July 24, 1962 R. GAINOR 3,045,723

SANITARY CONTAINER CLOSURE WITH DISPENSER

Filed Jan. 21, 1960

FIG. 1

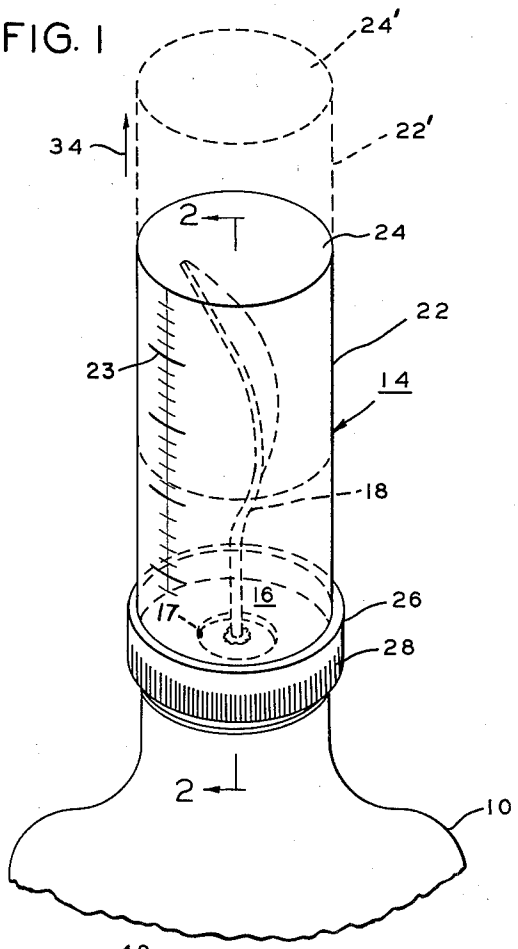
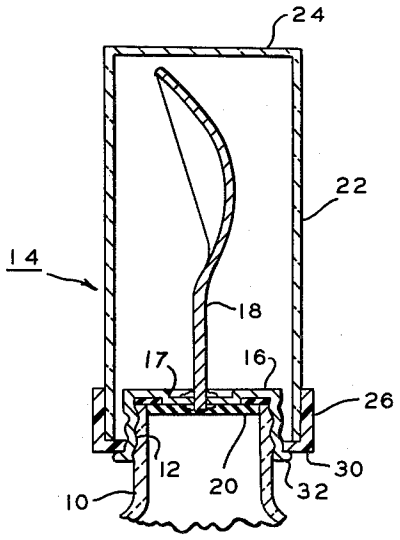


FIG. 2



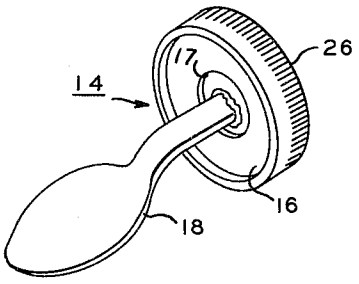


FIG. 3

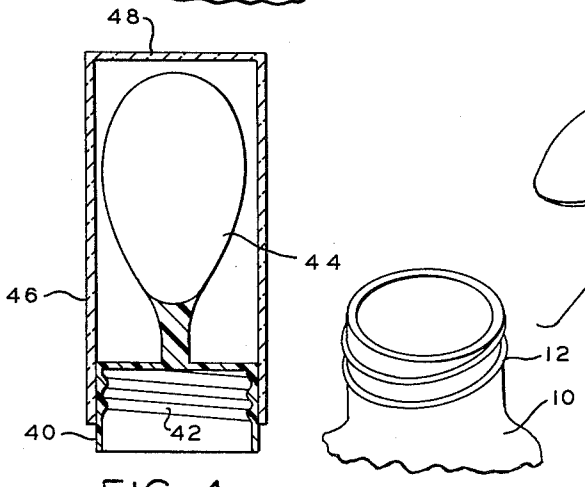


FIG. 4

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SANITARY CONTAINER CLOSURE WITH DISPENSER

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This invention relates to a container closure and to a dispenser such as a spoon for the contents of the container, and more particularly to a sanitary closure having an attached dispenser.

