Aug. 13, 1940. W. T. HOLLAND 2,211,120

PILL AND POWDER MEASURING BOTTLE CAP

Filed Oct. 22, 1938

Fig. 2

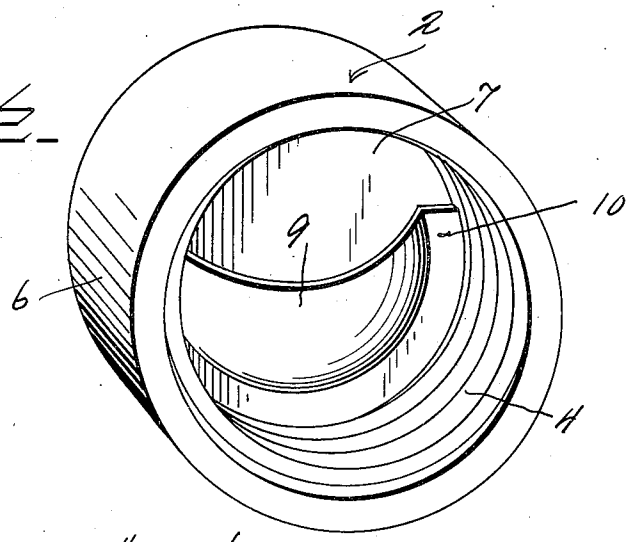


Fig. 1

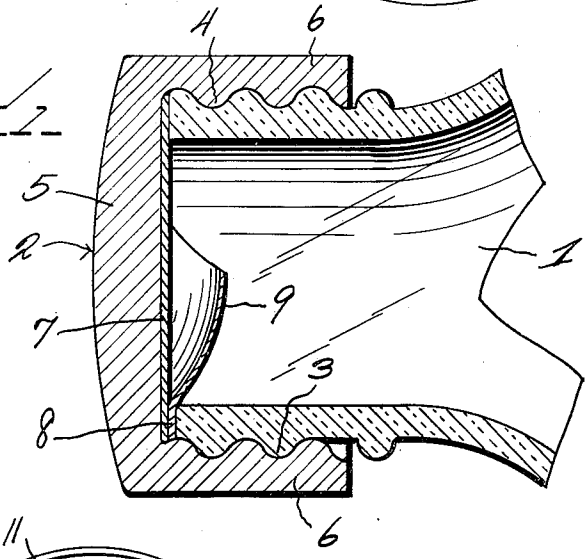
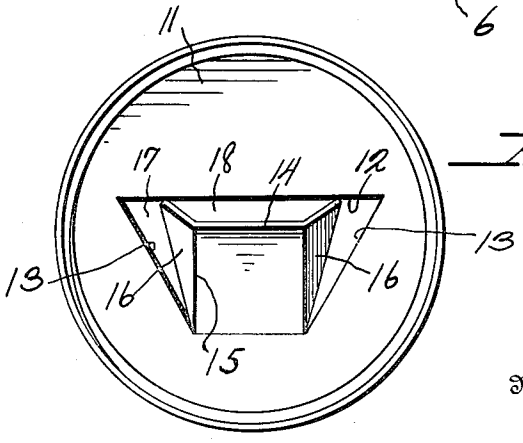


Fig. 3



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PILL AND POWDER MEASURING BOTTLE CAP

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4 Claims. (Cl. 221—147)

This invention relates to dosage measuring means for powder or pill bottles.

The primary object of the present invention is to provide an improved cap or top for pill and powder bottles having associated therewith and upon the inside thereof a means whereby a prescribed dosage of a powder or of pills contained in the bottle may be removed.

Another object of the invention is to provide a device of the above described character which, being placed upon the inner side of the bottle cap, not only functions as a means for measuring out a quantity of powder or a desired number of pills from the bottle, but serves as a seal for the mouth of the bottle on which the cap may be placed whereby the entrance of air into the bottle when the cap is on will be prevented.

The invention broadly contemplates the provision of a disk formed to be inserted into a bottle cap to lie flat against the top thereof and thus be pressed by the top of the cap against the edge of the mouth of the bottle when the cap is in place and a cup or pocket formed integral with or carried by the disk which projects and opens into the cap so that it may receive material, in the form of powder, pills or any other form, from the bottle, the mouth of which the cap closes. By this arrangement, the user of the bottle may trap some of the bottle contents in the pocket so that when the cap is removed from the bottle mouth, it will contain a prescribed amount of the bottle contents.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming part of this specification, with the understanding, however, that the invention is not to be confined to any strict conformity with the showing of the drawing but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawing:

Fig. 1 is a sectional view through the mouth portion of a bottle showing thereon a cap constructed in accordance with the present invention.

Fig. 2 is a view in perspective of the cap illustrated in Fig. 1.

Fig. 3 is a view looking into the mouth of a cap and showing a modified form of the measuring means therein.

