Feb. 20, 1934. G. RECHTEN 1,948,227

DISPENSING DEVICE

Filed May 24, 1933

Fig. 1.

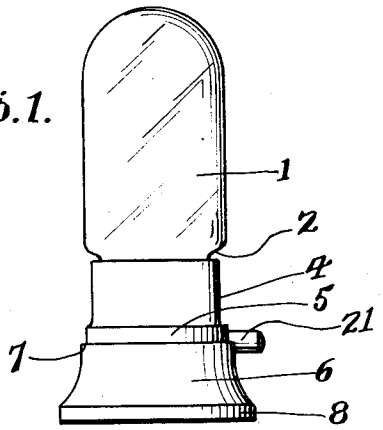


Fig. 2.

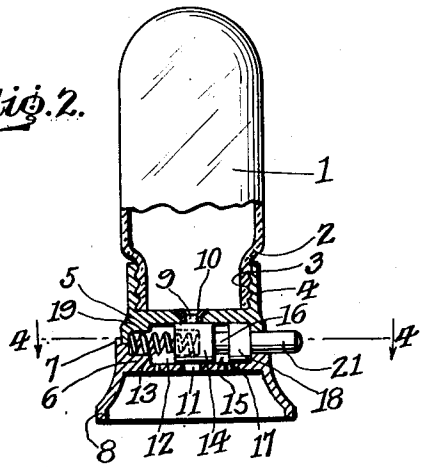


Fig. 3.

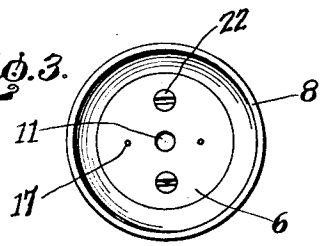


Fig. 4.

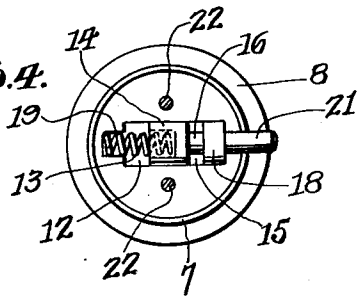


Fig. 5.

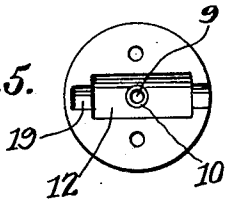


Fig. 7.

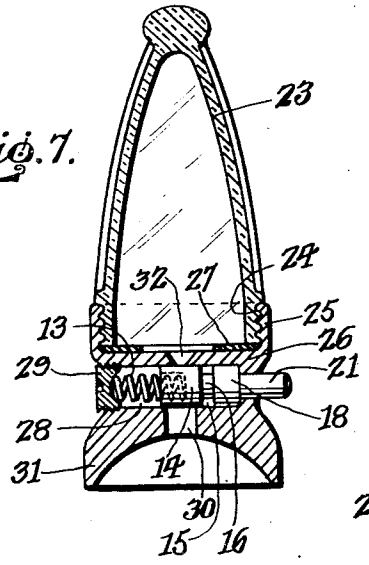


Fig. 6.

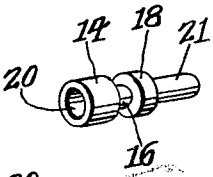
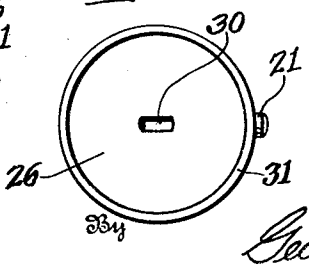


Fig. 8.



Inventor

George Rechten

By Geo. P. Kimmel.

Attorney

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DISPENSING DEVICE

George Rechten, Hasbrouck Heights, N. J., assignor of one-third to Ira W. Smith, Newark, N. J., and one-third to James J. Keegan, Brooklyn, N. Y.

Application May 24, 1933. Serial No. 672,733

1 Claim. (Cl. 65—45)

This invention relates in general to dispensing devices and more particularly has reference to a dispenser for granular or powdered material such as table salt or the like.

