Dec. 29, 1936. C. P. MORRIS 2,066,121

DISPENSING DEVICE

Filed Nov. 26, 1935

Fig. 1.

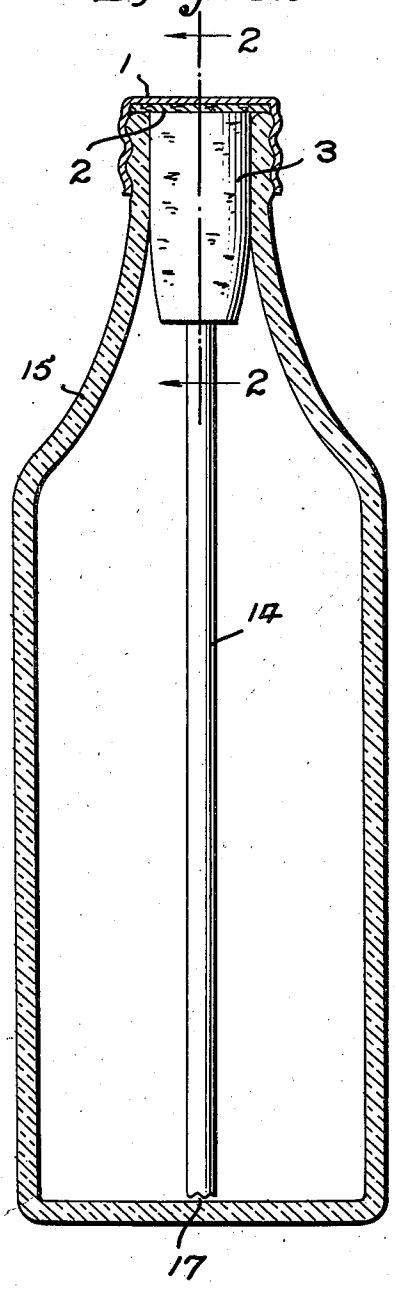


Fig. 2.

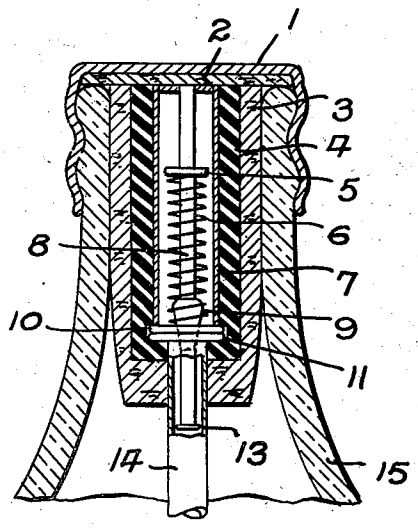
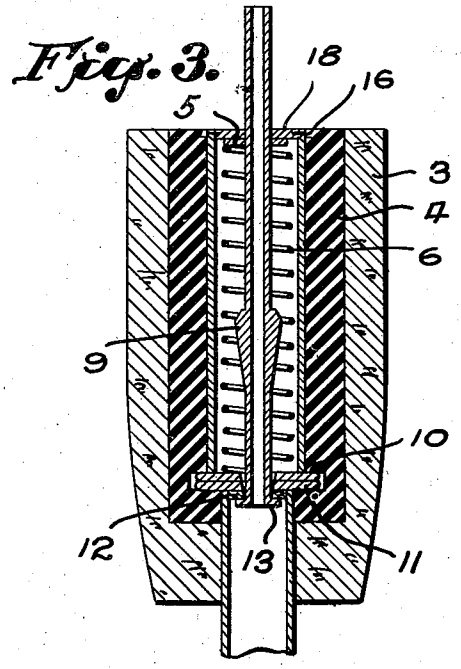


Fig. 3.



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DISPENSING DEVICE

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2 Claims. (Cl. 215—73)

My invention consists of improvements in dispensing devices it being in the nature of an adjustable telescopic drinking tube, detachable, which is confined within a bottle or flask when the bottle cap or closure is attached, and so constructed that when the closure is removed the upper section of said tube will be forced, by means of an inclosed spring, to protrude beyond the mouth of said bottle or flask. The lower section of said tube remains stationary and always sufficiently immersed in the liquid contents to enable the user to drink said contents as with an ordinary straw or drinking tube, except that it will not be necessary to handle the tube hereinafter described.

One object of the invention is to provide an economical and practical dispensing device in the form of a telescopic drinking tube made of glass, cellulose, or other similar inexpensive material which is impervious and immune from corrosion, disintegration, etc., when brought in contact with ordinary liquids.

Another object of the invention is to provide a supporting structure, made of cork and hard rubber, through which the tube is placed and which when inserted in the neck of the bottle supports both the upper and lower sections of said tube.

Another object of the invention is to provide a sliding or adjustable section at the upper end of said tube which will be confined within the bottle or flask when the closure is attached and which will protrude beyond the mouth of the bottle when the closure is removed.

Another object of the invention is to provide a means of equipping bottles and flasks of the ordinary screw-cap and crimped-cap types with a sanitary removable drinking tube which may be changed from one bottle or flask to another as desired and used indefinitely.

Another object of the invention is to provide a drinking tube confined within the bottle or flask when sealed and telescoping beyond the mouth of said container when the closure is removed, the lower end of said tube remaining always sufficiently near the bottom of the container that the entire contents may be imbibed.

