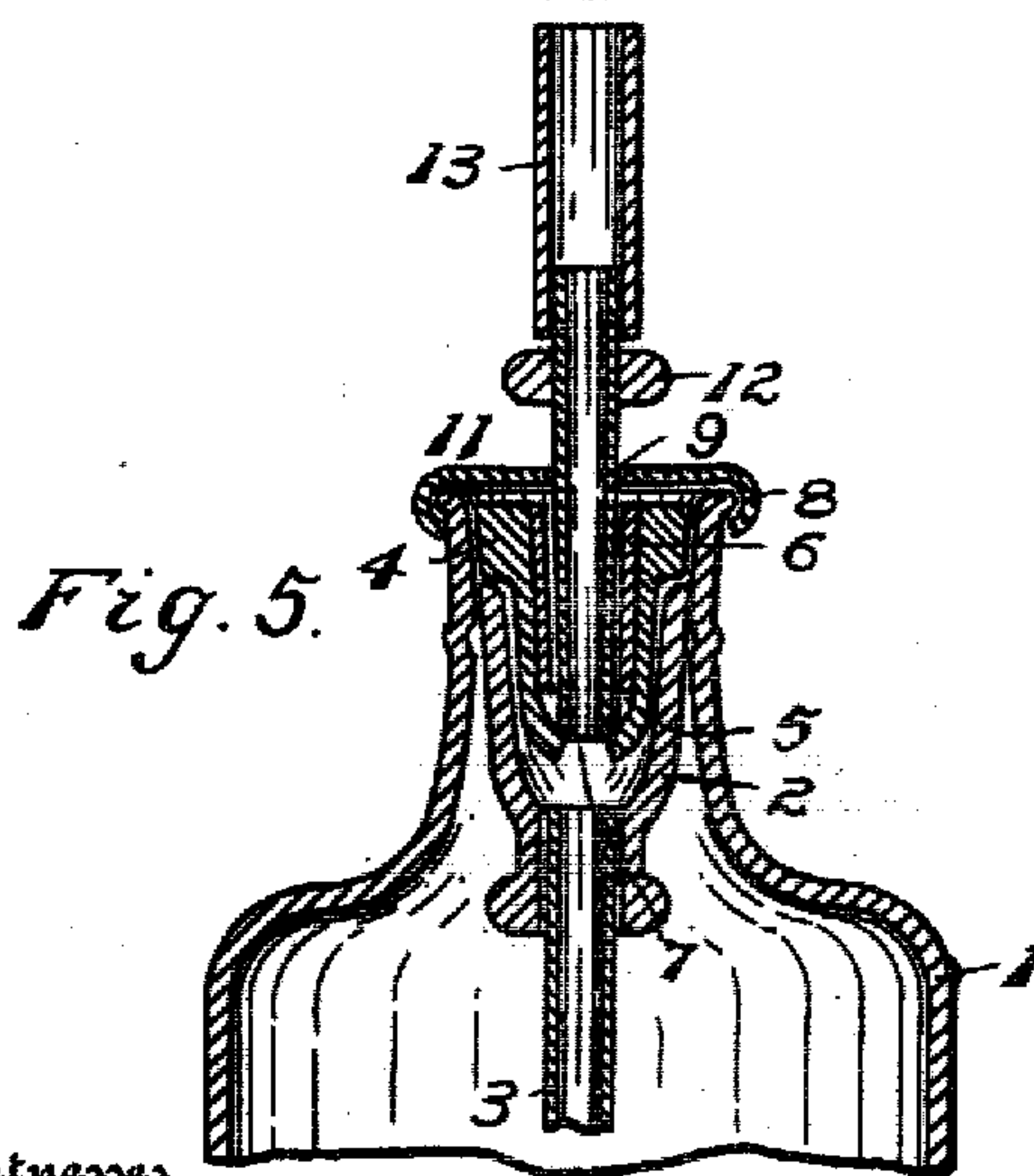
