Oct. 6, 1942. R. T. CORNELIUS 2,297,945

DISPENSER

Filed May 13, 1940

Fig. 1

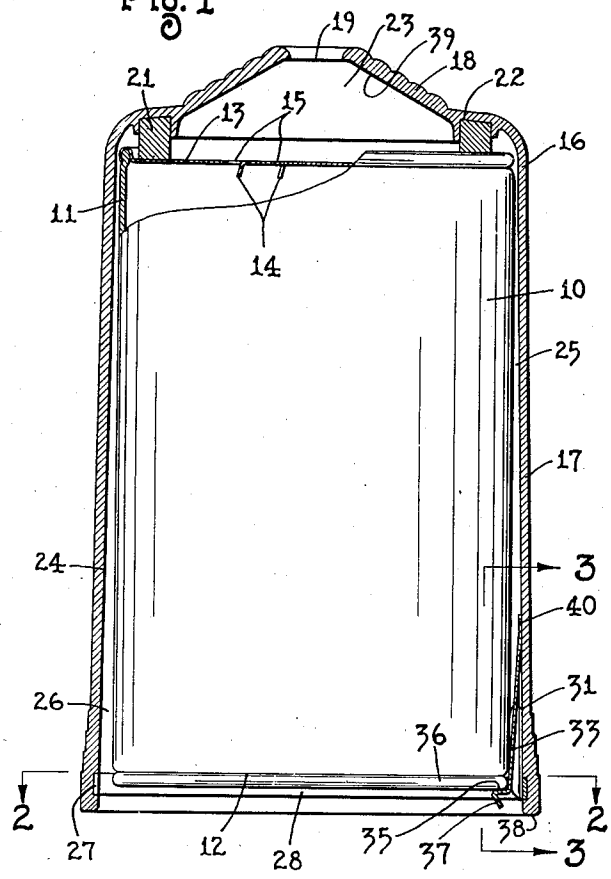


Fig. 2

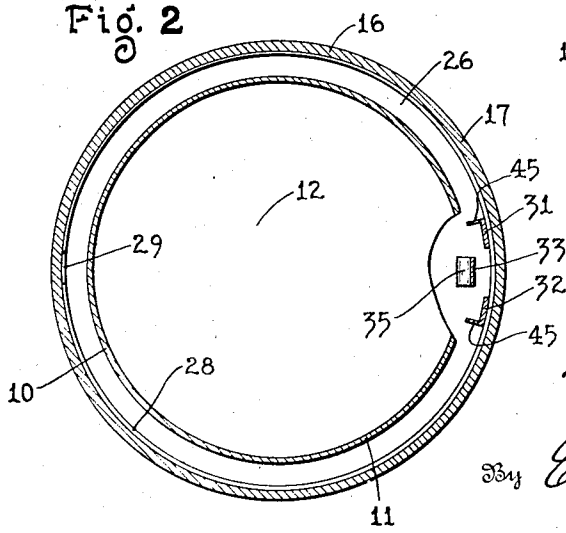


Fig. 3

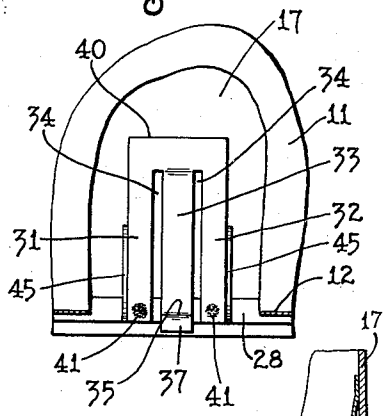


Fig. 4

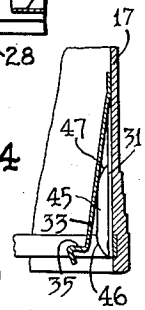
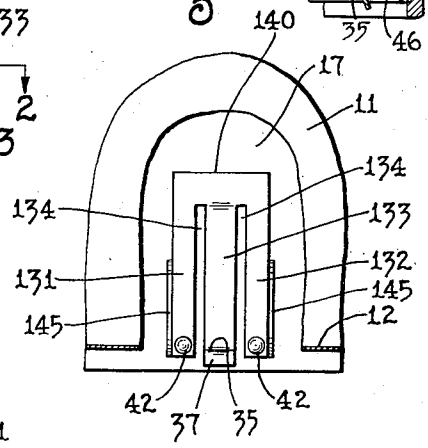


