Jan. 2, 1951 R. J. NEBESAR 2,536,655

CLOSURE FOR CONTAINERS

Filed Aug. 30, 1945

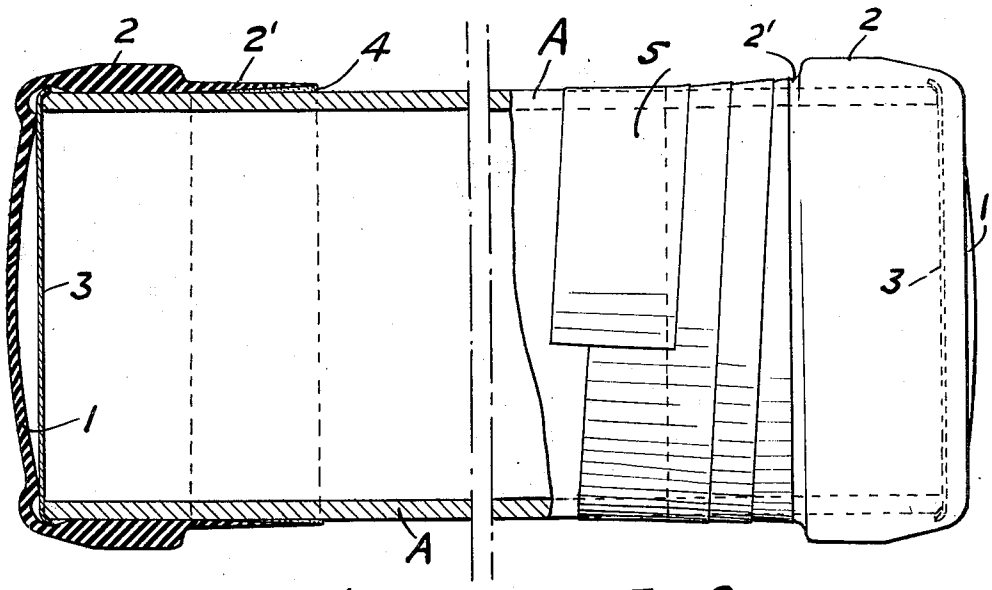

FIG. 1. FIG. 2.

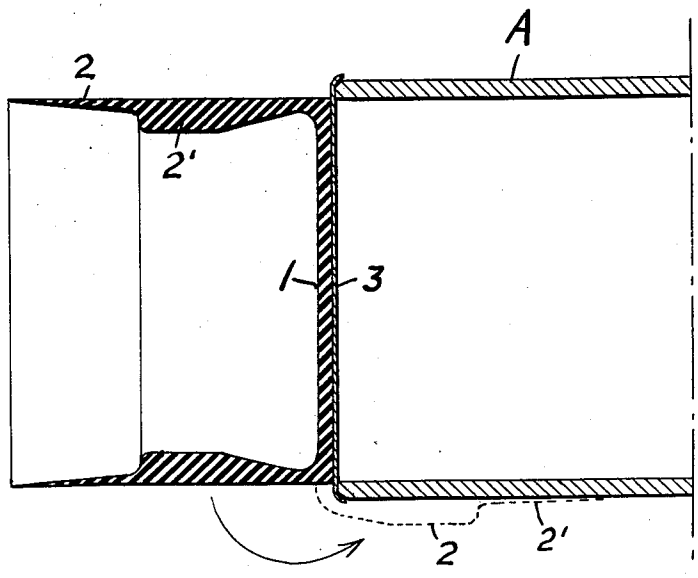

FIG. 3.

WITNESS:

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CLOSURE FOR CONTAINERS

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3 Claims. (Cl. 220—24)

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This invention relates to a closure for containers.

More particularly, this invention relates to a closure for containers so constructed as to insure sealing and moistureproofness of the container against relatively high internal pressures within the container.

The closure in accordance with this invention will have general use where sealing and moisture-proofness are desired and, at the same time, will find special use for closing containers where internal pressure is developed either by the contents of the container or through decrease in external pressure, as at high altitudes in the case of airplane shipments.

Having now indicated in a general way the nature and purpose of this invention, I will proceed to a detailed disclosure of a preferred embodiment, with reference to the accompanying drawings, in which:

Figure 1 is a sectional view of the end portion of a container with its end closed by a closure according to this invention, the closure being secured to the container in one manner.

Figure 2 is a view similar to that of Figure 1 and illustrating an alternative manner of securing the closure to the container.

Figure 3 is a sectional view illustrating the mode of application of the closure to a container.

