March 30, 1943. H. E. RUE 2,315,014

CONTAINER

Filed May 8, 1941

Fig. 1.

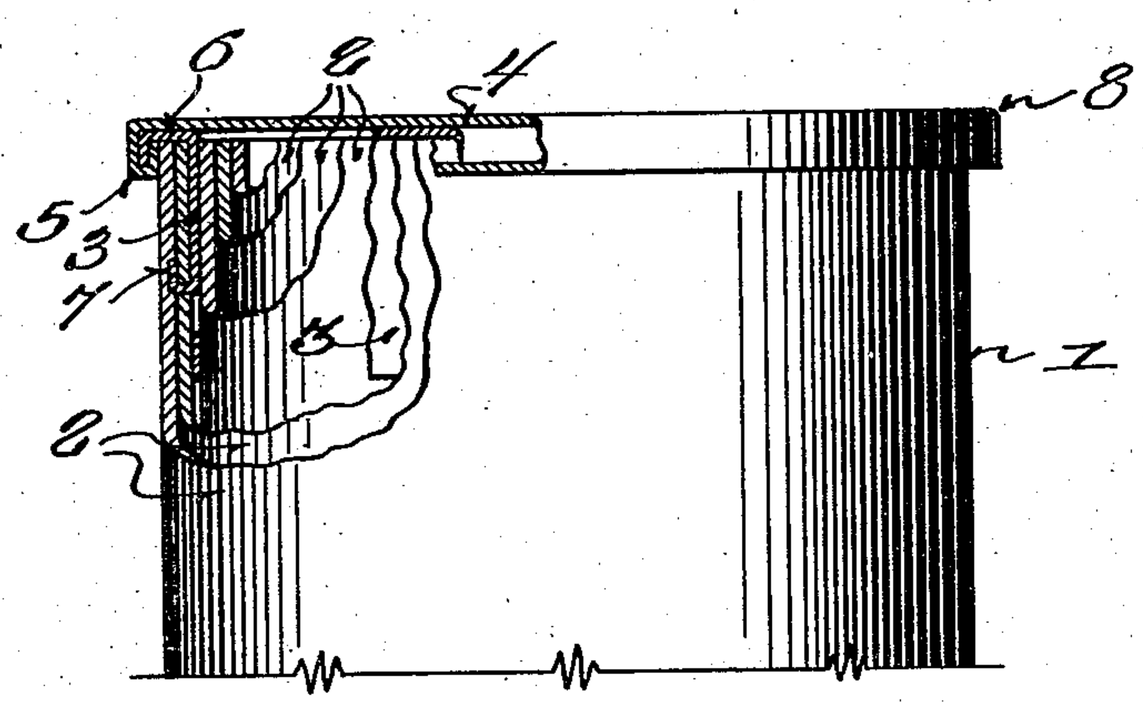


Fig. 2.

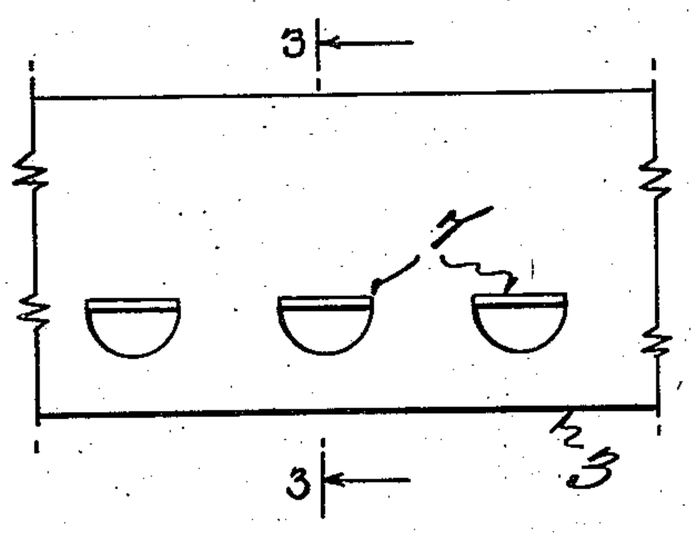


Fig. 3.

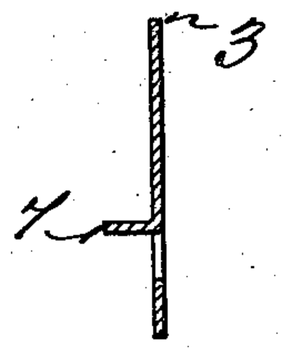


Fig. 4.

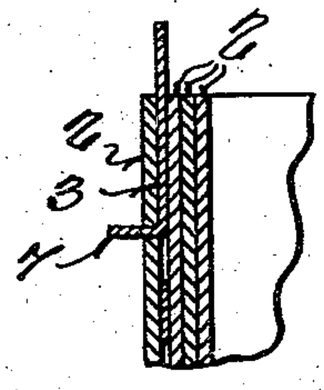
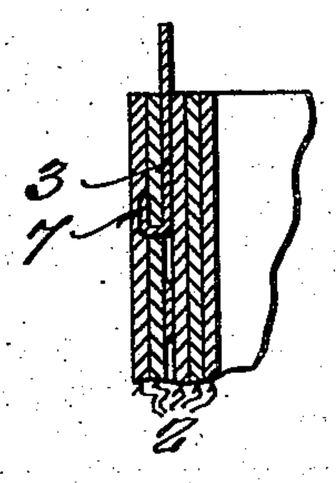


Fig. 5.