Fig. 5



Inventor

Richard T. Cornelius

By Caswell & Lagaard

Attorneys

Patented Oct. 6, 1942

2,297,945

UNITED STATES PATENT OFFICE

2,297,945

DISPENSER

Richard T. Cornelius, Minneapolis, Minn.

Application May 13, 1940, Serial No. 334,832

10 Claims. (Cl. 221—60)

My invention relates to dispensers and particularly to dispensers for powder contained in a can having a perforate top, and has for an object to provide a dispenser by means of which the powder may be easily and quickly dispensed.

Another object of the invention resides in providing a dispenser which will be extremely neat and attractive in appearance.

Another object of the invention resides in constructing the dispenser with a shell open at the bottom and in which the can containing the powder is received.

An object of the invention resides in providing latching means at the lowermost portion of the shell for detachably supporting the can within the shell.

Another object of the invention resides in employing a ring received within a groove in the lowermost portion of the shell for supporting the latching means.

A feature of the invention resides in splitting said ring to cause the same to be readily removed from or applied to the groove in which it is contained.

Another object of the invention resides in constructing the latching means with a spring arm disposed within the space between the shell and can and having a catch thereon and in arranging said spring arm for movement in said space to free the can.

A still further object of the invention resides in providing a support extending upwardly from said ring and from which the spring arm issues.

A feature of the invention resides in utilizing two spaced supports between which the spring arm is disposed.

An object of the invention resides in forming said supports and arm from a blank constructed from a single sheet of material, said blank being formed with two slots issuing along the same and extending from the lower end upwardly therefrom and terminating short of the opposite end of the same.

Another object of the invention resides in constructing the closure conical in form and having a central discharge opening therein, said closure providing a space above the perforate top of the can in which the powder to be dispensed first enters.

Another object of the invention resides in constructing the innermost portion of the closure of the shell with an annular recess for the reception of a gasket adapted to engage the uppermost portion of the can and prevent leakage of the powder downwardly along the sides of the can.

A feature of the invention resides in the specific construction of the latching means.

Other objects of the invention reside in the novel combination and arrangement of parts and in the details of construction hereinafter illustrated and/or described.

In the drawing:

Fig. 1 is a longitudinal elevational sectional view of a dispenser illustrating an embodiment of my invention.

Fig. 2 is a plan sectional view taken on line 2—2 of Fig. 1.

Fig. 3 is a fragmentary elevational sectional view taken on line 3—3 of Fig. 1.

Fig. 4 is a sectional detail view taken on line 4—4 of Fig. 3.

Fig. 5 is a view similar to Fig. 3 of a modification of the invention.

In modern kitchens where cleansing powder and similar powders are used for cleansing and other purposes, it becomes desirable to have the powder in cans available for instant use. The cans in which such powders are usually sold are usually unattractive in appearance and detract from the surroundings of the kitchen. The instant invention provides a dispenser including a shell having ornamental features which harmonize with the surroundings and from which the powder contained in the shell may be readily dispensed.

For the purpose of illustrating my invention I have shown a can 10 for the reception of any suitable powder. This can consists of a tubular wall structure 11 formed of paper or some other similar material. The wall structure 11 has a bottom 12 crimped over the lower end of the wall structure and similarly a top 13 likewise secured to the upper end thereof. The top 13 is provided with cut-outs 14 which are partly separated from the top proper and which, when pressed inwardly, form discharge perforations 15 in the top through which the powder may be sifted out of the can.

