This invention relates generally to a shaker or sifter-type assembly and more particularly to a shaker or sifter-type dispenser which is readily attachable to and removable from a container of资本, not only of dispensing powder or pelletized products, but also functioning effectively as a closure cap for the container.

An object of my invention is the provision of a novel dispensing assembly comprising a container, a sifter-type fitment, and a closure thereof.

A further object of my invention is the provision of novel means insuring ready, accurate orientation of the assembled elements after being affixed to the container, to the end that it may function effectively both as a dispensing unit and as a container sealing means.

Another object of my invention is to provide a dispensing assembly which is simply and readily brought into and out of operating or dispensing position.

An additional object of the present invention is the provision of a container mouth, sifter-type fitment and closure which cooperates to provide a simple and effective dispensing assembly.

These and other objects of my invention will become apparent from the reading of the following detailed description taken in conjunction with the drawings in which:

FIGURE 1 is an exploded perspective view of the shaker or sifter-type dispensing assembly of my invention;

FIGURE 2 is a fragmented elevational view, in cross-section, illustrating the assembly of the elements of FIGURE 1;

FIGURE 3 is a plan view of a shaker or sifter-type dispenser, partially in section, embodying my invention and illustrated in the dispensing position; and

FIGURE 4 is a plan view, partially in section, of the dispenser of FIGURE 3 in closed position.

In the illustrated embodiment of my invention, reference numeral 10 denotes a bottle or jar formed preferably from high density polyethylene, by conventional means well known to those skilled in the art. The bottle 10 is provided with a cylindrical wall 11 defining a neck, having a circular rim 12 extending about and defining a mouth 13. Exteriorly of this wall 11, and in close proximity to the rim 12, are a plurality of lugs 14 which are substantially in alignment with the axis of mouth 13. Lugs 14 are narrow, vertical and radical projections from the plane of wall 11. In FIGURE 1, only three lugs 14 are visible, there being another lug 14 180° around the wall 11 from the lug 14 that is completely shown. It should be understood that additional lugs 14 may be provided on the wall 11.

In close proximity to and below lugs 14, and preferably immediately adjacent thereto, is an abutment or annular radial projection 15 which is formed by increasing the outside diameter of wall 11 in a localized annular zone and in such fashion as to provide upwardly of this abutment, an upwardly, inwardly tapering guiding surface 16 and beneath said abutment, a downwardly, inwardly tapering securing surface 17; the function of this abutment will become more apparent hereinafter.

On the rim 12 are a plurality of equally spaced pegs 18. The pegs 18 are narrow, vertical and axial projections from the plane of the rim 12 and are in substantial alignment with the axis of the mouth 13. Each projection 14 is positioned below a peg 18. The function and number of pegs will become apparent hereinafter.

The sifter fitment or dispenser element 20 may be formed of rubber or other resilient, elastomeric, or plastic material, but preferably it is formed of polyethylene. It is molded in a single piece and comprises a relatively flat disk 21 of a diameter substantially at least as great as the exterior diameter of the rim 12 and preferably of a diameter equal to the exterior diameter of the rim 12, in order that when assembled, this disk may, to some extent, rest upon the rim 12. The disk 21 is provided with a multiplicity of perforations 22 extending there-through, such perforations being of a diameter dictated by the particular grain size of the condiment or other material to be dispensed.

The outer periphery 23 of the fitment 20 is provided with a plurality of notches 24 which are constructed and arranged to receive the pegs 18. The notches are preferably rectangular in configuration and are positioned on the periphery 23 in radial alignment with and at least equal in number to the pegs 18.

The notches 24 are arranged in radial alignment with the perforations 22. Preferably there are more perforations than notches. With the notches in alignment with the perforations, the perforations 22 are therefore in radial alignment with the pegs 18 when the fitment is applied to the container 10, and consequently in radial alignment with projections 14, thereby positively positioning the perforations 22.

The closure cap 25 may be formed of rubber or resilient elastomeric or plastic material but preferably it is formed of polyethylene. It is molded in a single piece and comprises a relatively flat circular top panel portion 26 of a diameter slightly greater than the diameter of the flat disk 21 of the fitment 20 so that when assembled the closure 25 will cover the fitment 20. The top panel portion 26 is provided with a multiplicity of perforations 27 which are equal in number to and alignable with the perforations 22 in the fitment 20. The diameter of these perforations 27 is also dictated by the particular grain size of the condiment or other product to be dispensed.

An annular depending attaching skirt 28 is formed at the outer periphery of the circular top panel portion 26 and is adapted to be telescopically over the fitment 20 and the container mouth 13. The lower or free end 30 of the skirt 28 is provided with an annular internally projecting rib 31 having a downwardly and inwardly tapered surface 32. The rib 31 is adapted to be forced over abutment 15 when the closure cap 25 and the fitment 20 are placed over the container mouth 13. This enables closure 25 to be held in snap fit relationship with the container 10 and it is held therewith by having the downwardly tapered surface 32 resting against the underside of abutment 15 or the downwardly and inwardly tapered surface 17 of the container 10.

The interior of skirt 28 of cap 25 is provided with a plurality of internally projecting lugs 33. The lugs 33 are narrow projections which are substantially aligned with the axis of the closure 25. They are positioned on the skirt 28 in relation to the perforations 27 in such fashion that rotation of the closure 25 on the container 10 will move the lugs 33 around the exterior of the wall 11 of the container 10 until they come into contact with an outwardly projecting member 14. At this point, the positioning of perforations 22 and 27, projections 14 and lugs 33, pegs 18 and notches 24 brings the perforations 22 and 27 into alignment and dispensing position.

