

May 8, 1928.

1,668,657

P. A. REUTTER
TOP FOR POWDER CANS
Filed Aug. 27, 1926

Fig. 1

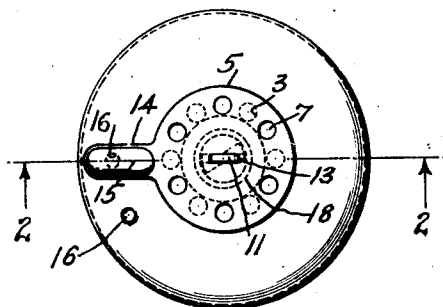


Fig. 2

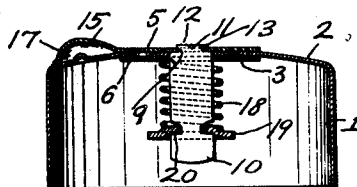


Fig. 4

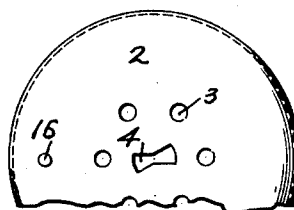


Fig. 3

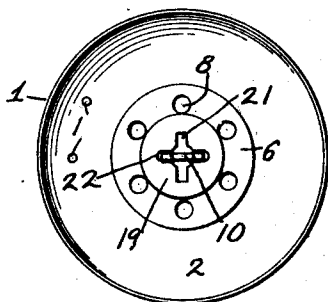


Fig. 5

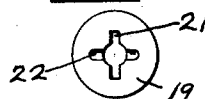


Fig. 6

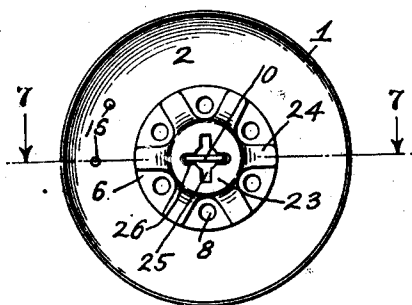
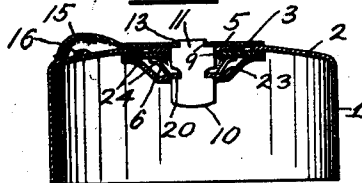


Fig. 7



INVENTOR
Philip A. Reutter
BY HIS
Philip, George, and Henry
ATTORNEYS

UNITED STATES PATENT OFFICE.

PHILIP A. REUTTER, OF WATERBURY, CONNECTICUT, ASSIGNOR TO SCOVILL MANUFACTURING COMPANY, OF WATERBURY, CONNECTICUT, A CORPORATION OF CONNECTICUT.

TOP FOR POWDER CANS.

Application filed August 27, 1926. Serial No. 131,879.

This invention relates to certain improvements in powder containers, and particularly to closures for the dispensing orifice of such containers.

5 It is desirable in producing powder containers that the dispensing orifice of the container be tightly closed when in non-use so as to prevent accidental loss or spilling of the contents of the container. It is further desirable in this class of containers that the parts be of simple form and few in number so that the container may be commercially produced at low cost.

15 It is the especial object of the present invention to produce an improved closure for the container which shall be substantially powder tight when in non-use, and in which the parts are so constructed and arranged as to be capable of large production at low cost, and easily assembled.

20 With this and other objects not specifically referred to in view, the invention consists in certain novel parts, arrangements and combinations which will be described in connection with the drawings and the novel features pointed out in the claims hereunto annexed.

In these drawings,—

30 Figure 1 is a top plan view of the improved container;

Figure 2 is a vertical central section taken on the line 2—2 of Fig. 1;

Figure 3 is a bottom view of the structure shown in Fig. 2;

35 Figure 4 is a broken top view of the closure shell;

Figure 5 is a detail view of one of the parts of the closure;

40 Figure 6 is a bottom view of a modified form of closure, and

Figure 7 is a central vertical section taken on the line 7—7 of Fig. 6.

Referring now to these drawings, two forms of closures embodying the invention are illustrated. Referring first to Figs. 1 to 5, a closure is shown comprising a shell or cap which is a configuration to fit on any desired container, as a can, this shell being provided with distributing openings which are closed both above and below by closing devices which are simultaneously operated so that a practically leak-proof top closure

is provided. While the specific type of closure may be somewhat varied, in the particular form shown, there is provided a shell or cap having a flange or skirt 1, by which it may be secured to a container, and a top 2 which may be either flat or slightly rounded, as shown. This shell is provided with distributing orifices 3 and a slot 4 which is, as shown, wing or butterfly shaped and hereinafter referred to.

