

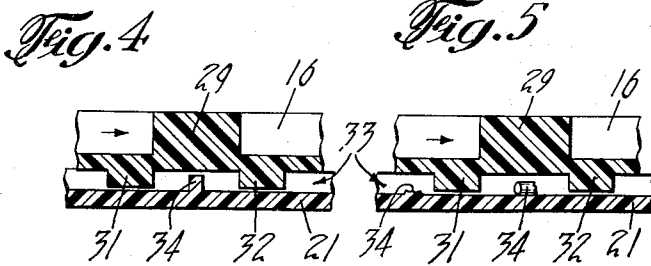
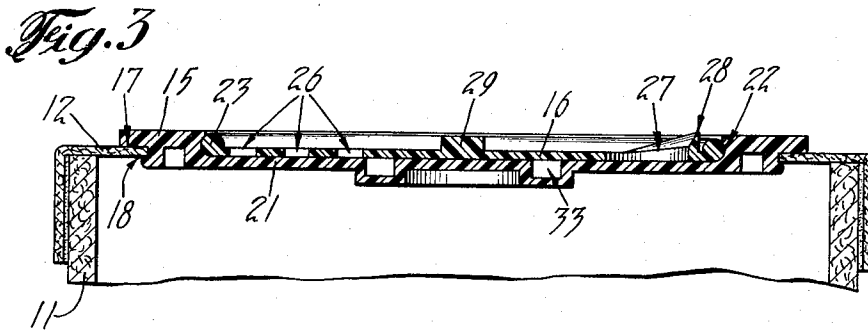
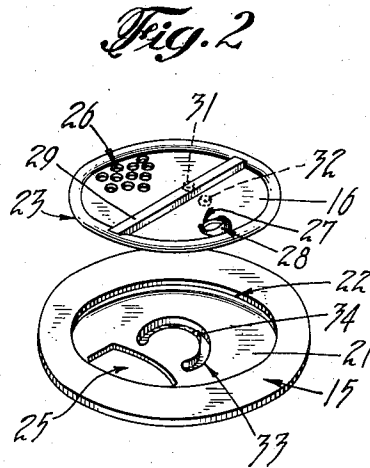
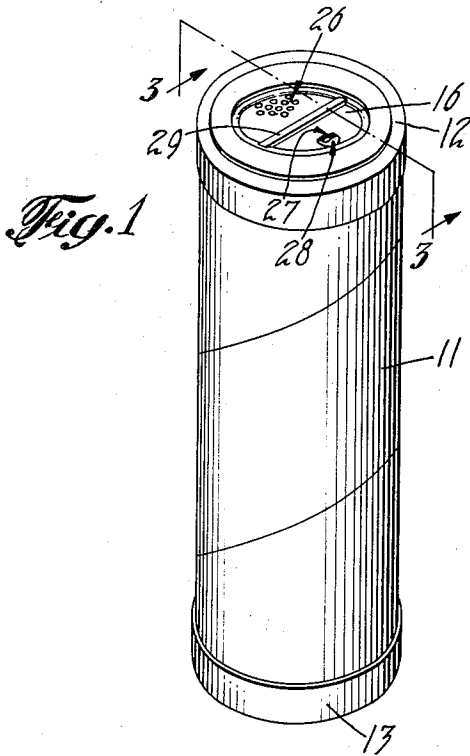
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DISPENSING CONTAINER

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2,954,148

DISPENSING CONTAINER

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The present invention relates to dispensing containers of the character having a perforated sifter disc-type closure which is rotatable into and out of sifter dispensing position on the container and has particular reference to a tamperproof rupturable connection between the closure and the container.

An object of the invention is to provide a connection between the rotatable closure and the container which holds the closure against rotation in a closed position during shipment and storage and which is readily rupturable by the consumer through rotation of the closure to shift the closure into operative position for use.

Another object is to provide such a connection which readily indicates to the consumer that the closure and probably the contents of the container has been tampered with if the connection is broken prior to purchase of the container.

Another object is to provide such a connection which traps any loose parts of the connection when broken so as to prevent such loose parts from falling into the container and the contents thereof.

Another object is to provide such a connection which is simple in construction and economical to produce and yet is foolproof.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawings:

Figure 1 is a perspective view of a container embodying the instant invention;

Fig. 2 is an enlarged exploded perspective view of a stationary dispensing element in the container shown in Fig. 1, and a rotatable closure therefor;

Fig. 3 is an enlarged sectional view taken substantially along a plane indicated by the lines 3-3 in Fig. 1, with the lower portion of the container broken away; and

Figs. 4 and 5 are enlarged fragmentary sectional views similar to Fig. 3 and showing the portion of the container embodying the rupturable connection; Fig. 4 showing the elements before rupture and Fig. 5 showing them after rupture.

As a preferred and exemplary embodiment of the instant invention, the drawings illustrate a dispensing container for granular products, such as salt and the like, the container comprising a cylindrical tubular, spirally wound fibre body 11 having top and bottom fibre slip covers 12, 13 permanently secured to the ends thereof, although the invention is equally well adapted to other kinds of containers and to other materials.

In its top end or cover 12, the container preferably is provided with a two element plastic dispensing device comprising a generally flat stationary element 15 (Fig. 2) and a flat rotary disc element or closure 16 which fits within the stationary element. The stationary element 15 preferably is circular in configuration and in its peripheral edge is formed with an annular groove 17

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(Fig. 3) for securing the element in any suitable leak-proof manner in an opening 18 in the top of the cover 12.