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2,315,014

CONTAINER

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1 Claim. (Cl. 229—5.7)

This invention pertains generally to containers, and more specifically to a container consisting of a fabricated tubular shell formed of layers of fibrous material, and provided with metallic end closures.

Containers of the foregoing type are exceedingly old in the art and have proved to be entirely satisfactory for certain uses. However, a serious objection has been encountered in attempting to employ such containers for liquids having a tendency to develop excessive pressure, either through agitation or increased temperatures, as for example, carbonated beverages.

The foregoing objection results solely from failure of the connection between the fiber shell and metallic end closures, which frequently becomes severed or loosened because of the excessive pressure created, with resultant loss of the contents of the container, or the gases occluded in the liquid.

The primary object of the present invention is to overcome the foregoing objection by the provision of a container of the character described, to which the metallic end closures are securely attached to prevent their displacement by pressure created within the container.

Incidental to the foregoing, a more specific object of the invention resides in the provision of a laminated fibrous container shell, having end closure skirts interposed between layers of the shell and provided with circumferentially spaced prongs piercing at least one layer of the shell, the prongs being folded back upon the pierced layer and confined by an adjacent outer layer.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the novel construction, combination and arrangement of parts, substantially as hereinafter described, and more particularly defined by the appended claim, it being understood that such changes in the precise embodiment of the herein disclosed invention may be made as come within the scope of the claim.

In the accompanying drawing is illustrated one complete example of the physical embodiment of the present invention constructed according to the best mode so far devised for the practical application of the principles thereof.

In the drawing:

Figure 1 is a fragmentary elevational view of a container constructed in accordance with the principles of the present invention, parts being broken away and in section to more clearly illustrate structural features.

Figure 2 is a fragmentary elevational view of a metallic closure skirt before assembly with the cover and container shell.

Figure 3 is a vertical sectional view taken on the line 3—3 of Figure 2.

Figure 4 is a similar view illustrating the manner in which one of the layers of the container shell is pierced by the prongs of the closure skirt; and,

Figure 5 is a similar view showing a prong folded back upon a pierced layer of a container shell, and covered by an adjacent outer layer.

Referring now more particularly to the accompanying drawing, the numeral 1 designates a tubular shell, preferably cylindrical in shape, and consisting of a plurality of adhered layers 2 of fibrous material between which a depending metallic closure skirt or ribbon 3 is interposed and connected with a metallic cover 4 by a peripheral bead 5, crimped upon a flange 6 formed on the top edge of the ribbon in any conventional manner. However, it is to be understood that the ribbon 3 and cover 4, which form the end closure 8, may be made integral without departing from the invention.

The ribbon 3 is provided at spaced intervals with prongs 7, struck out of the ribbon, and projecting outwardly through one of the layers 2, the ends being folded back upon the outer face of said layer, and covered by an adjacent outer layer, which further serves to retain the prongs in folded or crimped position.

Figure 4 shows the manner in which the ribbon 3 is assembled upon a plurality of winding or inner layers 2, and one of the prongs 7 projected outwardly through an intermediate layer. Figure 5 illustrates the prong 7 bent upwardly back upon the pierced layer and covered by an outer layer 2.

From the foregoing explanation considered in connection with the accompanying drawing, it will be apparent that an exceedingly firm and secure connection has been provided between a fibrous laminated container shell and a metallic closure, in which the upturned prongs struck out of the closure skirt, and extending through one of the layers of the shell, serve as hooks to effectively anchor the cover to the shell and withstand any pressure created within the container insufficient to rupture the cover or shell.

Inasmuch as the layers 2 are secured together by adhesive, obviously, the outer layer that covers the ends of the up-turned prongs 7, further serves to prevent pressure exerted upon the closure from stripping the bent tongues from the pierced layer of the shell.

I claim:

In a container comprising an adhesively coated fibrous strip having a plurality of windings upon itself forming a tubular base with a strip section extending therefrom for final winding upon the base, the same being of equal length to at least two laps of the circumference of the tubular base, a metallic ribbon equal in length to the base circumference, tightly wound upon the last layer of the tubular base, prongs projecting outwardly from the ribbon, the first lap of the strip section extension being simultaneously tightly wound upon said tubular base and metallic ribbon, the ribbon prongs piercing said first base lap, said prongs being flatly folded against the pierced strip lap toward the tube edge, the container being completed by a finishing winding of the strip section, to encase the metal ribbon and firmly bind the upwardly flattened prongs thereof, whereby the ribbon strip is confined and is securely bound and anchored for the reception of a container closure to thereby effectively resist high pressure strain developed in the aforesaid container.

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