In the past, container closures have been provided with attached dispensing elements such as a spoon. However, this invention has as its main object the provision of a new and improved combined closure and dispensing element in which the dispensing element is readily available for use and at the same time does not contaminate the contents of the container.

Another object of this invention is to provide a new and improved combined closure and dispenser in which the dispenser is readily available for cleaning.

Another object of this invention is to provide a new and improved combined container, closure, and dispenser in which the dispenser as well as the contents of the container may be maintained in sanitary condition.

Another object of this invention is to provide a new and improved combined closure and dispenser in which the dispenser may be cleaned without disturbing the contents of the container and may thereafter be maintained in sanitary condition.

Another object of this invention is to provide a new and improved combined closure and dispenser in which access may be had to either the container contents or to the dispenser without disturbing the other.

In accordance with this invention a container is provided with a dispensing cover that includes a cap and a dispensing element attached thereto. The cap includes means for attachment to the container to provide a sanitary closure therefor. The dispenser is attached to and projects externally from the cap. A transparent cylindrical shield, closed at one end, engages the cap at the other end with the dispenser contained therewithin. The cap includes means for engaging the open end of said shield to provide a sanitary seal for the protection of the dispenser. Thereby, a sanitary seal for protecting both the container contents and the dispenser is provided. Access to either without disturbing the other is made available, so that the dispenser may be cleaned while the container is kept closed and the container opened without affecting the dispenser.

The foregoing and other objects and features of this invention as well as the invention itself both as to its organization and mode of use may be best appreciated from the following description when read together with the accompanying drawing in which:

FIG. 1 is a view in perspective of a closure and dispenser embodying this invention;

FIG. 2 is a sectional view in elevation along the line 2—2 of FIG. 1;

FIG. 3 is an exploded view in perspective of the dispenser and container of FIG. 1 in position for use; and

FIG. 4 is an elevational view partly in section of another embodiment of this invention.

In the drawing, corresponding parts are referenced by similar reference numerals. In the embodiment of FIGURES 1–3, a glass bottle or jar **10** is shown of the type having a screw threaded mouth **12** to which a closure **14** may be removably secured.

The closure **14** includes a cap portion **16** which, by way of illustrating, is metal and screw threaded for attachment to the threaded mouth **12** of the bottle **10**. The cap **16** has secured to its center and projecting externally therefrom a spoon **18**, which is also metal by way of illustration. The shank of the spoon **18** is rectangular in cross-section and is embedded in a slot of similar shape formed in the center of the cap. The spoon **18** is suitably bonded to the cap. The spoon **18** and cap **16** may be cast in an integral construction where appropriate. A gasket **20** fitted within the cap **16** insures a suitable seal for the bottle **10**.

The closure **14** also includes a shield **22**, which is cylindrical in shape having closed upper end **24** and an open lower end.

This shield **22** is preferably made of transparent material such as, for example, a moldable plastic.

Secured to the outside rim of the metal cap portion **16** is a plastic collar **26** that has knurling **28** formed on its outer surface. The collar **26** has an annular shoulder **30** integrally formed around its lower edge and extending inwardly. The shoulder **30** rests on an annular lip **32** formed around the lower edge of the cap **16**, and shoulder **30** is firmly bonded to the metal cap portion **32** so that the collar is part of the cap. Thereby, the collar **26** may be readily grasped to unscrew and to tighten the cap **16**. The collar **26** is preferably fabricated of a yieldable material such as a soft moldable plastic so that a tight fit may be made between the outer surface of the shield **22** and the inner surface of the collar **26**.