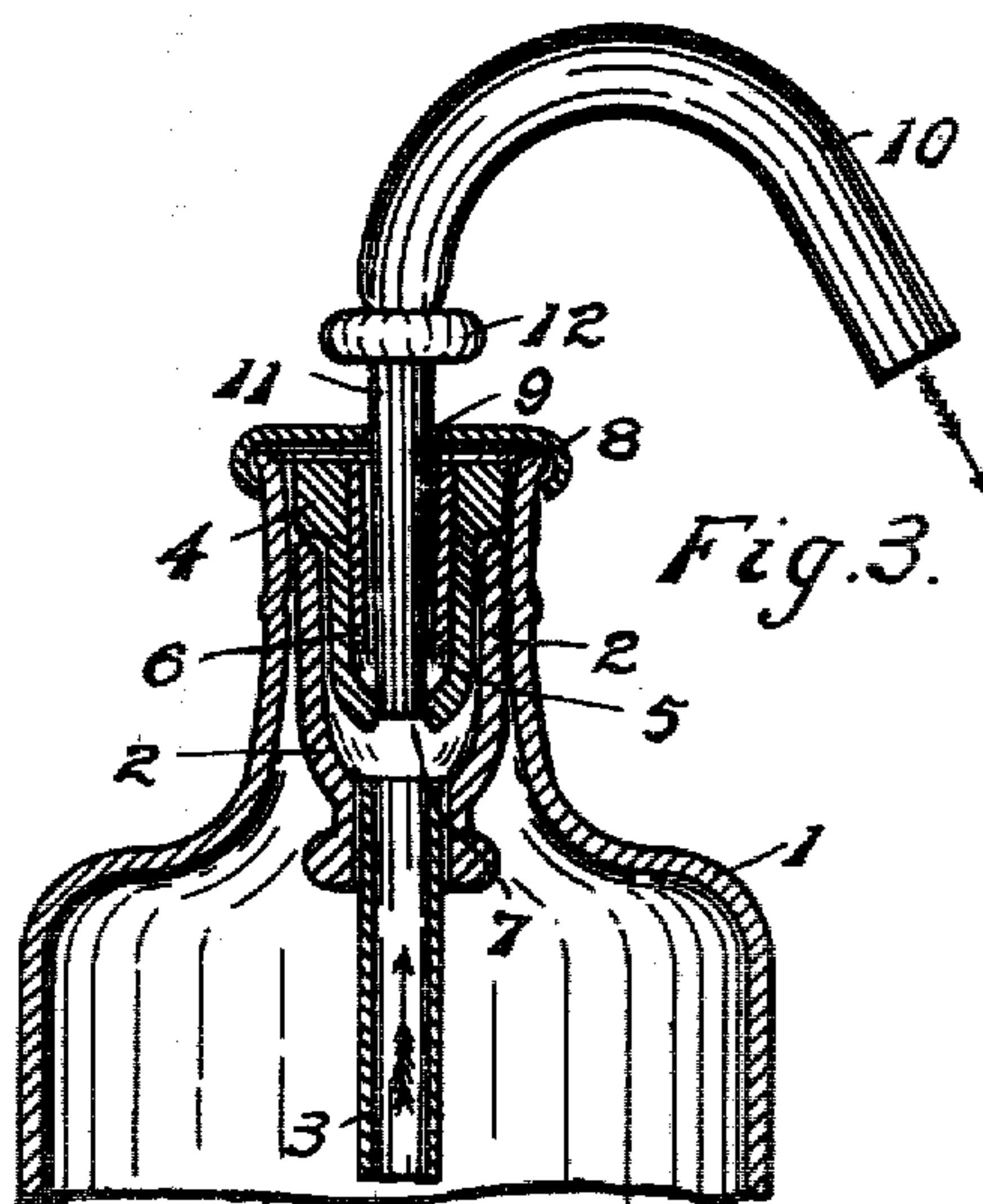