In the past, many different forms of dispensing devices have been utilized in connection with such articles as table salt, pepper, etc. These have for the most part consisted of small containers or reservoirs having perforations in the top thereof, or in some portion remote from the bottom, through which the materials were shaken. Others have had openings in various other portions of the container which openings have been so arranged that the materials would not escape therefrom except when the device was properly manipulated. However, all of these prior devices have been so arranged as to permit moisture from the atmosphere to enter the reservoir, and in the case of materials such as table salt, to render them sticky and moist so that they could not be dispensed from the container in the ordinary manner. Various attempts have been made to attain the object of providing moisture-proof dispensing containers for such materials, but all have either been inoperative under certain circumstances or have proved too costly and intricate to manufacture.

It is therefore an object of this invention to provide a container and dispensing device for materials such as table salt or the like, which device shall permit the free dispensing of such material and will automatically close in such a manner to prevent the ingress of moisture into the container. It is an object of this invention that this device shall be simple and easy to manufacture and that it shall be easily and readily disassembled for cleaning or other purposes. It is furthermore an object that the device shall be made in such a manner as to at all times show at a glance just how much material remains in the reservoir.

In addition to the above, it is an object to provide a device of the character set forth and which shall be easily operated to dispense exactly the amount of material required and which shall not be subject to clogging or other troubles usually inherent in such devices.

Other objects and advantages of this invention will become apparent from the following description taken in connection with the accompanying drawing, it being distinctly understood that the same is by way of illustration and example only and is not to be taken as in any way limiting the spirit or scope of this invention. The spirit and scope of this invention is to be limited only by the prior art taken in connection with the accompanying claim.

Referring now more particularly to the drawing in which like numerals indicate corresponding parts throughout:

Figure 1 is an elevation of a dispensing device constructed in accordance with this invention.

Figure 2 is a partial vertical sectional view of the same illustrating in detail the operating parts.

Figure 3 is a bottom view of the device illustrated in Figure 1.

Figure 4 is a view taken along the line 4—4 of Figure 2 looking downwardly.

Figure 5 is a view taken along the same line looking upwardly.

Figure 6 is a view illustrating the plunger or slide forming a part of this invention.

Figure 7 is a vertical sectional view illustrating a slight modification.

Figure 8 is a bottom view of the device illustrated in Figure 7.

In accordance with this invention, there is provided a receptacle or reservoir 1 closed at its upper end and formed with a shoulder 2 and a reduced portion at its lower end. This reservoir is preferably formed of some transparent material such as glass or the like in order that the substance to be dispensed may be easily seen through its walls so as to indicate when refilling becomes necessary. This reservoir is open at its bottom end and is provided with threads 3 upon its reduced portion such threads 3 being adapted to engage with internal threads within the collar portion 4 of the base. The base consists of an upper member 5 and a lower member 6, the lower member having an upstanding peripheral flange 7 adapted to telescopingly engage with the outer circumference of the upper portion 5 so as to cause these two portions 5 and 6 to accurately register. The lower portion 6 of the base is formed with a downwardly extending annular flange 8 adapted to form a footing for the entire structure.

The upper portion 5 of the base is provided with an opening 9 therethrough extending from the interior of the reservoir 1 and provided with a bushing or lining member 10. The lower member 6 of the base is likewise provided with an opening 11 therethrough, the same being in alignment with and forming a continuation of the opening 9 for a purpose to be presently described.

The two portions of the base are provided with complementary recesses in their lower and upper surfaces respectively so that when placed together these recesses will register to form the cylindrical chamber or guideway 12. As will be seen, this guideway is of considerably larger cross section than the openings 9 and 11 and extends substantially at right angles to those openings so as to intersect and interrupt the same. Within the chamber 12, the spring 13 is positioned and normally urges a slide having a portion 14 of substantially the same cross sec-

tion as the slideway 12 to such a position that it will effectively close the opening 9—11. This slide consists of two portions 14 and 18 respectively of substantially the same cross section as the slideway 12 and having between them intermediate the ends of the slide taken as a whole an encircling or encompassing channel 15 forming a reduced portion 16 in the slide. This reduced portion 16 is preferably of a length substantially equal to the diameter of the openings 9 and 11. The lower portion 6 of the base is likewise provided with a pair of openings 17 adapted to permit the escape of any material which might in any manner get into the chamber or slideway 12.

It will be noted in connection with Figures 2, 4, 5 and 6 that the base members are likewise recessed at one end of the chamber or slideway 12 so as to form a seat 19 for the end of the spring 13. The other end of the spring 13 is seated in the recess 20 within the portion 14 of the slide.