The invention proper comprises a shell 16 which is formed with a tubular wall structure 17 and which is open at the bottom. This wall structure is closed by means of a conical closure 18 integral therewith and which is formed at the upper central portion with a discharge outlet 19 of a cross sectional area considerably greater than that of the perforations 15 in the top 13.

The can 10 is received within the shell 16 and the top 13 thereof is adapted to engage an annular gasket 21 constructed of sponge rubber or some other similar extremely flexible gasket material. This gasket is received in an annular groove 22

formed upon the underside of the closure 18. The inner diameter of said gasket is sufficiently large to embrace all of the perforations 15. By means of the conical closure 18 a chamber 23 is formed above the top 13 in which the powder from the can 10 is first sifted before being discharged from the dispenser through the discharge outlet 19.

The uppermost portion of the can 10 fits freely within the interior of the wall structure 17 of shell 16. The inner surface 24 of said wall structure is conical and tapers upwardly so that the space 25 between the can 10 and said surface becomes enlarged as indicated at 26 at the lowermost portion of the shell.

The can 10 is held within the shell 16 in the following manner. Extending about the inner surface 24 of the wall structure 16 at the lowermost portion thereof is an annular groove 27. Received within this groove is a split ring 28, the ends of which are spaced from one another, as indicated at 29, an amount sufficient to permit of springing the ring out of the groove. This ring is preferably constructed of resilient material and is held seated in the groove 27 through the resiliency thereof. Attached to the ring 28 at a locality opposite the ends 29 thereof are two upwardly extending supports 31 and 32. This is accomplished by welding the same to the ring as indicated at 41. These supports have issuing downwardly therefrom and disposed therebetween an arm 33. These supports and the arm are preferably constructed from a strip of sheet material 40 which is provided with slots 34 therein by means of which the said supports and arm are formed.

The lowermost portion of the arm 33 has issuing inwardly from it a catch 35 which is adapted to engage the lowermost portion of the can 10 at the rim 36 of the bottom 12 thereof. Catch 35 is constructed with a beveled cam surface 37 which, when the can is inserted into the shell, forces the arm 33 in a direction toward the conical surface 24 of shell 16 so as to permit the can to clear the catch 35. The arm 33 is normally bent outwardly, as shown in Fig. 1, to urge the catch 35 into engagement with the can 10. The cam 37 projects slightly below the bottom 12 of the can 10 and forms a finger piece by means of which the said catch may be manipulated. Both the supports 31 and 32 and the arm 33 being constructed of a single piece of sheet material occupy but a limited space so that the arm 33 may have sufficient movement within the enlarged portion 26 of the space 25 toward the surface 24 of the shell 16 to free the can.

Issuing substantially radially inwardly from the outer edges of the supports 31 and 32 at the lowermost portions thereof are two flanges 45. These flanges serve to engage the exterior of the can and limit the movement of the can toward the wall structure 17. By means of these flanges the can is held in position while the catch 35 is disengaged from the can. The ends of the flanges are tapered as designated at 46 and 47 in Fig. 4 to facilitate insertion of the can into the shell 16 and removal therefrom.

The method of using the invention is obvious. The cutouts 14 in the can 10 are first poked inwardly with a suitable tool as an ice pick or the like. The can is then inserted into the shell 16 from the underside thereof until the top 13 of the can engages the gasket 21. The can is then firmly pressed against said gasket which compresses sufficiently to allow the catch 35 to snap under the rim 36 of the can. During such movement the flanges 45 guide the can into position. When this occurs pressure is removed from the bottom of the can and the can becomes properly supported within the shell 16. The base 38 of the shell 16 is below the lowermost portion of the cam or finger piece 37 so that the same does not engage the surface on which the dispenser is placed. In using the dispenser the same is inverted and the powder contained within the can 10 is shaken out of the perforations 15. The powder so freed enters the chamber 23 and engages the inner surface 39 of the closure 18 and becomes finally broken up and is discharged from the dispenser through the discharge outlet 19. Outlet 19 being centrally located permits of accurately dispensing the powder. By means of the gasket 21 the powder is confined solely into the interior of the can and the space 23 so that the powder is not strewn about nor does it come in contact with the hands of the user. After the can has been emptied the same may be removed from the shell 16 by moving the catch 35 through engagement with the finger piece 37 toward the wall structure 17. The flanges 45 restrain movement of the can permitting the catch 35 to be disengaged therefrom. After disengagement of the catch 35, the can drops out by its own weight.