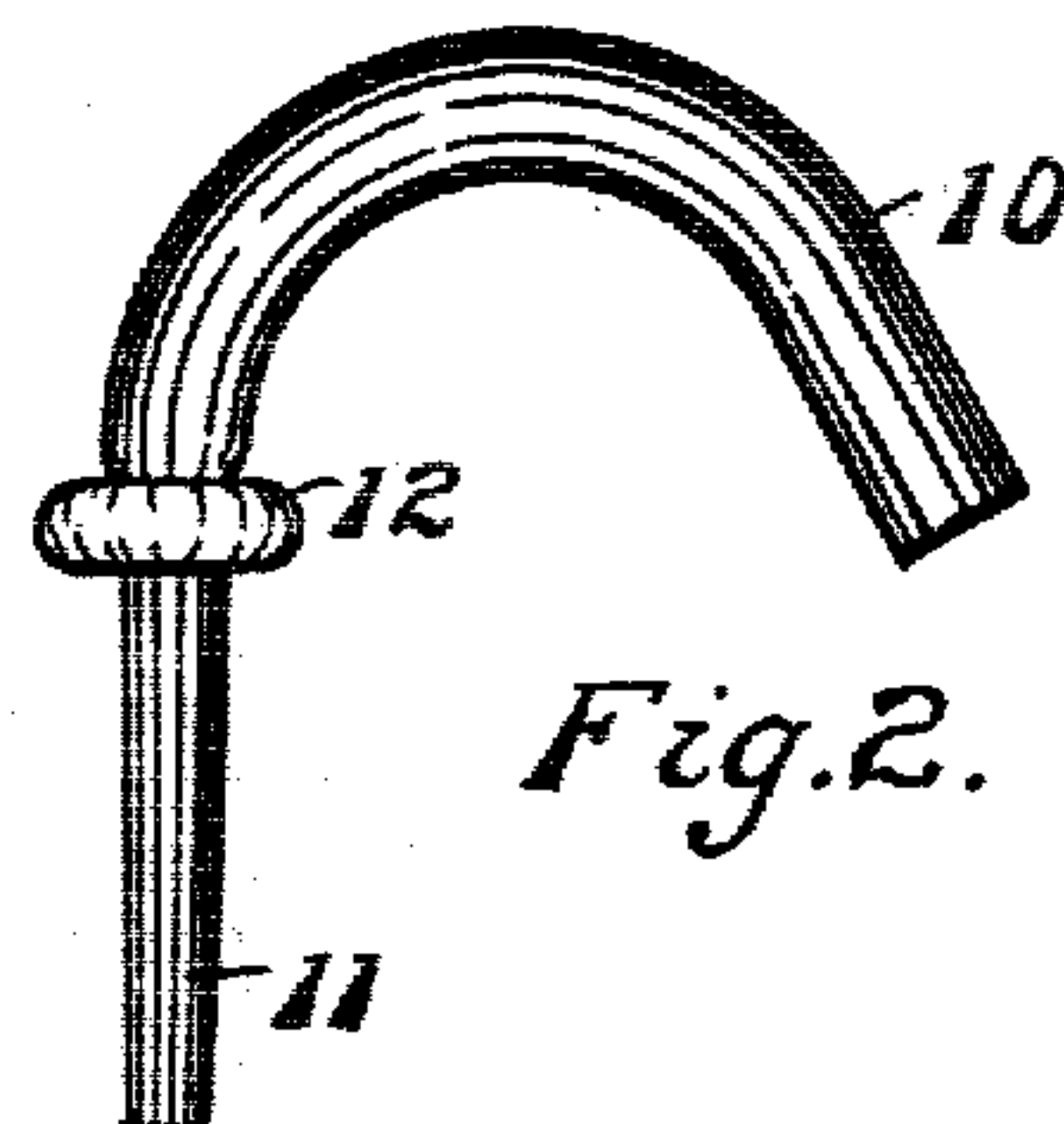