The lugs 33 are so positioned in relation to perforations 27 that the alignment of the perforations 22 and 27 is possible only by rotation of the closure 25 in one direction; thus the rotation of the closure in the opposite direction moves the perforations 22 and 27 out of alignment and thereby closes the container.

It can readily be seen from the foregoing that this dis-
pensing assembly may be readily assembled by conventional capping equipment. The fitment 20 can be af-
fixed to the container rim 12 by rotation of it until the
notches 24 are aligned with the pegs 18. Conventional
capping equipment can position the closure 25 over the
fitment 20 and container 10. Downward pressure on
the closure cap 25 will cause rib 31 to ride over projection 15
and lock into place. After the pegs 18 are engaged in
the notches 24, the fitment cannot be rotated and is thus
in a stationary position relative to the container 10 and
the closure 25.

In the illustrated embodiment, the perforations 22' and
27' are positioned on the vertical and the remaining
perforations are positioned at 45° increments around a
circle.

The lugs 33 utilized to align the perforations 22 and
27 must therefore be positioned so that their centers are
on the radii which are separated from the radii on which
the center of any perforation 27 is located by an angle of
about 15°.

It will be apparent from the foregoing that this dispens-
ring assembly can be easily manufactured and assembled
to the container thereby providing a secure closed posi-
tion against accidental opening, but easily opened to its
dispensing position. Various modifications will be ap-
parent from the foregoing and may be resorted to within
the spirit and scope of the following claims:

I claim:

1. In combination, a container having an annular neck
forming wall defining a mouth, a plurality of radially
projecting lugs on said wall, an annular radial projection
on said wall below said lugs for securing a closure cap to
said container, and a plurality of vertical pegs on the rim
of said container; a sinter-type fitment comprising a rel-
tively flat disk provided with a multiplicity of perforations
therethrough, a plurality of notches in the outer periphery
of said disk constructed and arranged to receive said pegs,
thereby preventing rotation of said fitment; and a closure
cap adapted to overlie said fitment and container mouth
comprising a circular panel portion of greater diameter
than said fitment, said panel portion being provided with
a plurality of perforations alignable with the perforations
in said fitment, a depending attaching skirt at the periphery
of said panel portion, an annular internally projecting
rib on the free end of said skirt cooperating with the pro-
jection on said container wall to secure said cap to said
container, and means on the interior of said skirt coop-
erable with said radially projecting lugs on the wall of
the container to limit rotative movement of said cap.

2. In combination, a container having an annular neck
forming wall defining a mouth, said wall having an outer
dero providing an annular rim, a plurality of radially
projecting lugs on said wall below said rim, an annular
radial projection on said wall below said lugs, and a
plurality of equally spaced vertical pegs on said rim, said
pegs being in axial alignment with the axis of said mouth,
a sinter-type fitment of resilient material comprising a re-
latively flat disk of at least as great a diameter as said
container rim and provided with a multiplicity of perfora-
tions therethrough, a plurality of notches in the outer periphery of said disk and equal in number to said pegs,
said notches being constructed and arranged to receive
said pegs thereby preventing rotation of said fitment; and

a closure cap adapted to overlie said fitment and con-
tainer mouth comprising a circular panel portion of
greater diameter than said fitment, said panel portion
being provided with a plurality of perforations alignable
with the perforations in said fitment, a depending attach-
ing skirt at the periphery of said panel portion, an annular
turnly projecting rib on the free end of said skirt, cooperative
with the projection on said container wall and adapted
to secure said cap to said container, and a plurality of
internally projecting lugs on the interior of said skirt,
said lugs adapted to be positioned between adjacent lugs
on said wall to limit rotative movement of said cap.

3. A dispensing package comprising a container having
an annular wall defining a mouth, an annular rim pro-
vided at the outer end of said wall, at least four radially
projecting lugs on the exterior of said wall below said
rim, an annular radial projection on said wall below said
lugs, said projection being of greater diameter than said
rim and a plurality of vertically disposed, equally spaced
narrow pegs extending axially from said rim; a sinter-type
fitment of resilient plastic material comprising a relatively
flat disk of a diameter at least as great as the diameter
of said rim, and provided with a multiplicity of perfora-
tions therethrough, and a plurality of rectangular shaped
notches in the periphery of said disk, said notches having
a length and width sufficient to receive said pegs thereby
preventing rotation of said fitment with respect to said
container; and a closure cap of resilient plastic material
adapted to overlie said fitment and container mouth, com-
prising a relatively flat circular top panel portion of
greater diameter than said fitment, said panel portion
being provided with a plurality of perforations equal in
number to and alignable with said perforations in said
fitment, an annular depending attaching skirt at the
periphery of said panel portion, an annular internally
projecting rib near the free end of said skirt, cooperative
with the projection on said container wall and adapted
to secure said cap to said container, and a plurality of
internally projecting lugs on the interior of said skirt,
said lugs adapted to be positioned between adjacent lugs
on said wall to limit rotative movement of said cap.

4. A dispensing package according to claim 3 wherein
said pegs are equal in number to said notches.

5. A dispensing package according to claim 3 wherein
said notches are in radial alignment with said perfora-
tions in said fitment.

6. A dispensing package according to claim 5 wherein
said lugs on said container are positioned beneath said
pegs.

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