

Dec. 22, 1942.

V. HENDRICKSON

2,305,705

COMPOSITE CONTAINER

Filed Aug. 22, 1939

FIG. 1. + 2

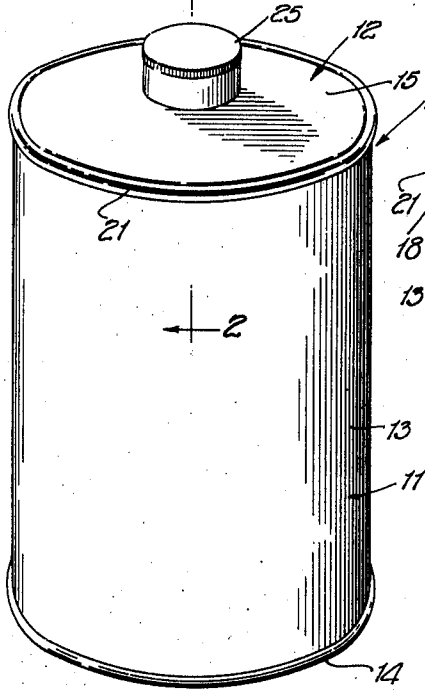


FIG. 2.

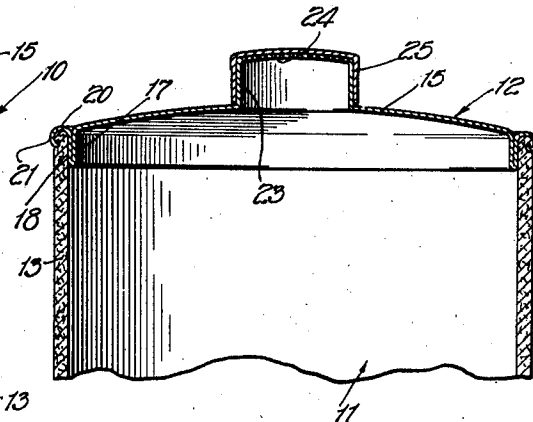
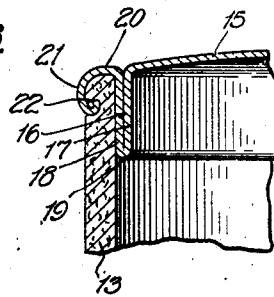


FIG. 3.



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WITNESS:

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1942

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COMPOSITE CONTAINER

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2 Claims. (Cl. 229—5.5)

This invention relates to improvements in containers, and more specifically to composite containers in which the body is constructed of fibre and the top end closure of metal.

All commercial composite containers with which I am familiar are so constructed that the connecting means between the walls of the fibre body and the metal top end closure causes a channel or groove to be formed in and around the end closure. Such a groove or channel has prevented the extensive use of this type of container for the packaging of merchandise of the kind which is placed on display, such as talcum powder, household drugs, and other powdered substance, for the reason that dust and dirt accumulate in the grooves or channel which cannot be easily wiped away, thus imparting an untidy and unsightly appearance and unsanitary condition to the container. It is therefore the main object of this invention to provide a composite container in which the top metal end closure is attached to the fibre body in a novel manner to eliminate any dirt collecting channels in the end closure.

Another feature of the invention resides in a composite container in which the peripheral edge of the metal and closure is interlocked with the top of the fibre body to provide a smooth surface throughout the area of the top end closure.

A further feature of the invention is the provision of a composite container in which the novel interlocking parts between the metal end closure and the fibre body may be rapidly formed and interlocked by a minimum amount of operations.

A further feature of the invention is to provide a composite container in which the interlocking parts between the metal end closure and the fibre body coact to reinforce the top end of the body and impart added rigidity thereto.

A still further feature of the invention is to interconnect the fibre body of the container to the metal end closure in a manner which will prevent removal and replacement of the end closure without detection, thus discouraging unscrupulous reuse of the container.

Other features of the invention will be apparent as the following specification is read in conjunction with the accompanying drawing, in which:

Figure 1 is a perspective view of one form of my composite container.