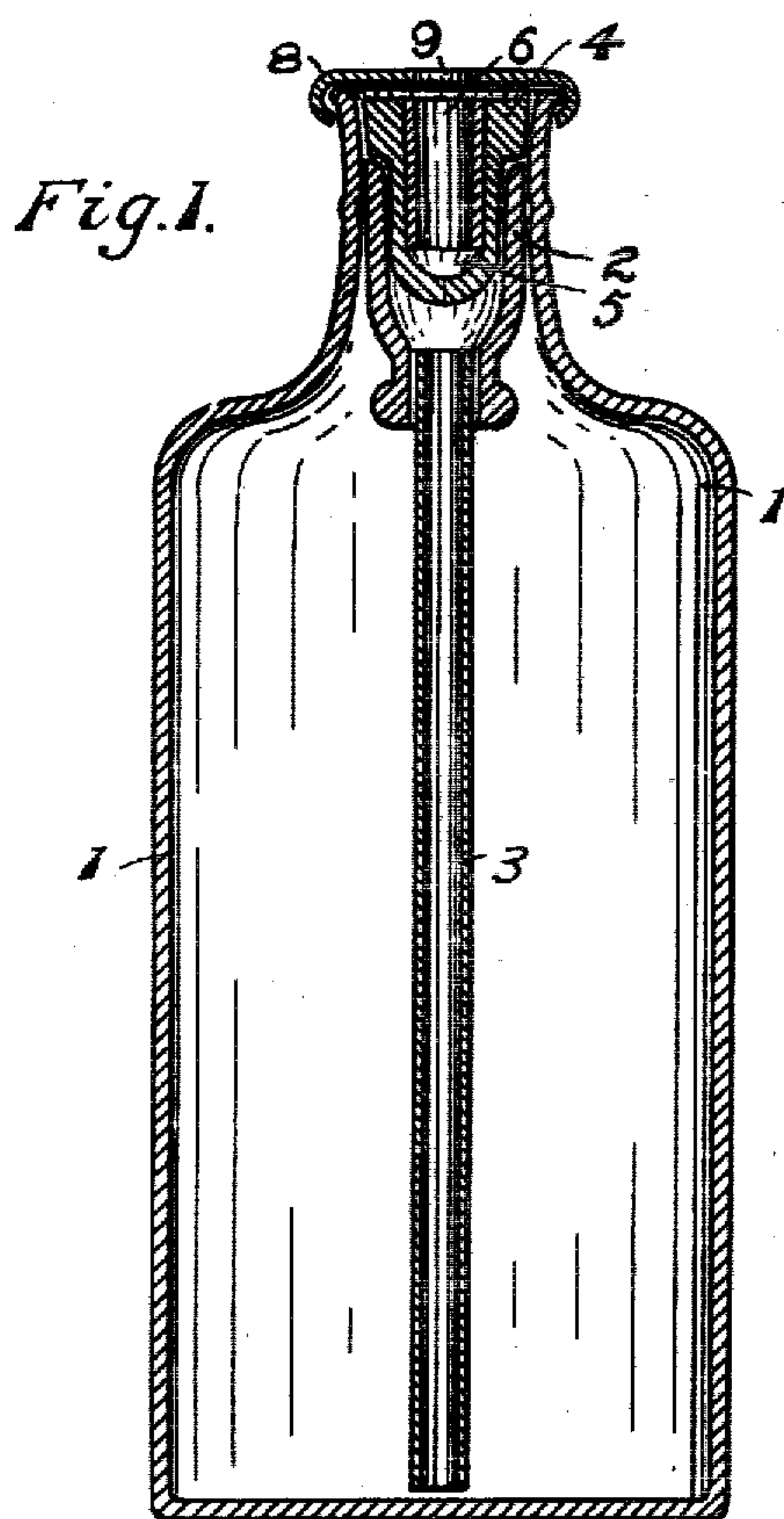


