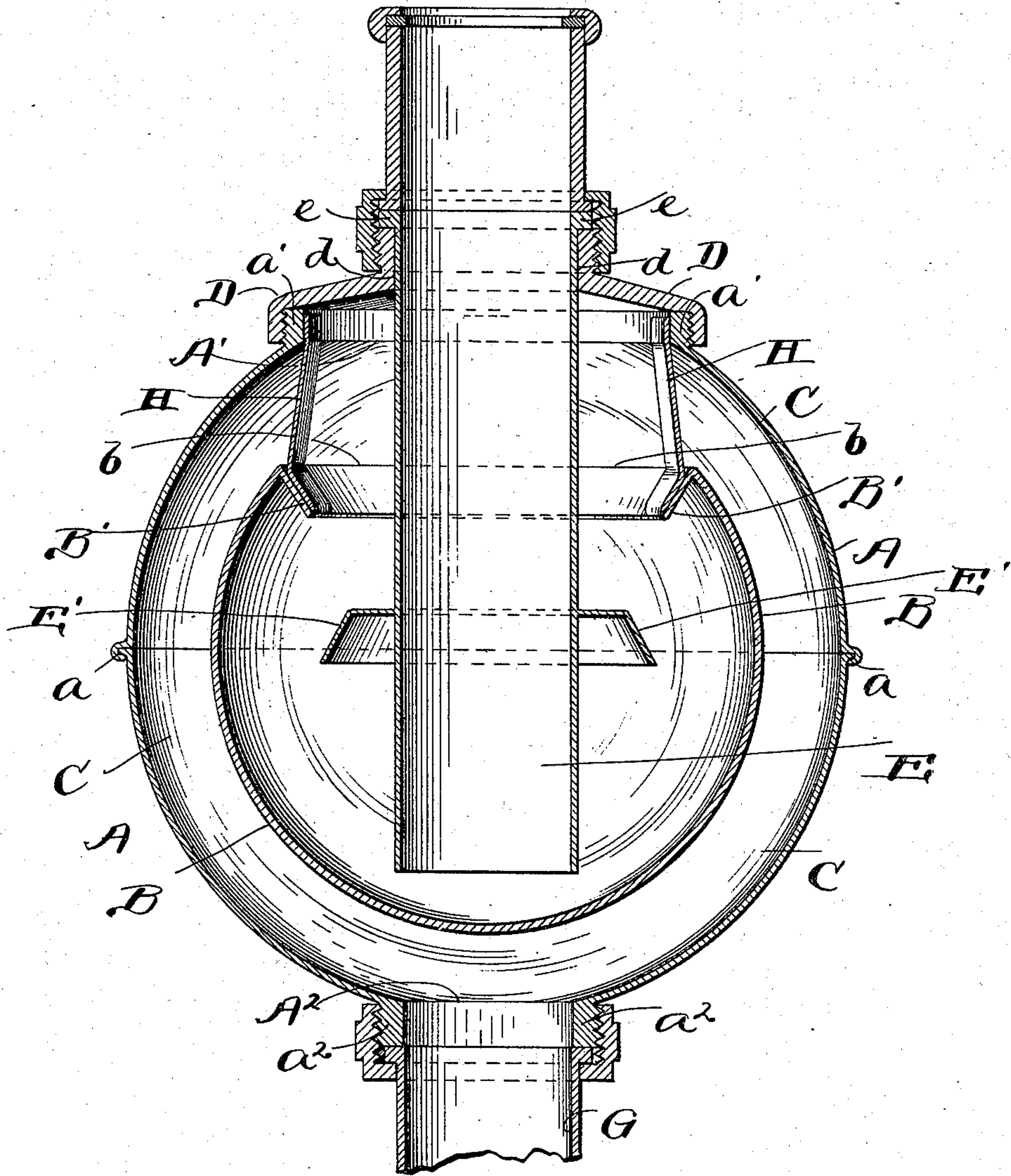


(No Model.)

F. A. RADCLIFFE.
OVERFLOW TRAP.

No. 565,565.

Patented Aug. 11, 1896.



Witnesses,
E. B. Gilchrist
Ella E. Tilden

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UNITED STATES PATENT OFFICE.

FRANK A. RADCLIFFE, OF CLEVELAND, OHIO.

OVERFLOW-TRAP.

SPECIFICATION forming part of Letters Patent No. 565,565, dated August 11, 1896.

Application filed April 1, 1896. Serial No. 585,779. (No model.)

To all whom it may concern:

Be it known that I, FRANK A. RADCLIFFE, of Cleveland, Cuyahoga county, Ohio, have invented certain new and useful Improvements in Overflow-Traps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in overflow-traps, the object being to provide a trap of the character indicated that is simple and durable in construction; that can be easily cleaned, and that is capable of maintaining a deep liquid seal within it.