The form of the invention is more accurately described and illustrated in the accompanying drawing wherein:

Figure 1 is a view of a bottle of the screw-cap type showing, among other things, the closure attached so as to force the sliding section of the tube downward by compressing the spring, until the bottle is sealed in the same manner as if the tube were not present.

Figure 2 is an enlargement of the upper portion of the tube showing in more accurate detail the sliding section, spring retainer and parts, and the frustum effect moulded near the lower end of said section.

Figure 3 is a view of the tube as a whole, without the bottle and screw-cap closure, showing the position of the sliding section of the tube when the closure is removed thereby allowing the spring to expand and force the upper end of said section to protrude beyond the mouth when inserted in the neck of the bottle as in Figure 1, except without the closure.

It will be noted from the drawing that the lower section of the tube remains fixed or stationary, being held in place by a stopper effect made of cork and hard rubber which when placed in the bottle neck supports the tube as hereinafter more fully described.

In the drawing the invention is shown as it would be made wherein the numerals indicate: 1 the metal portion of bottle cap; 2 the cork insulation underneath the bottle cap; 3 the cork insulation surrounding the spring-retainer housing; 4 the spring-retainer housing of hard rubber; 5 a flange near upper end of sliding section of tube to restrain the spring; 6 the enclosed spring; 7 the spring retainer; 8 the sliding section of tube; 9 a frustum moulded on sliding section, near lower end thereof; 10 a flange on lower end of spring retainer; 11 a flange on upper end of lower or stationary section of tube; 12 a cork gasket; 13 a flange on lower end of sliding section; 14 the lower or stationary section of tube; 15 the bottle; 16 screws; 17 corrugated effect at lower end of tube; 18 the disk-like closure at upper end of spring retainer.

It will be observed that the tube is held in place by a supporting structure composed of an outer layer of cork insulation 3 and an inner layer of hard rubber 4. The purpose of the cork insulation is to protect the contents of the bottle or flask from the rubber which otherwise would tend to give the liquid an unpleasant taste and odor. The rubber inner layer is provided because of its greater resiliency and durability. Through a vertical opening in the center of said supporting structure the lower section 14 of the tube is inserted and extends downward to the bottom of the bottle or flask. Flange 11 is constructed with an opening in the center just large enough to admit the smaller flange 13 which is passed through said opening into the larger sec-

tion of tube, being restrained by the cork gasket 12 from passing back through said opening when the closures 1 and 2 are removed from the bottle or flask and the spring 6 is released. The pressure exerted by the spring when the closure is removed brings flange 13 in contact with the cork gasket which in turn is brought flush against flange 11 thereby sealing the joint or coupling between the two sections 8 and 14 of the tube thus forming a continuous tube from the bottom of the bottle or flask to and beyond the mouth of said container, permitting the contents to be imbibed as with a straw or the ordinary drinking tube.

It will be noted that the retainer 7 for the spring and sliding section of tube is also inserted into the vertical opening of said supporting structure so that flange 10 at the lower end of said retainer rests flush on flange 11 at upper end of stationary section of tube.

It will be understood that the stationary section 14 of the tube and the spring retainer 7 are forced into the vertical opening of said supporting structure with sufficient pressure to prevent the contents of the bottle or flask from seeping into the retainer and spring thereby eliminating the possibility of rust or corrosion.

It will be understood that frustum 9 when the bottle or flask is sealed will be forced into the opening at the center of flange 10 at the lower end of the retainer with such pressure as to prevent the liquid from seeping into said retainer and spring, again eliminating the possibility of rust or corrosion.

It will be understood that the spring 6 and sliding section 8 of the tube are restrained within the retainer 7 by means of a disk 18 held in place by a small screw 16 on either side of said retainer. In the center of said disk is an opening through which that portion of the sliding section above flange 5 protrudes beyond the mouth of the bottle or flask.

It will be understood that by means of a slight vertical indentation along the outer edge of the supporting structure, or a small vertical opening in the cork or rubber part of said structure, air will be admitted into the bottle or flask thereby permitting the liquid to be withwdrawn.

It will be further understood that the corrugated end 17 of the stationary section of the tube will permit the liquid to enter the tube although said tube may be resting on the bottom of the bottle or flask.

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

1. A dispensing device substantially as herein described, comprising a bottle or flask, a closure therefor, and a telescopic drinking tube fitted within said bottle or flask by means of a cylindrical structure which serves as a coupler and supports both the upper and lower sections of said tube, the lower section of which is stationary and extends downward from within said cylindrical structure to the bottom of the bottle or flask, whereas the upper section is adjustable, being confined within the bottle or flask and said cylindrical structure when the closure is attached, and by means of an inclosed spring being forced to protrude beyond the mouth of said bottle or flask when the closure is removed.

2. A dispensing device substantially as herein described, comprising a bottle or flask, a closure therefor, and a sectional telescopic drinking tube fitted within said bottle or flask by means of a supporting structure which serves as a coupler and supports the sections of said tube, one section being stationary and extending downward to the bottom of the bottle or flask, whereas one section is adjustable, being confined within the container and supporting structure when the closure is attached, and, by means of an inclosed spring, forced to protrude beyond the mouth of said container when the closure is removed.

CLARENCE P. MORRIS.