June 9, 1931. E. OCASEK 1,808,784

CLOSURE FOR FLUID OR ASPIRATING BOTTLES AND THE LIKE

Filed July 20, 1929

Fig. 1

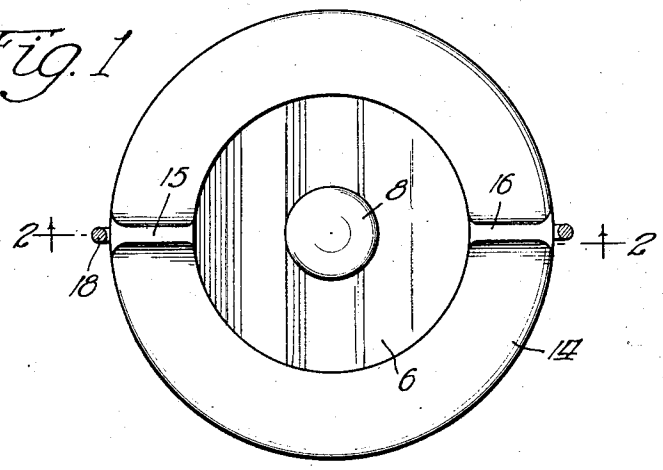
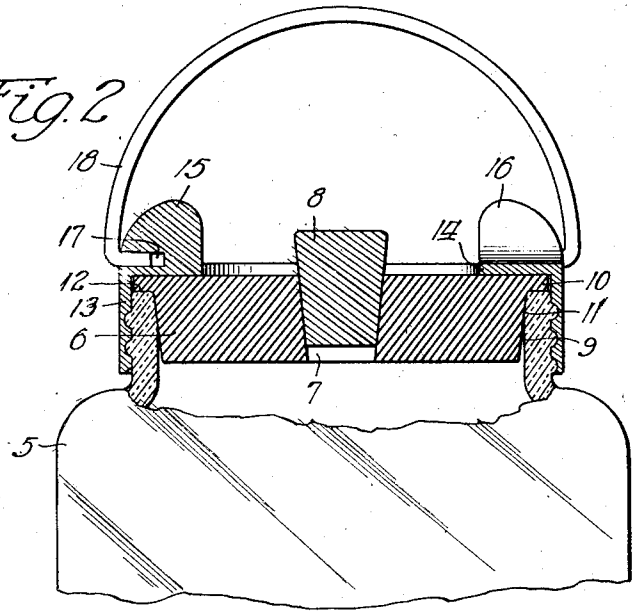


Fig. 2



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UNITED STATES PATENT OFFICE

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CLOSURE FOR FLUID OR ASPIRATING BOTTLES AND THE LIKE

Application filed July 20, 1929. Serial No. 379,731.

My invention relates to closures for aspirating bottles and the like, and has for its principal object the provision of an improved cap and closure construction by means of which leakage of fluid from the bottle may be insured against and at the same time the cap, which is usually of metal, may be protected from the fluid in the bottle.

It is also a purpose of this invention to provide a device of this character in which the different parts thereof may be readily separated and cleaned or sterilized independently of each other.

Another and more specific object of the invention is to provide a closure for bottles of the character above referred to, in which a combined rubber stopper and metallic cap are used in such a manner as to enable one to readily open the bottle by unscrewing the cap and to carry the bottle from the same cap by means of a handle co-operating with the cap.

I will describe one form which the invention may take, by reference to the accompanying drawings, wherein,—

Fig. 1 is a top plan view of the bottle closure; and

Fig. 2 is a vertical section on line 2—2 of Fig. 1, showing the closure applied to a bottle.

Referring now in detail to the drawings, I show at 5 a suitable bottle such as is used by embalmers for an aspirating bottle. This bottle has a wide mouth, and, owing to the nature of the fluids which are in the bottle at various times, it is necessary that an exceptionally tight closure be provided therefor if any degree of cleanliness is to be maintained.

Heretofore, in order to obtain the tight closure necessary, metallic caps have been used in conjunction with rubber gaskets or rings to prevent the escape of the liquid from the bottle. However, these devices present one difficulty which my present invention is designed to overcome. This difficulty lies in the fact that the fluids are permitted to contact with the metal at some part or other of the cap, and a cap of this nature, being provided with a recess where it fits over the bottle, is naturally very hard to clean, and if the fluid within the bottle attacks or corrodes the metal, it becomes a rather unsanitary and unsightly device.