No. 811,811.

PATENTED FEB. 6, 1906.

J. J. ALLISON.  
STOPPER FOR BOTTLES.  
APPLICATION FILED MAY 22, 1905.



Witnesses

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# UNITED STATES PATENT OFFICE.

JAMES J. ALLISON, OF ROCKFALLS, ILLINOIS.

## STOPPER FOR BOTTLES.

No. 811,811.

Specification of Letters Patent.

Patented Feb. 6, 1906.

Application filed May 22, 1905. Serial No. 261,544.

*To all whom it may concern:*

Be it known that I, JAMES J. ALLISON, a citizen of the United States, residing at Rockfalls, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Stoppers for Bottles; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention has reference to siphon-bottle stoppers, and is specially designed to be used in connection with bottles containing carbonated waters, mineral waters, and similar liquids wherein a pressure is exerted from the inside of the bottle to expel the contents thereof.

My device is simple and durable and so constructed as to permit of the use of one discharge-pipe interchangeably with different bottles, doing away with the necessity of having a discharge-pipe attached to each bottle, as is now the case. It is also possible to fill or refill bottles provided with my invention by the use of any usual means, no special apparatus being required therefor, as is the case with many bottles now in use.

In the drawings, Figure 1 is a central vertical section of a bottle fitted with my device. Fig. 2 shows the discharge-pipe used in connection therewith. Fig. 3 is an enlarged detail showing the stopper in vertical section with the discharge-pipe in position therein. Fig. 4 is a detail showing the lower end of the plug 4. Fig. 5 is an enlarged detail, in vertical section, showing a modified form of the discharge-pipe.

Similar numbers refer to similar parts throughout the several figures.

1 represents the bottle, and 2 a hollow stopper, in the lower end of which is tightly fixed a siphon-pipe 3, extending nearly to the bottom of the bottle. The stopper 2 is preferably formed of rubber and the pipe 3 of glass. In the upper part of the stopper 2 is tightly seated a plug 4, also of rubber and having a vertical perforation 5, in which is fixed a metal sleeve 6. At the lower end of the plug 4 is a three-way incision 7, forming a normally closed valve in the lower end of the plug.

The bottle may be provided with a cap 8

or other suitable cover, such covering being provided with a perforation 9 centrally thereof in line with the perforation 5.

10 is a discharge-pipe having at one end a tube 11, adapted to be inserted in the sleeve 6 and to force open the valve in the lower end of the plug 4. The operation is aided by means of a button 12, fixed on the discharge-pipe at the upper end of the tube. Upon the opening of the valve the liquid in the bottle is forced up through the pipe 3 and out through the discharge-pipe. When a desired amount of the liquid has been released, the discharge-pipe is withdrawn and the valve again closes. By reason of the elasticity of the lower end of the plug 4 there is a natural tendency of the valve to close, and this tendency is aided by the pressure of the gases within the bottle upwardly against such valve. By constructing the pipe 10 with a greater diameter than the tube 11 a considerable amount of expansion is permitted to the gases before they reach the mouth of the pipe, and the force of the stream proceeding therefrom is greatly reduced.

In Fig. 5 is shown a construction wherein the pipe 10 is replaced by a short straight pipe upon which can be fixed a short section of straw 13, through which the contents of the bottle can be imbibed, the flow of the liquid being regulated by the pressure of the fingers upon the button 12.

It will be seen that the discharge-pipe serves the purpose of a key to unlock the bottle and release the contents thereof and that such pipe can be used in common with all bottles fitted with my device. One of such pipes can be furnished with each case of carbonated goods, or a store-keeper dealing in such goods would only require a limited number of the discharge-pipes.

The sleeve 6 is not an essential part of the device, but merely serves the purpose of keeping the perforation 5 open for the insertion of the tube.

The bottle when fitted with my invention is susceptible of being refilled when empty by inserting in the plug 4 a pipe or tube leading from the charging-chamber and forcing the valve open with the end of such pipe. The plug 4 is closely embraced by the stopper 2, such stopper exerting a contractile force upon the lower part of the plug and aiding in keeping the valve in the lower end thereof normally closed.

What I claim as my invention, and desire



to secure by Letters Patent of the United States, is—

5 1. A stopper for bottles of the class named, comprising a hollow plug, adapted to be held in the neck of the bottle, and provided at its inner end with an inwardly-opening valve; and means for conducting the liquid contents of the bottle from the bottom thereof to the inner end of said plug; substantially as set  
10 forth.

2. In a device of the class named, a hollow flexible plug, provided in its inner end with an inwardly-opening valve; a hollow stopper, supported in the neck of the bottle, and embracing the lower part of the plug; and means  
15 for conducting the contents of the bottle to the inner end of said plug; substantially as and for the purpose set forth.

3. In a bottle-stopper, the combination of  
20 the stopper 2, fixed in the neck of the bottle; the hollow plug 4, embraced by the stopper 2,

having an inwardly-opening valve in its inner end, and provided with the sleeve 6 centrally of such plug; and the pipe 3, providing a passage for the contents of the bottle to the plug  
25 4; substantially as shown and set forth.

4. In a device of the class named, the combination of the stopper 2, fixed in the neck of the bottle; the hollow plug 4, embraced by the stopper 2, having an inwardly-opening  
30 valve in its inner end; the cap 8, fixed on the top of the bottle, and provided with an opening 9, in line with the opening in the plug 4; and the pipe 3, extending from the lower end of the stopper 2 to the bottom of the bot-  
35 tle; substantially as shown and described.

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

JAMES J. ALLISON.

Witnesses:

R. W. E. MITCHELL,  
E. C. BROWN.