In use, access to the spoon **18** without disturbing the contents of the bottle may be had by elevating the shield **22** in the direction of the arrow **34** to the position indicated by the prime numerals **22'**, **24'**. The spoon is then uncovered and available for cleaning or for use as a dispenser. The cap **16** may be left tightly secured to the bottle **10** at that time even though the spoon **18** is fully accessible.

After the spoon is cleaned, the shield **22** may be returned to covering position securely positioned in contact with the collar **26** to provide a tight seal. The external surfaces of the cap **16** are completely enclosed by the shield **22** and collar **26** so that the spoon **18** is completely protected against contamination. The shield **22** being transparent, the condition of the spoon **18** may be readily viewed. The transparent character of the shield may be used to advantage in packaging and for display purposes.

For dispensing the contents of the bottle **10**, for example, a dose of medicine therefrom, the collar **26** may be manipulated to remove the cap **16**. The removal of the cap **16** may be performed without removal of the shield **22** and without affecting the spoon **18**. Thus, if the user desires, he may use another spoon and leave the spoon **18** in clean condition. Such use may be possible, for example, if the use were at home where other spoons were readily available.

However, where the user is away from home, he can also remove the shield **22** and dispense the contents of the bottle **10** with the spoon **18**. After dispensing a dose of medicine in this way, the cap **16** may be restored to position closing the mouth **12** of the bottle. The spoon **18** may then be washed if facilities therefor are available, and the shield returned to its protecting position.

However, if washing facilities are not available, the spoon **18** may still be protected for certain purposes by the shield **22** being restored to position sealing the spoon from external contamination. Thus, the same user may, under many circumstances, reuse the spoon **18** even though cleaning facilities should not be available in the interim period and without fear of contamination. When such cleaning facilities are again available, the shield **22** may be removed, the spoon **18** cleaned, and the shield restored, all without any adverse effect on the contents of the bottle **10**, which remains tightly capped. The spoon **18** may be used repeatedly in this manner. This invention may be used with dispensing elements other than

a spoon and may be used for containers other than those for medicines. For example, prepared baby food containers may be supplied with a spoon or fork on the cap and used in the manner described. Other dispensing elements such as a reusable applicator which are liable to contamination in use may be stored outside of the container itself in this way.

Another embodiment of this invention is illustrated in FIG. 4. A plastic unit as shown in FIG. 4 includes a cylindrical cap **40** which may have threads **42** therein and a spoon **44** formed externally. The shank of the spoon **44** is attached to the cap **40** and extends up from the top of the cap **40**. The unit of cap **40** and spoon **44** may be molded integrally from a suitable plastic material. A cylindrical shield **46** with a closed top end **48** and preferably transparent may also be molded from a suitable plastic. The internal diameter of the shield **46** at its open end is substantially the same as the external diameter of the upper portion of the cap **40** to ensure a tight sealing fit. The upper portion of cap **40** should be smooth for this purpose, and knurling similar to that on the collar **28** may be provided around the lower outside surface of cap **40** to provide easy manipulation. Alternatively, the cap **40** may be molded with a recess at its upper rim to receive the shield **46** and to provide an internal surface for engaging the open end of the shield in a manner similar to that of the collar **26**.

In use, the embodiment of FIG. 4 may be handled similarly as described above for the embodiment of FIG. 1. Such use will be apparent from the foregoing description. It has been noted that the shield **46** makes direct contact with the cap **40** to provide the desired seal.

The use of plastic for the cap offers the advantage of providing a simple and inexpensive construction. The flat surface of the top of the cap **40** and the projection of the shank of the spoon **44** are easy to keep clean since they are readily accessible. Likewise, these spoon and shield elements **44** and **46** may be appropriately dimensioned to provide a compact construction. Various shapes of the shield and spoon together with suitable dimensions afford the basis for an attractive and convenient package both for the user and for a manufacturer or merchant.

