Jan. 11, 1938. H. W. RUEGER 2,104,887

DISPENSER OR CONTAINER

Filed Aug. 17, 1936

Fig. 1.

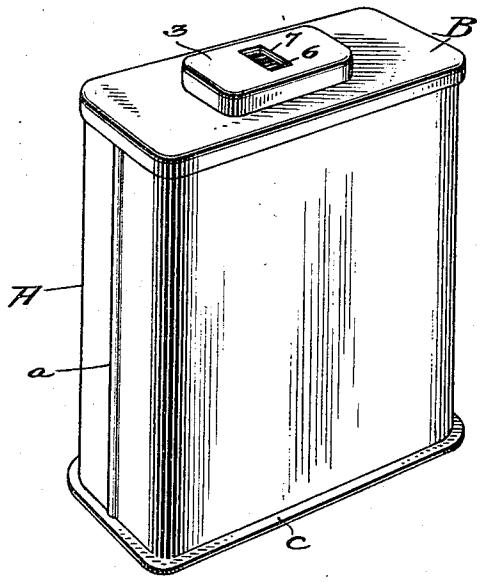


Fig. 4.

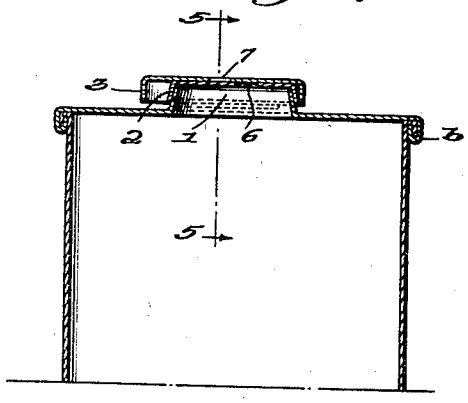


Fig. 5.

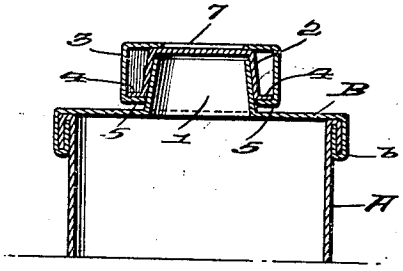


Fig. 2.

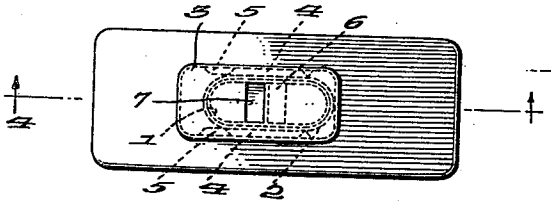


Fig. 6.

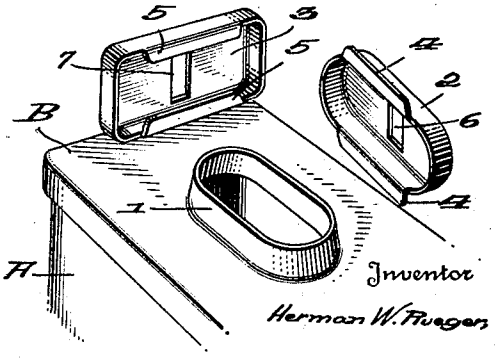
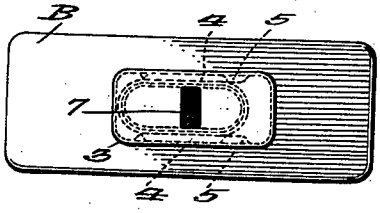


Fig. 3.



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UNITED STATES PATENT OFFICE

2,104,887

DISPENSER OR CONTAINER

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Application August 17, 1936, Serial No. 96,515

5 Claims. (Cl. 221—62)

This invention relates to cans or containers and resides primarily in the powder or paste dispensing means or cap.

The present invention may be said to be, when considered from some aspects, an improvement on my Patent No. 2,041,024, granted May 19, 1936, for Box.

The primary objects of the present invention are to permanently associate the two parts of a dispensing cap or means in such manner as to facilitate their quick and economical association with a neck or breast or seating cooperating means on a can top or body; to avoid the need for intricate special forming of the can top or body to cooperate with the dispensing means or cap; and to simplify the construction of such devices and provide a dispensing can which particularly lends itself to economical manufacture on a quantity production basis, and which shall be exceptionally simple and efficient in operation.

In the accompanying drawing:

Figure 1 represents a perspective view of a can embodying my invention;

Figure 2, a top plan view thereof, closed;

Figure 3, a top plan view thereof, open;

Figure 4, a sectional view on the line 4—4 of Fig. 2, looking in the direction of the arrows;

Figure 5, a sectional view on the line 5—5 of Fig. 4, looking in the direction of the arrows; and

Figure 6, an "exploded" view of the upper portion of the can and the parts of the dispensing means separated from each other.