In Fig. 5 I have shown a modification of the invention. Inasmuch as the shell of the structure shown in Fig. 5 is practically the same as that shown in Figs. 1 to 4 the same reference numerals will be used to designate the corresponding parts thereof and the description thereof will not be repeated. This form of the invention has two upwardly extending supports 131 and 132. These supports have issuing downwardly therefrom and disposed therebetween an arm 133. These supports and the arm are preferably constructed from a strip of sheet material 40 which is provided with slots 34 therein by means of which the said supports and arm are formed.

The lowermost portion of the arm 133 has issuing inwardly from it a catch 135 which is adapted to engage the lowermost portion of the can 10 at the rim 36 of the bottom 12 thereof. Catch 135 is constructed with a beveled cam surface 137 which, when the can is inserted into the shell, forces the arm 133 in a direction toward the surface 24 of shell 16 so as to permit the can to clear the catch 135. The arm is normally bent outwardly to urge the catch 135 into engagement with the can 10. The cam 137 projects slightly below the bottom 12 of the can 10 and forms a finger piece by means of which the said catch may be manipulated.

Issuing substantially radially inwardly from the outer edges of the supports 131 and 132 at the lowermost portions thereof are two flanges 145. These flanges serve to engage the exterior of the can and limit the movement of the can toward the wall structure 17. By means of these flanges the can is held in position while the catch 135 is disengaged from the can. Instead of using the ring 28 to attach the supports 31 and 32 to the receptacle, the groove 27 is dispensed with and the supports 131 and 132 are directly attached to the lowermost portion of the wall structure 17 by means of rivets 42 which pass directly through the supports 131 and 132 and are riveted upon the exterior of the wall structure 17.

The advantages of my invention are manifest. The device is extremely neat and attractive in appearance and readily lends itself to ornamentation. By means of the gasket employed the

powder is confined to the chamber above the can. With the central opening in the conical top the powder is easily directed to the desired locality. By means of my improved latch means, the can can be easily and quickly inserted into the shell and likewise as easily removed therefrom by manipulating the finger piece on the end of the arm having the catch. By constructing the inner surface of the shell conical, sufficient space is provided between the shell and the can at the lower portion thereof to properly manipulate the catch and release the same. By the use of the flanges employed on the latch supports the can can be removed by means of one hand of the user.

Changes in the specific form of my invention, as herein disclosed may be made within the scope of what is claimed without departing from the spirit of my invention.

Having described my invention, what I claim as new and desire to protect by Letters Patent is:

1. A can holder comprising a shell having a tubular wall structure open at the lower end, for the reception of a can, said wall structure having an annular groove formed therein on the lowermost portion thereof, a ring received within said groove, and latching means carried by said ring for engagement with the can to hold the can within the shell.

2. A dispenser for powder comprising a shell for the reception of a can having a perforate top and containing the powder, said shell having a tubular wall structure open at the lower end, a perforate closure closing the upper end of the wall structure, said closure upon the interior thereof having an annular recess therein, a flexible gasket disposed within said recess, said gasket being adapted to engage the uppermost portion of the can, said recess and gasket being of smaller dimensions than the inner periphery of the shell at the uppermost portion thereof and said gasket projecting below the closure to provide a space for the reception of the bead of the can.

3. A dispenser for powder contained in a can having a perforate top, said dispenser comprising a shell having a dispensing top and a tubular wall structure open at the lower end and adapted to receive the can, an elongated support secured to said tubular wall structure near the lowermost end thereof and extending upwardly along said wall structure and in the space between said wall structure and can, an arm issuing downwardly from the upper end of said support and extending along said support and to a position below the bottom of said can, a catch on the lower end of said arm for engagement with the lowermost portion of the can, said catch being movable in a direction toward the inner surface of the tubular wall structure of the shell to release the can.