With this object in view, my invention consists in certain features of construction and combinations of parts hereinafter described, and pointed out in the claim.

The accompanying drawing is a central vertical section of an overflow-trap embodying my invention.

My improved overflow-trap comprises an outer globular or spherical shell A and an inner spherical or globular shell B, supported centrally within the outer shell and sufficiently smaller diametrically than the outer shell to form a chamber C between the two shells, surrounding the inner shell. The outer shell is composed, preferably, of two sections suitably joined together at the central portion of the trap, as at *a*. The inner shell B is composed, preferably, of a single piece. The outer shell is provided at the top and centrally with a comparatively large circularly-flanged opening A', whose annular flange *a'* is screw-threaded externally and engaged by the correspondingly internally-threaded cap or cover D, that at its upper end is engaged by an external flange *e*, formed upon the upper end of the inlet-pipe E, and thereby supports said pipe that extends downwardly through a hole *d* in the central portion of cap or cover D, and through opening A', and into the lower portion of shell B through a comparatively diametrically large opening *b* in the top of said shell B, and discharges, preferably, in close proximity to the bottom of the chamber of said shell. Shell A at the bottom has a downwardly-flanged discharge-opening A², communicating with the passage through the discharge-pipe G, that is secured

in any approved manner to the flange *a*² of said discharge-opening.

It will therefore be observed that my improved trap comprises an inner chamber, an outer chamber communicating with the upper end of the inner chamber, the inlet-pipe discharging into the lower portion of the inner chamber, and the outlet passage-way leading from the lower end of the outer chamber, and that by such construction when suction is, in the passage of liquid through the trap, created at the trap's outlet, the liquid entering the lower end of the trap's inner chamber will rush up the surrounding wall of said chamber and up the external surface of the inlet-pipe toward the outer chamber. The primary object of my invention is to deflect the liquid rushing up said wall of the inner chamber and at the external surface of the inlet-pipe downwardly during the passage of liquid through the trap, and thereby compel the liquid that escapes from the inner chamber to simply overflow, as it were, said chamber, and consequently the maintenance of a deep liquid seal within said chamber, between the discharging end of the inlet-pipe and the upper and discharging end of said chamber, is insured. To most effectually accomplish this object, I flange the upper end of the inner shell downwardly and inwardly around the discharge-opening *b* of said shell, and thereby form an inwardly and downwardly inclined deflector B', extending round said opening and arranged to arrest the water or liquid that rushes up the surrounding wall of the inner chamber during the passage of liquid through the trap, and thereby deflect said liquid downwardly; and I also provide the inlet-pipe E, at any suitable point between deflector B' and the discharge extremity of said pipe, with an outwardly and downwardly inclined deflector E', extending around the pipe, preferably approximately centrally between said extremity of the inlet-pipe and deflector B', and arranged to arrest the water or liquid rushing up the external surface of said pipe during the passage of liquid through the trap, and thereby deflect said upwardly-rushing liquid downwardly. Hence it is obvious that the inner chamber of the trap will never be bled enough by the suction created in the trap's outlet to destroy

or interfere with the maintenance of a deep liquid seal within the trap's inner chamber.

The inner shell is supported from the outer shell preferably by means of any suitable
5 number of metallic strips H, arranged at suitable intervals, and soldered or suitably secured to flange *a'* of the outer shell and deflector B' of the inner shell at its opposite ends, respectively. The opening through the
10 lower extremity of deflector B' is of course sufficiently large diametrically to accommodate the removal of the inlet-pipe and its deflector B'; and it will be observed that the inlet-pipe is removed with cap or cover D by
15 unscrewing the latter from the outer shell, and that when said parts are removed convenient access is had to the interior of the trap for cleaning and other purposes.

What I claim is—

20 An overflow-trap comprising an outer chamber having a discharge-opening at its lower

end, an inner chamber whose upper end has a discharge-opening communicating with the outer chamber, an inlet-pipe discharging into the lower portion of the inner chamber, a de- 25 flector B' projecting inwardly from the surrounding wall of the inner chamber a suitable distance above the discharging extremity of the inlet-pipe, and another and outwardly-projecting deflector E' provided around the 30 inlet-pipe at any suitable point between the discharging extremity of said pipe and the aforesaid inwardly-projecting deflector, substantially as shown, for the purpose specified.

In testimony whereof I sign this specification, in the presence of two witnesses, this 6th 35 day of March, 1896.

FRANK A. RADCLIFFE.

Witnesses:

C. H. DORER,
ELLA E. TILDEN.