Referring now in detail to the drawing, A designates the body of the can seamed together at *a*; B, the top of the can seamed to the top of the body at *b*; and C the bottom or lower end of the can inserted in the bottom of the can body and adapted to be spun or seamed over after the body A has been filled to permanently connect the lower end or bottom C to the body A substantially as stated with relation to the bottom C in Patent 2,041,024 above mentioned.

The top B is formed with an upwardly directed inwardly upwardly tapering neck or breast 1. This neck or breast 1, while preferably oblong or elliptical, may be of a form more nearly approaching the circular in cross-section than illustrated, or may be of truly circular cross-section so as to be frustro-conical in shape, or it may be of any other suitable form, its exact form being immaterial.

The dispensing top, applied to and cooperating with said neck or breast 1, comprises two members 2 and 3 respectively. Both said members 2 and 3 are preferably formed by usual sheet metal stamping operations from sheet metal. The stationary supporting member 2 is cupped or formed as a cap, being recessed to receive the upwardly presented neck or breast 1, or the major portion thereof, and is of such internal dimensions, and has its depending flange or wall downwardly and outwardly flaring at such degree, as to make a tight driven frictional fit upon the neck or breast 1, said cap 2 being driven upon the neck or breast 1 by suitable press operations so as to be permanently associated therewith. Of course the upper end of the neck or breast 1 will be open, as illustrated, and the cap 2 will be formed with a dispensing opening 6, as illustrated. The lower edge portions of the cap 2 are provided with laterally extending flanges 4, preferably disposed in a plane substantially parallel to the panel or top of cap 2. Preferably said flanges 4 will extend for an appreciable length of the respective sides of said cap 2, though this is not essential and they may be considerably shorter than shown, also they need not extend as continuous uninterrupted flanges, but any other construction functioning to that same end may be employed, as for instance, a lug at each end, or corresponding to each end, of the respective flanges 4 now illustrated.

Sliding member 3 is of recessed construction to internally receive and fit about the cap 2 and has each of its sides formed with inwardly presented flanges 5 extending below the flanges 4 of cap 2 to confine said cap 2 in said slide 3 with the upper face of the panel of the cap 2 in snug rubbing sliding contact with the lower face of the panel of slide 3 and with the lower faces of the flanges 4 of cap 2 in snug rubbing sliding contact with the upper faces of the flanges 5 of the slide 3. Of course the panel of silde 3 is formed with a dispensing opening 7 adapted to be brought into registry with the opening 6 in the panel of cap 2.

Slide 3 preferably will be of such length that when moved to one extreme position as illustrated in Fig. 2 its dispensing opening 7 will be out of register with the dispensing opening 6 in cap 2, which opening 6 will be closed by the imperforate material of slide 3; and that when moved to its other extreme position, as illustrated in Fig. 3, the dispensing openings 6 and 7 will be in registry.

To assemble, assuming cap 2 to have been completely stamped and formed, and the slide 3 to have been stamped and formed except for the

final inturning of the flanges 5, the cap 2 will be inserted in the slide 3 and the flanges 5 will be turned inwardly under the flanges 4 so as to slightly compress the cap 2 between the top or panel and flanges 5 of the slide 3 and thereafter the cap 2 will be driven by pressure onto the neck or breast 1 to be permanently associated therewith, while at the same time the lower faces of the flanges 5 of slide 3 will be spaced at a distance or slight interval from the top B, which therefore will not interfere with the free sliding movement of the slide 3.

Preferably the cap 2 will be formed from resilient sheet metal and will be held in a compressed or partially compressed condition in the slide 3.

Of course it will be apparent that either the opening 7 in the slide 3 or the opening 6 in the slide, or both said openings might be substituted by an area of corresponding size formed with a plurality of small holes to constitute sifter portions.

Also, it will be apparent that the slide 3 might be made longer in proportion to the cap 2 and formed with its opening 7, and a sifter area, said opening 7 and sifter area being so related to the opening 6 in the cap 2 that in one position the openings 6 and 7 would be in registry, in another position the sifter area of the slide would be in registry with the opening 6, and in a third position of the slide the opening 6 would be completely closed by an imperforate portion of the slide 3; or the cap 2 might be provided with both the opening 6 and a sifter portion, the slide 3 in such case being movable to 3 different operative positions so that in one position its opening 7 would be in registry with the opening 6, in a second position its opening 7 would be in registry with the sifter portion of cap 2, and in its third position both the opening 6 and the cap sifter portion would be covered by imperforate portions of the slide 3.

