

No. 702,810.

Patented June 17, 1902.

S. MOLNÁR.

VALVED STOPPER FOR RECEPTACLES, &c.

(Application filed Oct. 17, 1901.)

(No Model.)

Fig. 1.

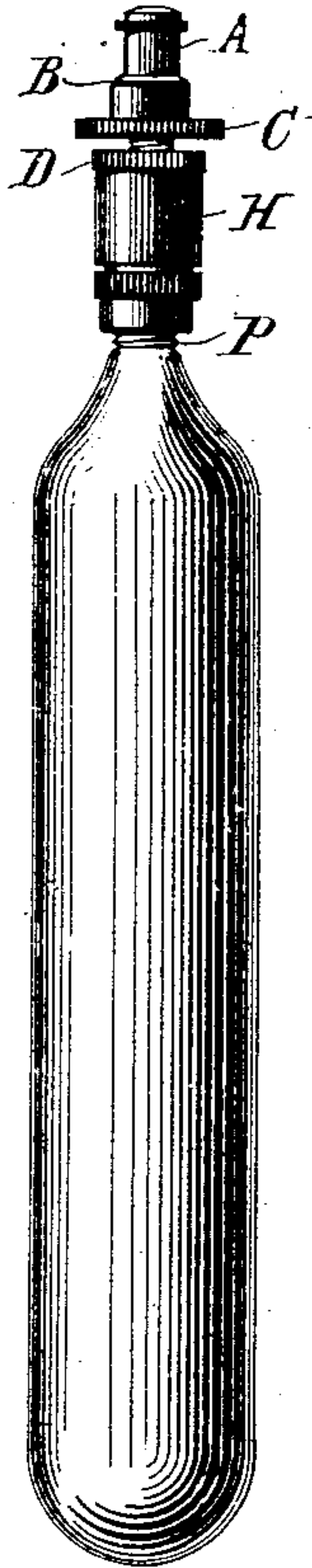


Fig. 2.