The embodiment of FIG. 4 lends itself for use with various types of cap constructions other than the threaded cap construction described above. Thus, this invention may also be used with the conventional beaded rim bottle mouth, and the cap may be provided with a suitable form of snap fastener for tightly gripping the beaded rim of the bottle. Such variations of the form of this invention will be readily apparent to those skilled in the art. It is not intended to limit the invention to any particular form though a preferred form thereof has been disclosed. Various modifications of features of this invention will be apparent to those skilled in the art and are intended to fall within the scope of the appended claims.

Thus, it is seen from the foregoing description that a new and improved combined closure and dispenser for a container is provided. The contents of the container or the dispenser may be made accessible without disturbance of the other or, alternatively, both may be used. A sanitary arrangement for the container and the dispenser is ensured.

In addition, the size of spoon **18** can be varied for large or small dosage. For example, spoon **18** may be large enough to dispense at one time a tablespoon or more of liquid as may be required in connection with the dosage of mineral oil.

Moreover, shield **22** may have marked thereon a graduated scale **23** whereby shield **22** may serve as a measuring member for a given volume of liquid in the event that an accurate amount of liquid is to be dispensed.

Furthermore, a depression **17** is provided on cap portion **16** at the base of the shank of spoon **18** to collect any liquid which remains in spoon **18** after dispensing. Such liquid would ordinarily run down to the base of the shank of spoon **18** and thence upon cap portion **16** to shield **22** to produce unsanitary fouling of the dispensing device. Depression **17** functions to minimize such fouling.

Obviously many modifications and variations of the present invention are possible in the light of the above teachings. It is, therefore, to be understood that within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

What is claimed as the invention is:

1. In a device having a closure with a santiary dispenser, a container including a mouth with fastening means, a dispensing cover for said container including a cap with internal fastening means to mate with that of said container, the improvement comprising a dispensing spoon as the sanitary dispenser, the dispensing spoon having a shank portion attached to said cap and having a spoon portion extending outwardly therefrom when said cap is mounted on said container, and a transparent shield closed at one end and open at the other for receiving said dispensing spoon therein, said shield having a smooth surface at the other end thereof, said cap including means for engaging said smooth surface of said shield to provide a tight seal to ensure sanitary protection of said dispensing element, whereby the dispensing element is retained in protected condition with said container and without contamination of the contents thereof.

2. The improvement as recited in claim 1 wherein said shield is marked with a graduated scale whereby said shield may serve as a measuring means.

3. The improvement as recited in claim 1 wherein said cap includes a depression to collect any excess liquid which may drip from said spoon.

4. The improvement as recited in claim 1 wherein said spoon and cap are integrally molded from plastic, and said cap includes a shield engaging surface.

5. The improvement as recited in claim 1 wherein said smooth surface is an inner cylindrical surface and said engaging means includes a smooth external cylindrical surface on said cap.

6. The improvement as recited in claim 1 wherein said spoon and a portion of said cap are formed of metal and said cap includes a plastic collar attached to said metal cap portion, said collar having a shield engaging surface and knurling whereby said cap may be manipulated.

7. In a device having a closure with a sanitary dispenser, a container including a mouth with fastening means, a dispensing cover for said container including a cap with internal fastening means to mate with that of said container, the improvement comprising a dispensing spoon as the sanitary dispenser, the dispensing spoon having a shank portion attached to said cap and having a spoon portion extending outwardly therefrom when said cap is mounted on said container, and a transparent shield closed at one end and open at the other for receiving said dispensing spoon therein, said shield having a smooth surface at the other end thereof, said shield smooth surface being an outer cylindrical surface, said cap including means for engaging said smooth surface of said shield to provide a tight seal to ensure sanitary protection of said dispensing element, said engaging means of said cap including an annular recess open only at one end for receiving said shield open end and formed by means providing an internal cylindrical shoulder for engaging said shield smooth surface, whereby the dispensing element is retained in protected condition with said container and without contamination of the contents thereof.

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