The stationary element 15 is provided with a circular recessed or flat sunken panel 21 for the reception of the rotatable element or closure 16. The inner periphery of the stationary element surrounding the sunken panel 21 preferably is undercut with a concavely curved groove 22 to receive and permit of snapping into place a convexly curved peripheral edge or bead 23 on the closure 16, to serve as a retaining seat on which the closure may be manually rotated.

The sunken panel 21 of the stationary element 15 is provided with a dispensing opening 25 (Fig. 2) while the closure 16 is provided with a group of sifter perforations 26 and a diametrically opposed pouring opening 27 having a lip 28, which through rotation of the closure may be moved selectively into register with the dispensing opening 25 to dispense the contents of the container. When the perforations 26 and the pouring opening 27 are out of register with the dispensing opening 25 i.e. disposed on opposite sides of the opening 25, as shown in Figs. 2 and 3, the opening 25 is closed and dispensing of the container contents is prevented. A raised lug or handle 29 extending across the top of the closure 16 is provided to rotate the closure into either sifting or pouring position as desired.

In order to lock and maintain the closure 16 in a closed position during shipment and storage and to provide a device to readily detect when the closure and/or the contents of the container have been tampered with, a rupturable loose connection is provided between the closure 16 and the stationary element 15. For this purpose, the closure 16 is provided with a pair of spaced and adjacent eccentrically mounted lugs or abutments 31, 32 (Figs. 2, 4 and 5) which depend from the bottom of the closure and which project into a radial groove 33 in the upper face of the sunken panel 21.

The closure lugs 31, 32 straddle a break-off lug or shear pin 34 which projects upwardly from the bottom of the groove 33 in the panel 21. The closure lugs 31, 32 preferably are disposed close together so as to permit of only slight rotation of the closure 16 relative to the stationary element 15 so that the closure is maintained relatively stationary and closed. The break-off lug 34 is located so as to hold the closure 16 in this closed position, with the perforations 26 and the pouring opening 27 out of register with the dispensing opening 25 in the panel 21, as best shown in Figs. 2 and 3.

Thus during shipment and storage of the container, the closure 16 cannot of its own accord, as through vibration or other movement, rotate in its seat in the stationary element 15, into an open position where the contents may be inadvertently dispensed. When in the hands of the consumer, a mere twisting of the closure 16 by application of a turning movement to the handle 29, in either direction, exerts sufficient force against the break-off lug 34 to break the lug away from the panel 21 as shown in Fig. 5 and thus permit rotation of the closure into sifting or pouring position. The terminal ends of the radial groove 33 preferably are located in the panel 21 to serve as stops against which the closure lugs 31, 32 engage to stop the group of perforations 26 and the pouring opening 27 in proper register with the dispensing opening 25 for use.

The break-off lug 34 when ruptured from the panel 21 remains in place between the closure lugs 31, 32 as shown in Fig. 5, and rides along the groove 33 with the rotation of the closure 16. This broken-off lug 34 is thus trapped in the groove 33 and cannot in any manner escape to drop into the container or its contents. Since the closure lugs 31, 32, the break-off lug 34, and the

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groove 33 are located between the closure 16 and the stationary element 15, they are inaccessible and thereby tamperproof. Only when the break-off lug 34 is sheared off can the closure be rotated and thus tampering with the container is indicated if the closure is rotatable prior to purchase of the container by the consumer.

Although the drawings illustrate the container as being equipped with a two element plastic dispensing device, it should be understood that the features of the stationary element 15 can be readily incorporated in the container cover 12 as integral parts thereof and that the break-off lug 34 need not be an integral part of either the closure 16 or the stationary element 15 or even the container cover, but may take the form of a shear-off pin secured in one or both of the cooperating parts to be locked together.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

We claim:

1. A container having a member provided with a dispensing opening, a closure member mounted on said container member for movement over said dispensing opening, said closure member having at least one opening therethrough movable into register with said dispensing opening, at least one of said members having a recess therein facing the other member, and a break-off lug in said recess connecting said members for holding said closure member with its opening out of register with said dispensing opening, said break-off lug being rupturable through relative movement between said members, and said ruptured and separated lug being confined and held by said recess against entrance into said container.

2. A container of the character defined in claim 1

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wherein said closure is mounted for rotary movement on said container member and said break-off lug is integrated with one of said members and the other of said members is provided with at least one abutment engageable with said break-off lug for connecting said members to hold said closure member against rotation until said break-off lug is broken from its member.

3. A container of the character defined in claim 1 wherein said break-off lug is integrated with one of said members and is disposed between opposing abutments on the other of said members projecting into said recess, whereby said break-off lug, when separated from its member, remains confined between walls of said recess and said abutments.

4. A container comprising a wall member having a dispensing opening therein, a closure member mounted on said wall member for movement over said dispensing opening, said closure member having at least one opening therein movable along a predetermined path and into register with said dispensing opening, one of said members having a recess therein covered by the other member and located out of alignment with said path of said opening, and a break-off element in said recess connecting said members for holding said closure member with its opening out of register with said dispensing opening, said break-off element being rupturable through forced relative movement between said members for disconnecting them thus permitting movement of said closure member opening into registration over said dispensing opening while said ruptured and separated break-off element remains trapped in said recess between the members.

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