Aug. 24, 1943. E. E. BAKER 2,327,391

POWDER CAN

Filed June 11, 1940

FIG. 1.

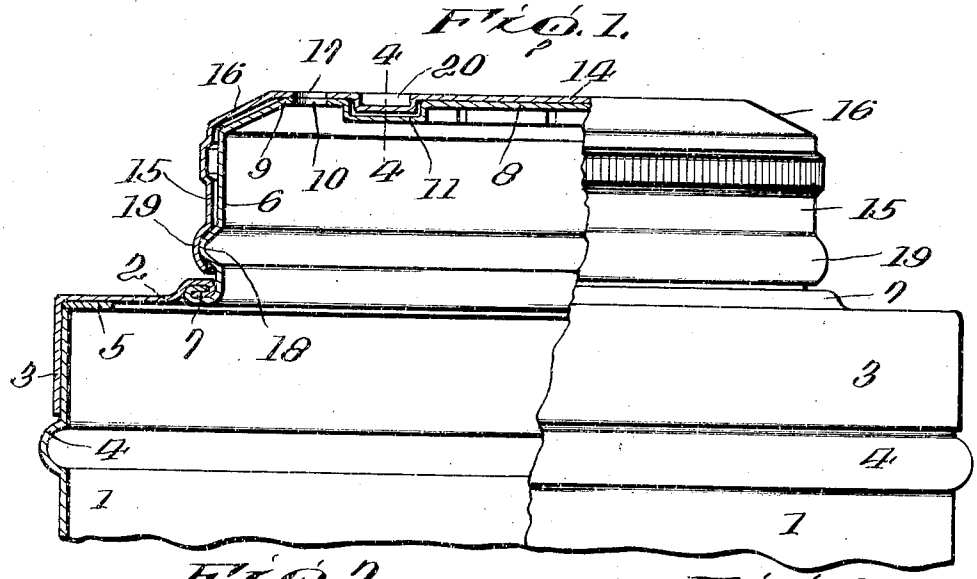


FIG. 2.

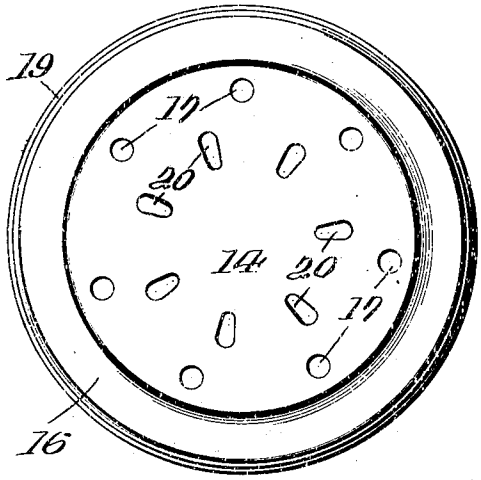


FIG. 3.

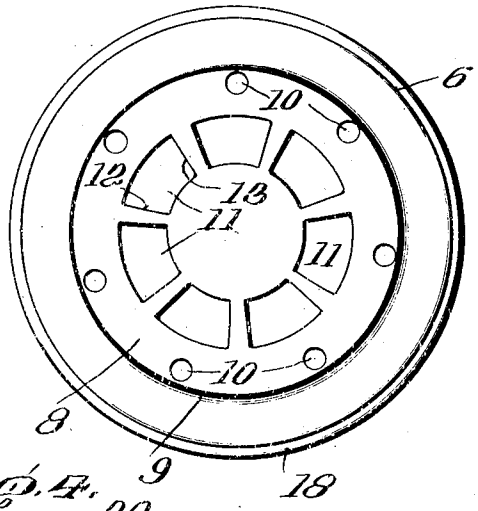
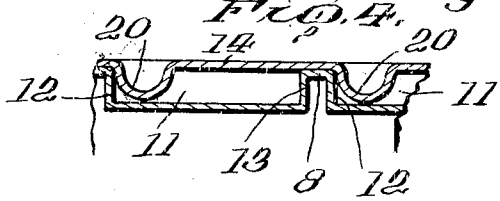


FIG. 4.



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UNITED STATES PATENT OFFICE

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POWDER CAN

Edward E. Baker, Larchmont, N. Y., assignor to Continental Can Company, Inc., New York, N. Y., a corporation of New York

Application June 11, 1940, Serial No. 339,966

1 Claim. (Cl. 221—64)

The invention relates to new and useful improvements in a sheet metal can for powdered materials, and more particularly to a can having a perforated neck portion controlled by a rotatable perforated closure cap which may be used for sifting the contents of the can.

An object of the invention is to provide a can of the above type wherein the neck of the can and the closure member therefor have a flat seating contact extending substantially from one side of the neck to the other, and wherein the sifting perforations and the stop lugs for insuring registration or non-registrations of the perforations are all disposed within said surfaces having flat seating contact.

In the drawing—

Figure 1 is a view partly in vertical section and partly in side elevation through the upper portion of a can embodying the improvements;

Fig. 2 is a plan view of the can with the closure cap removed, showing the perforations and the recesses in the end of the neck;

Fig. 3 is a plan view of the closure cap for the can, and

Fig. 4 is a sectional view on the line 4—4 of Fig. 1, said section being taken on the arc of a circle as indicated in Figure 3.