Figure 2 is a detail vertical sectional view on the line 2—2 of Figure 1.

Figure 3 is an enlarged detail vertical sectional view of the interlocking parts between the fibre body and the metal end closure.

Referring to the drawing by reference characters, the numeral 10 designates one form of my composite container in its entirety which broadly consists of a fibre container body 11 and a metal top end closure 12. The container 10 is shown as round in plan in the drawing, but it will be understood that the same may be of other shapes in plan if desired, such as oval, elliptical, rectangular, square, or rounded in configuration.

The container body 10 includes an annular side wall 13 made of paper, cardboard or other like fibre material, and a bottom wall 14 which is secured to the lower end of the side wall in any well known conventional manner.

The metal top end closure 12 is constructed of relatively thin sheet metal and includes an annular body portion 15 which is concavo-convex in cross section. The blank of metal from which the end closure 12 is constructed is bent upon itself inwardly of its peripheral edge to provide an annular downwardly bent flange 16 which consists of an inner downwardly bent portion 17 and an outer outwardly bent portion 18, the portions 17 and 18 being disposed in parallel relation and in abutting contact. The bending of the metal to form the double thickness flange 16 results in the formation of a rounded edge 19 at the inner end of the said flange. The flange 16 snugly telescopes within the open top of the annular side wall 11 of the container body and is embraced by the side wall 11. The peripheral edge of the metal stock from which the end closure 12 is constructed is bent outwardly from the top of the portion 18 as at 20, the bend between the portions 18 and 20 being in contact with the bend between the portion 17 and the body 15 so that the annular portion 20 constitutes a continuation of the top surface of the body portion 15. After forming the portion 20, the periphery of the blank of metal is rolled downwardly and inwardly against the exterior of the side wall 13 to form a channel-like clinching bead 21. The peripheral edge of the bead 21 is rolled upwardly and inwardly to provide an upturned annular hook portion 22 which embeds itself in the fibre side wall 13 adjacent the top edge and coacts with the annular flange 16 to tightly secure the end closure 12 to the side wall 13 of the fibre container body 11. The annular flange 16 provides a rigid backing during the

downward and inward bending of the annular rolled bead 21.

The body portion 15 of the end closure 12 is provided with an upstanding spout 23 which may be provided with pouring openings 24. A removable closure cap 25 telescopes the spout 23. The contents of the container 10 may be poured through the openings 24 when the cap 24 is removed, and although I have illustrated the container 10 as having a perforated pouring spout in the drawing, other conventional forms of discharge openings may be resorted to.

While I have shown and described what I consider to be the preferred embodiment of my invention, it is understood that such changes in construction and design as come within the scope of the appended claims may be resorted to if desired without departing from the spirit of the invention.

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

1. A composite container comprising a hollow body having an open top defined by a fibre side wall of continuous curvilinear form, a metal top end closure including an outwardly bulged body portion of concavo-convex in cross section and of a size and shape corresponding to that of the side wall of said body at the open top thereof and extending above the plane of the side wall, said body portion being devoid of depressions, a

downwardly extending continuous double wall flange integral with said body portion of a shape and size conforming to the inner side of said side wall and disposed in intimate contact therewith, and an outwardly, downwardly, and inwardly rolled peripheral bead integral with the body portion and terminating above the plane of the lower edge of said flange and provided with an upturned hook edge in clinching engagement with the outer side of said side wall and acting to press the fibre side wall into sealing engagement with said continuous flange.

2. A composite container comprising a hollow body having an open top defined by a fibre side wall of curvilinear form, a metal top end closure including a body portion of a size and shape corresponding to that of the fibre side wall of said body at the open top thereof, a downwardly extending continuous double wall flange integral with said body portion of a shape and size conforming to the inner side of said fibre side wall and disposed in intimate contact therewith, and an outwardly, downwardly, and inwardly rolled peripheral bead integral with the body portion and terminating above the plane of the lower edge of said flange and provided with an upturned hook edge in clinching engagement with the outer side of said side wall and acting to press the fibre side wall into sealing engagement with said continuous flange.

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