Dec. 21, 1926. 1,611,164

P. N. CONDIT

AMPUL SEAL

Filed June 27, 1922

Fig. 1.

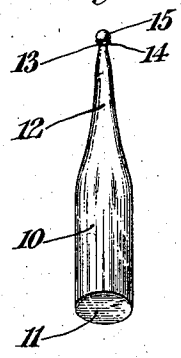


Fig. 2.

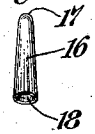


Fig. 3.

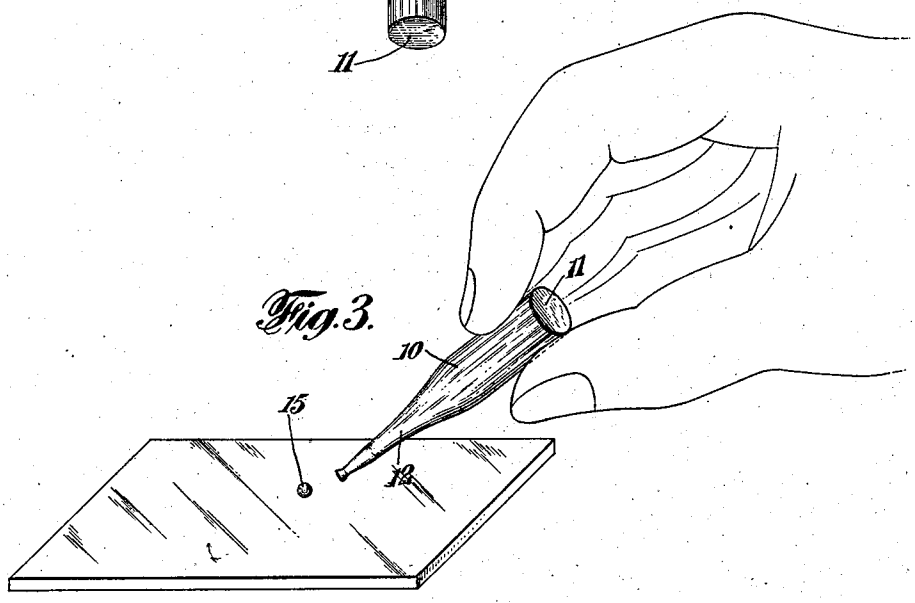


Fig. 4.

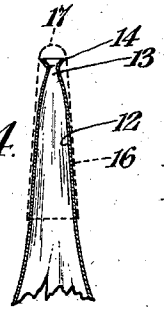
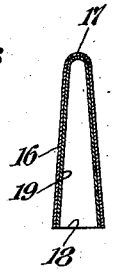


Fig. 5.



Inventor

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By his Attorney

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Patented Dec. 21, 1926. 1,611,164

UNITED STATES PATENT OFFICE.

PARK N. CONDIT, OF BOSTON, MASSACHUSETTS.

AMPUL SEAL.

Application filed June 27, 1922. Serial No. 571,188.

This invention relates to improvements in ampuls, vials or small bottles made of glass and particularly adapted to contain liquid substances of a volatile nature immune from contact with the air, thereby preventing evaporation, dissipation and deterioration of the contents.

One of the objects of the invention is in the provision of an ampul of the character indicated, having a hermetically sealed closure, which may be readily removed when desired.

Another purpose is to provide a form of cap applicable to the neck of the ampul, after the original stopper has been removed, said cap being close fitting and having a lining adapted to preserve the contents from the air.

A further aim is to provide such devices in forms adapted for convenient use, relatively inexpensive in construction and effective in their purpose.

These several objects are attained by the novel construction, arrangement and combination of parts hereinafter described and shown in the accompanying drawing, forming a material part of this disclosure, and in which:—

Figure 1 is a perspective view of an ampul made in accordance with the invention, showing the same in its commercial form.

Figure 2 is a similar view of the cap in detail.

Figure 3 is a reversed view illustrating the manner of its use, the bead or stopper being removed.

Figure 4 is a fragmentary sectional view of the ampul the cap showing in broken lines.

Figure 5 is a similar sectional view of the cap, indicating the lining therein.

Stated in general terms the invention consists in improvements in containers for chemicals, medicaments and perishable liquids, subject to rapid evaporation when open to the atmosphere, and which are used in minute quantities, such for instance as an iodine solution.

Other substances of evanescent, deliquescent or putrescent character may also be safely held in containers of the character described.

The ampul, as shown, consists of a cylindrical body 10 formed with an integral bottom 11 at one end and a smooth conically tapering neck 12 at the other, resembling in general appearance a miniature glass bottle, the upper end of the neck being reduced as at 13 and this attenuated portion expanded into a flaring mouth 14.

In this condition the contents are entered, after which heat is applied to the small opening at the mouth until the glass becomes melted. By using pliers the glass is drawn out into a fine thread, again heated and as it melts the ampul is rotated in order to form a spherical bead 15 of slightly greater diameter than the end of the neck, forming a hermetic seal.

When it is desired to use a portion of the contents, the bead 15 is readily removed by grasping it with a pair of pliers or other implement, holding the body firm, and giving a twist which cause separation.

Light taps or blows on the end of the opened ampul, when inverted, as shown in Fig. 2 causes the contents to flow out, drop by drop, until the desired quantity has been extracted.

In order to preserve the remainder, a conical cap 16 of celluloid or like material, having a closed top 17 and an open bottom 18 is applied to the neck 12, the cap accurately fitting the same, and previous to placing the cap in position its interior is coated with a lining 19 of vaseline or like thick unguent, thus forming an air tight stopper which can be removed and replaced as desired.

The foregoing disclosure is to be regarded as descriptive and illustrative of the invention, rather than restrictive, as it is obvious that changes in size, proportion, material and minor matters may be made without conflicting with the spirit and scope of the appended claims.

Having thus described my invention and set forth the manner of its construction, application and use, what I claim as new and desire to secure by Letters Patent, is:—

1. An ampul comprising a cylindrical body closed straight across at one end and having a plain straight walled conical neck at the other, contracted at the outer portion and expanded at the extremity, a cap close fitting said neck covering the opening therethrough, said cap being made of thin cellu-

loid and flexible in nature, and a soft lining in said cap adapted to hermetically seal the contents of the ampul, said neck being originally sealed prior to operation.

2. The process of handling evaporative liquids consisting of confining the same in a glass ampul, sealing the ampul with a single glass bead thus forming an original package, removing the bead by fracture, extracting some of the contents from said ampul and resealing the ampul with a conical cap fitting the neck thereof, said cap having straight walls and an unguent lining.

In testimony whereof I have signed my name to this application.

PARK N. CONDIT.