Jan. 18, 1944. J. McK. BALLOU 2,339,745

VERMIN POISON-DISPENSER

Filed April 10, 1939

FIG. 1.

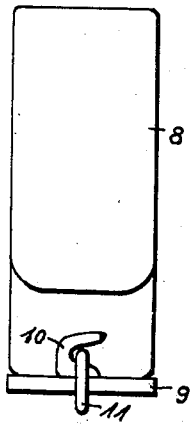


FIG. 2.

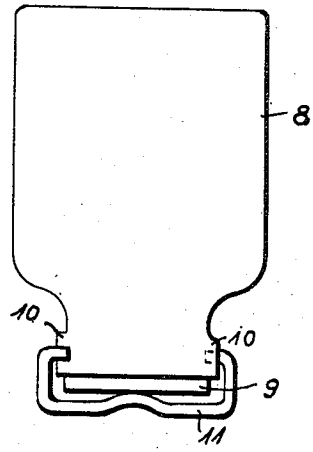


FIG. 4.

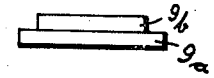


FIG. 3.

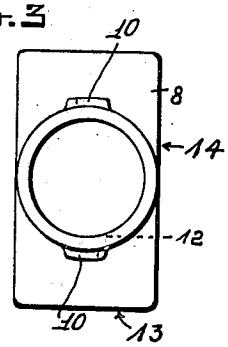


FIG. 7.

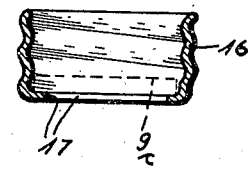


FIG. 6.

FIG. 5.

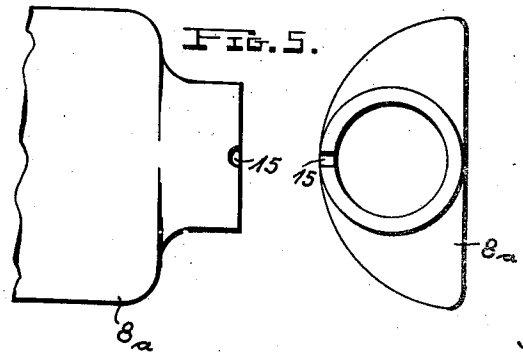
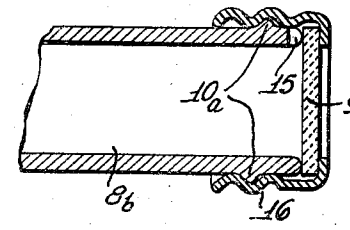


FIG. 8.



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VERMIN POISON DISPENSER

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5 Claims. (Cl. 43—131)

This invention relates to devices by which vermin poison may be exposed sufficiently to produce the exterminating effect upon any vermin partaking of such poison.

One of the objects of this invention is to provide a dispenser by which the poison is held in a clean condition.

Another object is to provide a device that will keep poison in such a manner that children, domestic animals, or pets are not so readily exposed to danger.

Another object is to provide a device that will feed only sufficient poison for particular purposes.

Another object is to provide a device that can easily be kept clean and operative.

Another object is to provide easily exchangeable control means.

Other objects will appear from the following description and appended claims as well as from the accompanying drawing, in which—

Fig. 1 illustrates a container of rectangular cross-section of a form shown in front view in Fig. 3, as seen with the narrower side in top plan view, designed and with a closure according to this invention.

Fig. 2 is the same container and closure as seen with the broader side in top plan view.

Fig. 3 is the same container without the closure in front view.

Fig. 4 is an edge view of a slightly modified form of dispensing body.

Fig. 5 is a fragmentary top plan view of a slightly modified form of container.

Fig. 6 is a front view of the container of Fig. 5.

Fig. 7 is a midsectional view of a screw-ring, for holding a dispensing body in place over the front end of a container, as another slightly modified form to be used for devices of this sort.

