L. F. GILLETTE.

THERAPEUTIC BOTTLE.

APPLICATION FILED JUNE 17, 1910.

991,844.

Patented May 9, 1911.

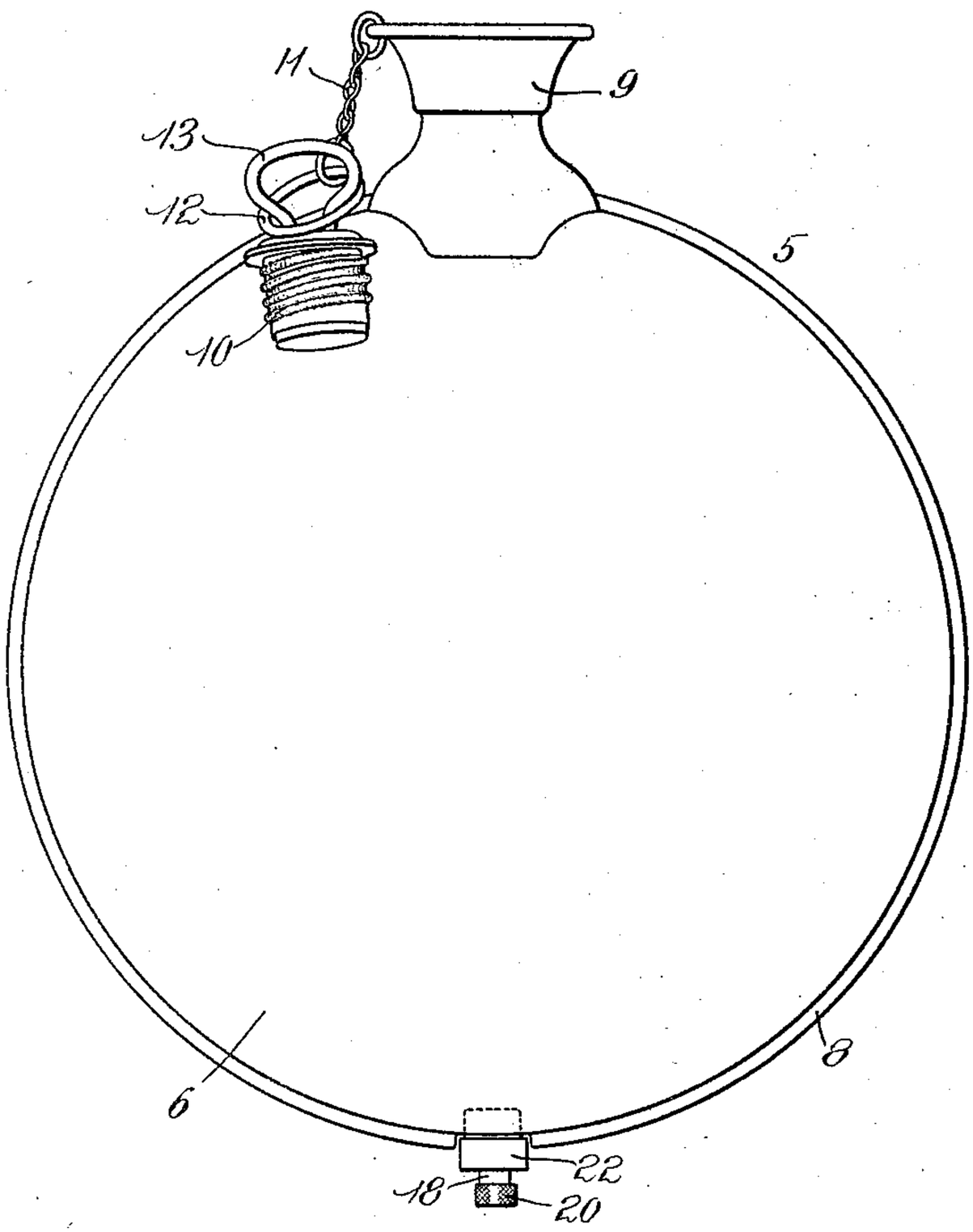

Fig. 1.