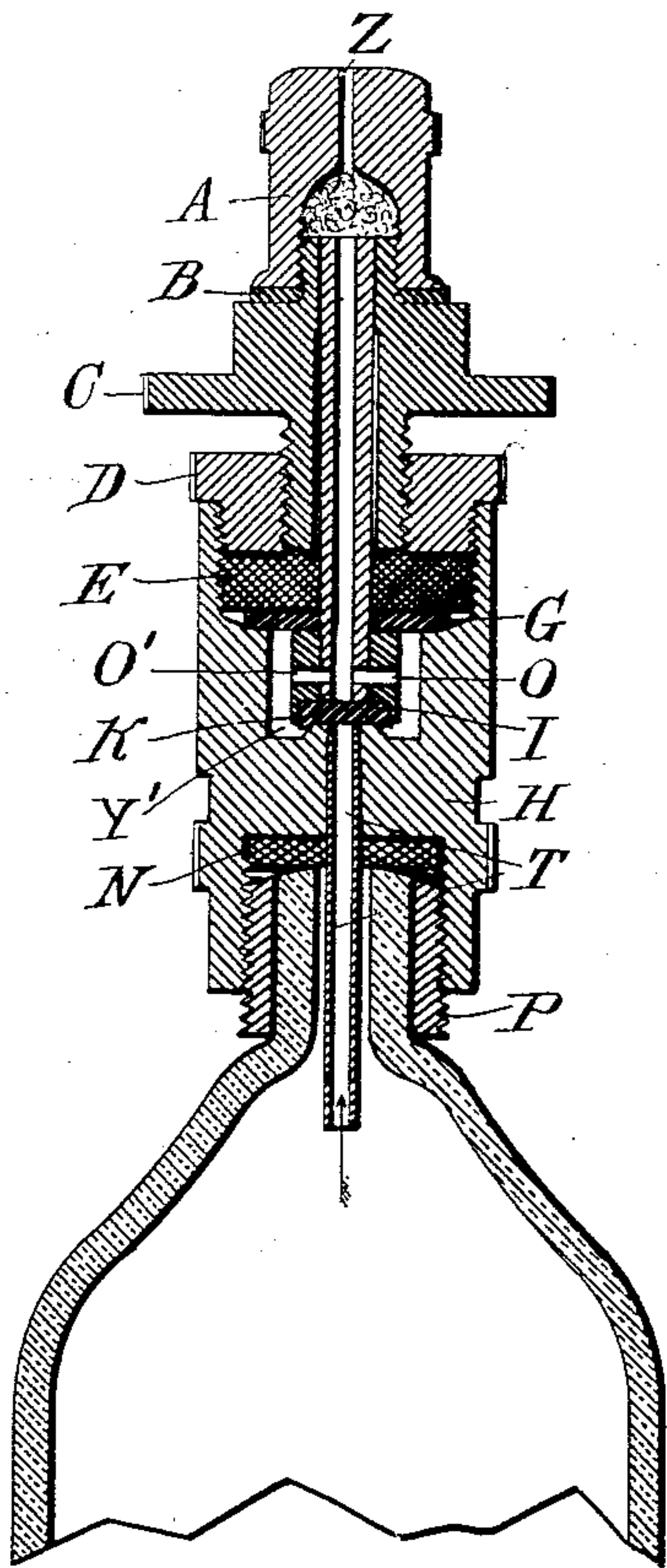
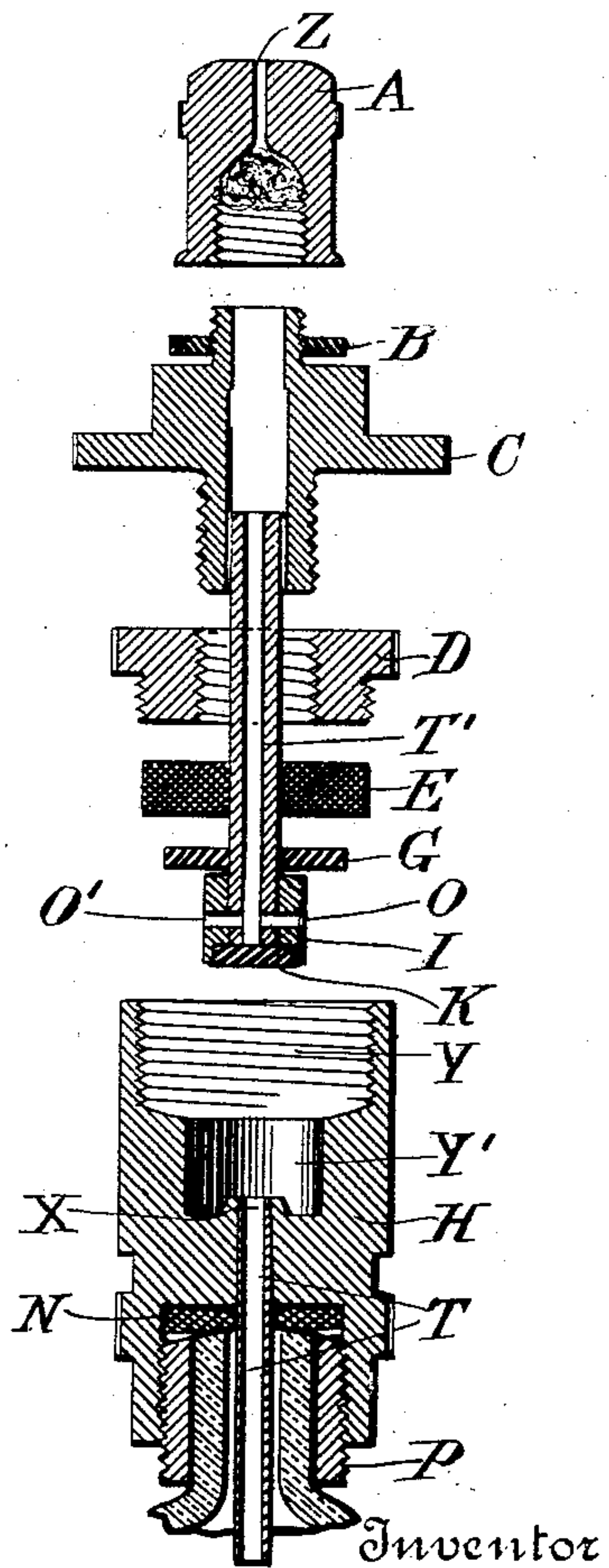


Fig. 3.



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VALVED STOPPER FOR RECEPTACLES, &c.

SPECIFICATION forming part of Letters Patent No. 702,810, dated June 17, 1902.

Application filed October 17, 1901. Serial No. 78,974. (No model.)

To all whom it may concern:

Be it known that I, SÁNDOR MOLNÁR, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county of New York and State of New York, have invented certain new and useful Improvements in Valved Stoppers for Receptacles, &c., by which means the contents of said bottles or receptacles are kept practically
10 air and water tight, yet may nevertheless be easily discharged in a thin jet or spray by a simple movement of the thumb and finger, of which improvements the following is a specification.

15 Figure 1 of the annexed drawings shows the general appearance of the valve or stopper screwed onto the receptacle, which in this instance is a glass bottle, and ready for use. Fig. 2 shows a section of the valve or stopper
20 fastened onto the receptacle, cut vertically through its center, and with all its parts assembled as when in use. Fig. 3 shows the various parts of the valve or stopper fastened to the receptacle, cut vertically through the
25 center, being practically the same as Fig. 2 except that the parts are here disassembled.

The valved stopper is formed of various parts made of metal (preferably brass) in combination with washers made of various
30 materials, as hereinafter shown.

The same letters are used to designate the same parts in the different figures and in this description.