In order to overcome this, I provide, in the present invention, a stopper 6, which is in the nature of a heavy rubber stopper, provided in the center with an aperture at 7 to receive the usual aspirating stopper or a common, rubber closure stopper, such as shown at 8. The stopper 6, it will be noted, tapers slightly from top to bottom, as shown at 9, and is provided at its top with a laterally extending ledge or shoulder 10 which rests upon the top of the bottle neck. Thus the rubber stopper, when fitted down within the bottle neck, forms a double seal, one portion of which is located within the bottle neck, as at 11, and the other portion of which is between the portion 10 of the stopper and the top of the bottle neck, as at 12. In order to hold the rubber member 6 tightly in place, I provide a cap 13, which is screw-threaded upon the neck of the bottle and is provided at its top with an inwardly extending flange 14 that is adapted to fit down upon the top of the member 6, so that, as the cap 13 is screwed down on the bottle, it will force the member 6 into the bottle neck until the shoulder 10 presses tightly against the top of the bottle.

To make he cap easy to turn, I provide the upwardly extending ears 15 and 16 at diametrically opposed points, so that these ears may readily be grasped by the hand of the person using the bottle in order to turn the cap.

As a further feature of advantage, I provide, at the base of these ears, suitable recesses, such as shown at 17, to receive the handle 18 and pivot it to the cap. The handle 18, being connected in this fashion, readily turns down out of the way when the cap is to be applied or removed from the bottle, and forms a very good handle for carrying the bottle around when the cap is applied thereto.

The material of the ears 15 and 16 is

preferably widened sufficiently at the base to form a strong mounting for the handle.

From the above description, it will be seen that I have provided a closure for bottles of the character hereinbefore described, in which all of the parts may be readily separated and cleaned or sterilized independently of each other. It is also apparent that by the utilization of this bottle closure a practically perfect seal of the bottle may be obtained without in any way permitting the fluid contents to come in contact with the outer cap and corrode it or cause it to become dirty and unsanitary.

It is highly important in devices of this character that a positive air seal be maintained regardless of whether a vacuum or a high pressure is created in the bottle. With the present invention, the stopper 6 and flange 10, both contacting as they do with the bottle mouth and being pressed tightly into position by the cap, make a positive seal so that gaseous or liquid matter in the bottle cannot escape. When a vacuum is created within the bottle, the cap gripping the flange 10 prevents the rubber stopper 6 from being drawn down into the bottle. Also in case of high pressures within the bottle, the cap prevents the stopper from being forced out of the bottle.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A closure device for bottles and the like comprising a resilient stopper having a portion for fitting tightly in a bottle mouth and an annular flange for engaging the top of the bottle whereby to form an additional seal therefor, and a cap for holding said stopper in place having an annular rim for fitting down over the top of the bottle and a flange extending inwardly from said rim to engage the top of said stopper, said rim having means cooperating with the bottle mouth to clamp said cap tightly thereon, said cap having upwardly extending ears thereon adjacent the periphery thereof to aid in attaching or removing the same, and a bail-like handle pivotally mounted in said ears for carrying the bottle.

2. A closure combination for aspirating bottles comprising a cap member having an annular rim provided with means to receive the neck of the bottle and means cooperating therewith to draw the cap down on the bottle neck, said cap having an inwardly extending flange extending over the bottle neck, a rubber closure having a substantial portion fitting within the bottle neck and having a projecting shoulder gripped between the top of the bottle neck and the flange whereby to prevent the fluid contents of the bottle from reaching the cap, said closure having an opening into said bottle spaced inwardly from said flange, and a stopper for said opening.

3. A closure holding and bottle carrying device for aspirating bottles having a wide neck and a flexible stopper therefor which has a shoulder overlying the neck of the bottle comprising a cap having a rim portion fitting over the bottle neck and having screw threaded engagement therewith, a flat annular flange extending inwardly from said rim a distance slightly greater than the wall thickness of the bottle neck whereby to secure said stopper and protect the neck of the bottle, said flange having upstanding ears thereon and a handle pivoted in said ears.

In witness whereof, I have hereunto subscribed my name this 26 day of June, A. D. 1929.

EDWARD OCASEK.