

An improved bottle and stopper for containing and dispensing liquid or granular poisons and such like / [James Bannerman].

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COMPLETE SPECIFICATION.

An Improved Bottle and Stopper for Containing and Dispensing Liquid or Granular Poisons and such like.

We, JAMES BANNERMAN, of 7 Guthrie Port, Engineer; DAVID MILLER, of 13 Lochland Street, Machineman; and GEORGE HARVEY, of 3 Hill Terrace, Residenter; all of Arbroath, in the County of Forfar, Scotland. do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to an improved bottle and stopper for containing and dispensing liquid or granular poisons and such like, the object being to provide means for ensuring that the contents cannot be administered unwittingly or that children can obtain access thereto.

And in order that our said invention and the manner of performing or carrying the same into effect or practice may be properly understood we have hereunto appended an explanatory sheet of drawings in which the same reference letters are used to indicate corresponding parts in all the figures where shown, that is to say:—

Figure 1. is a part section at X. X. (Figure 3.) showing the stopper in position.

Figure 2. is a part section at Y. Y. (Figure 3.) showing the stopper in position to allow of the contents of the bottle being poured out.

Figure 3. is a cross-section at Z. Z. (Figure 2.)

Figure 4. is a plan, and

Figure 5. is a plan of the bottle mouth, with the stopper removed and showing the recess in which the feather works.

In carrying out our invention we provide the bottle *a.* with a stopper *b.* of the form shown. It is preferably provided with a lining *c.* of cork or other suitable material and such lining is either attached to the stopper so that it can rotate with it, or conversely, fixed to the bottle. The lining must be attached to either the stopper, or the bottle, or if otherwise it might be turned into such a position as to close the passages. The head of the stopper is rounded, and when in position in the bottle such head is sunk within a lip *d.* If the stopper be moderately tight it cannot be withdrawn because nothing projects to afford means for seizing it. *e.* is a recess in the stopper, its purpose being to provide means for turning it round. Instead of or in addition to a recess, projections *k.* may be formed. A feather *f.* on the stopper works in a groove *g.* such groove preferably only extending round the neck rather more than the quarter of the circle. When the feather bears against one end of the groove the passages in the stopper are closed and when bearing against the other end they are fully open. *h.* is an air passage in the stopper which can put in communication with a similar passage in the neck of the bottle. *i.* is a somewhat similar passage which can permit the contents of the bottle to pass.

The bottle is filled and operated in the following manner:—The stopper *b.* being detached, the bottle *a.* is filled in the usual manner. Such stopper is then inserted and firmly pressed down, care being taken that it is set with the passages *h.* and *i.* open, otherwise it might not be sent fully down. It is then turned a quarter of a revolution, thus effectually closing such passages. If the stopper be provided with a recess *e.* it may be turned with anything suitable, such as a screw driver, a coin, or the handle of a spoon. If it have projections *k.* it

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Improved Bottle and Stopper for Containing and Dispensing Poisons, &c.

may be turned by the finger and thumb of the operator. To pour out the contents, the stopper is turned until the two passages are open, whereupon air will enter the upper one and the liquid will escape from the lower; or conversely. By the use of a bottle and rotatable stopper such as described, poisoning by misadventure is hardly possible, because access to the contents is obtained in an absolutely distinct way to that which at present obtains, that is to say once the stopper is inserted it cannot be withdrawn but only rotated, and a person could hardly manipulate the stopper—simple in operation though it be—if only partially awake. It is impossible for a child to get at the contents of the bottle without breaking it. 5 10

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed we declare that what we claim is:

(1.) In bottles, the construction, combination and arrangement of parts, substantially as described and illustrated on the annexed drawings and for the purposes set forth. 15

(2.) In bottles, the combination of a partially rotatory stopper having two independent passages, a recess or projection for turning it and a feather, with a bottle provided with two apertures placed opposite one another, a lip for receiving the head of the stopper and a lining of cork, or other suitable material, as described. 20

(3.) In bottles, the general arrangement whereby air is admitted at one side of the neck and the contents emitted at the opposite side, as described.

(4.) In bottles, the use of a safety non-removable and partially rotatory stopper, substantially as described. 25

Dated this 14th. day of February 1901.

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Agents for the Applicants.

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[This Drawing is a reproduction of the Original on a reduced scale.]

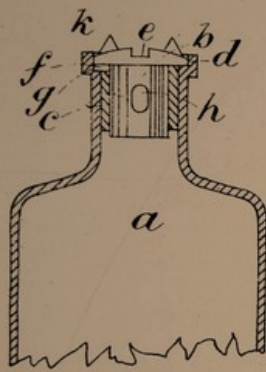


FIG. 1.

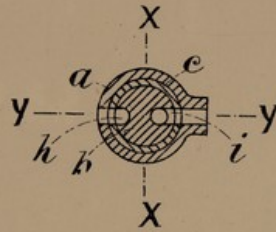


FIG. 3.

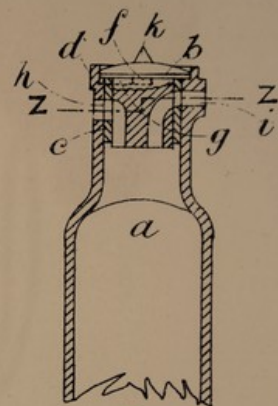


FIG. 2.



FIG. 5.

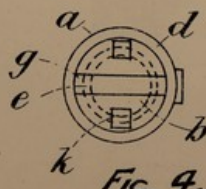


FIG. 4.