In the several views A indicates a container, one or both ends of which are open for filling and emptying.

The container may be of any desired shape in its body, but will desirably have a substantially cylindrical end portion or neck at its open end or ends.

The container may be made of any desired material, but desirably will be made of a light weight material, such as paper, wood, magnesium alloy, plastic material, or the like, adapting it, because of strength combined with lightness, to airplane shipment.

The closure, which will be formed of resilient material, as, for example, natural rubber, synthetic rubber, or the like, will comprise essentially a head portion 1 and a skirt portion 2. The skirt portion in its extension from the head portion thickens and then abruptly terminates in a thin, tapered lip portion 2'.

The closure will be so constructed, with respect to the container to which it is to be applied, that the diameter of the head and the internal diameter of the skirt will be less than the external diameter of the end portion of the container.

For application of the closure to the open end

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of a container, a metal cap 3 is first placed over the end of the container, the closure is then placed on the cap and the closure is turned inside out, as shown in Figure 3.

With the closure in the position shown in Figure 3, the skirt portion is reversed and stretched and drawn down over the end portion of the container.

By reference to Figures 1 and 2, it will be noted that when the skirt portion is drawn down over the end portion of the container, the skirt portion, and especially the thin terminal lip 2', will, due to the fact that its internal diameter before application is smaller than the external diameter of the container, tightly grip the wall of the container.

To complete the sealing, where necessary or desirable because of relatively high internal pressure within the container, the thin lip 2' may be adhered to the container wall with a cement or glue 4 (Figure 1), or by the application of a tie or binder 5, as electricians' tape, applied outside the lip.

As will now be observed, the closure according to this invention will afford an effective seal against moisture under conditions of internal pressure due to the grip of the thin lip or extension of the skirt 2' on the wall of the container and which can be made more effective by the use of an adhesive or a tie. At the same time, the thickened portion of the skirt will act to cushion the end of the container as it may be dropped.

It will be appreciated that various modifications may be made in the specific structure described above for illustrative purposes without departing from this invention and within the scope of the appended claims.

What I claim and desire to protect by Letters Patent is:

1. A closure for the end of a container having an uninterrupted outer cylindrical surface which comprises a cap formed of resilient material and a second cap of substantially rigid material interposed between said first mentioned cap and the container, said first mentioned cap before application having a head adapted to rest on said second cap and a reversible skirt with a substantially cylindrical outer periphery of less diameter than the outer diameter of the container and whose interior diameter increases in thickness from the junction of the head and skirt and then tapers to a thin edge, whereby, when the skirt of the first mentioned cap is reversed, the major portion of the cylindrical portion of

the skirt grips the cylindrical portion of the container so that the thicker portion of the skirt is adjacent to the end of the container while the end portion of the skirt slopes inwardly toward the container providing an extended section of small thickness in contact with the container.

2. A closure for the end of a container having an uninterrupted outer cylindrical surface which comprises a cap formed of resilient material and a second cap of substantially rigid material interposed between said first mentioned cap and the container, said first mentioned cap before application having a head adapted to rest on said second cap and a reversible skirt with a substantially cylindrical outer periphery of less diameter than the outer diameter of the container and whose interior diameter increases in thickness from the junction of the head and skirt and then tapers to a thin edge, whereby, when the skirt of the first mentioned cap is reversed, the major portion of the cylindrical portion of the skirt grips the cylindrical portion of the container so that the thicker portion of the skirt is adjacent to the end of the container while the end portion of the skirt slopes inwardly toward the container providing an extended section of small thickness in contact with the container, the tapered end portion of the skirt being cemented to the container.

3. A closure for the end of a container having an uninterrupted outer cylindrical surface which comprises a cap formed of resilient material and a second cap of substantially rigid material interposed between said first mentioned cap and the container, said first mentioned cap before application having a head adapted to rest on said second cap and a reversible skirt with a substantially cylindrical outer periphery of less diameter than the outer diameter of the container and whose interior diameter increases in thickness from the junction of the head and skirt and then tapers to a thin edge, whereby, when the skirt of the first mentioned cap is reversed, the major portion of the cylindrical portion of the skirt grips the cylindrical portion of the container so that the thicker portion of the skirt is adjacent to the end of the container while the end portion of the skirt slopes inwardly toward the container providing an extended section of small thickness in contact with the container, and adhesive tape wrapped over a portion of the tapered portion of the skirt and a portion of the adjacent cylindrical surface of the container to secure the tapered end of the skirt to the container.

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