Referring now more particularly to the drawing, the numeral 1 designates the upper or neck portion of a bottle in which medicine in the form of a powder or of pills may be dispensed, the mouth of the bottle being covered by a cap 2 which may be of metal, hard rubber or any other suitable material, such as is commonly used in connection with prescription bottles in which powder or pills may be dispensed. In the present illustration, the neck portion of the bottle is shown as having threads 3 pressed therein for engagement by threads 4 formed upon the inner side of the cap 2 but it is to be understood that the present invention is not to be limited to use with caps of this specific form but may be employed in connection with bottle caps generally regardless of the manner in which they are attached to the bottle neck. Broadly, the device is used in connection with a cap having the usual flat top 5 and a side or skirt portion 6, wherein the skirt portion encircles the bottle neck and the flat top comes into tight contact with the mouth of the bottle.

In carrying out the present invention, there is provided a disk upon one side of which a material receiving pocket is formed. Two forms of the present invention are illustrated and in both of these forms it will be seen that the disk and pocket forming portion occur. In the form of the invention shown in Figs. 1 and 2, the disk is indicated by the numeral 7 and this is of a diameter to correspond with the diameter of the inner side of the cap top 5 so that when it is placed in position within the cap and the cap is placed upon the bottle in the manner shown, the edge of the bottle mouth will bear against the disk 7 and thus the disk will serve as a sealing means.

The disk 7 has secured thereto in any suitable manner a plate 8 which may be formed of the same material as the disk 7, and this plate is shaped to cover substantially half of the disk and has its central portion pressed outwardly so as to form the pocket-like flap 9, the plate being secured as by the use of staples or the like, as indicated at 10, to the disk 7 at opposite sides of the pocket and at any other points where such attachment may be desirable. Of course, any other means may be employed for securing the plate 8 to the disk such as a suitable adhesive or, if the disk and plate are formed of fusible material such as hard rubber or by a synthetic resin, then the plate and disk may be fused together at the same time that the parts are assembled. It will be seen, however, that the construction of the disk and plate is such that there is formed a pocket or receptacle at the central part of the

disk which opens toward the side or skirt portion 6 of the cap.

In Fig. 3, another form of the invention is shown wherein there is employed a disk 11 which has been cut through along the line 12 extending through the diameter thereof and terminating short of the edges and along lines 13 extending from the ends of the line 12 in slightly convergent relation in a direction transversely of the line 12. This forms a flap portion 14 which is bent or folded along the lines 15 extending transversely of each of its ends so as to provide the triangular ears 16 which are bent in toward the disk 11 so that their free long edges will extend through the opening 17 which is formed in the disk and contact the inner surface of the top portion of the bottle cap. This holds the major portion of the flap 14 outwardly at an angle to the disk 11, thus providing the pocket or receptacle 18.

It will be noted that the ends of the cut line 12 terminate a sufficient distance inwardly from the edge of the disk to permit the edge of the bottle mouth to press against the disk without covering the cut out or open portion, thus making the disk serve the additional function of a sealing means.

In the use of the present device, the cap is removed from the bottle and held in the left-hand with the open side or mouth of the pocket directed upwardly. The cap is then placed against the mouth of the bottle and the bottle inverted or held in such position as to permit a pill or a quanity of powder to flow into the pocket. By then relatively rotating the bottle and cap as, for example, by turning the bottle to approximately a 45° angle, assuming that the bottle has been held horizontally, the powder or pills which the pocket has not caught will flow back into the bottle and the desired dosage will be retained in the pocket.

It will be understood, of course, that the size of the pocket may vary according to the different quantities of the substance desired to be dispensed.

What is claimed is:

1. In a bottle cap, a measuring means, comprising a disk member disposed within the cap against the inner side of the top thereof and adapted to be compressed between the said top of the cap and the mouth of a bottle upon which the cap is placed, and means joined to the disk and forming a pocket upon the side of the disk away from the top of the cap, said pocket having a wide mouth opening toward the side of the cap and the pocket gradually decreasing in width from the mouth to the bottom of the pocket.

2. In a bottle cap having a top portion and a skirt portion, a disk body formed to position within the cap against the inner side of the top portion, and a plate secured to said disk upon the side opposite from the said top of the cap, said plate extending over substantially half of the surface of the disk and having one edge bowed outwardly away from the disk to form a material receiving pocket.

3. In a bottle cap having a top portion and a skirt portion, a disk body formed to position within the cap against the inner side of the top portion, and said disk having a portion thereof struck outwardly away from the side adjacent the top of the cap, the said outstruck portion of the disk being folded at its sides to form with the adjacent wall of the cap top a material receiving pocket.

4. In a bottle cap having a top portion and a skirt portion, a measuring means comprising a disk member disposed within the cap against the inner side of the top portion and adapted to be secured between the top portion and the mouth of a bottle upon which the cap is placed, and means forming a pocket joined to the disk having a mouth having a length extending diametrically of the disk and at least as great as the radius of the disk, the mouth having a substantial width and the pocket tapering from the mouth to its bottom.

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