Also, while the cap 2 will preferably be associated with the neck of breast 1 by a tight frictional driven fit, this is not essential to the invention considered in its broader aspects, and in fact the cap 2 may be secured to or about the neck or breast 1 by soldering or seaming or interlocking by indenting or in any manner that will serve the function of firmly associating them, or in some instances it may be preferred not to permanently associate the cap 2 and neck or breast 1 but instead to associate them in such manner as will permit their easy separation.

The terms upper, lower, top, bottom and lateral herein used and variations thereof are used simply in their relative sense with regard to the position of the members and parts as they happen to be illustrated in the accompanying drawing and they are to be interpreted in this sense only.

Of course in practice the upper end of the neck or breast 1 need not literally be open but might be closed by sheet metal partially cut or scored through at a point in registry with the opening 7 of the slide 3 when the latter has been moved to open position, the material defined by such partial cuts or scores of the end of the breast or neck 1 being then broken away or shoved through by the consumer.

Also the end of the neck or breast 1 might be closed by tagger's tin or a sheet of lead or tin foil or other soft or frangible material.

Also a sheet of paper might be inserted between the cap 2 and the neck 1, or cemented to the under face or the upper face of the cap 2 or to the under or upper face of slide 3 or be inserted between the upper face of cap 2 and the under face of the panel of slide 3.

Also, of course, the flanges 5 need not be continuous but might be substituted by inwardly presented lugs, say one lug corresponding to each end portion of the flanges 5 now shown, in which case the flanges 4 of the cap 2 would preferably be continuous as shown.

I claim:

1. A dispensing container comprising a body member formed with an outwardly projecting tapering open ended neck, in combination with dispensing means comprising a slide and a cap each having dispensing openings, the said openings registering in one extreme position of the slide and being completely out of registry in the other extreme position of the slide, said cap being recessed and permanently secured on said neck with a tight frictional fit and having longitudinal laterally projecting flanges respectively extending from its respective side edges and being under compression, and said slide having flanges extending inwardly from its side edges and cooperating with the lower face of its top panel to permanently hold said cap under compression between the lower face of said top panel and the upper faces of said slide flanges, the fit between the slide and cap being such as to permit a snug frictional sliding movement of the slide with relation to said cap, said slide flanges being spaced at an interval from the opposing face of said body member.

2. A dispensing container comprising a body member formed with an outwardly projecting tapering open ended neck, in combination with dispensing means comprising a slide and a cap each having dispensing openings, said cap being recessed and permanently secured on said neck and having longitudinal laterally projecting flanges respectively extending from its respective side portions and being under compression, and said slide having flanges extending inwardly from its side edges and cooperating with the lower face of its top panel to permanently hold said cap under compression between the lower face of said top panel and the upper faces of said slide flanges, the fit between the slide and cap being such as to permit a snug frictional sliding movement of the slide with relation to said cap, said slide flanges being spaced at an interval from the opposing face of said body member.

3. A dispensing container comprising a body member formed with an outwardly projecting tapering open ended neck, in combination with dispensing means comprising a slide and a cap each having dispensing openings, said cap being formed with a recess receiving and permanently secured on said neck and having laterally projecting flanges, and said slide having inwardly extending flanges cooperating with the lower face of its top panel to permanently hold said cap between the lower face of said top panel and the upper faces of said slide flanges, the fit between the slide and cap being such as to permit a snug frictional sliding movement of the slide with relation to said cap.

4. A unitary dispensing means for permanent association, by means of a drive fit frictional application, with an open ended outwardly tapering protruding neck of a container member, said means comprising a recessed cap of such size and shape as to receive and firmly frictionally grip said neck and formed with laterally projecting flanges in combination with a slide hav-

ing flanges extending inwardly from its side edges and cooperating with the inner face of its panel to permanently hold said cap under compression between the inner face of said panel and the opposed faces of said slide flanges said cap and slide each having dispensing openings, the fit between the slide and cap being such as to permit a snug frictional sliding movement of the slide with relation to said cap to bring the opening of the slide selectively into or out of registry with the opening in said cap, and said slide flanges being spaced at an interval from the opposing face of said body member.

5. A unitary dispensing means for association with an open ended outwardly protruding neck of a container said means comprising a recessed cap adapted to snugly receive said neck and formed with laterally projecting flanges in combination with a slide having flanges extending inwardly from its side edges and cooperating with the inner face of its panel to permanently hold said cap between the inner face of said panel and the opposed faces of said slide flanges said cap and slide each having dispensed openings, the fit between the slide and cap being such as to permit a snug frictional sliding movement of the slide with relation to said cap to selectively bring the opening of the slide into or out of registry with the opening in said cap.

HERMAN W. RUEGER.