4. A dispenser for powder contained in a can having a perforate top, said dispenser comprising a shell having a dispensing top and a tubular wall structure open at the lower end and adapted to receive the can, a pair of spaced elongated supports secured to said wall structure near the lowermost end thereof and extending upwardly along said wall structure and in the space between said wall structure and can, an arm issuing downwardly from the upper ends of said supports and disposed between the same, a catch on the lower end of said arm for engagement with the lowermost portion of the can, said catch being movable in a direction toward the inner surface of the wall structure of the shell to release the can.

5. A dispenser for powder contained in a can having a perforate top, said dispenser comprising a shell having a dispensing top and a tubular wall structure open at the lower end and adapted to receive the can, an elongated support secured to said wall structure near the lowermost end thereof and extending upwardly along said wall structure and in the space between said wall structure and can, a spring arm issuing downwardly from the upper end of said support and extending along said support, a catch on the lower end of said spring arm for engagement with the lowermost portion of the can, said spring arm being urged to bring the catch into engagement with the can and being movable in the opposite direction and toward the inner surface of the wall structure of the shell to release the can.

6. A dispenser for powder contained in a can having a perforate top, said dispenser comprising a shell having a dispensing top and a tubular wall structure formed with a conical inner surface, and being open at the lower larger end for the reception of the can, said can fitting freely within the smaller upper end of the shell and being spaced from the conical surface of the wall structure at the lower end of the shell, and latching means for holding the can within the shell, said latching means being disposed within and movable in the space between the can and the lowermost portion of the conical surface of the wall structure of the shell to release the can.

7. A dispenser for powder contained in a can having a perforate top, said dispenser comprising a shell having a dispensing top and a tubular wall structure open at the lower end and adapted to receive the can, said wall structure having an annular groove formed therein at the lowermost portion thereof, a ring received within said groove, a support secured to said ring and extending upwardly therefrom and into the space between said shell and can, an arm secured to said support and depending therefrom and extending adjacent said support in the same space, a catch secured to the lowermost portion of the arm and adapted to engage the can to hold the same within the shell, said catch being movable in a transverse direction within said space between the can and shell to release the can.

8. A dispenser for powder contained in a can having a perforate top, said dispenser comprising a shell having a dispensing top and a tubular wall structure open at the lower end and adapted to receive the can, said wall structure having an annular groove formed therein at the lowermost portion thereof, a split ring of resilient material urged through its resiliency to become seated in said groove, and latching means carried by said ring for engagement with the can to hold the can within the shell.

9. A dispenser for powder contained in a can having a perforate top, said dispenser comprising a shell having a dispensing top and a tubular wall structure open at the lower end and adapted to receive the can, an elongated support secured to said tubular wall structure near the lowermost end thereof and extending upwardly along said wall structure and in the space between said wall structure and can, an arm issuing downwardly from the upper end of said support and extending along said support and to a position below the bottom of said can, a catch on the lower end of said arm for engagement with the lowermost portion of the can, said catch being movable in

a direction toward the inner surface of the tubular wall structure of the shell to release the can, and means on said support for engaging the can to restrain movement of the can toward the inner surface of the wall structure.

10. A dispenser for powder contained in a can having a perforate top, said dispenser comprising a shell having a dispensing top and a tubular wall structure open at the lower end and adapted to receive the can, an elongated support secured to said tubular wall structure near the lowermost end thereof and extending upwardly along said wall structure and in the space between said wall structure and can, an arm issuing downwardly from the upper end of said support and extending along said support and to a position below the bottom of said can, a catch on the lower end of said arm for engagement with the lowermost portion of the can, said catch being movable in a direction toward the inner surface of the tubular wall structure of the shell to release the can, and a flange on said support issuing substantially radially inwardly therefrom for engaging the can to restrain movement of the can toward the inner surface of the wall structure.

RICHARD T. CORNELIUS.