The slide is provided adjacent its opposite end with a projecting portion 21 which is adapted when in place within the base to project outwardly through an opening provided for the purpose and serve as a button to move the slide against the resistance of the spring 13 to such a position that the encompassing or encircling channel 15 will be in alignment with the openings 9—11, thus allowing material to be dispensed from the reservoir 1 through the opening 9, the channel 15 and the opening 11. The two parts of the base are held together by means of a pair of screws 22 or the like extending from the bottom of the base upwardly and threaded into the upper portion 5 of the base. It is to be observed that these screws may be readily removed thus allowing the removal of the slide as well as the spring 13 so that the entire device may be cleaned, inspected or repaired.

With reference now to the form illustrated in Figures 7 and 8, the reservoir in this instance is shown as having a slightly different form for the purposes of ornamentation and additional strength, but is formed like the reservoir 1 of glass or other similar transparent material. The lower end of this reservoir 23 is likewise provided with threads 24 for the purpose of engaging with the internal threads within the collar 25 on the base member 26. If found desirable, a gasket 27 which may if desired be formed of blotting paper is placed beneath the lower edge of the reservoir 23 for the purpose of providing a moisture-proof seal between the reservoir 23 and the base 26.

The base 26, unlike that previously described, is formed for the most part of a single piece. A chamber or slideway 28 is provided therein corresponding to the chamber or slideway 12, and is adapted to receive a slide which is shown as being exactly the same as that used in the form just described. The chamber 28, however, instead of terminating short of the outer wall of the base member as in the previously described form extends outwardly through this wall and is closed by means of a plug 29 threadedly engaging the base member and normally forming a part thereof as illustrated.

Leading from the reservoir 23 into the chamber 28 there is provided a conical shaped opening 32 having its larger end uppermost and its smaller end communicating with the chamber. An opening 30 in the form of a slot is provided between the lower surface of the base member 26 and the lower side of the chamber 28, this opening 30 being positioned in alignment with the opening 32 so as to form a continuation thereof in the same manner that the opening 11 forms a continuation of the opening 9. The portion 21 of the slide projects from the side wall of the base at a point opposite the plug 29 in much the same manner as the base in the form previously described. The lower edge of the base 26 is formed with a downward projection 31 forming a footing for the entire structure corresponding to the footing 8 shown in Figure 2.

It will readily be observed that the operation and principles of the two forms illustrated and described are substantially identical, and that the normally movable parts are so alike as to be practically interchangeable. In each instance, a portion of the base is readily removable for the purpose of gaining access to or removing the slide and the spring 13 if so desired so that they may be cleaned, inspected or repaired.

It will be appreciated that with the device above described a material placed within the reservoir 1 or the reservoir 23 will be entirely shut off from the outer atmosphere and protected against the assimilation of moisture or dirt from the atmosphere. At the same time, the reservoir in each instance may be readily removed for the purposes of filling, and is transparent so that the need for filling the same may be readily perceived. It will further be seen that any desired quantity of material may be readily dispensed from the container because of the fact that the flow of material can be stopped instantaneously by merely releasing the push button 21 forming a part of the operating slide. There are very few working parts to get out of order and the device is comparatively very simple and inexpensive to manufacture.

Although the various parts have been described in detail, it is to be understood that the details of construction and arrangement of parts may be varied to a considerable extent without departing from the spirit or scope of this invention as set forth in the appended claim.

What I claim is:—

In a device of the character described, a reservoir for a substance to be dispensed, a base for said reservoir having a relatively small opening therethrough communicating with the interior of said reservoir, said base also having an elongated chamber therein extending transversely of and interrupting said opening and forming a slideway, a slide in said slideway, said slide having the major portion of its length of substantially the same cross section as said slideway and having an encompassing channel intermediate its ends forming a part of reduced cross section, resilient means normally positioning said slide with a portion of its length of the larger cross section closing said opening, and means projecting outside of said base for manually moving said slide to cause said reduced portion to register with said opening, said base being of two parts, the line of division between said parts extending longitudinally of said chamber whereby when said parts are separated said slide may be removed from said chamber, and means detachably securing the parts of said base together.

GEORGE RECHTEN.