Fig. 8 is a fragmentary mid-sectional view of a form to include the screw-top, container with recessed front-edge, and a porous body disposed between the screw-cap and the front-edge.

With devices commonly in use, it is not only a matter of vermin getting into the inside of containers to thereby make the devices unpleasant to handle, but the devices become too frequently loaded, not only with dead vermin but also with waste material, such as dust and water, the latter from rain as well as from sprinkling, whereby the devices become unduly ineffective.

While attempts may have been made to overcome some of the old difficulties, covers commonly in use still seem to allow insects to get in, to an extent of clogging up passages or pores.

In the present case, it is particularly desired that the dispensing body should be of a material that will positively eliminate any clogging up by small insects or dust or other waste.

It has been found that certain minerals have a particularly strong capillary characteristic, whereby any material, such as vermin poison, may be made to pass to the surface of such material and still be retained in the pores of such material for greatest efficiency, without unduly running out of a container placed on the side, as is common practice with such devices, and for which the devices of this invention are particularly meant to be suited.

Materials, or minerals particularly useful may be said to be the class of tremolite, nephrite, or wollastonite, all of which are of a particular long fibre but firm form, particularly, when compressed and baked into blocks or bodies, such as referred to in this case, to thereby assure such capillary characteristics in manufactured porous bodies; but from this it should be understood that minerals and materials that assure a good capillary characteristic and variable porosity may be also useful with this invention.

Any porous body used for dispensing the poison is naturally made from such minerals or materials by suitable processes to first reduce the mineral to desired fineness and then compacting the fine particles into suitable body-form.

Figs. 1 and 2, for instance, show plain round discs 9; while Fig. 4 shows a shouldered disc with a front portion 9_a and a smaller portion 9_b; both forms of discs representing such body-form for dispensing poison from a container 8.

A container, too, may vary in form, Figs. 1, 2, and 3 showing one form of container; while Figs. 5 and 6 show another form of container.

It should therefore be understood that modifications of details do not necessarily limit this invention in scope, and that details may be varied without departing from the principles of this invention.

As illustrated, while the poison is held in the container 8, a porous body 9 is tightly held over the front end of the container.

The form of Figs. 1, 2, and 3 is then placed on the side, either, with one of the narrower sides down as indicated by the arrow 13 in Fig. 3, or, with the wider or broader side down as indicated by the arrow 14.

When resting on the flat side indicated by the arrow 14, it must be clear that the whole contents of the container may be drained; while, when resting on the narrower side indicated by the arrow 13, the container will eventually be drained only to the level indicated by the numeral 12. However, it should be understood that, since the dispensing bodies are made in the form of solid and firm discs, and so that the inclosed liquid will be held back suitably in the container though allowed to accumulate on the surface of such bodies by reason of the capillarity of such bodies, liquid will largely be drained only to the extent to which it is picked off by insects and the like.

Under such condition, a container may at first

be placed on the narrower side to avoid undue pressure on the porous body from the inside, and, later on, a person can turn over the containers to empty fully, thereby eventually helping to create a change in the efflux.

The porous body is practically in form of a filter disc, though in this case no filtering is desired but merely a slow discharging.

In Figs. 1 and 2 there are cam-like projections 10 on the sides of the container into which a clamp 11 of spring material may be hooked for clamping the dispensing body 9 to the container.

Nevertheless, common screw-top bottles or containers may be used for this invention, but the closing cap for this case is preferably made in ring form so that the largest possible area of the porous dispensing body may be exposed, such ring-closure being illustrated in Fig. 7 and designated 18, having the large opening indicated at 17, a disc being indicated in dotted lines at 9c.

Figs. 5 and 6 illustrate a slightly modified form of container, indicated at 8a, having one flat side, and being provided with a small depression 15 in the front edge of the container, at a point that will naturally be at the top when the container is lying on its flat side, this depression forming a suitable vent by which air may enter while the contents discharge from the container.