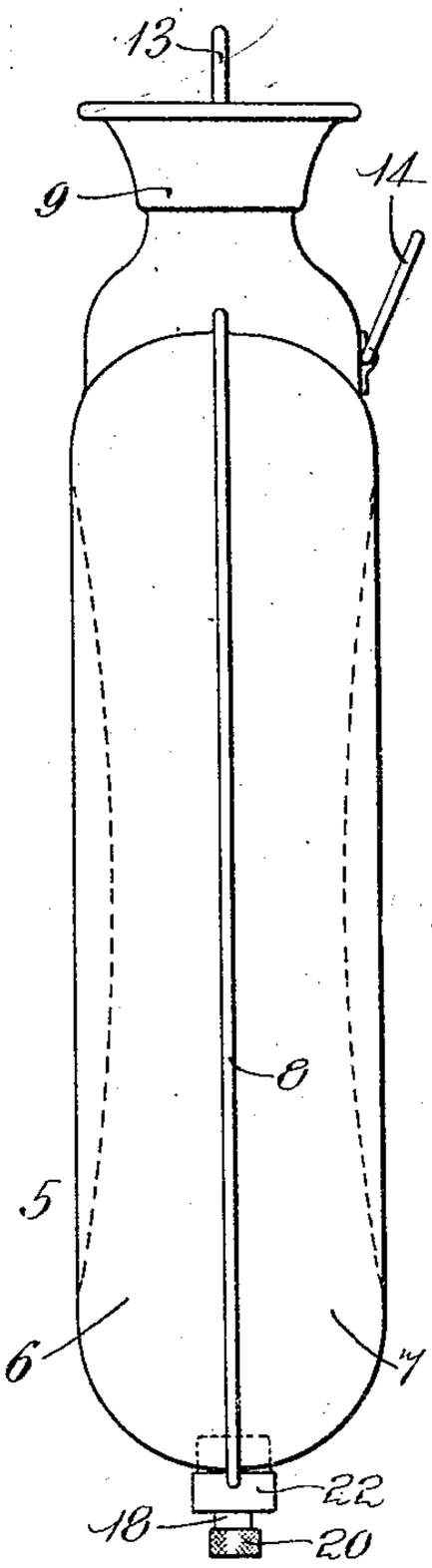

Fig. 2.

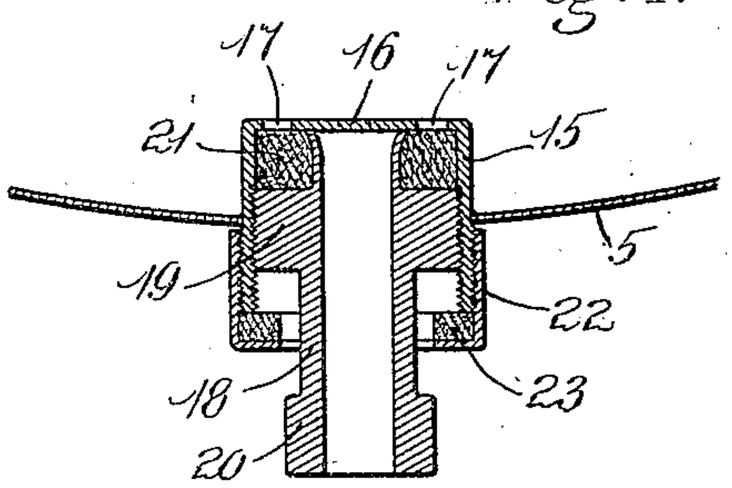

Fig. 3.

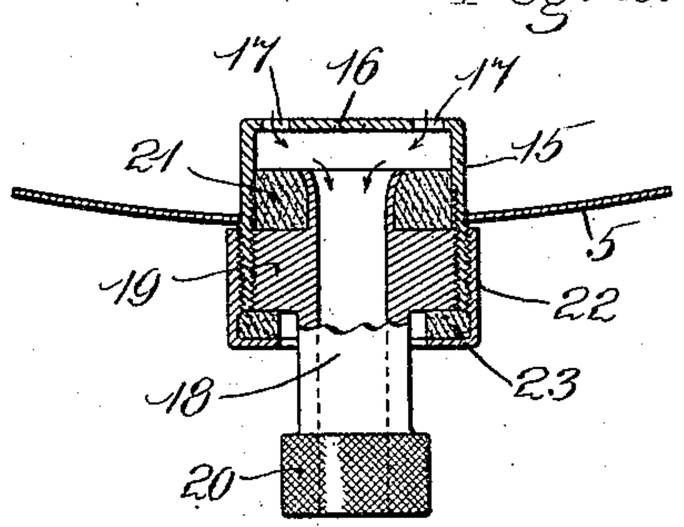

Fig. 4.

Witnesses.
Harold C. Haskill.
K. M. Sullivan

Inventor:
Louis F. Gillette
by Chas. F. Perkins Atty.

UNITED STATES PATENT OFFICE.

LOUIS F. GILLETTE, OF CONCORD, NEW HAMPSHIRE.

THERAPEUTIC BOTTLE.

991,844. Specification of Letters Patent. Patented May 9, 1911.

Application filed June 17, 1910. Serial No. 567,508.

To all whom it may concern:

Be it known that I, LOUIS F. GILLETTE, a citizen of the United States, residing at Concord, in the county of Merrimack and State of New Hampshire, have invented new and useful Improvements in Therapeutic Bottles, of which the following is a specification.

My invention relates to therapeutic water bottles, and its object is to combine in one receptacle the features and advantages of a hot water bottle with those of a reservoir for fountain syringes.

The invention will be hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawing similar numerals of designation refer to similar parts throughout the several views.

Figure 1 is a front elevation of my improved water bottle showing the detachable stopper. Fig. 2 is a side elevation of the water bottle shown in Fig. 1. Fig. 3 is a vertical section of the valve located at the bottom of the bottle, and showing the same closed. Fig. 4 is a section similar to that of Fig. 3, but showing the valve open.