The distributing orifices 3 of the top are closed when in non-use by a pair of guards in the form of thin metal plates 5, 6, which are provided with distributing orifices 7, 8, designed to be brought into register simultaneously with the dispensing orifices 3 of the top 2. One of these plates, as 6, is arranged beneath the top surface 2, and the other of the plates is arranged above the top surface 2, each of the plates having close frictional engagement with the surface with which it is in contact, so that when these plates are operated to bring their orifices out of register with the orifices of the top 2 leakage of powder from the closure is almost entirely prevented. Various constructions may be employed for positioning and operating these plates, but in the best construction means will be provided whereby the plates are held in close frictional engagement with the top. In the particular construction shown, each of the plates is provided with a slot 9. Through these slots is passed a shank 10 having a head 11. The slot in the plate 5 is somewhat shorter than that in the plate 6, and the shank 10 is securely fastened to the plate 5 by burring, as indicated at 12, the plate 5 being held between the burring and shoulders 13 formed on the shank.

It will be observed that by turning the shank the plates 5, 6 are simultaneously turned and their openings brought into register with the openings in the top. Various means may be employed for rotating the shank, but in the particular construction shown, the top plate 5 is utilized for this purpose, being provided with an extension 14 formed with a finger-piece 15, these parts being preferably, as shown, integral with the plate. If desired, the top 2 may be formed with projections 16 which en-

gage a hollow 17 formed on the under side of the finger-piece for stopping the rotation of the handle when the orifices are in registering position. For holding the plates in close frictional contact with the top, there is provided a coil spring 18 which bears against the under side of the plate 6 and against a head 19 which sets against projections 20 formed on the end of the shank. For convenience in assembling, this head 19 is, as shown in Fig. 5, provided with a slot 21 and with recesses 22 extending at right angles to the slot. In assembling, the spring is put in position and the head 19 is slipped over the shank and given a quarter turn, so that the recesses or grooves 22 will engage the shoulders 20 on the shank and securely hold the parts in position.

Instead of the coil spring shown in Fig. 2, a spring plate such as shown in Fig. 7 may be employed. In this construction there is provided a plate 23 having a plurality of spring legs 24 arranged to bear against the under side of the plate 6 at points between the perforations 8. This spring plate, as shown, is provided with a slot 25 and grooves or recesses 26, and is assembled in the same way as the head 19, before referred to. It will be noted that, by reason of the shape of slot 4, the shank may have a limited rotary movement sufficient to effect the registration of the openings in the plates and in the top, it will also be observed that the spring 18 or the spring plate 23 has a rotary movement with the shank, so that the distributing orifices are not interfered with.

While the invention has been shown and described in its preferred forms, it will be understood that various changes may be made in the particular shape and arrangement of the parts without departing from the invention as defined in the appended claim, and that the closure may be used with any desired form of container.

What I claim is:

1. A sifter closure for containers, comprising a shell having a skirt by which it may be secured to the container and provided with distributing openings in its top, a pair of plates, one arranged above and one below the top of the container and provided with distributing orifices, a rotary member common to the plates, means for rotating these plates to effect the registration of their orifices with the orifices in the shell, and a spring associated with the member and turning therewith for effecting a close frictional contact of the plates and the shell.

2. A sifter closure for containers, comprising a shell having a skirt by which it may be secured to the container and provided with distributing openings and a central slot in its top, a plate having distributing openings arranged above the casing and in close frictional contact therewith and provided with a slot, a second plate having distributing openings arranged below the top of the container and provided with a slot, a rotary shank passing through the slots in the top and in the plates and secured to one of the plates, a spring associated with the shank and turning therewith for pressing the plates into close frictional contact with the top of the shell, and a handle formed from an extension of the top plate for rotating the shank and simultaneously rotating the plates.

3. A sifter closure for containers, comprising a shell having a skirt by which it may be secured to the container and provided with distributing openings in its top, a pair of plates, one arranged above and one below the top of the container and provided with distributing orifices, a handle for simultaneously rotating the plates to effect the registration of their orifices with the orifices in the shell, a shank passing through the top and the plates and secured to one of the plates, a recess in the shank, a head secured in the recess, and a spring surrounding the shank and interposed between the head and the bottom plate for holding the plates in close frictional engagement with the top of the shell.

4. A sifter closure for containers, comprising a shell having a skirt by which it may be secured to a container and provided with distributing openings in its top, a pair of plates, one arranged above and one below the top of the container and provided with distributing orifices, a handle secured to one of the plates for simultaneously rotating the plates to effect the registration of their orifices with the orifices in the shell, a rotary shank passing through the top and the plates and secured to one of the plates, a recess in the shank, a head having a slot by which it may be passed over the end of the shank and recesses at right angles to the slot in which the shank may seat after the head has been given a quarter turn, and a spring turning with the shank and interposed between the head and the bottom plate for holding the plates in close frictional engagement with the top of the shell.

In testimony whereof, I have hereunto set my hand.

PHILIP A. REUTTER.