The improved powder can includes a body portion 1 which may be of any desired construction and shaping, but preferably it is rectangular in cross section and rounded corners. Secured to the upper end of the body portion 1 is a breast portion 2. Said breast portion 2 has a depending skirt 3 making frictional engagement with the body wall above the bead 4. A sealing gasket 5 is contacted with by the edge of the body wall to prevent powder escaping. Said breast portion 2 has an opening centrally therein, and secured to said breast portion is a neck 6. Said neck is cylindrical in shape and is secured to the breast 2 by the interfolding of the lower edge portion of the neck with the metal surrounding the opening in the breast, thus forming a very tight seam indicated at 7 in the drawing.

Said neck portion is closed at the outer end and the closed outer end is shaped so as to provide a flat seating portion 8 which extends substantially from one side of the neck to the other. Said flat seating portion terminates at 9 as illustrated in the drawing, and the portion of the neck between the flat portion and the cylindrical wall of the neck is tapered upwardly and inwardly from the neck proper to the flat seating portion 8.

The flat seating portion of the neck is provided with a series of perforations 10, 10. These perforations are disposed inside of and adjacent the outer edge of the flat seating portion. The openings are spaced from each other the same distance and are located the same radial distance from the center of the neck portion.

Between the perforations and the center of the neck portion is a series of recesses 11, 11, and these recesses are spaced from each other. They are similarly shaped and are spaced the same distance from the center of the neck portion. Each recess terminates in radial end walls 12 and 13. The end portion of the neck centrally thereof and inside of these recesses lies in the same plane as the portion of the closure end containing the perforations 10. A closure cap 14 is applied to the neck portion. Said cap has a depending skirt 15. Said cap has a flat seating portion extending substantially from one side thereof to the other and conforming to the flat seating portion 10 of the neck. This flat seating portion of the cap makes contact with the flat seating portion of the neck and is the main contact between the cap and the neck. Between the flat seating portion of the cap and the skirt of the cap is an inclined annular portion 16 which conforms to the tapered portion between the cylindrical wall of the neck and the flat seating portion of the neck. However, this annular portion 16 of the cap is preferably disposed so that it does not contact with the tapered portion of the neck, and this will permit the seating surface to be placed in engagement with each other. The flat seating portion of the cap is provided with a plurality of perforations 17, which perforations are spaced from each other the same as the perforations 10, 10 in the neck. They are likewise spaced the same distance from the center of the cap as the perforations 10, so that these perforations may be brought into register for the purpose of sifting the contents of the can. The closure cap is rotatively attached to the neck portion, and this enables the cap to be turned so as to bring the perforations therein into alignment with the perforations in the neck, or to place the cap so that the perforations will be out of register and thus tightly closed.

As a means for rotatively connecting the cap to the neck portion, a rib 18 is provided in the neck portion, and the lower edge portion of the skirt is beaded as indicated at 19 so that an annular recess is formed on the inside of the skirt which receives this rib 18. The skirt 15 of the closure cap is dimensioned so that it is substan-

tially out of contact with the outer surface of the neck, except in the region where the bead 10 contacts with the lugs. This makes a contact which is very limited in area, and therefore, the cap may be very readily rotated on the neck. The skirt of the closure cap is dimensioned so that when connected to the lugs it will hold the flat seating portion of the closure cap in firm engagement with the flat seating portion of the neck.

The flat seating portion of the closure cap is provided with a plurality of spaced lugs 20. These spaced lugs 20 are so disposed relative to the recesses 11 in the neck portion that there is a lug extending into each recess. When the closure cap is rotated so that the lug 20 contacts with the radial wall 12, then the perforations are in alignment, and when this lug 20 contacts with the radial wall 13, then the perforations are out of register, and in fact, the perforations in the closure cap will then be disposed midway between the perforations in the neck portion. These perforations are quite widely spaced, and therefore, when the rotary closure cap is positioned so that the stop lug contacts with the radial end wall 13, the can is tightly sealed and there is no chance for any leakage of powder. By the placing of the perforations and the stop lug, together with the recesses having the radial walls with which the stop lugs cooperate, in the flat seating portions of the neck and the closure cap, they may be made by die-stamping at the same time, and thus very accurately disposed relative to each other, so as to insure perfect alignment of the perforations for sifting and also a most efficient positioning of the perforations for sealing the can.

It is obvious that minor changes in the details of construction and the arrangement of the parts may be made without departing from the spirit of the invention as set forth in the appended claim.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent, is:

A sifter top can comprising a cylindrical neck having a closed end provided with a flat section extending across the neck substantially from one side thereof to the other and forming a seat for a closure cap, said flat section being provided with a series of spaced perforations adjacent the outer edge thereof and a series of depressions having spaced radially disposed endwalls located between the perforations and the center of said flat section, a rotary closure cap having a depending skirt and a flat section in the top thereof conforming to the flat section in the closure end of the neck, said flat section of the cap being provided with perforations adapted to register with the perforations in the end of the neck and an integral depending lug extending into each depression and adapted to engage the radial end walls thereof to limit the movement of the cap to insure registration or non-registration of said openings in the cap and neck, said neck having a retaining bead formed therein and said skirt having the lower edge portion thereof curved to fit said bead, said skirt being dimensioned so as to be out of contact with the neck except in the regions of the retaining bead, said retaining bead and said curved portion of the skirt being disposed so as to hold the flat sections in intimate contact while permitting the same to move relative to each other about the center of the cap.

EDWARD E. BAKER.