Referring to the drawing, the receptacle 5, is constructed of two circular plates 6 and 7 composed of copper or some other suitable metal secured together at their edges 8 by soldering, brazing or welding the same to form a hermetically tight joint. The said plates 6 and 7 are preferably made of thin sheet metal in order to render the bottle as light as possible, but are sufficiently stiff to resist ordinary external pressure or violence to which it may be subjected. I have found by actual experience that by constructing my bottle of approximately circular sheets of metal that I reduce to a minimum the danger of collapse, and render it possible to use a smaller amount of metal than with other forms. Each plate or sheet is shaped so that the exterior surface is concaved at the center and convexed adjacent to its edge.

The neck 9 of the bottle is constructed in the well known form used in receptacles designed for various uses now on the market, and is closed by the stopper 10 which is threaded to engage the same. To prevent the loss of the stopper, I secure it by the chain 11 and the ring 12 which incloses the shank of the loop 13, but permits the stopper to be turned freely in either direction. To suspend the bottle I employ the ring 14 which is pivotally secured to the plate 7 near the top thereof or to the base of the neck of the bottle as shown in Fig. 2.

At the bottom of the receptacle 5, directly beneath the neck 9 thereof, I secure within an opening made therefor the casing 15 which is constructed of a strip of metal bent into cylindrical form, and has at the top thereof the perforated head 16. Preferably said casing 15, the head 16, and adjacent parts are brazed together or otherwise permanently united, and permit no passage of the water except through the perforations 17 formed near the edge of the head 16. Within the cylindrical casing 15, I introduce the hollow stem 18, formed with a flange 19 threaded to engage with the interior of said outlet, and having its lower end flanged at 20 for the purpose of furnishing a connection for the end of the tube of a fountain syringe. Above the flange 19 and surrounding the upper portion of the hollow stem, which is here shown flaring, I secure the ring or gasket 21 composed of any suitable packing material, the said gasket being disposed so as to be exactly underneath and fully cover the perforations 17. At the lower end of the cylindrical casing 15, is the cap 22 which is threaded to engage with the exterior of said casing, and is provided with the gasket 23 for the purpose of permitting the flange 19 to be turned down upon the same and thereby to prevent escape of the water around the threaded portions thereof.

As represented, my improved water bottle is constructed for a double purpose; first, for use as a hot water bottle; secondly, for use as a reservoir for a fountain syringe. When employed for the first purpose, the valve of the cylindrical casing is kept tightly closed as shown in Fig. 3, and after the hot water is introduced, the stopper is screwed down tightly into the neck of the bottle. When used for the second purpose, the stopper is removed and the receptacle filled to the extent desired with the fluid to be introduced into the syringe. The bottle is then suspended by the ring 14 in a vertical position against the wall or in other suitable location, and the hollow stem 18 is connected to the rubber tube of the syringe, and is turned to the position shown in Fig. 4, where it will be observed the perforations are left uncovered and the passage of the water

through the hollow stem 18 left unobstructed,—the water first passing from the receptacle 5 through the perforations 17 into the upper portion of the casing 15 (left open by the flange of the hollow stem being turned downwardly and pulling the gasket 21 away from the head 16), and from said chamber through the hollow stem 18, whence the water passes into the tube of the syringe.

An important feature of my device is the location of the valve chamber, mainly within the reservoir. The liability of damage to or destruction of a valve chamber extending mainly outside of the reservoir would be great. It would be constantly exposed to the danger of being knocked off or bent so as to render it useless or inefficient.

The advantages of my improved water bottle are apparent, combining as it does in one compact device the several features above set forth.

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

1. In a therapeutic bottle, the combination with a reservoir provided with an inlet opening at its top and an outlet opening in its base, of a valve casing located in said outlet opening having inner and outer end walls to form a closed chamber, said inner end wall being provided with a plurality of minute perforations for the passage of fluid, a hollow plunger provided with a flange adjustably engaging said casing, said perforated end wall serving as an abutment for one end of the plunger to limit the inward movement thereof, the other end of said plunger projecting through the outer end wall of said valve casing to form a tube coupling, and means resting on said flange for closing said perforations, said flange coöperating with the outer end wall of said valve casing to limit the outward movement of the plunger.

2. In a therapeutic bottle, the combination with a reservoir provided with an inlet opening at its top and an outlet opening in its base, of a valve casing located in said outlet opening and formed of inner and outer separable members each having an end wall, whereby a closed chamber is formed the inner end wall of said casing being provided with a plurality of minute perforations for the passage of fluids, a hollow plunger provided with a flange adjustably engaging the side wall of the inner member of said casing, said perforated end wall serving as an abutment to limit the inward movement of said plunger, a gasket on said flange to close said perforation the outer end wall of said valve casing being provided with an opening through which the outer end of said plunger projects to form a coupling, and a gasket for preventing leakage through said opening, said flange and the end wall of the outer casing member coöperating to limit the outward movement of said plunger.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses, this 14th day of June 1910.

LOUIS F. GILLETTE.

Witnesses:

ELLA M. WARDNER,

HENRY W. STEVENS.