It should be understood that the holding of the porous dispensing body does not require any great force, and that the means for holding the body to the front edge may be varied to suit requirements or even mere choice.

Undeniably, no one expects a screw-cap to seal in the threads. Even if the cap were made of strong material, regardless of whether such a cap were to be screwed down tightly, the recess, or depressison, 15 would still form a vent in communication with the normal air-space as plainly illustrated next to the beads 10a, engaged by the cap 16 in Fig. 8. There is always a space from the annular engaging edge of such a cap to continue throughout the threaded portion of such a cap. The body 9, held thus to the top-edge of the container 8b, would really never close the container air-tight, though dust and other matter may well enough be kept out of the container, since the vent is in the top and comparatively narrow.

With threaded caps, any person relies on abutment between cap and top edge of container, generally even placing a gasket between such abutments for better sealing, but no one would put any sort of gasket in the threads.

In this case, the recessed top-edge, or front-edge, co-operates with the never-sealing-feature of a screw-cap.

Caps of that sort are commonly made of thin material, and such thin material is quite commonly rather resilient, so much, that it should hardly require particular mentioning. Such resiliency, however, could easily be said to be sufficient to assure a firm-enough holding to a container-end such as shown and illustrated in Figs. 5 and 6. A resilient cap may easily be slipped on and off, and still hold the dispensing-body firmly-enough against the top-edge, or front-edge, of the container.

Screw-caps are not always provided with very coarse threads, and the threaded portions may easily be made so fine that undue admissions of matter may be prevented and still assure resiliency sufficient for the requirements, and space enough for the air-vent.

Having thus described my invention, I claim—

1. In a vermin poison-dispenser, an open-end container designed to rest on the side with a dispensing end disposed to discharge laterally including a front-edge with a depression at a point to be at the top of the open end when the container rests on the side, a dispensing member made of porous mineral in the form of a flat and solid body and to fit with one of its flat sides against the front-edge of the container so as to leave the depression in the front-edge free for a vent, and means to fit over the said dispensing end and including means for annularly engaging over the outer flat face of the dispensing member for pressing and holding the member against the front-edge.

2. In a vermin poison-dispenser, an open-end container designed to rest on the side having a dispensing-end disposed to discharge laterally and including a front-edge with a recess at a point to be at the top of the open end when the container rests on the side, a dispensing member made of porous mineral in the form of a solid and integral body and to fit for abutment against the front-edge of the container so as to leave the recess in the front-edge free for a vent, and means to engage over the open end of the container and over the member to the extent of the said front-edge with respect to the outer flat side of the member.

3. In a vermin poison-dispenser, an open-end container designed to rest on the side having a dispensing-end disposed to discharge laterally and including a front-edge with a recess therein at a point to be at the top of the open end when the container rests on the side, a dispensing member made of porous mineral in the form of a flat and integrally solid body to fit with its inner flat face along the periphery thereof for abutment against the front-edge of the container, and an annular screw-cap to hold the member to the edge of the container and being designed so as to leave the whole area of the end of the container to act on the body with the tendency of accumulating poison on an equal area on the outer flat face of the member, the container having means for engaging the screw cap so that the recess in said front-edge forms a vent together with non-engaging portions in the thread-portions of the cap.

4. In a vermin poison-dispenser, an open-end container designed to rest on the side in operating position with said end disposed to discharge laterally and including an annular front-edge with a recess therein at a point to be at the top in said operating position to form a vent when the open end is covered by any flat-faced member by abutment against said front-edge.

5. In a vermin poison-dispenser, a container shaped to rest on the side in operating position and having a dispensing-end disposed to discharge laterally and including an annular front-edge with a recess therein at a point to be at the top of the end when the end is in operating position so that said recess is left in form of an open vent whenever a cover is applied by abutment against said front-edge, and having engaging-means on the dispensing-end shaped for holding a closure to the edge by circular twisting movement of the closure.

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