Referring now to the figures, the part H is
35 the main body of the stopper. This main body is fastened at its lower end to the neck of the bottle or receptacle P, which may be accomplished either by a screw and a thread, which is permanently affixed to the bottle or
40 receptacle, as shown, or it may be hermetically fastened to the neck by being blown into the glass or otherwise, as may be found most convenient. The main body H contains a chamber Y Y', which is connected with the
45 interior of the bottle or receptacle by means of a vertical tube T, made of metal or other material, which is permanently joined air and water tight to the main body of the valve and extends from the opening in H down-
50 ward into the bottle or receptacle. A washer N, made of a combination of soap, rubber,

celluloid, and ruby, absolutely proof against the effects of ether, is placed between the neck of the bottle or receptacle and the body of the valve H to prevent the liquid from
55 coming in contact with and affecting the metal and the screw and thread at P.

The part D is firmly screwed into the chamber Y, which is in the upper end of the main body of the valve H and which is provided
60 with threads for that purpose. Into this part D in turn is screwed the part C, which is made in the form of a thumb-screw, through the center of D, containing threads to receive the thumb-screw C. By simply turning the
65 thumb-screw C backward or forward it is raised or lowered at pleasure in the part D, which remains stationary at all times, being firmly screwed into the main body of the valve H, which in its turn is firmly fastened
70 to the bottle or receptacle.

The part T' consists of a tube made of metal or other material corresponding to the tube T. It ends in a broad base I, which closes the tube at that end, the opposite end
75 being open. This base I forms a valve or closure controlling the inlet-passage and is provided with a disk K, located in a recess in its bottom, which is made of a substance impervious to and unaffected by contact with
80 ether. In the base I are two (2) holes O and O', directly opposite each other. These holes O and O' extend through the tube T', connecting with the passage-way through the center of the tube. Upon the base I rests the
85 washer G, made of fiber. Upon this washer G rests another washer F, made of ruby, a compound of rubber, soft and yielding, but absolutely impervious to and unaffected by
90 the action of or contact with ether.

Before the part D is screwed into the main body of the valve it is passed down over the tube T', the base I being underneath and the washers G and F being in place, as shown in Fig. 3. Thus when D is screwed into the
95 main body of the valve H the base I rests in the chamber Y', and the washers F and G being pressed down over the chamber Y' entirely close its mouth, rendering Y' practically air and water tight. The washers F and G ab-
100 solutely prevent the ether from coming in contact or affecting the threads of the thumb-

screw C, which screws into D and which forms the mechanism of my invention. Consequently the ether cannot oxidize the metal forming the threads of said thumb-screw C into D, and thus prevent the valve or stopper from being easily opened or closed. The upper end of the tube T' is then passed through the center of the thumb-screw C and permanently and securely fastened thereto.

10 The screws and threads in the parts C, D, H, and P are so arranged with respect to each other that when the parts are put together, as stated, the valve-seat K on I, the base of the tube T', comes directly over X, the mouth

15 of the tube T. When the thumb-screw C is screwed tight into D, the tube T' is forced downward, and the valve-seat K, which is fastened on I, the base of the tube T', closes the mouth X of the tube T air and water tight.

20 When the thumb-screw C is slightly unscrewed, the valve-seat K is slightly raised and uncovers the mouth X. This is easily accomplished by the thumb and finger of the hand holding the bottle or receptacle.

25 The part A is screwed down over the top of C and rests upon washer B, which is also proof to the effects of ether. This part A is penetrated in the middle by an aperture Z capillary in size.

30 When the thumb-screw C is unscrewed and the valve-seat K is thereby raised from X, the volatile or effervescent liquid first going through the tube T escapes and flows through the aperture X into the chamber Y', which

3 has been made practically air-tight by reason of D being screwed down tightly on the washers F and G. The liquid then flows through the holes O and O', which are the only exits, and thence through the tube T' into A and

40 through Z, the aperture in the top of A.

The holes O and O' are placed opposite each other, so that there is always a current through both, and thus the ether is prevented from gathering at and freezing and clogging up said holes.

Should Z, the capillary aperture in A, become clogged, it can readily be cleaned with an ordinary pin or needle by unscrewing A from C.

I claim as new and desire to secure by Letters Patent—

A valve-stopper for receptacles adapted to contain volatile and effervescent liquids comprising a main body or shell having an air-chamber within, an inlet-tube connected with said chamber, an adjustable outlet-tube also connected with the chamber and having a portion thereof formed into a valve or closure for controlling the inlet-passage, an adjustable perforated thumb-screw secured to said body inclosing the outlet-tube and for adjusting the same to control the inlet-passage, washers impervious to and unaffected by the gases and liquid surrounding the outlet-tube and located in the air-chamber between the thumb-screw and the closure portion of the outlet-tube, and a washer in the lower end of the body surrounding the inlet-passage whereby contact of the connections of the various parts with the liquid and gases is prevented, and a tubular cap having capillary bore connected with the outlet-tube.

Signed in the borough of Manhattan, in the city, county, and State of New York, this 9th day of October, 1901.

SÁNDOR MOLNÁR. [L. S.]

Witnesses:

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