being tipped up so that the water is about to flow from its mouth the circuit is closed in consequence of the flow of water over the ends of the two poles of the battery thus electrifying the water as it passes from the vessel.

In the form shown in Fig. 6 a constant flow of the current is set up within the vessel this form being used when it is desired to keep the liquid continually electrified until used. While the above means for establishing this circuit have been shown and described as being automatic, there are occasions when it may be advisable if necessary to provide some manually operated switch which is operated when the water is drawn off from the vessel.

In Figs. 3 and 4 is shown a switch located in the handle of the cup and adapted to be pressed upon and operated by the hand of the user when he takes hold of the cup and consists of a button 12 of some non-conductive material which bears upon the spring 13 forming the end of one of the electric connections and when it is forced inward makes contact with the other electric connection 14 closing the circuit and causing the current to flow from the poles 15 and 16.

The siphon illustrated in Fig. 5 is another example of how the circuit may be closed when the liquid is being withdrawn from the vessel and in this case the two poles of the battery are seen at 17 and 18, the point where the liquid leaves the vessel and the connections are made through the wires 19 and 20 the former terminating in the spring 21 which is in the path of the lever 22 operating the valve which permits the liquid to flow and as this lever is pushed down it simultaneously opens the valve and closes the battery circuit subjecting the liquid to an

electric current at the lower end of the tube 23 as the said liquid passes out.

While I have only shown this applied to bottles and other small vessels for containing water it is obvious that similar automatic means may be applied to large vessels for containing liquids and which it is desirable to subject to an electric current as they leave the vessel and various other modifications may be adapted for supplying the liquid with the currents of electricity as they are being used from the vessels containing them.

What I claim as new and desire to secure by Letters Patent is:

1. A vessel of the class described having a hollow handle, a battery attached to the bottom of the vessel, a conductor leading from the battery through the hollow handle and having electrodes presented to the action of liquid in the vessel, and a make-and-break for such conductor attached to the handle.

2. A vessel of the class described having a battery, a conductor leading therefrom and having electrodes presented to the action of liquid in the vessel, and a make-and-break for such conductor having a movable element at a portion of the vessel grasped when the vessel is in use to cause the act of grasping the vessel to also close the electric circuit.

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

EMANUEL FRIENDLICH.

Witnesses:

JAMES F. DUHAMEL,

H. G. HOSE.